

uCosminexus Application Server
Definition Reference Guide

3021-3-J16-10(E)

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Preface

For details on the prerequisites before reading this manual, see the *Release Notes*.

■ Non-supported functionality

Some functionality described in this manual is not supported. Non-supported functionality includes:

- Audit log functionality
- Compatibility functionality
- Cosminexus Component Transaction Monitor
- Cosminexus Reliable Messaging
- Cosminexus TPBroker and VisiBroker
- Cosminexus Web Service - Security
- Cosminexus XML Security - Core functionality
- JP1 linkage functionality
- Management Server management portal
- Remote installation functionality for the UNIX edition
- SOAP applications complying with specifications other than JAX-WS 2.1
- uCosminexus OpenTP1 linkage functionality
- Virtualized system functionality
- XML Processor high-speed parse support functionality

■ Non-supported compatibility functionality

"Compatibility functionality" in the above list refers to the following functionality:

- Basic mode
- Check of JSP source compliance (cjjsp2java) with JSP1.1 and JSP1.2 specifications
- Database connection using Cosminexus DABroker Library
- EJB client application log subdirectory exclusive mode
- J2EE application test functionality
- Memory session failover functionality
- Servlet engine mode
- Simple Web server functionality
- Switching multiple existing execution environments
- Using EJB 2.1 and Servlet 2.4 annotation

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1

Files Overview

This chapter describes the file types used with Application Server, formats for describing the files, and precautions for editing the files.

This chapter also describes the files specifying the server-related definition information, among the files used with Application Server.

For details on the property files used for J2EE application settings, see *3. Property Files Used for Setting J2EE Applications*, and for details on defining the resource property files, see *4. Property Files Used for Setting Resources*, in the *uCosminexus Application Server Application and Resource Definition Reference Guide*.

1.1 File types

With Application Server, the files to be used differ depending upon the types of applications to be executed. This manual classifies the files in the following five types:

- Files used in systems executing J2EE applications
- Files used in systems executing batch applications
- Files used in systems executing the Java applications
- Files used in systems executing Web applications
- Files used in systems executing Web Services

The following table describes each file.

Table 1–1: Files used in systems executing J2EE applications

File types	File description	Manual	Reference
Files used in J2EE servers	When you use a J2EE server, these files are used for specifying the JavaVM properties and invocation options of the J2EE server. Examples: <code>usrconf.properties</code> , <code>usrconf.cfg#</code>	This manual	Chapter 2
Files used by the Smart Composer functionality (Server setup property files)	These files are used for specifying the systems built using the Smart Composer functionality commands. Examples: <code>cmxserver.properties</code> , <code>.cmxrc</code>		Chapter 4
Files used in server management commands	These files are used for specifying the JavaVM properties while server management commands are being executed, and the operations of the server management commands. Examples: <code>usrconf</code> , <code>usrconf.bat</code>		Chapter 5
Files used with Cosminexus JMS Provider	When using the Cosminexus JMS Provider functionality, these files are used for specifying the connection service and message routing service. Examples: <code>commonconfig.properties</code> , <code>config.properties</code>		Chapter 6
Files used with CTM	When you perform request scheduling and load balancing using CTM, these files are used for specifying the command options and environment variables that are used with CTM. Example: CTM user environment variable definition file. Note that you can use CTM only in the products in which Cosminexus Component Transaction Monitor is included in the component software. For details about products that you can use, see 2.2.1 Relationship of products and component software in the manual <i>uCosminexus Application Server Overview</i> .		Chapter 7
Files used with Cosminexus Manager	These files are used to specify the properties to administer the management domain, environment variables and the location for collecting logs. Examples: <code>adminagent.properties</code> , <code>mserver.properties</code>		Chapter 8
Files used in a virtual system	When building Application Server on a virtual server, these files are used to specify the connection properties for load balancing units, and client common settings properties of the virtual server manager. Examples: <code>tierlb.properties</code> , <code>vmclient.properties</code>		Chapter 9

File types	File description	Manual	Reference
Files used in log operations	When you collect Application Server logs, these files are used to specify the location to collect the snapshot log. Example: <code>snapshotlog.conf</code>		Chapter 10
Files used when setting the audit log	When setting up the audit log, these files are used to specify the log files to output the audit log. Example: <code>auditlog.properties</code>		Chapter 11
Files used in integrated user management	When you use the integrated user management functionality, these files are used to specify the information about the JAAS-compliant user management and single sign-on functionality. Examples: <code>jaas.conf</code> , <code>ua.conf</code>	<i>uCosminexus Application Server Security Management Guide</i>	Chapter 12

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For details about the product JavaVM (called JavaVM hereafter) extension option specified in the option definition file (`usrconf.cfg`) of J2EE servers, see [14. Options for Invoking JavaVM](#).

Table 1–2: Files used in the system executing batch applications

File types	File description	Reference
Files used in batch servers	When you use a batch server, these files are used to specify the JavaVM properties and invocation options. Examples: <code>usrconf.properties</code> , <code>usrconf.cfg</code> [#]	Chapter 3
Files used by the Smart Composer functionality (Server setup property files)	These files are used for specifying the execution environment of the Smart Composer functionality commands and the default values for common arguments. Examples: <code>cmxserver.properties</code> , <code>.cmxrc</code>	Chapter 4
Files used in server management commands	These files are used for specifying the JavaVM properties while server management commands are being executed, and the operations of the server management commands. Examples: <code>usrconf</code> , <code>usrconf.bat</code>	Chapter 5
Files used with Cosminexus Manager	These files are used to specify the properties to administer the management domain, environment variables and the location for collecting logs. Examples: <code>adminagent.properties</code> , <code>mserver.properties</code>	Chapter 8
Files used in log operations	When you collect Application Server logs, these files are used to specify the location to collect the snapshot log. Example: <code>snapshotlog.conf</code>	Chapter 10
Files used when setting the audit log	When setting up the audit log, these files are used to specify the log files to output the audit log. Example: <code>auditlog.properties</code>	Chapter 11

#

For details about the JavaVM extension option specified in the option definition file (`usrconf.cfg`) of batch servers, see [14. Options for Invoking JavaVM](#).

Table 1–3: File used in the system executing Java applications

File types	File description	Reference
Files used in Java applications	When you use Java applications, these files are used for specifying the JavaVM properties and invocation options. Examples: <code>usrconf.properties</code> , <code>usrconf.cfg</code> [#]	Chapter 12

#

For details about the JavaVM extension option specified in the option definition file (`usrconf.cfg`) of Java applications, see [14. Options for Invoking JavaVM](#).

Table 1–4: Files used in the system executing Web applications

File types	File description	Reference
Files used in Web applications	When you start the application and the JSP file included in the application is to be compiled, these files are used for specifying the files that are not to be compiled and the files that output the execution result.	Chapter 13

Table 1–5: Files used in the systems executing Web Services

File types	File description	Reference location	Reference section
Files used in Web Services	These files are used to specify the settings for the common system operations or process-specific operations. Example: <code>cjwconf.properties</code> , <code>cjrconf.properties</code>	<i>uCosminexus Application Server Web Service Development Guide</i>	<i>10.1, 13.1</i>

1.2 Format for describing the files

This section explains the format for describing the files and symbols used in the description.

1.2.1 Format for describing the files

Chapter 2 and proceeding chapters use the following format to describe the files:

Format

Shows the coding format of the file.

File storage location

Describes the location for storing the file.

Functionality

Explains the functionality of the file.

Specifiable keys

Explains the keys that can be specified in the file.

Specifiable parameters

Explains the parameters that can be specified in the file.

Examples of coding

Shows an example of coding of the file contents.

Precautions

Explains the points to remember when you set up or use the file.



Reference note

Not all of the above items are explained for each file. Additional file-specific information is also provided for some files.

1.2.2 Symbols used in syntax

The following table lists and describes the symbols and syntax elements used in file description.

Table 1–6: Symbols used in the file description

Symbol	Convention
	In syntax explanations, a vertical bar separates multiple items, and has the meaning of OR. For example: A B C means A, or B, or C.
[]	In syntax explanations, square brackets indicate that the enclosed item or items are optional. For example: [A] means that you can specify A or nothing. [B C] means that you can specify B, or C, or nothing.
{ }	In syntax explanations, curly brackets indicate that only one of the enclosed items is to be selected. For example: { A B C } means only one of A, or B, or C.

Symbol	Convention
. . .	<p>In syntax explanations, ... indicate that description is omitted.</p> <p>ABC... means that there is a description after ABC, and this description is omitted.</p> <p>Alternatively, in syntax explanations, an ellipsis indicates that the immediately preceding item can be repeated as many times as necessary. For example:</p> <p><Property>. . . means that you can specify as many properties as necessary.</p>
< >	<p>In syntax explanations, angle brackets indicate a variable.</p> <p>For example:</p> <p><Property> means that the user enters a property name or a property name is displayed.</p> <p><File name> means that the user enters a file name.</p>

Note:

Use single-byte characters for all the symbols.

1.3 Precautions during file editing

This section describes the precautions you must take when editing files. The description assumes that the system drive is the C drive.

To update the definition file

The definition file provided with the Application Server must be updated with administrator permission. If a user who does not have administrator permission updates the definition file, the definition file present in the directory under `C:\Program Files` is not updated. The file updated by a user who does not have administrator permission is saved in the following directory:

```
C:\Users\user-name\AppData\Local\VirtualStore
```

The application server is invoked with administrator permission, so the contents of the definition file updated by a user who does not have administrator permission are ignored.

To use the Unicode supplementary characters

You cannot use the Unicode supplementary characters in the definition file used with Application Server.

Examples of definitions in which the Unicode supplementary characters cannot be used are as follows:

- Names of EAR, WAR, JAR, EJB-JAR, servlet, JSP, class, method, argument, and variables
- Various definitions in a DD
- Apart from the above, setup values of various definition files

Moreover, if the characters that cannot be encoded during execution are output to a log file, the characters are not output correctly.

2

Files Used in J2EE Servers

This chapter describes the storage location, functionality, and format of the files used in J2EE servers and the keys that you can specify in the files.

2.1 List of files used in J2EE servers

The following table lists the files used in J2EE servers:

Table 2–1: List of files used in J2EE servers

File name	Classification	Overview	Reference
<code>hitachi_web.properties</code>	Web application property file for J2EE servers	Specify Web application specific properties.	2.2.1
<code>usrconf.cfg</code>	Option definition file for J2EE servers	Specify the invocation options of the JavaVM that execute the J2EE servers.	2.2.2
<code>usrconf.properties</code>	User property file for J2EE servers	Specify the system properties of the JavaVM that execute the J2EE servers.	2.2.3
<code>server.policy</code>	Security policy file for J2EE servers	Specify the security policy of the JavaVM that executes the J2EE servers.	2.2.4
<code>criticalList.cfg</code>	Protected area list file	Set the classes that prohibit method cancellation in the protected area.	2.2.5

2.2 Details of files used by J2EE servers

2.2.1 hitachi_web.properties (Web application property file for J2EE servers)

(1) Format

Specify the key as follows:

```
key-name=value
```

How to specify:

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- If a path containing space is specified in the value, the path need not be enclosed with double quotation mark (").

(2) File storage location

- In Windows
Web-application-web-inf-directory
- In UNIX
Web-application-web-inf-directory/

(3) Functionality

Specify Web application specific properties. You specify the system property settings of the entire J2EE server in the `usrconf.properties` file. If you specify the same key in `usrconf.properties` and `WEB-INF/hitachi_web.properties`, the value in `WEB-INF/hitachi_web.properties` is given priority.

(4) Specifiable keys

The specifiable keys and default values are described below. If you specify an invalid value in these keys, the operations may not produce the desired results.

Key name	Contents	Default value
<code>webserver.jsp.keepgenerated</code>	Specify whether to store the Java files obtained as a result of JSP file compilation. If you specify <code>true</code> : The Java files will be stored. If you specify <code>false</code> : The Java files will not be stored.	false
<code>webserver.xml.validate</code>	Specify whether to check if the tag library descriptor (TLD file) is written as per the schema coded in DTD. If you specify <code>true</code> : Tag library descriptor will be checked.	true

Key name	Contents	Default value
	If you specify <code>false</code> : Tag library descriptor will not be checked.	

(5) Examples of coding

```
webserver.jsp.keepgenerated=false
webserver.xml.validate=true
```

2.2.2 usrconf.cfg (Option definition file for J2EE servers)

(1) Format

Specify the key as follows:

```
key-name=value
```

How to specify:

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) *key-name=value#comment*

- You cannot code with a character encoding that is different from the runtime character encoding.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\server\usrconf\ejb\server-name
- In UNIX
/opt/Cosminexus/CC/server/usrconf/ejb/server-name/

(3) Functionality

Specify the invocation options of the JavaVM that execute the J2EE servers.

If you change the contents of this file while the J2EE server is running, the changes become effective only when the J2EE server is started next.

(4) Specifiable keys

The following table describes the specifiable keys and the default values: *VR* is the version of Application Server on which parameters are introduced or changed.

Table 2–2: Specifiable keys and default values in usrconf.cfg (J2EE servers)

Key name	Contents	Default	VR
add.jvm.arg	<p>This key invokes JavaVM by using the specified option. If you want to specify the system properties, do not use the -D option, but specify the properties in the usrconf.properties file.</p> <p>When specifying multiple options, use the same key name and specify multiple times as follows: (Example of specification) add.jvm.arg= -Xms256m add.jvm.arg= -Xmx512m</p> <p>You cannot specify multiple options as shown in the following example. If you specify the options as shown below, the initialization of JavaVM will fail. (Example of specification) add.jvm.arg=-Xms256m -Xmx512m</p> <p>For details about the Java VM options that can be specified by using add.jvm.arg keys, see <i>14.1 List of JavaVM extension options</i> and <i>14.5 Java HotSpot VM options that can be specified in Cosminexus</i>.</p>	For details about default values, see <i>2.2.2(5) Default values of the JavaVM options in J2EE servers</i> .	--
add.class.path	<p>Specify the class path for a container extension library. If a path containing space is specified in the value, the path need not be enclosed with double quotation mark (").</p> <p>Also, values specified in double quotations are not valid.</p>	None	--
add.library.path ^{#1}	<p>Specify the shared library for JNI only when the container extension library uses JNI.</p>	None	--
cpp.library.version	<p>Specify the version of libstdc++ library used in the process. Note that this key is used in Linux.</p> <p>The following string can be specified: 6: Use the libstdc++.so.6 library.</p> <p>Only 6 can be specified with version 09-00 or later. This key will be invalid when specified on platforms other than Red Hat Enterprise Linux.</p>	6	--
ejb.public.directory	<p>Start a J2EE server using the specified directory as the <i>working directory</i> of J2EE server. The current directory of J2EE server is as follows:</p> <ul style="list-style-type: none"> • In Windows <i>Cosminexus-working-directory\ejb\server-name</i> • In UNIX <i>Cosminexus-working-directory/ejb/server-name</i> <p>Specify an absolute path for the directory name. The characters that you can specify include, single-byte alphanumeric characters, underscores (_), or hyphens (-). You can specify the path length in the range calculated using the estimation formula of the Application Server working directory. For details on the work directory of J2EE servers, see <i>Appendix C.1 Work directory of the J2EE server</i> in the <i>uCosminexus Application Server System Setup and Operation Guide</i>.</p>	<ul style="list-style-type: none"> • In Windows <i>Cosminexus-installation-directory\CC\server\public</i> • In UNIX <i>/opt/Cosminexus/CC/server/public</i> 	--

Key name	Contents	Default	VR
<code>ejb.server.corefilenum</code> (in UNIX)	<p>Specify an integer value from 0 to 16 for the number of core files that remain when a J2EE server is restarted. Note that this key is used for UNIX.</p> <p>Among the following target core files, the specified number of files, starting from the one with the latest creation time, is left behind and all the other files are deleted. Generally, specify 1 as the number of core files output when a J2EE server is down.</p> <p>Target core files</p> <p><i>Cosminexus-working-directory/</i>ejb/<i>server-name/core*</i></p> <ul style="list-style-type: none"> • To delete all the core files when you restart the J2EE server, specify 0. • In the case of manual operations, or when you intend to use the Management Server, specify 1 or more. <p>Among the target <code>core</code> files, those <code>core</code> files that may be overwritten or deleted during restart, are renamed.</p> <p>In Linux (settings with process ID)</p> <p><i>core.core-generated-process-ID - > core.core-generated-process-ID.core-file-creation-date-and-time</i></p> <p>For cases other than the above</p> <p><i>core -> core.core-file-creation-date-and-time</i></p> <p>The format of <i>core-file-creation-date-and-time</i> is <i>yymmddHHMMSS</i>.</p> <p>When the process of renaming or deleting a <code>core</code> file fails, a message KDJE40047-E is output, the process of starting the J2EE server is cancelled and terminates abnormally.</p> <p>Note the following:</p> <ul style="list-style-type: none"> • When a file having the same name as that of the target <code>core</code> file is created, the file created by the user will be deleted. • The <code>core</code> files are deleted when a J2EE server is restarted, therefore, sometimes more <code>core</code> files may be output than the defined number of files until the J2EE server restarts. • Keep a check on the disk capacity, as the defined number + <i>n</i> number of <code>core</code> files is left on the disk. (<i>n</i>: the number of core files output by a J2EE server until the server is restarted). 	1	--
<code>ejb.server.log.directory</code>	<p>Use the specified directory as the output destination of the log file^{#2}. Specify the path length from 1 to 200 bytes. In Windows, you cannot specify a path that includes a UNC name. In UNIX, you cannot specify a path of an nfs-mounted disk.</p> <p>When specifying this key, create a directory to output log before starting the server. If you specify a directory that does not exist, the message KDJE40024-E is output when the J2EE server starts up, and then the server is terminated abnormally.</p> <p>Make sure that the specified log data output-destination directory is not shared with other J2EE servers, Web container servers (compatibility functionality), batch servers, or Cosminexus Manager. If you specify the</p>	<ul style="list-style-type: none"> • In Windows <i>Cosminexus-working-directory\</i>ejb\<i>server-name\logs</i> • In UNIX <i>Cosminexus-working-directory/</i>ejb/<i>server-name/logs</i> 	--

Key name	Contents	Default	VR
	<p>same directory, the operation will not produce the desired results.</p> <p>Note that if you specify this key and output the log to a directory other than the working directory, the log files in the change destination directory are not deleted when you uninstall the server. If you want to delete the log files, delete them manually.</p>		
<code>ejb.server.log.stdout.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: byte) as the upper-limit for the size of the <code>cjstdout.log</code> file.	1048576	--
<code>ejb.server.log.stderr.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: byte) as the upper-limit for the size of the <code>cjstderr.log</code> file.	1048576	--
<code>jvm.type</code>	<p>Specify the type of Java VM to be used. You can specify one of the following values:</p> <ul style="list-style-type: none"> • <code>server</code> Java HotSpot Server VM is used. • <code>client</code> Java HotSpot Client VM is used. <p>In a development environment where the J2EE servers or the J2EE applications start and stop frequently, performance may be improved by specifying "client". In the case of an error in the specified value, the key searches for Java VM in the order of "server" -> "client". At this time, the message KDJE40020-W is output.</p>	server	--

Legend:

--: Indicates a version earlier than the version 08-00.

#1

If both the `add.library.path` and OS environment variables (such as `LIBPATH`) are set up when executing the `cjstartsv` command or `cjstartweb` command, the `add.library.path` settings have a higher priority.

#2

The log files listed below will be changed:

Types of log	Contents	Log collection directory and log file names
Message log	Operation log	<ul style="list-style-type: none"> • In Windows <code>ejb.server.log.directory-key-value\cjmessage?.log</code> • In UNIX <code>ejb.server.log.directory-key-value/cjmessage?.log</code>
	Log operation log	<ul style="list-style-type: none"> • In Windows <code>ejb.server.log.directory-key-value\cjlogger.log</code> • In UNIX <code>ejb.server.log.directory-key-value/cjlogger.log</code>
User log	Web servlet log	<ul style="list-style-type: none"> • In Windows <code>ejb.server.log.directory-key-value\web_servlet?.log</code> • In UNIX <code>ejb.server.log.directory-key-value/web_servlet?.log</code>
	User output log	<ul style="list-style-type: none"> • In Windows <code>ejb.server.log.directory-key-value\user_out?.log</code> • In UNIX

Types of log	Contents	Log collection directory and log file names
		<i>ejb.server.log.directory-key-value</i> /user_out?.log
	User error log	<ul style="list-style-type: none"> In Windows <i>ejb.server.log.directory-key-value</i>\user_err?.log In UNIX <i>ejb.server.log.directory-key-value</i>/user_err?.log
	JavaVM maintenance information and GC log	<ul style="list-style-type: none"> In Windows <i>ejb.server.log.directory-key-value</i>\javalog??.log In UNIX <i>ejb.server.log.directory-key-value</i>/javalog??.log
Event log	Event log for the Explicitly Memory Management functionality of JavaVM	<ul style="list-style-type: none"> In Windows <i>ejb.server.log.directory-key-value</i>\ehjavalog??.log In UNIX <i>ejb.server.log.directory-key-value</i>/ehjavalog??.log
Exception log	Exception information in the case of failure	<ul style="list-style-type: none"> In Windows <i>ejb.server.log.directory-key-value</i>\cjexception?.log In UNIX <i>ejb.server.log.directory-key-value</i>/cjexception?.log
Maintenance log of resource adapter	--	<ul style="list-style-type: none"> In Windows <i>ejb.server.log.directory-key-value</i>\connectors\display-name-of-resource-adapter?.log In UNIX <i>ejb.server.log.directory-key-value</i>/connectors/display-name-of-resource-adapter?.log
TPBroker trace	Trace information of TPBroker	<ul style="list-style-type: none"> In Windows In <i>ejb.server.log.directory-key-value</i>\TPB In UNIX In <i>ejb.server.log.directory-key-value</i>/TPB

Legend:

--: Not applicable

(5) Default values of the JavaVM options in J2EE servers

The following are the default values of the Java VM options for J2EE servers:

(a) When using V9 compatibility mode

- -Xms256m
- -Xmx512m
- -XX:MetaspaceSize=128m
- -XX:MaxMetaspaceSize=128m
- -XX:SurvivorRatio=8
- -XX:HitachiJavaLog:<ejb.server.log.directory>
- -XX:HitachiJavaLogFileSize=4m
- -XX:+HitachiOutOfMemoryStackTrace

- `-XX:-HitachiThreadDumpToStdout`
- `-XX:+HitachiOutOfMemoryAbort`
- `-XX:+HitachiJavaClassLibTrace`
- `-XX:HitachiJavaClassLibTraceLineSize=1024`
- `-XX:+HitachiLocalsSimpleFormat`
- `-XX:+HitachiTrueTypeInLocals`
- `-XX:+HitachiLocalsInStackTrace`
- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiVerboseGCPrintCause`
- `-XX:+HitachiOutputMilliTime`
- `-XX:+HitachiUseExplicitMemory`
- `-XX:HitachiExplicitHeapMaxSize=64m`
- `-XX:HitachiExplicitMemoryLogLevel:normal`
- `-XX:HitachiExplicitMemoryJavaLog:<ejb.server.log.directory>`
- `-XX:HitachiExplicitMemoryJavaLogFileSize=4m`
- `-XX:-HitachiAutoExplicitMemory`
- `-XX:+HitachiExplicitMemoryAutoReclaim`
- `-XX:-HitachiExplicitMemoryCompatibleToV8`
- `-XX:+HitachiOutOfMemoryHandling`

(b) When using recommended mode

- `-Xms256m`
- `-Xmx512m`
- `-XX:MetaspaceSize=128m`
- `-XX:MaxMetaspaceSize=128m`
- `-XX:SurvivorRatio=8`
- `-XX:HitachiJavaLog:<ejb.server.log.directory>`
- `-XX:HitachiJavaLogFileSize=4m`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:-HitachiThreadDumpToStdout`
- `-XX:+HitachiOutOfMemoryAbort`
- `-XX:+HitachiJavaClassLibTrace`
- `-XX:HitachiJavaClassLibTraceLineSize=1024`
- `-XX:+HitachiLocalsSimpleFormat`
- `-XX:+HitachiTrueTypeInLocals`
- `-XX:+HitachiLocalsInStackTrace`
- `-XX:+HitachiVerboseGC`

- -XX:+HitachiVerboseGCPrintCause
- -XX:+HitachiOutputMilliTime
- -XX:+HitachiUseExplicitMemory
- -XX:HitachiExplicitHeapMaxSize=64m
- -XX:HitachiExplicitMemoryLogLevel:normal
- -XX:HitachiExplicitMemoryJavaLog:<ejb.server.log.directory>
- -XX:HitachiExplicitMemoryJavaLogFileSize=4m
- -XX:-HitachiAutoExplicitMemory
- -XX:+HitachiExplicitMemoryAutoReclaim
- -XX:-HitachiExplicitMemoryCompatibleToV8
- -XX:+HitachiOutOfMemoryHandling
- -XX:ReservedCodeCacheSize=240M

(6) Examples of coding

- In Windows

```
# java vm options
add.jvm.arg=-Xms256m
add.jvm.arg=-Xmx512m
add.jvm.arg=-XX:MetaspaceSize=128m
add.jvm.arg=-XX:MaxMetaspaceSize=128m
add.jvm.arg=-XX:+HitachiVerboseGC
add.jvm.arg=-XX:HitachiVerboseGCIntervalTime=600

# ejb public directory
ejb.public.directory=c:\workdir

# ejb.server.log.directory
ejb.server.log.directory=c:\logdir\servername
```

- In UNIX

```
# java vm options
add.jvm.arg=-Xms256m
add.jvm.arg=-Xmx512m
add.jvm.arg=-XX:MetaspaceSize=128m
add.jvm.arg=-XX:MaxMetaspaceSize=128m
add.jvm.arg=-XX:+HitachiVerboseGC
add.jvm.arg=-XX:HitachiVerboseGCIntervalTime=600

# ejb public directory
ejb.public.directory=/opt/workdir

# ejb.server.log.directory
ejb.server.log.directory=/CClogs/server/servername

# ejb.server.corefilenum
ejb.server.corefilenum=3
```

(7) Notes

- The environment variable CLASSPATH that is set at the command prompt is not passed to the J2EE servers, but the other environment variables (such as PATH) are passed.
- Do not use a character encoding that is different from the OS locale. If UTF-8 is used in the OS locale, do not use UTF-8 with BOM.
- If you specify the same key in the `usrconf.properties` file and in `-D` of `add.jvm.arg` of the `usrconf.cfg` file, the value specified in `usrconf.properties` is given priority.
- The JavaVM options that are not specified in the `usrconf.cfg` become the default JavaVM values.
- You cannot specify the following properties for `-D`:
 - `java.endorsed.dirs`
 - `java.security.policy`
 - `java.class.path`
 - `java.library.path`
 - `java.locale.providers`
- Among the values specified in the `add.class.path` key, there are some values for which the `<cosminexus.home>` tag is used to specify the JAR files for the container extension library. These values indicate the installation destination of Application Server, so you do not need to change the contents coded for the `add.class.path` key. Note that when you add the container extension library to the `add.class.path` key, the installation and uninstallation operations might not be guaranteed. Therefore, do not use the `<cosminexus.home>` tag.
- For the `add.jvm.arg` key, do not specify the `--add-modules` or `--module-path` option. If you do so, operations are not guaranteed.
- Specify the `-XX:SoftRefLRUPolicyMSPerMB` option only if the metaspace area becomes insufficient in the development environment. Specifying 0 for this option disables all soft references. Because soft references are often used as caches for performance improvement, this option specification might degrade the performance of applications.

2.2.3 usrconf.properties (User property file for J2EE servers)

(1) Format

J2SE property file format.

Specify the key as follows:

```
key-name=value
```

How to specify:

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.

- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) *key-name=value#comment*

- Use the ISO 8859-1 character encoding according to the Java specifications for the characters to be encoded.
- If the format does not conform to Java specifications, the J2EE server might fail to start.

(Example) When the format contains an invalid Unicode escape sequence (the string after `\u` is not an appropriate Unicode hexadecimal value).

(2) File storage location

- In Windows

Cosminexus-installation-directory\CC\server\usrconf\ejb\server-name

- In UNIX

/opt/Cosminexus/CC/server/usrconf/ejb/server-name/

(3) Functionality

Specify the system properties of the JavaVM that execute the J2EE servers.

If you specify the same key in the `usrconf.properties` file and in `-D` of `add.jvm.arg` of the `usrconf.cfg` file, the value specified in `usrconf.properties` is given priority.

If you change the contents of this file while the J2EE server is running, the changes become effective only when the J2EE server is started next.

(4) Keys reserved in a J2EE servers

A J2EE server internally uses the keys beginning with the following prefixes. As a result, the keys beginning with these prefixes must not be used in applications.

- `ejbserver.*`
- `webserver.*`
- `appclient.*`
- `j2eeserver.*`
- `manager.j2ee.*`

(5) Keys for customization of J2EE servers

You can customize the operations of the J2EE servers by setting the values in the following system property keys.

The keys are classified and described as follows:

- *Keys beginning with `ejbserver.application`*
- *Keys beginning with `ejbserver.bv`*
- *Keys beginning with `ejbserver.client`*
- *Keys beginning with `ejbserver.commonj`*
- *Keys beginning with `ejbserver.compiler`*

- *Keys beginning with ejbserver.connectionpool*
- *Keys beginning with ejbserver.connector*
- *Keys beginning with ejbserver.container*
- *Keys beginning with ejbserver.ctm*
- *Keys beginning with ejbserver.deploy*
- *Keys beginning with ejbserver.distributedtx*
- *Keys beginning with ejbserver.DynamicStubLoading*
- *Keys beginning with ejbserver.ejb*
- *Keys beginning with ejbserver.ext*
- *Keys beginning with ejbserver.http*
- *Keys beginning with ejbserver.instrumentation*
- *Keys beginning with ejbserver.javaee*
- *Keys beginning with ejbserver.jca*
- *Keys beginning with ejbserver.jndi*
- *Keys beginning with ejbserver.jta*
- *Keys beginning with ejbserver.logger*
- *Keys beginning with ejbserver.management*
- *Keys beginning with ejbserver.manager*
- *Keys beginning with ejbserver.naming*
- *Keys beginning with ejbserver.rmi*
- *Keys beginning with ejbserver.security*
- *Keys beginning with ejbserver.server*
- *Keys beginning with ejbserver.stateful*
- *Keys beginning with ejbserver.stdoutlog*
- *Keys beginning with ejbserver.watch*
- *Keys beginning with ejbserver.webj2ee*
- *Keys beginning with https*
- *Keys beginning with java*
- *Keys beginning with vbj*
- *Keys beginning with vbroker*
- *Keys beginning with webserver.application*
- *Keys beginning with webserver.connector*
- *Keys beginning with webserver.container*
- *Keys beginning with webserver.context*
- *Keys beginning with webserver.dbsfo*
- *Keys beginning with webserver.errorpage*
- *Keys beginning with webserver.http*
- *Keys beginning with webserver.jsp*

- *Keys beginning with webserver.prf*
- *Keys beginning with webserver.servlet*
- *Keys beginning with webserver.ServletContainerInitializer_jar*
- *Keys beginning with webserver.session*
- *Keys beginning with webserver.static*
- *Keys beginning with webserver.work*
- *Keys beginning with webserver.xml*
- *Keys beginning with mail.mime*

(a) Keys beginning with ejbserver.application

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.application.InitTermProcessClasses</code>	When using the container extension library, specify the class name of server start/stop hook. When specifying multiple classes, demarcate them with a comma (.). Do not insert a space between the comma (,) and the class name. When a J2EE server is started, the server start hook method of the server start/stop hook functionality is invoked in the specified order. When a J2EE server is shutdown, the server stop hook method of the server start/stop hook functionality is invoked in the reverse order of the specified order.	None	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.appname</code>	Specify a single-byte character set of 0 to 16 bytes for the default application name that is output to the AppName field. If the value of the AppName field is not specified in the program, the value of this property is output to the AppName field. If the definition of the usable character sets is fulfilled, but the length of the value exceeds the limit, a warning message is output, the data exceeding the limit is truncated, and the data up to the restricted length is used. If you specify the string "null", this string is treated as a null character string "", and nothing is displayed in the appname field. You cannot specify the display of a "null" string in appname, from this property.	user_app	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.count</code>	Specify an integer in the following range for the number of log files: When CJMessageFileHandler is used: 2 to 16 When CJMPMessageFileHandler is used: 2 to 64 The value keeps increasing up to the number of files specified here and once the specified number is reached, the next number returns to the starting number "1". If an old log file or a user file with the same name exists, the existing file is overwritten.	2	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.encoding</code>	Specify a value from 0 to 1024 bytes for the encoding of the strings to be output. If you do not specify any value, the default encoding is used. If the specified value exceeds the range, or if you specify a "null" string, it is treated as if encoding is not specified (default value in encoding is used). You cannot use an encoder named "null". In JavaVM, specify the character set that changes <code>java.nio.charset.Charset.isSupported (String charsetName)</code> to <code>true</code> . For the character sets that can be specified in encoding as well as the character strings	null	--

Key name	Contents	Default value	VR
	<p>to be specified, follow the specifications, such as <i>java.nio.charset.Charset</i> of Java standard API. Examples of specified values are as follows:</p> <ul style="list-style-type: none"> • US-ASCII: 7-bit ASCII (Basic Latin block of ISO646-US/Unicode charset) • ISO-8859-1: ISO Latin Alphabet No. 1 (ISO-LATIN-1) • UTF-8: 8-bit UCS conversion format • SJIS: Shift-JIS, Japanese • EUC_JP: JIS X 0201, 0208, 0212, EUC encoding, Japanese • MS932: Windows Japanese (Specification for Windows) • JIS0201: JIS X 0201, Japanese • JIS0208: JIS X 0208, Japanese • JIS0212: JIS X 0212, Japanese <p>Do not perform any unnecessary encoding since it will lead to performance degradation.</p>		
<code>ejbserver.application.userlog.CJLogHandler.handler-name^{#1}.filter</code>	<p>Specify the filter to be used with its full name, including the package name. Specify the value as a class character set from 0 to 4096 bytes.</p> <p>Create the filter specified here using the Reflection functionality and use it for the handler of the specified handler name.</p> <p>If the specified value exceeds the range, it is assumed that the filter is not specified. Furthermore, if you specify a "null" string, it is again treated as no filter is to be used.</p> <p>Do not create a filter with the name "null".</p>	null	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name^{#1}.formatter</code>	<p>Specify the formatter that you will use along with its full name, including the package name. Specify the value as a class character set from 0 to 4096 bytes. The values that can be specified are as follows:</p> <p>When connecting to the <code>CJMessageFileHandler</code> class</p> <p>Specify either <code>com.hitachi.software.ejb.application.userlog.CJSimpleFormatter</code>, or a user-created <code>Formatter</code> class.</p> <p>Do not specify Java2-1.4 standard <code>SimpleFormatter</code> and <code>XMLFormatter</code> in <code>CJMessageFileHandler</code> (the separator is a linefeed, therefore, the message record is not displayed in one line). When specifying a user-created <code>Formatter</code> class, a formatter that will create a message without control codes such as linefeed, needs to be created.</p> <p>When connecting to the <code>Handler</code> class of Java2-1.4:</p> <p>There are no specific rules.</p> <p>Create the filter that is specified here using the Reflection functionality and use it for the handler of the specified handler name.</p> <p>If the specified value exceeds the range, it is assumed that the formatter is not specified. Furthermore, if you specify a "null" string, it is treated as no formatter is to be used. Do not create a formatter with the name "null".</p>	null	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name^{#1}.level</code>	<p>Specify single-byte alphabets for the upper-limit of log collection level. You specify a value defined in the Java constant. This option is case-sensitive.</p> <p>Only messages of a level lower than the value specified here are output to the log. The specifiable levels are as follows:</p> <ul style="list-style-type: none"> • OFF: A special level used for logging off • SEVERE: Message level indicating a severe problem • WARNING: Message level indicating a potential problem • INFO: Message level for providing messages as information • CONFIG: Message level of static configuration messages • FINE: Message level for providing the trace information • FINER: Trace level 2 (higher than FINE) • FINEST: Trace level 3 (higher than FINER) 	SEVERE	--

Key name	Contents	Default value	VR
	<ul style="list-style-type: none"> • ALL: Collects the log of all messages <p>OFF and ALL are special levels. For example, if you specify OFF for a logger and handler, the log will not get collected at all, irrespective of the log level. If you specify ALL, the log of all levels is output.</p>		
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.limit</code>	<p>Specify an integer in the following range (units: bytes) for the capacity of a log file:</p> <p>When CJMessageFileHandler is used: 8192 to 2147483647</p> <p>When CJMPMessageFileHandler is used: 8192 to 16777216</p> <p>Keep incrementing the capacity up to the capacity specified in this key and once the specified capacity is reached, the log file will switch to the next log file.</p> <p>In the case of HNTRLlib2, since the capacity check is done before writing the messages, there are times when the actual maximum capacity exceeds the set value by a maximum of approximately 4200 bytes (this is because messages are written if even one byte does not match the specified capacity).</p> <p>For example, if you specify 8192 in this key and when the area currently being used by <code>out1.log</code> is 8000 bytes, the free space is 192 bytes and if a message of 4000 bytes is output, the message is output to <code>out1.log</code>. As a result, the size of <code>out1.log</code> will exceed the upper-limit value.</p>	1048576	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.msgid</code>	<p>Specify a single-byte character set from 0 to 21 bytes for the default message ID that is output to the MsgID field. If the value of MsgID is not specified in the program, the value of this property is output to the MsgID field.</p> <p>If the definition of the usable character sets is fulfilled, but the length of the value exceeds the limit, a warning message is output, the data exceeding the limit is truncated, and the data up to the restricted length is used.</p> <p>If you specify "null", it is treated as a null character string "", and nothing is displayed in the msgid field. You cannot specify the display of a "null" string in msgid, from this property.</p>	0001	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.path</code>	<p>Specify a value from 1 to 255 bytes for the prefix of a log file name. Specify the path as a relative path^{#2}. Do not specify a single-byte numeric value at the end of the path name.</p> <p>The value obtained by adding "xx (an integer between 1 to 16).log" to the prefix specified in this key forms the name of the trace information file.</p> <p>The single-byte alphanumeric characters specified in the path are not case-sensitive. Specify the length of the path value, such that the total of the following A + B + C values is within the range of the value:</p> <ul style="list-style-type: none"> • A (In Windows): <i>log-output-destination-root</i>(value of <code>ejb.server.log.directory</code>)\user\ (The default is <i>Cosminexus-working-directory</i>\ejb\J2EE-server-name\logs\user\) • A (In UNIX): <i>log-output-destination-root</i>(value of <code>ejb.server.log.directory</code>)/user/ (The default is <i>Cosminexus-working-directory</i>/ejb/J2EE-server-name/logs/user/) • B: Length of the prefix specified by the user • C: Six characters of "xx.log" <p>Apart from the above, note the following when specifying the path:</p> <ul style="list-style-type: none"> • Double-byte codes of <code>native</code> cannot be used in the <code>Properties</code> file, therefore, acquire and specify the Unicode strings by using <code>native2ascii</code>. • Do not specify as an absolute path. Do not use ". \" (". /" in Unix) of a relative path. • If the path includes Japanese characters, JavaVM needs to be running in an environment where the locale settings enable the processing of Japanese characters. 	user_log	--

Key name	Contents	Default value	VR
	<ul style="list-style-type: none"> You cannot set the same path as another handler. If you set the same path, the handler is not created. 		
<code>ejbserver.application.userlog.CJLogHandler.handler-name^{#1}.separator</code>	<p>Use the CJSimpleFormatter and specify a single byte character set from 0 to 1024 bytes for the separator that is used to output the message. You can use the separator as a character string.</p> <p>If the definition of the usable character sets is fulfilled, but the length of the value exceeds the limit, a warning message is output, the data exceeding the limit is truncated, and the data up to the restricted length is used.</p> <p>In the case of output in the HNTRLib2 format, do not specify the following control characters in the message:</p> <ul style="list-style-type: none"> In Windows: "\r" and "\n" In UNIX: "/r" and "/n" <p>If these characters are specified, the output contents are misaligned and the record is not output in one line. If you specify "null", it is treated as a null character string "". As a result, "null" string cannot be used as a separator. You cannot specify the display of a "null" string in the separator, from this property.</p>	(Vertical bar)	--
<code>ejbserver.application.userlog.loggers</code>	<p>This is a property that declares the name of the logger to be used. Specify a value from 0 to 65535 bytes. You can specify multiple logger names by demarcating with a comma (.). If you demarcate with a semicolon (;) immediately after the logger name, you can also specify the resource bundle name for regional correspondence used in that logger.</p> <p>Hitachi recommends that the logger name be a name based on the package name or the class name of the subsystem that is demarcated with a dot (.), such as java.net or javax.swing.^{#3} Do not use a comma (,) or a semicolon (;) in the logger name.</p> <p>If multiple class names are defined and the length of the specified value exceeds the range, only those class names whose length is within the range and which fulfill the rules of the value are set.</p> <p>The logger with the name declared in this key is processed as a logger built in the CJLogManager class (the logger is built when a J2EE server is started).</p> <p>The loggers that are not specified in this key are not generated automatically; therefore, create the loggers as per the codes.</p>	None	--
<code>ejbserver.application.userlog.Logger.logger-name^{#3}.filter</code>	<p>This property specifies the filter used in the logger with its full name, including the package name. Specify the value as a class character set from 0 to 4096 bytes.</p> <p>The logger with the specified logger name creates the filter specified in this key by using the Reflection functionality and uses the filter to select messages.</p> <p>If the specified value exceeds the range, it is assumed that the filter is not specified. Furthermore, if you specify a "null" string, it is treated as no filter is to be used. Do not create a filter with the name "null".</p>	Null	--
<code>ejbserver.application.userlog.Logger.logger-name^{#3}.handlers</code>	<p>This property is used to connect the handler class (addHandler(Handler)) to the specified logger name. To create the handler class using the Reflection functionality, specify a value from 0 to 65535 bytes for the handler class with a full name containing the package name. You can specify multiple handler classes by demarcating with a comma (,).</p> <p>You can specify the following handler classes:</p> <ul style="list-style-type: none"> com.hitachi.software.ejb.application.userlog.CJMessageFileHandler com.hitachi.software.ejb.application.userlog.CJMPMessageFileHandler java.util.logging.ConsoleHandler java.util.logging.FileHandler java.util.logging.SocketHandler java.util.logging.StreamHandler java.util.logging.MemoryHandler Full name including the package name of the unique Handler class created by the user 	None	--

Key name	Contents	Default value	VR
	<p>In a CJLogHandler node, specify the handler name by demarcating with a semicolon (;) after the handler class name, initialize the handler with the specified handler name, create the handler class, and then connect to the logger. In the Java2-1.4 standard Logging class, even if you specify the handler name by demarcating with a semicolon (;), this key becomes disabled. For details about how to set the Java2-1.4 standard Logging class, follow the specifications of the corresponding class.</p> <p>Specify a class character set of 1 to 1024 bytes beginning with a single-byte alphanumeric character for the handler name.</p> <p>If multiple class names are defined and the length of the specified value exceeds the range, only those class names whose length is within the range and which fulfill the rules of the value are set.</p> <p>If the logger name is not specified in ejbserver.application.userlog.loggers, the logger is not created.</p>		
ejbserver.application.userlog.Logger. <i>logger-name</i> ^{#3} .level	<p>Specify single-byte alphabets for the log output level of the logger or "null". This option is case-sensitive. To output a log message, you need to clear the log output level of the logger and the output level of the handler used for the output. The values that can be specified are as follows:</p> <ul style="list-style-type: none"> Values that can be specified in ejbserver.application.userlog.CJLogHandler.<i>handler-name</i>.level "null" <p>If you specify "null" as the name, initialize the logger level with null. If the logger level is initialized to null, that logger will inherit the level of its parent logger.</p>	SEVERE	--
ejbserver.application.userlog.Logger. <i>logger-name</i> ^{#3} .useParentHandlers	<p>Specify single-byte alphabets for whether the log record is to be transmitted from the logger that received the log record to the handler that is connected to the parent logger. Specify true if the log record is to be transmitted and false if it is not to be transmitted.</p> <p>The log output level that passes through this logger affects only the level of the handler that is connected to the parent logger (If the level of the parent logger is OFF and the level of the handler that is connected to the parent logger is ALL, all messages are displayed).</p>	true	--

Legend:

--: Indicates a version earlier than the version 08-00.

Note:

You can specify the following values in the respective character sets used in the property definitions of the user log functionality (other than the ejbserver.application.InitTermProcessClasses key):

- **Class character sets (character sets used in defining the class name)**

Single-byte alphanumeric characters (a-z, A-Z, 0-9), periods (.), dollar signs (\$) and underscores (_)

- **Single-byte character sets**

Single-byte alphanumeric characters (a-z, A-Z, 0-9), periods (.), dollar signs (\$), underscores (_), hyphens (-), vertical bars (|), colons (:), ampersands (&), at marks (@), hash marks (#), and percent signs (%)

If the specified value is invalid, such that it does not fulfill the conditions of the character sets that can be used or is not within the range of the values that can be specified, a warning message is output and a valid default value is used at that point. The valid default value at that point implies the value of the key when the *handler-name*=default, or the default value of the 'Default values' column.

#1

Use the handler name to differentiate between the property values. Specify a class character set from 1 to 1024 bytes beginning with a single-byte alphanumeric character for the handler name. If you specify default, handler name indicates a property that is recognized as the common default value by all CJLogHandler.

#2

Use the following rules for the source of the output destination:

```
ejb.server.log.directory-value\user or ejb.server.log.directory-value/user
```

For the value of `ejb.server.log.directory`, follow the specifications of `ejb.server.log.directory`. The default value of `ejb.server.log.directory` of J2EE servers is as follows:

- In Windows
`Cosminexus-working-directory\ejb\J2EE-server-name\user\user-specified-value`
- In UNIX
`Cosminexus-working-directory/ ejb/ J2EE-server-name/ user/ user-specified-value`

#3

You specify the logger name when the instances of the logger are acquired with `Logger.getLogger(logger-name)`. The logger name is appended with a dot (.) and must be declared beforehand in `ejbserver.application.userlog.loggers` property. For details on the logger name, follow the specifications of `java.util.logging.Logger`.

Specify a class character set from 1 to 1024 bytes beginning with a single-byte alphanumeric character for the logger name. If you specify `default`, logger name indicates a property that is recognized as the common default value by all `CJLogHandler`.

The properties identified by the logger names are used for initializing the logger class of the user log functionality.

If a logger name ends with `.handlers`, there may be confusion when the properties of `ejbserver.application.userlog.Logger.logger-name.handlers` are specified, and therefore, Hitachi recommends that you do not end a logger name with `".handlers"`.

(b) Keys beginning with `ejbserver.bv`

Key name	Contents	Default value	VR
<code>ejbserver.bv.limit.max_validation_message</code>	Specify the threshold value for issuing an alert for the string length during the message interpolation processing performed when constraint violation occurs. You can specify a value in the range from 1 to 2147483647. If you specify a value larger than the value of the system property, the system outputs the KDJE60110-W message and continues the processing. If you specify a non-numeric value or a numeric value outside the specifiable range, the system outputs the KDJE60111-W message and sets the default value.	10000	09-85

(c) Keys beginning with `ejbserver.client`

The following table lists the specifiable key. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.client.ctm.RequestPriority</code>	Specify an integer from 1 to 8 as the priority for extracting the requests accumulated in the queues within CTM. Smaller the value higher is the priority. If the specified value is wrong or omitted, 4 will be set.	4	--

Legend:

--: Indicates a version earlier than the version 08-00.

(d) Keys beginning with `ejbserver.commonj`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.commonj.WorkManager.non_daemon_work_threads</code>	Specify an integer from 1 to 65535 for the maximum pool size of the thread pool for executing a short-lived Work in WorkManager.	10	08-50

(e) Keys beginning with `ejbserver.compiler`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.compiler.jvm.maxHeapSize</code>	<p>Specify the maximum value of the heap size of the <code>javac</code> command that is invoked when a J2EE application is started.</p> <p>Specify the value in the format that is accepted by the <code>-Xmx</code> and <code>-Xms</code> options of the <code>java</code> command. If you specify the value in any other format, the operation may not produce the desired results.</p> <p>Specify as follows:</p> <ul style="list-style-type: none">Specify a value from 2048 to 4294966272. Specify a value that is greater than the value specified in <code>ejbserver.compiler.jvm.minHeapSize</code>.When specifying in kilobytes, add the character 'k' or 'K'.When specifying in megabytes, add the character 'm' or 'M'. <p>This property is valid for the Application Server version 09-00-01 or earlier. Even if this property is specified for the Application Server version 09-00-02 or later, the specification is ignored.</p>	256m	--
<code>ejbserver.compiler.jvm.minHeapSize</code>	<p>Specify the initial value of the heap size of the <code>javac</code> command that is invoked when a J2EE application is started.</p> <p>Specify the value in the format that is accepted by the <code>-Xmx</code> and <code>-Xms</code> options of the <code>java</code> command. If you specify the value in any other format, the operation may not produce the desired results.</p> <p>Specify as follows:</p> <ul style="list-style-type: none">Specify a value from 1024 to the value specified by <code>-Xmx</code>.To specify in kilobytes, add the character 'k' or 'K'.To specify in megabytes, add the character 'm' or 'M'. <p>This property is valid for the Application Server version 09-00-01 or earlier. Even if this property is specified for the Application Server version 09-00-02 or later, the specification is ignored.</p>	32m	--

Legend:

--: Indicates a version earlier than the version 08-00.

(f) Keys beginning with `ejbserver.connectionpool`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.connectionpool.applicationAuthentication.disabled</code>	<p>Specify whether to enable the functionality for optimizing container management sign-on.</p> <p>If you specify <code>true</code>:</p> <p>Container management sign-on will be optimized. If you specify <code>true</code>, you cannot use sign-on by application management.</p> <p>If you specify <code>false</code>:</p> <p>Container management sign-on will not be optimized. You can use sign-on by container management as well as sign-on by application management.</p> <p>If you use a resource adapter other than DB Connector, you cannot specify <code>true</code> in this property.</p>	false	--	3.14.8 Optimizing the container-managed sign-on for DB Connector in the Common Container Functionality Guide
<code>ejbserver.connectionpool.association.enabled</code>	<p>Specify whether to enable the connection association functionality.</p> <p>If you specify <code>true</code>:</p> <p>The connection association functionality will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>The connection association functionality will be disabled.</p>	false	--	3.14 Functionality for performance tuning in Common Container Functionality Guide
<code>ejbserver.connectionpool.association.enabledDespiteUnshareableSetting</code>	<p>Specify whether to perform connection association when <code>Unshareable</code> is specified in <i>res-sharing-scope</i> of the standard DD for servlets and Enterprise Beans.</p> <p>If you specify <code>true</code>:</p> <p>Connection association will be performed even if <code>Unshareable</code> is specified in <i>res-sharing-scope</i> of the standard DD for servlets and Enterprise Beans. However, <code>ejbserver.connectionpool.association.enabled=true</code> needs to be specified.</p> <p>If you specify <code>false</code>:</p> <p>Connection association will not be performed if <code>Unshareable</code> is specified in <i>res-sharing-scope</i> of the standard DD for servlets and Enterprise Beans.</p> <p>Do not specify this key, when developing a new application.</p>	false	--	
<code>ejbserver.connectionpool.sharingOutsideTransactionScope.enabled</code>	<p>Specify the operations of connection sharing when a connection is acquired multiple times outside the transactions managed by Application Server. When <code>NoTransaction</code> is specified in the transaction support level of a resource adapter, connection sharing is not performed.</p> <p>If you specify <code>true</code>:</p> <p>Connection will be shared. Connection will not be shared if <code>Unshareable</code> is specified in <i>res-sharing-scope</i> of the standard DD for servlets and Enterprise Beans, even if you specify <code>true</code>.</p>	false	--	

Key name	Contents	Default value	VR	Related information
	If you specify <i>false</i> : Connection will not be shared outside the transactions managed by Application Server.			
<code>ejbserver.connectionpool.validation.timeout</code>	Specify the timeout value for the functionality to detect connection failure and the timeout value (unit: seconds) for deleting connections using the functionality to adjust the number of connections as an integer from 1 to 2147483647.	5	08-00	

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

(g) Keys beginning with `ejbserver.connector`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.connector.logwriter.filenum</code>	Specify an integer from 1 to 16 for the number of log files of a resource adapter.	4	--
<code>ejbserver.connector.logwriter.filesize</code>	Specify an integer from 4096 to 2147483647 (units: bytes) for the size of the log files of a resource adapter.	2097152	--
<code>ejbserver.connector.statmentpool.clear.backcompat</code>	Specify the contents for initializing the statements when the statements are reused in the statement pooling functionality. If you specify <i>true</i> : The following contents are initialized: - Parameters - SQL command list - All the warnings reported for a Statement object If you specify <i>false</i> : The following contents are initialized: - Parameters - SQL command list - All the warnings reported for a Statement object - Number of lines that must be fetched from a database - Restricted value for maximum number of bytes of the ResultSet column storing the character or binary values - Restricted value for maximum number of lines that can include the ResultSet object - Query timeout	true	08-70

Legend:

--: Indicates a version earlier than the version 08-00.

(h) Keys beginning with `ejbserver.container`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.container.audit_trail.enabled</code>	<p>Specify whether to enable the database audit trail linkage functionality.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">The database audit trail linkage functionality is enabled.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">The database audit trail linkage functionality is disabled.</p>	false	--	
<code>ejbserver.container.bmp.ackcompatible</code>	<p>Specify operation lock control of an Entity Bean (BMP).</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">The lock in the EJB container will be controlled.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">The lock in the EJB container will not be controlled.</p> <p>To enable the changes in this property, once delete the J2EE application that is being started and then re-create or re-import it.</p>	false	--	
<code>ejbserver.container.ejbhome.sessionbean.reconnect.enabled</code>	<p>Specify whether to enable the reconnection of EJB home object functionality.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">The reconnection of EJB home object functionality is enabled.</p> <p style="padding-left: 20px;">When you specify <code>true</code>, always specify the port number in the <code>vbroker.se.iiop_tp.scm.iiop_tp.listener.port</code> property.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">The reconnection of EJB home object functionality is disabled.</p>	false	--	
<code>ejbserver.container.passivate.scan.interval</code>	<p>Specify an integer from 0 to 2147483 (units: seconds) for the interval to invoke the thread for monitoring the timeout and pool status of an Enterprise Bean.</p> <p>When 0 is specified, monitoring is not performed.</p> <p>The thread for monitoring the timeout and pool status of an Enterprise Bean executes the following processing at the interval specified here:</p> <ul style="list-style-type: none"> • Deletes the Stateful Session Bean and Entity Bean instances with the lapsed timeout periods. 	0	--	<i>2.11 Setting up timeout in the EJB container in EJB Container Functionality Guide</i>

Key name	Contents	Default value	VR	Related information
	<ul style="list-style-type: none"> Gradually deletes the pooled instances exceeding the minimum value for the Stateless Session Bean and Entity Bean pools. 			
<code>ejbserver.container.rebindpolicy</code>	<p>Specify re-connection and re-sending of requests in the EJB client, in the case of a communication failure when invoking the EJB method.</p> <p>VB_TRANSPARENT: Re-connects and resends the requests.</p> <p>NO_RECONNECT: Does not re-connect and does not resend the requests. In such a case, since there is no re-connection when the connection is disconnected due to communication failure, the object reference cannot be re-used.</p>	VB_TRANSPARENT	--	<i>2.13 Invoking the EJB remote interface in EJB Container Functionality Guide</i>
<code>ejbserver.container.security.disabled</code>	<p>Specify whether to enable the functionality for controlling the access of Enterprise Bean. For details about the functionality used for controlling the access of Enterprise Beans, see <i>2.10 Access control for Enterprise Bean</i> in the manual <i>uCosminexus Application Server EJB Container Functionality Guide</i>.</p> <p>This property is not related to the security policy specified in <code>server.policy</code> (security policy file for J2EE servers).</p> <p>If you specify <code>true</code>: The functionality that controls the access of Enterprise Beans will be disabled. In this case, the security definition at the EJB level and the application level is disabled, and absolutely no check is performed for the method execution permission during EJB execution.</p> <p>If you specify <code>false</code>: The functionality that controls the access of Enterprise Beans will be enabled.</p>	false	--	
<code>ejbserver.container.remove.scan.interval</code>	<p>Specify an integer from 0 to 153722867280912 (units: minutes) for the interval to invoke the thread for monitoring the timeout of an activated Stateful Session Bean.</p> <p>When you specify either 0 or a value below 0, the timeout is not monitored.</p> <p>If you specify a value greater than 153722867280912, 153722867280912 is set.</p> <p>If you specify a non-numeric value, the default value will be set.</p>	5	--	<i>2.11.2 Timeout of a Stateful Session Bean in the EJB Container Functionality Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

(i) Keys beginning with `ejbserver.ctm`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.ctm.ActivateTimeOut</code>	This property is necessary for using the CTM functionality. When you deploy a J2EE application that uses the CTM functionality, the J2EE server activates the schedule queue. At this point, specify a value from 0 to 2147483647 for the standby time (units: seconds). If you specify 0, the standby time continues infinitely and when if you do not specify a value, 180 (seconds) is set.	180	--	
<code>ejbserver.ctm.CTMDomain</code>	This property is necessary for using the CTM functionality. Specify an alphanumeric character from 1 to 31 or an underscore (<code>_</code>) for the CTM domain name to which the J2EE server belongs. You cannot specify a CTM domain name beginning with 'CTM' or 'ctm'. If you do not specify a value, "CTMDOMAIN" is set.	CTMDOMAIN	--	<i>3.3.5 CTM domains and CTM domain managers in the Expansion Guide</i>
<code>ejbserver.ctm.CTMID</code>	This property is necessary for using the CTM functionality. Specify an alphanumeric character from 1 to 31, an underscore (<code>_</code>), or a period (<code>.</code>) for the CTM identifier of the CTM daemon that controls the J2EE server. You can, however, use a period (<code>.</code>) only when specifying the identifier as an IP address. You cannot specify a CTM identifier beginning with 'CTM' or 'ctm'. You also cannot specify a name that is same as the CTM domain name. If you do not specify a value, the IP address is set.	IP-address	--	
<code>ejbserver.ctm.CTMMYHost</code>	This property is necessary for using the CTM functionality. Specify the host name or the IP address used by CTM in a node-switching environment, wherein multi-home or IP address is inherited. Specify a string of 1 to 64 characters for the host name or IP address. If you do not specify a value, the host name that can be acquired by the <code>hostname</code> command is set. If you specify this property without specifying the <code>ejbserver.ctm.CTMID</code> property, the IP address specified in this property becomes the default CTM identifier.	<i>host-name-acquired-by-hostname-command</i>	--	
<code>ejbserver.ctm.DeactivateTimeOut</code>	When un-deploying the J2EE applications that use the CTM functionality, the J2EE server passivates the schedule queue. Specify a value from 0 to 2147483647 (units: seconds) for the standby time (awaiting completion of the running requests) at that point. If you specify 0, the standby time continues infinitely and when if you do not specify a value, 180 (seconds) is set. If you attempt to stop an application via CTM when the application contains some running requests, it is not possible to perform forced termination, and therefore, do not specify 0.	180	--	
<code>ejbserver.ctm.enabled</code>	Specify whether to use the CTM functionality.	In version 09-00 or	--	

Key name	Contents	Default value	VR	Related information
	<p>If you specify <code>true</code>:</p> <p>CTM functionality will be used. CTM can only be used in products including Cosminexus Component Transaction Monitor in the component software. For details about the products that can be used, see 2.2.1 <i>Relationship of products and component software</i> in the manual <i>uCosminexus Application Server Overview</i>.</p> <p>Establish a connection with CTM, and perform initialization when a J2EE server is started. If this is successful, the J2EE server is started when the CTM functionality is in a usable state.</p> <p>In the case of failure in connecting to CTM and initializing, invocation of the J2EE server fails.</p> <p>If you specify <code>false</code>:</p> <p>CTM functionality will not be used.</p> <p>When a J2EE server is started, since a connection is not established with CTM and initialization is not performed, the J2EE server is not invoked when CTM is in a usable state. In this state, you cannot deploy the applications that use CTM. If you want to invoke the J2EE server when the CTM functionality is not in a usable state, specify <code>false</code>.</p>	<p>later versions:</p> <p><code>false</code></p> <p>In version 09-00 or earlier versions:</p> <p><code>true</code></p>		
<code>ejbserver.ctm.QueueLength</code>	<p>A J2EE server generates the CTM queue, when J2EE applications that use the CTM functionality are deployed. Specify a value from 1 to 32767 for the length of the CTM queue at this point. If you do not specify a value, the length during the generation of the CTM queue maintained in the CTM daemon (length specified by the <code>-CTMMaxRequestCount</code> option) becomes valid. When the CTM queue is shared, since the CTM queue is already created, the already created length becomes valid instead of the specified value.</p>	None	--	
<code>ejbserver.ctm.useGlobalJNDI</code>	<p>Switches the default lookup name used when no optional name is specified for Enterprise Bean in a configuration using the CTM functionality.</p> <p>If you specify <code>true</code>:</p> <p>A Portable Global JNDI name beginning with <code>java:global/</code> is used.</p> <p>If you specify <code>false</code>:</p> <p>A Global JNDI name beginning with <code>HITACHI_EJB/</code> is used.</p>	<code>false</code>	09-00	

Legend:

--: Indicates a version earlier than the version 08-00.

(j) Keys beginning with `ejbserver.deploy`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.deploy.annotations.load_libjars.enabled</code>	<p>Specifies whether library JAR annotations will be read when a J2EE application is deployed.</p> <p>If <code>true</code> is specified: The library JAR annotations will be read.</p> <p>If <code>false</code> is specified: The library JAR annotations will not be read.</p> <p>This key is used to restrict the memory usage when you import applications containing a library JAR with a large number of classes and in which the library JAR annotations are not required.</p> <p>Notes:</p> <ul style="list-style-type: none"> • If the library JAR annotations are not read, you cannot use the annotations of the classes included in the library JAR. For example, if a class included in a library JAR is specified as an interceptor in a class within an Enterprise-Bean application, the annotations of the invocation destination class (such as <code>@PostConstruct</code>) are disabled. Therefore, do not operate an invocation destination class as an interceptor. • The annotation read before you set up this property is stored during import operation. Therefore, after you change the settings, you must stop, delete, and then re-import the application. 	<code>true</code>	09-50	<i>14.3 Classes to be loaded and the class path required for loading in Common Container Functionality Guide</i>
<code>ejbserver.deploy.app.stopforcibly.disabled</code>	<p>Specify whether to disable forced termination of a J2EE application.</p> <p>If you specify <code>true</code>: Forced termination of a J2EE application will be disabled.</p> <p>If you specify <code>false</code>: Forced termination of a J2EE application will be enabled.</p>	<code>false</code>	--	
<code>ejbserver.deploy.annotations.load_check.enabled</code>	<p>Specify whether to ignore the exceptions occurred when loading the classes for acquiring the annotation information.</p> <p>If you specify <code>true</code>: An error will occur and the processing will be interrupted.</p> <p>If you specify <code>false</code>: The exception log will be acquired and the processing will continue.</p>	<code>false</code>	08-00	<i>14.3 Classes to be loaded and the class path required for loading in Common Container Functionality Guide</i>
<code>ejbserver.deploy.context.check_interval</code>	<p>Specify an integer (units: seconds) from 0 to 2147483647 for the interval to detect an update in the application setup file.</p> <p>If you specify a numeric character other than 0 and 1 to 2147483647, automatic reloading is performed. Only command reload is accepted.</p>	<code>0</code>	--	<i>15.8.6 Update detection interval for J2EE applications in the Common Container</i>

Key name	Contents	Default value	VR	Related information
				<i>Functionality Guide</i>
<code>ejbserver.deploy.context.reload_scope</code>	<p>app: The reload functionality is used in EJB application, servlet, and JSP.</p> <p>jsp: The reload functionality is used in JSPs.</p> <p>none: The reload functionality is not used.</p> <p>web: The reload functionality is used in JSPs.</p> <p>Other than above: The default value is specified.</p>	app	--	<i>15.8.2 Scope of reloading in the Common Container Functionality Guide</i>
<code>ejbserver.deploy.context.update.interval</code>	<p>Specify an integer (units: seconds) from 0 to 2147483647 for the standby time for update of an application setup file.</p> <p>If you specify a numeric character other than 0 or 1 to 2147483647, it is assumed that there is no standby time.</p>	0	--	<i>15.8.7 Interval for updating the J2EE application configuration file in the Common Container Functionality Guide</i>
<code>ejbserver.deploy.exclusive.lockAliveInterval</code>	<p>Specify an integer (units: seconds) from 1 to 2147483647 for the maximum standby time until the receipt of the next response sent from a command after the completion of server processing.</p> <p>The commands affected by this property are those classified as update, reference and privilege, from among the commands used in a J2EE server. The commands classified into update, reference and privilege can be checked in the list of commands used in J2EE servers. For details on the commands used in a J2EE server, see <i>2. Commands Used with a J2EE Server</i> in the <i>uCosminexus Application Server Command Reference Guide</i>.</p> <p>If you specify an invalid value, a warning message is output and the default value will be set.</p> <p>If there is no communication from the command side even after the specified time, the server assumes invalid termination of the command and forcibly cancels command exclusion.</p> <p>The standby time is the total of the time that a command requires to go to and return from the servers and the processing time of the command.</p>	60	--	
<code>ejbserver.deploy.resourcefile.scramble.enabled</code>	<p>Specify whether to scramble the DD files related to DataSource, JavaMail, and ResourceAdapter that are expanded below the working directory. Even if the value of this property is switched and the J2EE server is started, the status of the DD files of the resource that is already imported or deployed does not change, as long as the definition information is not updated.</p> <p>If you specify <code>true</code>: Scrambling will be performed.</p>	false	--	

Key name	Contents	Default value	VR	Related information
	If you specify <i>false</i> : Scrambling will not be performed.			
<code>ejbserver.deploy.session.work.directory</code>	Output the session information file of a Web application in the directory present below the set <i>ejbserver.deploy.session.work.directory-property-value\web\context-root-name</i> .	<ul style="list-style-type: none"> In Windows <i>Cosmin exus-installation-directory\CC\server\repository\server-name</i> In UNIX <i>Cosmin exus-installation-directory/CC/server/repository/server-name</i> 	--	
<code>ejbserver.deploy.stub.generation.scope</code>	Specify the target range for generating the classes required for communication, such as stub. Specify <i>ejb</i> during new installation and app during upgradation. ejb: Generate classes required for communication, such as stub, from the home interface and component interface specified in DD of EJB-JAR. app: Generate classes required for communication, such as stub, from the classes that inherit <i>java.rmi.Remote</i> of EJB-JAR and WAR. Other than above: The KDJE42257-W message is output and default value is specified, when the server is started.	<i>ejb</i>	--	

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

(k) Keys beginning with `ejbserver.distributedtx`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.distributedtx.ots.recoverFailMessageCount</code>	<p>Specify after how many retries in scanning uncompleted transactions would the KFCB40139-W message be displayed. Specify the value using an integer from 0 to 2147483647.</p> <p>Application Server scans uncompleted transactions for the resource manager participating in a transaction during transaction recovery executed when a J2EE server starts or when a communication failure occurs while a transaction is being concluded. If scanning fails, the Application Server continues to retry infinitely until the scanning process is successful; however, when the scanning of uncompleted transactions executed for resource adapters continues and fails for the number of times specified in this property, the KFCB40139-W message is displayed.</p> <p>Note that the uncompleted transactions are re-scanned every 5 seconds.</p> <p>If you specify 0, the KFCB40139-W message is not displayed even if the scanning of the uncompleted transactions fails several times. If you specify 1, the KFCB40139-W message is displayed if scanning fails once. (The KFCB40139-W message is not displayed when scanning fails on the second and subsequent attempts. However, if the scanning is successful once, or if the J2EE server is stopped, the count is reset. In this case, the KFCB40139-W message is displayed when the scanning fails once the next time).</p> <p>If you specify a value of 1 or more in this property, you can identify the inability to connect to a participating resource manager at an early stage. However, when you perform an operation in which a resource is started after starting the Application Server, the KFCB40139-W message might be displayed even for a normal operation.</p>	0	08-70	
<code>ejbserver.distributedtx.ots.status.directory1#</code>	<p>Specify the directory for saving the backup of the status file of in-process transaction service and the status file used as maintenance data. You use a forward slash (/) as the path delimiter. If you specify a relative path, it indicates the path from the following directory:</p> <p>In Windows: <i>Cosminexus-working-directory\ejb\server-name</i></p>	otsstatus	--	<i>3.4 Managing transactions in Common Container Functionality Guide</i>

Key name	Contents	Default value	VR	Related information
	In UNIX: <i>Cosminexus-working-directory</i> /ejb/ <i>server-name</i>			
<code>ejbserver.distributedtx.ots.status.directory2#</code>	When replicating the status file of in-process transaction service, specify a directory that stores the backup of spare status files and the spare status files used as maintenance data. You use a forward slash (/) as the path delimiter. If you specify a relative path, the path will be from the execution directory of J2EE applications. You must specify a different directory to avoid overlapping with other J2EE servers or J2EE application processes running on the same machine. If you do not specify this property, a spare status file will not be created, and therefore, the status file does not get replicated.	None	--	<i>3.4 Managing transactions in Common Container Functionality Guide</i>
<code>ejbserver.distributedtx.recovery.completionCheckOnStopping.timeout</code>	Specify a number from -1 to 2147483647 (units: seconds) for the timeout value to check whether the running transaction is complete, which is performed when using a global transaction and stopping the J2EE server and when using the Transacted Delivery functionality and stopping the J2EE application. However, the timeout does not occur in the following cases: <ul style="list-style-type: none"> • When -1 is specified • When an invalid string is specified • When this key is not specified In the above cases, the termination of the J2EE server or J2EE application is postponed infinitely, until it can be confirmed that there are no uncompleted transactions as recognized by the J2EE server or the resource manager. If you specify an integer from 0 to 2147483647, the transaction completion check times out when the specified time (seconds) elapses and the J2EE server or J2EE application stops even if it cannot be confirmed that there are no uncompleted transactions. To guarantee ACID of transactions when an application is running, you need to specify the settings where the timeout will not occur. You can specify the timeout settings, when convenience is given priority over ACID of transactions, during development of an application.	-1 (no timeout)	--	
<code>ejbserver.distributedtx.recovery.port</code>	Specify an integer from 1 to 65535 for the fixed port number used for transaction recovery when a global transaction is used. If you specify an invalid value or if the specified port is already being used, the invocation process is interrupted. If a light transaction is invoked considering it as valid, this property is ignored.	20302	--	
<code>ejbserver.distributedtx.rollbackClientTxOnSystemException</code>	Specify whether to mark an invoked client transaction for roll back, when a system exception occurs.	false	--	

Key name	Contents	Default value	VR	Related information
	<p>If you specify <code>true</code>:</p> <p>The client transaction will be marked for roll back.</p> <p>If you specify <code>false</code>:</p> <p>The client transaction will not be marked for roll back.</p> <p>If you do not specify the property or if you specify an invalid value, <code>false</code> will be set.</p> <p>This property is enabled only in either of the following two cases: When you start a client transaction, invoke the EJB (that implements the remote interface of J2EE server) by using the optimization for local invocation, and start a new transaction on the invoked EJB when you do not start the client transaction.</p>			
<code>ejbserver.distributedtx.XATransaction.enabled</code>	<p>Specify whether to use a <i>global transaction</i>.</p> <p>If you specify <code>true</code>:</p> <p>The light transaction functionality will be disabled and global transaction can be used.</p> <p>If you specify <code>false</code>:</p> <p>The light transaction functionality will be enabled and the environment will be optimized to the local transaction. The global transaction, however, cannot be used.</p>	false	--	<i>3.4.2 Local transaction and global transaction in the Common Container Functionality Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

Note:

In the status file of in-process transaction service, a host name or an IP address is incorporated as the identification information of the J2EE server. As a result, you need to stop the J2EE server to change the host name or the IP address. Change the host name or IP address of the storage directory of status file, when customizing the operation settings of the J2EE server. For details about customization of the operation setup for J2EE servers, see *3.15.13 Settings in execution environment* in the manual *uCosminexus Application Server Common Container Functionality Guide*.

(I) Keys beginning with `ejbserver.DynamicStubLoading`

The following table lists the specifiable key. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.DynamicStubLoading.Enabled</code>	<p>Specify whether to use dynamic class loading.</p> <p>If you specify <code>false</code>:</p> <p>Dynamic class loading will not function. Download the stub of EJB object, the stub of EJBHome object, or the stub of business</p>	false	--	<i>3.7.3 Dynamic class loading in the EJB Container Functionality Guide</i>

Key name	Contents	Default value	VR	Related information
	<p>interface reference, and specify in the user class path of the EJB client.</p> <p>If you specify <code>true</code>:</p> <p>Dynamic class loading will function. You need not specify the stub of EJB object, the stub of EJBHome object, or the stub of business interface reference, in the user class path of the EJB client.</p>			

Legend:

--: Indicates a version earlier than the version 08-00.

(m) Keys beginning with `ejbserver.ejb`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.ejb.cmp20.cmr.use.existing_table</code>	<p>This option uses the existing CMR table during deployment. Generally, a CMR table is generated during deployment so there is no need to use the existing CMR table. However, when recovering from an error, specify this option temporarily.</p> <p>If you specify <code>false</code>:</p> <p>If a CMR table already exists during deployment, it will result in an error.</p> <p>If you specify <code>true</code>:</p> <p>The existing CMR table will be used during deployment.</p>	false	--
<code>ejbserver.ejb.timer.service.maxCallBackThreads</code>	Specify an integer from 1 to 100 for the maximum number of threads that call back the timeout method in <code>TimerService</code> , in the entire J2EE server.	1	--
<code>ejbserver.ejb.timer.service.retryCount</code>	Specify an integer from 0 to 2147483646 for the maximum frequency for retrying to call back the timeout method in <code>TimerService</code> .	1	--
<code>ejbserver.ejb.timer.service.retryInterval</code>	Specify an integer (units: seconds) from 1 to 604800 for the interval for retrying to call back the timeout method in <code>TimerService</code> .	5	--

Legend:

--: Indicates a version earlier than the version 08-00.

(n) Keys beginning with `ejbserver.ext`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.ext.method_observation.interval</code>	<p>If this property is set, it implies:</p> <ul style="list-style-type: none"> Specify whether to use the functionality for monitoring the J2EE application execution time. Specify an integer (units: seconds) from 0 to 86400 as the time interval for monitoring whether a request that is being processed has timed out and the time interval for canceling the timed out request (method). <p>If you specify 0: The functionality for monitoring the J2EE application execution time is not used. The timeout is also not monitored.</p> <p>If you specify a valid value other than 0: The functionality for monitoring the J2EE application execution time is used. The timeout and method cancellation are executed with different threads, in the specified time interval.</p> <p>If you specify an invalid value other than the above: The default value is specified.</p>	0	--	<i>5. Operations of J2EE Applications in Operation, Monitoring, and Linkage Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

(o) Keys beginning with `ejbserver.http`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.http.port</code>	<p>Specify the port number for the management server. You can specify an integer in the range from 1 to 65535.</p> <p>You cannot specify a port number that is already being used in or secured for another application. Furthermore, do not specify the same value in port numbers of the ports to be used to communicate with the Web server in multiple J2EE servers. The <code>cjstartsv</code> command cannot start up multiple J2EE servers in which identical port numbers are specified.</p>	28008	11-00

Legend:

--: Indicates a version earlier than the version 08-00.

(p) Keys beginning with `ejbserver.instrumentation`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.instrumentation.enabled</code>	Specify whether to integrate with the Management Server.	true	--

Key name	Contents	Default value	VR
	<p>If you specify <code>true</code>:</p> <p>Integration with the Management Server will become possible.</p> <p>If you specify <code>false</code>:</p> <p>Integration with the Management Server will not be possible.</p>		

Legend:

--: Indicates a version earlier than 08-00.

(q) Keys beginning with `ejbserver.javaee`

The following table lists the specifiable key. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.javaee.batch.J2EE-application-name.appTag</code>	<p>Changes the application tag for Java batch processing.</p> <p>Specify a string as the application tag if the job repository needs to be shared with multiple J2EE servers in cases such as when the system is set up in a cluster or HA configuration.</p>	<i>J2EE-server-name:J2EE-application-name</i>	11-00
<code>ejbserver.javaee.batch.J2EE-application-name.executorService.jndiName</code>	<p>Specify a string as the JNDI name of the thread pool used for Java batch processing for each application.</p> <p>If you specify an asterisk (*) for the <i>J2EE-application-name</i> portion of the key name, the specified value becomes the default value applied to all applications on the target J2EE server.</p>	<code>concurrent/_BatchExecutorService</code>	11-00
<code>ejbserver.javaee.batch.executorService.JNDI-name.keepAliveTime</code>	<p>Specify the maximum time (in seconds) during which the threads in the thread pool used for Java batch processing except the minimum threads required can remain after they are used until they are reused. You can specify an integer in the range from 0 to 2147483647. If the specified time elapses before a thread is reused, the thread is discarded.</p> <p>For the <i>JNDI-name</i> portion, specify the JNDI name of the target thread pool used for Java batch processing.</p>	60	11-00
<code>ejbserver.javaee.batch.executorService.JNDI-name.maxThreads</code>	<p>Specify the maximum number of threads in the thread pool used for Java batch processing. You can specify an integer in the range from 0 to 2147483647.</p> <p>For the <i>JNDI-name</i> portion, specify the JNDI name of the target thread pool used for Java batch processing.</p>	2147483647	11-00
<code>ejbserver.javaee.batch.executorService.JNDI-name.minThreads</code>	<p>Specify the minimum number of threads in the thread pool used for Java batch processing. You can specify an integer in the range from 0 to 2147483647.</p> <p>For the <i>JNDI-name</i> portion, specify the JNDI name of the target thread pool used for Java batch processing.</p>	0	11-00

Key name	Contents	Default value	VR
<code>ejbserver.javaee.batch.executorService.JNDI-name.queueSize</code>	Specify the maximum number of tasks that can be put in the queue of the thread pool used for Java batch processing. You can specify an integer in the range from 0 to 2147483647. For the <i>JNDI-name</i> portion, specify the JNDI name of the target thread pool used for Java batch processing.	2147483647	11-00
<code>ejbserver.javaee.batch.jobRepository.autoCreate.enabled</code>	Specify whether the job repository for Java batch processing is generated automatically. If you specify <code>true</code> (case insensitive): The job repository for Java batch processing is generated automatically. In other cases: The job repository for Java batch processing is not generated automatically.	false	11-00
<code>ejbserver.javaee.batch.jobRepository.jndiName</code>	Specify a string as the JNDI name of the data source to be made persistent in the job repository for Java batch processing. Use the user-specified name space functionality of <code>DBConnector</code> to specify an optional name in the JNDI name space, and then specify the optional name for this property.	<code>jdbc/</code> <code>__BatchPool</code>	11-00
<code>ejbserver.javaee.cdi.beanSxmlRequired</code>	Specify whether to make only the archives in which <code>beans.xml</code> exists be subject to management of CDI in compliance with the CDI 1.0 specifications in the same way as in version 09-70 or earlier. If you specify <code>true</code> (case insensitive): Only the archives in which <code>beans.xml</code> exists are managed by CDI. In other cases: All archives are managed by CDI, regardless of whether <code>beans.xml</code> exists.	false	11-00
<code>ejbserver.javaee.concurrent.hungCheckIntervalSeconds</code>	Specify the interval (in seconds) at which to check for non-responding tasks with Concurrency Utilities. You can specify an integer in the range from 1 to 2147483647.	60	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.JNDI-name.awaitTerminationSeconds</code>	Specify the maximum time (in seconds) for which to wait until the task that is being executed by the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities ends when the J2EE server stops. You can specify an integer in the range from 0 to 2147483647. If you specify 0, Concurrency Utilities are forcibly terminated without waiting for the task to end.	0	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.JNDI-name.corePoolSize</code>	Specify the initial number of threads for the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647.	16	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.JNDI-name.hungAfterSeconds</code>	Specify the thread execution time (in seconds) before the thread is judged to be non-responding if <code>false</code> is set for <code>longRunningTasks</code> of the <code>ManagedExecutorService</code> specified by	0	11-00

Key name	Contents	Default value	VR
	<i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. If you specify 0 or a smaller value, the task is not judged to be non-responding.		
<code>ejbserver.javaee.concurrent.managedExecutorService.<i>JNDI-name</i>.keepAliveSeconds</code>	Specify the maximum time (in seconds) for which to wait before the used threads other than the initial number of threads are reused for the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. If the specified time elapses before a thread is requested to be used for execution, the thread is discarded.	60	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.<i>JNDI-name</i>.longRunningTasks</code>	Specify whether the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities is a long-running task. If you specify <code>false</code> : If a task does not end before the time specified with <code>hungAfterSeconds</code> elapses after the task started, the task is judged to be non-responding and the KDJE60831-W message is output to the message log. If you specify <code>true</code> : No judgment is performed.	false	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.<i>JNDI-name</i>.maxPoolSize</code>	Specify the maximum number of threads for the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. No more threads than the specified number are generated.	16	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.<i>JNDI-name</i>.taskQueueCapacity</code>	Specify the maximum number of tasks that can be put in the queue for the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. If more tasks than the initial number of tasks are requested to run concurrently, the tasks that cannot run are put in the queue. If the queue becomes full, new threads are generated. In the case where the maximum number of threads is reached and the queue is full, if a request to start another task is issued, a <code>java.util.concurrent.RejectedExecutionException</code> is thrown and the request is rejected.	2147483647	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.<i>JNDI-name</i>.threadLifeTimeSeconds</code>	Specify the time (in seconds) before discarding the threads that are no longer used for the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. If you specify 0, the threads are always reused without being discarded.	0	11-00

Key name	Contents	Default value	VR
<code>ejbserver.javaee.concurrent.managedExecutorService.<i>JNDI-name</i>.threadPriority</code>	Specify the priority of threads generated by the <code>ManagedExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 1 to 10.	5	11-00
<code>ejbserver.javaee.concurrent.managedExecutorService.jndiNames</code>	Specify the JNDI name (as a string value) for the <code>ManagedExecutorService</code> in the user definition of Concurrency Utilities. If you specify multiple JNDI names for lookup use, specify them as a comma-separated list.	None	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.<i>JNDI-name</i>.awaitTerminationSeconds</code>	Specify the maximum time (in seconds) for which to wait until the task being executed by the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities ends when the J2EE server stops. You can specify an integer in the range from 0 to 2147483647. If you specify 0, the task is forced to end immediately.	0	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.<i>JNDI-name</i>.corePoolSize</code>	Specify (as a string value) the number of initial number of threads for the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities.	None	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.<i>JNDI-name</i>.hungAfterSeconds</code>	Specify the thread execution time (in seconds) before the thread is judged to be non-responding if <code>false</code> is set for <code>longRunningTasks</code> of the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. If you specify 0 or a smaller value, the task is not judged to be non-responding.	0	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.<i>JNDI-name</i>.keepAliveSeconds</code>	Specify the maximum time (in seconds) for which to wait before the used threads other than the initial number of threads are reused for the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to 2147483647. If the specified time elapses before a thread is requested to be used for execution, the thread is discarded.	60	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.<i>JNDI-name</i>.longRunningTasks</code>	Specify whether the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities is a long-running task. If you specify <code>false</code> : If a task does not end before the time specified with <code>hungAfterSeconds</code> elapses after the task started, the task is judged to be non-responding and the <code>KDJE60818-W</code> message is output to the message log. If you specify <code>true</code> : No judgment is performed.	<code>false</code>	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.<i>JNDI-name</i>.threadLifeTimeSeconds</code>	Specify the time (in seconds) before discarding the threads that are no longer used for the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 0 to	0	11-00

Key name	Contents	Default value	VR
	2147483647. If you specify 0, the threads are always reused without being discarded.		
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.JNDI-name.threadPriority</code>	Specify the priority of threads generated by the <code>ManagedScheduledExecutorService</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 1 to 10.	5	11-00
<code>ejbserver.javaee.concurrent.managedScheduledExecutorService.jndiNames</code>	Specify the JNDI name (as a string value) for the <code>ManagedScheduledExecutorService</code> in the user definition of Concurrency Utilities. If you specify multiple JNDI names for lookup use, specify them as a comma-separated list.	None	11-00
<code>ejbserver.javaee.concurrent.managedThreadFactory.JNDI-name.threadPriority</code>	Specify the priority of threads generated by the <code>ManagedThreadFactory</code> specified by <i>JNDI-name</i> in Concurrency Utilities. You can specify an integer in the range from 1 to 10.	5	11-00
<code>ejbserver.javaee.concurrent.managedThreadFactory.jndiNames</code>	Specify the JNDI name (as a string value) for the <code>ManagedThreadFactory</code> in the user definition of Concurrency Utilities. If you specify multiple JNDI names for lookup use, specify them as a comma-separated list.	None	11-00
<code>ejbserver.javaee.jaxrs.config.client.connectTimeout</code>	Specify the default value (in milliseconds) of the <code>jersey.config.client.connectTimeout</code> client configuration property for the JAX-RS Client API. You can specify an integer in the range from 0 to 2147483647. If you specify 0, no timeout occurs.	0	11-00
<code>ejbserver.javaee.jaxrs.config.client.readTimeout</code>	Specify the default value (in milliseconds) of the <code>jersey.config.client.readTimeout</code> client configuration property for the JAX-RS Client API. You can specify an integer in the range from 0 to 2147483647. If you specify 0, no timeout occurs.	0	11-00
<code>ejbserver.javaeeLogfilter.msgids</code>	Specify (as a string value) a comma-separated list of the IDs of installation-base-log messages that are not to be output to the message log and exception log. A space, tab, line break, or another character must not be placed between a message ID and a comma. The log messages whose IDs are included in the list are redirected from the message log or exception log to the maintenance log. If the same message ID is specified more than once, the second and subsequent specifications are ignored.	None	11-00

(r) Keys beginning with `ejbserver.jca`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.jca.adapter.tpl.bind_host</code>	Specify the IP address or host name used for communication (receipt and dispatch) in the TP1 inbound integrated function. However, if you cannot resolve the address when the host name is specified, use the default value.	Valid local address selected automatically by the system	08-50

(s) Keys beginning with `ejbserver.jndi`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.jndi.cache</code>	Specify whether to perform caching in naming. Specify ON if caching is to be performed, and OFF if caching is not to be performed.	on	--	
<code>ejbserver.jndi.cache.interval</code>	Specify the interval (units: seconds) to clear a cache, when caching is done in naming. If you specify a value other than a number from 1 to 2147483647, the cache is not cleared.	0	--	
<code>ejbserver.jndi.cache.interval.clear.option</code>	Decide the operations to be performed in the cache area of naming, after the lapse of the interval. If you specify <code>refresh</code> : Clear the entire cache area. If you specify <code>check</code> : Clear the invalid cache. If you use CTM, the object reference of the EJB home object in the cached global COBRA Naming Service will not be cleared as an invalid cache, even when you stop the application. For details, see <i>2.8.4 Notes on caching in naming</i> in the manual <i>uCosminexus Application Server Common Container Functionality Guide</i> .	refresh	--	
<code>ejbserver.jndi.cache.reference</code>	Specify whether to use the caching functionality of DataSource object. If you specify ON: The caching functionality of DataSource object is enabled and the same instance is returned when there is a search request. If you specify OFF or an invalid string: The operation is performed as normal and a different instance is returned for each search process.	off	--	<i>3.14.7 Caching the DataSource objects in the Common Container Functionality Guide</i>
<code>ejbserver.jndi.global.enabled</code>	Specify whether to register an object using the Portable Global JNDI name for the naming service, when starting the application.	true	09-00	

Key name	Contents	Default value	VR	Related information
	<p>If you specify <code>true</code>:</p> <p>The object will be registered using the Portable Global JNDI name.</p> <p>If you specify <code>false</code>:</p> <p>The object will not be registered using the Portable Global JNDI name.</p>			
<code>ejbserver.jndi.namingservice.group.specify-group-name.providerurls</code>	<p>Specify the root position of naming services belonging to each group, with a provider URL.</p> <p>In <i>specify-group-name</i>, specify the group name that has been specified in <code>ejbserver.jndi.naming-service.group.list</code>.</p> <p>Code the provider URL by using the URL schema "corbaname".</p> <p>Specification format:</p> <p><i>provider-URL [; provider-URL] *</i></p>	None	--	
<code>ejbserver.jndi.naming-service.group.list</code>	<p>Define the group of logical naming service that is to be searched during the round-robin search. The group name to be specified consists of alphanumeric characters (A-Z, a-z, 0-9) or underscores (<code>_</code>), and can be clearly identified in <code>ejbserver.jndi.naming-service.group.list</code>.</p> <p>Specification format:</p> <p><i>specify-group-name (; specify-group-name) *</i></p> <p>Note that * indicates iteration.</p>	None	--	
<code>ejbserver.jndi.request.timeout</code>	<p>Specify an integer from 0 to 86400 for the timeout period (units: seconds) of communication with the naming service. If you specify 0, or if this property is not specified, the timeout does not occur. If a value greater than 86400 is set, a warning message is output and the timeout does not occur.</p>	0	--	<i>2.11.5 Timeout of RMI-IIOP communication in the EJB Container Functionality Guide</i>

Legend:

*: Indicates iteration of the part within brackets ().

--: Indicates a version earlier than the version 08-00.

(t) Keys beginning with `ejbserver.jta`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.jta.TransactionManager.defaultTimeout</code>	<p>Specify the default value (in seconds) for the timeout time of transactions started on J2EE servers. You can specify an integer in the range from 1 to 2147483647.</p>	180	--	<i>3.15.8 Transaction timeout and statement collection in the Common</i>

Key name	Contents	Default value	VR	Related information
				<i>Container Functionality Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

(u) Keys beginning with `ejbserver.logger`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.logger.access_log.nio_http.enabled</code>	Specify whether to enable the access logger for the HTTP communications handled on the NIO HTTP server. If you specify <code>true</code> : The HTTP access logger is enabled. If you specify <code>false</code> : The HTTP access logger is disabled.	<code>true</code>	11-00	
<code>ejbserver.logger.access_log.nio_http.format</code>	Specify the format of the access log for the HTTP communications handled on the NIO HTTP server.	<code>%h %{X-Forwarded-For}i %l %u %d %rootap "%r" %s %b %D %S</code>	11-00	
<code>ejbserver.logger.access_log.websocket.enabled</code>	Specify whether to enable the access logger for the WebSocket communications handled on the NIO HTTP server. If you specify <code>true</code> : The WebSocket access logger is enabled. If you specify <code>false</code> : The WebSocket access logger is disabled.	<code>false</code>	11-00	
<code>ejbserver.logger.access_log.websocket.format</code>	Specify the format of the access log for the WebSocket communications handled on the NIO HTTP server. For <i>n</i> of the <code>%PAYLOADDATA (n)</code> format argument, specify an integer in the range from 1 to 32768. You cannot specify both of the <code>%PAYLOADDATA</code> and <code>%PAYLOADDATA (n)</code> format arguments.	<code>%TS %IO %OPCODE %ROOTAP %URI %FIN %PAYLOAD DATALEN %CLIENTIP %CLOSEREASON</code>	11-00	

Key name	Contents	Default value	VR	Related information
<code>ejbserver.logger.channels.define.DevelopmentLogFile.filenum</code>	Specify an integer from 1 to 6 for the number of log files to be output with the development check log functionality for J2EE servers.	4	09-00	
<code>ejbserver.logger.channels.define.DevelopmentLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 for the size of log files to be output with the development check log functionality for J2EE servers (unit: bytes).	1048576	09-00	
<code>ejbserver.logger.channels.define.NIOHTTPAccessLogFile.filenum</code>	Specify the number of log files used by the access logger for the HTTP communications handled on the NIO HTTP server. You can specify an integer in the range from 1 to 16.	16	11-00	
<code>ejbserver.logger.channels.define.NIOHTTPAccessLogFile.filesize</code>	Specify (in bytes) the size of each log file used by the access logger for the HTTP communications handled on the NIO HTTP server. You can specify an integer in the range from 4096 to 2147483647.	4194304	11-00	
<code>ejbserver.logger.channels.define.WebSocketAccessLogFile.filenum</code>	Specify an integer from 1 to 16 for the number of log files to use with the WebSocket access log functionality handled via the NIO HTTP server.	16	11-00	
<code>ejbserver.logger.channels.define.WebSocketAccessLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes) for the size of the log files to use with the WebSocket access log functionality handled via the NIO HTTP server.	4194304	11-00	
<code>ejbserver.logger.DevelopmentLogFile.level</code>	<p>Specify the log output level of the development check log functionality for J2EE servers.</p> <p>We recommend that you set up the INFO level during development. If you require more detailed information than the INFO level in order to investigate the errors in the application being developed, specify a level to output a more detailed log.</p> <p>You can specify the following values. The values are listed in order of the amount of information to be output from smallest to largest.</p> <ul style="list-style-type: none"> • OFF (log is not output) • SEVERE • WARNING • INFO • CONFIG • FINE • FINER • FINEST • ALL (Entire log is output) 	OFF	09-00	
<code>ejbserver.logger.channels.define.channel-name#.filenum</code>	Specify an integer from 1 to 16 for the number of log files of a J2EE server.	<ul style="list-style-type: none"> • 4, when the channel name is MaintenanceLogFile or WebServletLogFile 	--	

Key name	Contents	Default value	VR	Related information
		<ul style="list-style-type: none"> • 2, when the channel name is other than above 		
<code>ejbserver.logger.channels.define.channel-name#.filesize</code>	Specify an integer from 4096 to 2147483647 (units: bytes) for the size of the log files of a J2EE server.	<ul style="list-style-type: none"> • 16777216, when the channel name is MaintenanceLogFile • 4194304, when the channel name is ServletLogFile • 1048576, when the channel name is other than above 	--	
<code>ejbserver.logger.enabled.*</code>	Specify the log level of a J2EE server. Specify either one or more from among Error, Warning, Information and Debug. If you specify only one log level, only the log of the applicable log level is output. When specifying more than one log levels, demarcate each level-name string with a comma (,). Normally, use the default value.	Error	--	
<code>ejbserver.logger.systemlog.enabled</code>	Specify whether to output the log of messages about invocation, stopping and abnormal termination of a J2EE server, to the event log (syslog in UNIX). If you specify <code>true</code> : The log will be output to event log (syslog in UNIX). If you specify <code>false</code> : The log will not be output in event log (syslog in UNIX).	true	--	
<code>ejbserver.logger.rotationTime</code>	Specify the time for switching the file to which the J2EE server log is output, in the HHMMSS format. If the time is not specified, the output destination is switched using the log file size. Note that even if this key is specified, the file size specification is valid. The output destination files are switched when the time specified in this key is	None	09-00	<i>3. Preparing for Troubleshooting in Maintenance and Migration Guide</i>

Key name	Contents	Default value	VR	Related information
	reached or when the output destination file reaches the specified file size.			
<code>ejbserver.logger.rotationStyle</code>	Specify the rules for naming a file when the file to which the J2EE server log will be output is switched. If you specify <code>SHIFT</code> : The file will be named in the shift mode. The total number of files is equal to the specified number of output destination files + 1 (the current output destination files). If you specify <code>WRAP</code> : The file will be named in the wraparound mode.	WRAP	09-00	<i>3. Preparing for Troubleshooting in Maintenance and Migration Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

#:

You can set the following names as channel name:

- Channels for output of Cosminexus system log:

`MessageLogFile`, `MaintenanceLogFile`, `ExceptionLogFile`, `ConsoleLogFile`, `EJBContainerLogFile`, `WebContainerLogFile`, `WebServletLogFile`, `UserOutLogFile`, `UserErrLogFile`, `JPAOperationLogFile`, `JPAMaintenanceLogFile`

- Channels for output of resource depletion monitoring log

`MemoryWatchLogFile`, `FileDescriptorWatchLogFile`, `ThreadWatchLogFile`, `ThreaddumpWatchLogFile`, `RequestQueueWatchLogFile`, `HttpSessionWatchLogFile`, `ConnectionPoolWatchLogFile`

For details about the acquisition of documents, see *2.3 Acquiring the Data* in the manual *uCosminexus Application Server Maintenance and Migration Guide*.

(v) Keys beginning with `ejbserver.management`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.management.JVM.stats_monitor.FullGCCou nt.enabled</code>	Specify whether to enable the monitoring of the frequency of Full GC. true: Enable. false: Disable.	true	--	<i>3.4 Event issuing functionality in the Operation, Monitoring, and Linkage Guide</i>
<code>ejbserver.management.JVM.stats_monitor.FullGCCou nt.threshold</code>	Specify an integer from 1 to 2147483647 for the frequency that acts as the threshold value when monitoring the frequency of Full GC.	10	--	<i>3.4 Event issuing functionality in the Operation, Monitoring, and Linkage Guide</i>

Key name	Contents	Default value	VR	Related information
<code>ejbserver.management.JVM.stats_monitor.FullGCCount.interval</code>	Specify an integer from 1 to 2147483647 (units: seconds) for the threshold value-monitoring interval when monitoring the frequency of Full GC.	600	--	<i>3.4 Event issuing functionality in the Operation, Monitoring, and Linkage Guide</i>
<code>ejbserver.management.statistics.interval</code>	Specify an integer from 1 to 86400 (units: seconds) for the statistics collection interval.	60	--	<i>3.3 Statistics File Output Functionality in the Operation, Monitoring, and Linkage Guide</i>
<code>ejbserver.management.statistics_file.base_time</code>	Specify an integer from 0 to 1439 (units: minutes) as the base time for the time switching operation of the statistics file, by incrementing from the local time 1970-01-01 00: 00: 00. When the local time 1970-01-01 hh: mm is taken as the base, specify $h \times 60 + m$.	0	--	
<code>ejbserver.management.statistics_file.dir</code>	Specify the directory to output the statistics file. When changing the output destination directory, specify a separate directory for each J2EE server.	<ul style="list-style-type: none"> In Windows <i>Cosminexus-working-directory\ejb\server-name\stats</i> In UNIX <i>Cosminexus-working-directory/ejb/server-name/stats</i> 	--	
<code>ejbserver.management.statistics_file.enabled</code>	Specify whether to enable the functionality to output the statistics file. true: Enable. false: Disable.	true	--	<i>3.3 Statistics File Output Functionality in the Operation, Monitoring, and Linkage Guide</i>
<code>ejbserver.management.statistics_file.num</code>	Specify an integer from 2 to 168 for the number of statistics file.	7	--	<i>3.3 Statistics File Output Functionality in the Operation, Monitoring, and Linkage Guide</i>
<code>ejbserver.management.statistics_file.period</code>	Specify an integer from 1 to 744 (units: hours) for the switching period in the time switching operation of the statistics file.	24	--	
<code>ejbserver.management.webcontainer.stats_monitor.</code>	Specify whether to enable the monitoring of the total pending request count for Web containers.	true	09-00	

Key name	Contents	Default value	VR	Related information
<code>whole_waiting_request_count.enabled</code>	<p>true: Enable.</p> <p>false: Disable.</p>			
<code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.high_threshold</code>	<p>Specify an integer from 1 to 100 (unit: %) as the percentage when a message is output to convey that the percentage of the total pending request count for Web containers has reached the warning level. Specify a value of <code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.low_threshold</code> or more.</p> <p>If the percentage of the total pending request count for Web containers is greater than the specified value, the message is displayed.</p> <p>If you specify 100, an alert message is displayed when the storage ratio of the total pending request count for Web containers becomes 100%.</p>	80	09-00	
<code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.low_threshold</code>	<p>Specify an integer from 0 to 99 (unit: %) as the percentage when a message is output to convey that the percentage of the total pending request count for Web containers has reached the normal level. Specify a value of <code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.high_threshold</code> or less.</p> <p>If the percentage of the total pending request count for Web containers is less than the specified value, the message is displayed.</p> <p>If you specify 0, an alert message is displayed when the storage ratio of the total pending request count for Web containers becomes 0%.</p>	0	09-00	
<code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.enabled</code>	<p>Specify whether to enable the monitoring of the pending request count for Web containers.</p> <p>true: Enable.</p> <p>false: Disable.</p>	true	09-00	
<code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.high_threshold</code>	<p>Specify an integer from 1 to 100 (unit: %) as the percentage when a message is output to convey that the percentage of the pending request count for Web containers has reached the warning level. Specify a value of <code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.low_threshold</code> or more.</p> <p>If the percentage of the pending request count for Web containers is greater than the specified value, the message is displayed.</p> <p>If you specify 100, an alert message is displayed when the storage ratio of the pending request count for Web containers becomes 100%.</p>	80	09-00	
<code>ejbserver.management.webcontainer.stats_monitor.</code>	<p>Specify an integer from 0 to 99 (unit: %) as the percentage when a message is output to convey that</p>	0	09-00	

Key name	Contents	Default value	VR	Related information
waiting_request_count.low_threshold	<p>the percentage of the pending request count for Web containers has reached the normal level. Specify a value of <code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.high_threshold</code> or less.</p> <p>If the percentage of the pending request count for Web containers becomes less than the specified value, the message is displayed.</p> <p>If you specify 0, an alert message is displayed when the storage ratio of the pending request count for Web containers becomes 0%.</p>			

Legend:

--: Indicates a version earlier than the version 08-00.

(w) Keys beginning with `ejbserver.manager`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.manager.agent.Agent.conf</code>	Specify the settings required for integrating with the Management Server. The Management Server automatically sets these contents in a J2EE server. For details on the contents set up automatically by the Management Server in a J2EE server, see <i>Appendix E.4 Contents set automatically by Management Server to the J2EE server</i> in the <i>uCosminexus Application Server System Setup and Operation Guide</i> .	None	--
<code>ejbserver.manager.agent.Agent.enabled</code>	Specify the settings required for integrating with the Management Server. The Management Server automatically sets these contents in a J2EE server. For details on the contents set up automatically by the Management Server in a J2EE server, see <i>Appendix E.4 Contents set automatically by Management Server to the J2EE server</i> in the manual <i>uCosminexus Application Server System Setup and Operation Guide</i> .	false	--
<code>ejbserver.manager.agent.JP1EventAgent.conf</code>	Specify the path of the setup file for JP1 integration.	None	--
<code>ejbserver.manager.agent.JP1EventAgent.enabled</code>	Specify whether to integrate with JP1.	false	--
<code>ejbserver.manager.jp1event.event_server_name</code>	Specify a value similar to the address of the ports parameter that is specified in the event server setup file (<code>conf</code>) of the event service of JP1/Base in use. If multiple addresses are specified in the ports parameter, specify any one of the specified addresses. If you use an event service, wherein "0.0.0.0" (default value) is specified in the address of the ports parameter, either omit this key or specify the host name of the local machine or localhost.	localhost	--
<code>ejbserver.manager.agent.MEventAgent.conf</code>	Specify an absolute path for the property file for issuing the Management event. If you do not specify the property file, or if the specified file does not exist, the Management event is not issued. For details on property file for issuing the Management event, see <i>8.2.11 Property file for issuing Management events</i> .	None	--

Key name	Contents	Default value	VR
<code>ejbserver.manager.agent.MEventAgent.enabled</code>	<p>Specify whether to enable the functionality for issuing the Management event.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 2em;">The functionality for issuing the Management event will be enabled.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 2em;">The functionality for issuing the Management event will be disabled.</p> <p>If you specify an invalid value, the default value will be set.</p>	false	--

Legend:

--: Indicates a version earlier than the version 08-00.

(x) Keys beginning with `ejbserver.naming`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.naming.exec.args</code>	<p>Specify the runtime option added in the CORBA Naming Service that is invoked when the CORBA Naming Service is used in the automatic invocation mode (<code>ejbserver.naming.startupMode=automatic</code> or <code>inprocess</code>). Generally, there is no need to set a value in this property. This property is used to determine, take action and avoid any failures in the CORBA Naming Service, when the CORBA Naming Service is used in the automatic invocation mode.</p> <p>For the runtime option, specify the string in the format that is specified in the command line argument of <code>nameserv</code> (specify by adding <code>-J</code> at the beginning of each property and demarcating with a space. It is actually specified in one line).</p> <p>(Example of specification)</p> <pre>ejbserver.naming.exec.args=-J- Dvbroker.se.iiop_tp.scm.iiop_tp.listener.port=900 -J-Dvbroker.agent.enableLocator=false</pre> <p>If, however, the CORBA Naming Service is used in the in-process mode, you cannot specify the following properties:</p> <ul style="list-style-type: none"> • <code>javax.rmi.CORBA.StubClass</code> • <code>javax.rmi.CORBA.UtilClass</code> • <code>javax.rmi.CORBA.PortableRemoteObjectClass</code> • <code>vbroker.serverManager.name</code> • <code>vbroker.orb.enableServerManager</code> • <code>vbroker.agent.enableLocator</code> • <code>vbroker.se.iiop_tp.host</code> <p>This property value is given priority over the values specified in <code>ejbserver.naming.port</code> and <code>vbroker.agent.enableLocator</code> property. If, however, the same property as that specified in <code>ejbserver.naming.exec.args</code> is set in the system properties when the CORBA Naming Service is invoked in the in-process mode, the information set in the system properties is given priority.</p> <p>For details about the properties that you can specify when executing the CORBA Naming Service, see the manual <i>Borland(R) Enterprise Server VisiBroker(R) Developers Guide</i> and the manual <i>Borland(R) Enterprise Server VisiBroker(R) Programmers Reference</i>.</p>	None	--
<code>ejbserver.naming.host</code>	Specify the host name or the IP address that invoke the CORBA Naming Service that the J2EE server uses.	localhost	--

Key name	Contents	Default value	VR
	<p>When using the name switching functionality, do not use "localhost" as the host name. Specify the host name or the IP address that the CORBA Naming Service invokes.</p> <p>If the CORBA Naming Service is used in the automatic invocation mode (<code>ejbserver.naming.startupMode=automatic</code> or <code>in-process</code>), specify either the default value ("localhost"), or the host name or IP address that starts the J2EE server.</p>		
<code>ejbserver.naming.nameroot</code>	<p>Specify a name when the name is added to the CORBA Naming Service that is invoked, when the CORBA Naming Service is used in the automatic invocation mode (<code>ejbserver.naming.startupMode=automatic</code> or <code>in-process</code>). Specify the name with a string consisting of alphanumeric characters (A-Z, a-z, 0-9) or underscores (_). This name is used in the parameters of the <code>nsutil</code> command of VisiBroker.</p> <p>If a name is not specified, the name "NameService" is automatically set in VisiBroker.</p> <p>For details about how to use the <code>nsutil</code> command, and also about its usage conditions, see the manual <i>Borland(R) Enterprise Server VisiBroker(R) Developers Guide</i>.</p>	None	--
<code>ejbserver.naming.port</code>	<p>Specify an integer from 1 to 65535 for the port numbers of the CORBA Naming Service that the J2EE server uses. You cannot specify a port number that is already being used by another application. If the J2EE server is started by specifying a port number that is already being used by another application, the invocation process might not be finished.</p>	900	--
<code>ejbserver.naming.protocol</code>	<p>Specify the access protocol to the CORBA Naming Service that is used in the J2EE servers. Currently, this key supports only <code>corbaname</code>. You can, however, perform the operations even with the protocols (<code>iioploc</code> or <code>iiopname</code>) that were in use in the older versions.</p>	<code>corbaname</code>	--
<code>ejbserver.naming.startupMode#</code>	<p>Specify the invocation mode of the CORBA Naming Service.</p> <p>If you specify <code>manual</code>:</p> <p>Specify when the CORBA Naming Service is to be used in manual invocation mode.</p> <p>Before starting the J2EE server, you need to manually start the CORBA Naming Service.</p> <p>When starting the J2EE server, manually specify the CORBA Naming Service that is specified in <code>ejbserver.naming.host</code> and <code>ejbserver.naming.port</code>. When you specify this property value, the CORBA Naming Service is not invoked automatically from the invocation process of the J2EE server.</p> <p>If you specify <code>automatic</code>:</p> <p>Specify when CORBA Naming Service is to be used in the automatic invocation mode.</p> <p>When a J2EE server is started, the CORBA Naming Service starts automatically as out-process.</p> <p>In this mode, the CORBA Naming Service also stops automatically, when the J2EE server is shut down. If, however, the CORBA Naming Service specified in <code>ejbserver.naming.port</code> is already running on the local host when the J2EE server is started, that CORBA Naming Service will be used without performing the automatic start process. In this case, the CORBA Naming Service does not stop automatically when the J2EE server is shut down.</p> <p>If you specify <code>in-process</code>:</p> <p>Specify when CORBA Naming Service is to be used in the automatic invocation mode.</p> <p>This is the mode in which the CORBA Naming Service is automatically started as an in-process, when the J2EE server is started. If the CORBA</p>	<code>inprocess</code>	--

Key name	Contents	Default value	VR
	Naming Service specified in <code>ejbserver.naming.port</code> is already running on the local host when the J2EE server is started, an error message is output and the invocation process of the J2EE server fails.		
<code>ejbserver.naming.startupRetryCount</code>	If the CORBA Naming Service still does not start after the lapse of invocation wait time of the CORBA Naming Service that is specified in <code>ejbserver.naming.startupWaitTime</code> , specify an integer from 0 to 2147483647 for the iteration frequency to await invocation only for the number of seconds specified in <code>ejbserver.naming.startupWaitTime</code> . If you specify 0, the process for checking invocation status of the CORBA Naming Service is not retried. If you specify 0 in <code>ejbserver.naming.startupWaitTime</code> , this property value is invalid.	9	--
<code>ejbserver.naming.startupWaitTime</code>	Specify an integer from 0 to 2147483647 for the standby time (units: seconds) until the CORBA Naming Service becomes available when a J2EE server is started. When you specify 0, invocation of the CORBA Naming Service is not awaited. If <code>inprocess</code> is set in <code>ejbserver.naming.startupMode</code> , do not specify 0.	1	--

Legend:

--: Indicates a version earlier than the version 08-00.

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If the J2EE server is started by using the Management Server, do not specify `automatic`. If you specify `automatic`, the CORBA Naming Service process is no longer monitored by the operation support functionality of TPBroker and is not restarted even if the process is down.

(y) Keys beginning with `ejbserver.rmi`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.rmi.localinvocation.scope</code>	Specify the scope of the functionality for optimizing local invocation. If you specify <code>none</code> : There is no scope. If you specify <code>app</code> : The contents of the same application are included in the scope. If you specify <code>all</code> : The contents of the same J2EE server are included in the scope.	<code>app</code>	--	<i>2.13 Invoking the remote interface of EJB in the EJB Container Functionality Guide</i>
<code>ejbserver.rmi.logger.file num</code>	Specify an integer from 2 to 16 for the number of RMI communication log files of a J2EE server. If you specify a non-numeric value, or a numeric value outside the range, or if you do not specify a string, a message is output and the default value will be set.	4	--	

Key name	Contents	Default value	VR	Related information
<code>ejbserver.rmi.logger.file size</code>	Specify an integer from 8192 to 2147483647 (units: bytes) for the size of the RMI communication log files of a J2EE server.	1048576	--	
<code>ejbserver.rmi.naming.host</code>	Specify the host name or the IP address of the RMI registry and MBean server that the J2EE server uses in a multi-homed host environment. The specified single-byte alphabets are not case-sensitive.	None	--	
<code>ejbserver.rmi.naming.port</code>	Specify an integer from 1 to 65535 for the port number of RMI registry used by the J2EE server. You cannot specify a port number that is already being used by another application. If the J2EE server is started by specifying a port number that is already being used by another application, the invocation process may not finish.	23152	--	
<code>ejbserver.rmi.passbyreference#</code>	<p>If you specify <code>true</code>, the arguments and the return value are not passed by value but are passed by reference, by invoking the EJB method that contains the remote interface. If, however, the range specified in <code>ejbserver.rmi.localinvocation.scope</code> is exceeded when invoking the EJB method, the pass-by-reference functionality becomes disabled.</p> <p>With the help of pass-by-reference, you can reduce the cost generated by copying the value, but, you need to be careful as the original value can be changed by using the reference that has been passed.</p>	false	--	
<code>ejbserver.rmi.remote.listener.port</code>	<p>You can specify optional values to fix the request reception port for the statistics information acquisition by the JMX client (such as Administration Agent and JP1/Performance Management - Agent Option for uCosminexus Application Server). Specify an integer from 0 to 65535.</p> <p>You cannot specify a port number that is already being used by another application. If the J2EE server is started by specifying a port number that is already being used by another application, the invocation process may not finish.</p> <p>If you specify 0 for this property, a random value is specified.</p> <p>Therefore, the request reception port might change when the J2EE server is restarted.</p> <p>A JMX client might send a request to the port that was previously used as the request reception port, but the port might have already been used by another process. To avoid this problem, we recommend that you fix the request reception port for statistics acquisition.</p>	23550	--	
<code>ejbserver.rmi.request.timeout</code>	<p>Specify an integer from 0 to 86400 for the communication timeout period (unit: seconds) between the client and server.</p> <p>If you specify 0, or if this property is not specified, the timeout does not occur. Note that if a value exceeding 86400 is set, a warning message is output, and there is no timeout.</p>	0 (seconds)	--	<i>2.11.5 Timeout of RMI-IIOP communication in the EJB Container Functionality Guide</i>

Key name	Contents	Default value	VR	Related information
<code>ejbserver.rmi.stateless.unique_id.enabled</code>	<p>Specify whether the invocation of the <code>remove</code> method of Stateless Session Bean is required.</p> <p>If you specify <code>true</code>:</p> <p>The invocation of the <code>remove</code> method for the EJBObject of Stateless Session Bean is not required.</p> <p>If you invoke the <code>business</code> method after invoking the <code>remove</code> method, the <code>java.rmi.NoSuchObjectException</code> exception does not occur and the <code>business</code> method is executed.</p> <p>If you specify <code>false</code>:</p> <p>The invocation of the <code>remove</code> method for EJBObject of the Stateless Session Bean is required.</p> <p>If you invoke the <code>business</code> method after invoking the <code>remove</code> method, the <code>java.rmi.NoSuchObjectException</code> exception occurs.</p>	false	--	<i>4.3.1 Notes on implementing the Stateless Session Beans in EJB Container Functionality Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

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Pass-by-reference can also be set in the EJB from the server management commands.

(z) Keys beginning with `ejbserver.security`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.security.digest.algorithm</code>	<p>Specify the message digest algorithm that is used for authentication of the security management functionality. You can specify MD5, SHA-1, SHA-256, or another message digest algorithm supported by JDK. For details, see <i>java.security.MessageDigest</i> in the Java SE API reference. If you specify an invalid value, it will be changed to the default value.</p> <p>If you change the value that has already been set for this property, you must delete the user and then re-create it. This functionality treats different string values as different message digest algorithms.</p> <p>If you use an algorithm other than SHA-1 to implement security on the EJB client, the version of the EJB client must be 09-70 or later. If the version is earlier than 09-70, authentication fails.</p> <p>If you implement security on the EJB client whose version is earlier than 09-70, you must use SHA-1 as the digest algorithm on the J2EE server used as an authentication server.</p>	SHA-1	09-70

(aa) Keys beginning with ejbserver.server

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>ejbserver.server.eheap.ht tpsession.enabled</code>	<p>Specify whether to deploy the objects, stored in the HTTP session, on the Explicit heap.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 40px;">The objects stored in the HTTP session will be deployed on the Explicit heap.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 40px;">The objects stored in the HTTP session will be deployed on the Java heap area.</p> <p>However, if JavaVM option <code>HitachiUseExplicitMemory</code> is disabled, this property is disabled (same as for the case when <code>false</code> is specified).</p>	true	08-00	
<code>ejbserver.server.mutex.in vocation.timeout</code>	<p>Specify an integer from 45 to 92233720368547758 for the exclusive timeout period (units: seconds) required to concurrently access the Entity Beans of the same primary key. Specify the timeout period above the default value (45 seconds) and below the <code>java.lang.Long.MAX_VALUE/1000</code> (seconds). If you specify a value lesser than the default value, the timeout period is considered as 45 (seconds).</p> <p>If you specify a value greater than <code>java.lang.Long.MAX_VALUE/1000</code> (seconds), the timeout period is considered as <code>java.lang.Long.MAX_VALUE</code> (milliseconds). Similarly, if you specify a value greater than <code>java.lang.Long.MAX_VALUE</code>, the default value is considered.</p>	45	--	
<code>ejbserver.server.prf.PRFI D</code>	<p>Specify the PRF identifier.</p> <p>If you specify a PRF identifier when the PRF daemon is invoked, specify the same PRF identifier.</p> <p>If the PRF identifier is omitted when invoking the PRF daemon, do not specify the PRF identifier. If the PRF identifiers do not match, the performance analysis trace is not collected.</p>	PRF_ID	--	
<code>ejbserver.server.threaddu mp.filenum</code>	<p>Specify an integer from 1 to 2147483647 for the upper limit of the thread dump file count, when the J2EE server detects an error and voluntarily outputs the thread dump.</p> <p>If you specify a value outside the range, the default value will be set.</p> <p>If the environment variable <code>JAVACOREDİR</code> is specified, the current value is a total of the number of thread dump files in both the directory specified in the environment variable <code>JAVACOREDİR</code> and the default output destination directory (Windows:</p>	256	--	<i>4. Monitoring Resource Depletion in the Operation, Monitoring, and Linkage Guide</i>

Key name	Contents	Default value	VR	Related information
	<p><i>Cosminexus-working-directory\ejb\server-name</i>, Unix: <i>Cosminexus-working-directory/ejb/server-name</i>).</p> <p>If there is an external request to output the thread dump, the files of thread dump are output, regardless of the setting of this option. The following are examples of external requests to output the thread dump.</p> <ul style="list-style-type: none"> • <code>jheapprof</code> command • <code>cjdumpsv</code> command • <code>-fd</code> specification of the <code>cjstopsv</code> command • <code>Ctrl+Break</code> (in Windows) in the execution console of J2EE server • Specifying the <code>kill</code> command <code>-3 (SIGTERM)</code> for a J2EE server process (in UNIX) 			

Legend:

--: Indicates a version earlier than the version 08-00.

Blank cell: Related information does not exist.

(ab) Keys beginning with `ejbserver.stateful`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.stateful.passivate.switch</code>	<p>Specify whether to use the functionality for passivating and activating the Stateful Session Bean.</p> <p>If you specify <code>true</code>:</p> <p>The functionality for passivating and activating the Stateful Session Bean will be used.</p> <p>If you specify <code>false</code>:</p> <p>The functionality for passivating and activating the Stateful Session Bean will not be used.</p>	false	--

Legend:

--: Indicates a version earlier than the version 08-00.

(ac) Keys beginning with `ejbserver.stdoutlog`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.stdoutlog.autoflush</code>	<p>Specify whether to enable the automatic flush functionality of the user output log and user error log.</p> <p>The automatic flush functionality is the automatic flush option of <code>java.io.PrintStream</code> used for</p>	false	08-00

Key name	Contents	Default value	VR
	<p>the output of user output log (<code>user_out[n].log</code>) and user error log (<code>user_err[n].log</code>).</p> <p>If you specify <code>true</code>:</p> <p>The automatic flush functionality will be enabled. This might cause performance degradation compared to when the functionality is disabled.</p> <p>If you specify <code>false</code>:</p> <p>The automatic flush functionality will be disabled. If a processing, such as <code>java.io.PrintStream.print()</code>, for which automatic flush of <code>PrintStream</code> class is not performed is executed, contents to be output to user output log and user error log might be stored in the buffer and compress the memory.</p>		

(ad) Keys beginning with `ejbserver.watch`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.watch.defaultRequestQueue.enabled</code>	<p>Specify whether to enable the alert output to monitor pending queues of HTTP requests, in the case of the default pending queue.</p> <p>If you specify <code>true</code>:</p> <p>Alert output to monitor pending queues of HTTP requests will be enabled, in the case of the default pending queue.</p> <p>If you specify <code>false</code>:</p> <p>Alert output to monitor pending queues of HTTP requests will be disabled, in the case of the default pending queue.</p>	<code>true</code>	--
<code>ejbserver.watch.defaultRequestQueue.interval</code>	<p>Specify an integer from 1 to 2147483647 (units: seconds) for the interval to monitor the pending queues of HTTP requests, in the case of the default pending queue.</p>	30	--
<code>ejbserver.watch.defaultRequestQueue.threshold</code>	<p>Specify an integer from 1 to 100 (units: %) for the threshold value to output alert messages. If the storage ratio of the default pending queue for the requests to be monitored exceeds the value specified in this key, an alert message will be output.</p>	80	--
<code>ejbserver.watch.defaultRequestQueue.writefile.enabled</code>	<p>Specify whether to output the results to monitor pending queues of HTTP requests to a file, in the case of the default pending queue.</p> <p>If you specify <code>true</code>:</p> <p>The results of monitoring the pending queues of HTTP requests will be output to a file, in the case of the default pending queue.</p> <p>If you specify <code>false</code>:</p> <p>The results of monitoring the pending queues of HTTP requests will not be output to a file, in the case of the default pending queue.</p>	<code>true</code>	--
<code>ejbserver.watch.enabled</code>	<p>Specify whether to enable the depletion monitoring of all the resources.</p> <p>If you specify <code>true</code>:</p> <p>Depletion monitoring of all the resources will be enabled.</p>	<code>true</code>	--

Key name	Contents	Default value	VR
	<p>If you specify <code>false</code>:</p> <p>Depletion monitoring of all the resources will be disabled. In this case, though depletion monitoring of each resource is set to enable, depletion monitoring of all resources is disabled.</p>		
<code>ejbserver.watch.fileDescriptor.enabled</code>	<p>Specify whether to enable the alert output for file descriptor monitoring. Note that file descriptor monitoring cannot be used in Windows and AIX.</p> <p>If you specify <code>true</code>:</p> <p>Alert output for file descriptor monitoring will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>Alert output for file descriptor monitoring will be disabled.</p>	<code>true</code>	--
<code>ejbserver.watch.fileDescriptor.interval</code>	<p>Specify an integer from 1 to 2147483647 (units: seconds) for the interval for monitoring file descriptor. Note that file descriptor monitoring cannot be used in Windows and AIX.</p>	60	--
<code>ejbserver.watch.fileDescriptor.threshold</code>	<p>Specify an integer from 1 to 2147483647 for the threshold value to monitor the usage of a file descriptor. When the number of in-use file descriptors exceeds the threshold value, an alert will be output. Set the threshold value in the following manner:</p> <p>The number of file descriptors that can be allocated in the OS processes[#] > Value acquired from the file descriptor estimation formula > File descriptor threshold value</p> <p>#</p> <p>On some platforms, the system may not have any upper limit.</p> <p>Note that file descriptor monitoring cannot be used in Windows and AIX.</p>	2147483647	--
<code>ejbserver.watch.fileDescriptor.writefile.enabled</code>	<p>Specify whether to output the results of file descriptor monitoring in a file. Note that file descriptor monitoring cannot be used in Windows and AIX.</p> <p>If you specify <code>true</code>:</p> <p>The results of file descriptor monitoring will be output in a file.</p> <p>If you specify <code>false</code>:</p> <p>The results of file descriptor monitoring will not be output in a file.</p>	<code>true</code>	--
<code>ejbserver.watch.memory.enabled</code>	<p>Specify whether to enable alert output of memory monitoring.</p> <p>If you specify <code>true</code>:</p> <p>Alert output of memory monitoring will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>Alert output of memory monitoring will be disabled.</p> <p>If you specify <code>true</code>, make sure that the same value is set for the following Java VM options:</p> <ul style="list-style-type: none"> • <code>-XX:MetaspaceSize</code> • <code>-XX:MaxMetaspaceSize</code> <p>If different values are set, the system might perform Full GC without generating an alert.</p>	<code>true</code>	--
<code>ejbserver.watch.memory.interval</code>	<p>Specify an integer from 1 to 2147483647 (units: seconds) for the memory-monitoring interval.</p>	60	--
<code>ejbserver.watch.memory.threshold</code>	<p>Specify an integer from 1 to 100 (units: %) for the threshold value to monitor the memory usage status. The system generates an alert if it detects a symptom that can trigger Full GC under any of the following conditions:</p> <p>If serial GC is enabled:</p> <ul style="list-style-type: none"> • The ratio (value output for Rate1 of resource depletion monitoring information) of Tenured area consumption size with Tenured total size is more than the threshold value. 	80	--

Key name	Contents	Default value	VR
	<ul style="list-style-type: none"> The ratio (value output for Rate2 of resource depletion monitoring information) of New area total size with Tenured area maximum free size is more than the threshold value. The ratio (value output for Rate3 in the resource depletion monitoring information) of the used metaspace area size to the maximum metaspace area size is more than the threshold value. <p>If G1 GC is enabled:</p> <ul style="list-style-type: none"> The ratio (value output for Rate1 in the resource depletion monitoring information) of the used Java heap area size to the maximum Java heap area size is more than the threshold value. The ratio (value output for Rate3 in the resource depletion monitoring information) of the used metaspace area size to the maximum metaspace area size is more than the threshold value. 		
<code>ejbserver.watch.memory.writefile.enabled</code>	<p>Specify whether to output the results of memory monitoring in a file.</p> <p>If you specify <code>true</code>:</p> <p>The results of memory monitoring will be output in a file.</p> <p>If you specify <code>false</code>:</p> <p>The results of memory monitoring will not be output in a file.</p>	<code>true</code>	--
<code>ejbserver.watch.thread.enabled</code>	<p>Specify whether to enable alert output of thread monitoring. Note that you cannot monitor the number of threads in Linux.</p> <p>If you specify <code>true</code>:</p> <p>Alert output of thread monitoring will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>Alert output of thread monitoring will be disabled.</p>	<code>true</code>	--
<code>ejbserver.watch.thread.interval</code>	<p>Specify an integer from 1 to 2147483647 (units: seconds) for the thread monitoring interval. Note that you cannot monitor the number of threads in Linux.</p>	<code>60</code>	--
<code>ejbserver.watch.thread.threshold</code>	<p>Specify an integer from 1 to 2147483647 for the threshold value for monitoring the usage of threads. When the number of generated threads is greater than the threshold value, alert will be output. Set the threshold value in the following manner:</p> <p>The number of threads that can be allocated in the OS processes[#]>Value acquired from the thread estimation formula>Thread threshold value #</p> <p>On some platforms, the system may not have any upper limit. Note that you cannot monitor the number of threads in Linux.</p>	<code>2147483647</code>	--
<code>ejbserver.watch.thread.writefile.enabled</code>	<p>Specify whether to output the results of thread monitoring to a file. Note that you cannot monitor the number of threads in Linux.</p> <p>If you specify <code>true</code>:</p> <p>The results of thread monitoring will be output to a file.</p> <p>If you specify <code>false</code>:</p> <p>The results of thread monitoring will not be output to a file.</p>	<code>true</code>	--
<code>ejbserver.watch.thread.readdump.enabled</code>	<p>Specify whether to enable alert output of thread dump monitoring.</p> <p>If you specify <code>true</code>:</p> <p>Alert output of thread dump monitoring will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>Alert output of thread dump monitoring will be disabled.</p>	<code>true</code>	--
<code>ejbserver.watch.thread.readdump.interval</code>	<p>Specify an integer from 1 to 2147483647 (units: seconds) for the intervals in the thread dump monitoring period.</p>	<code>30</code>	--

Key name	Contents	Default value	VR
<code>ejbserver.watch.threaddump.threshold</code>	Specify an integer from 1 to 100 (units: %) for the ratio of the threshold value for thread dump monitoring with respect to the maximum value. When the ratio of the current value with respect to the maximum value of number of files of thread dump is greater than the threshold value, alert will be output. If the environment variable <code>JAVACOREDIR</code> is specified, the current value is a total of the number of thread dump files in both the directory specified in the environment variable <code>JAVACOREDIR</code> and the default output destination directory.	80	--
<code>ejbserver.watch.threaddump.writefile.enabled</code>	Specify whether to output the results of thread dump monitoring to a file. If you specify <code>true</code> : The results of thread dump monitoring will be output to a file. If you specify <code>false</code> : The results of thread dump monitoring will not be output to a file.	true	--
<code>ejbserver.watch.memory.rate2alert.enabled</code>	Specify whether to enable alert generation for Rate2 in the memory depletion monitoring information that is output by the resource depletion monitoring functionality. If you specify <code>true</code> : Alert generation for Rate2 is enabled. Note, however, that if alert generation for Rate2 is enabled when G1 GC is enabled, no alert is generated because Rate2 is always -1. If you specify <code>false</code> : Alert generation for Rate2 is disabled.	true	Cosminexus Component Container 09-70-12 or later and 09-80-02 or later

Legend:

--: Indicates a version earlier than the version 08-00.

(ae) Keys beginning with `ejbserver.webj2ee`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>ejbserver.webj2ee.connectionAutoClose.enabled</code>	Specify whether to use the automatic close functionality. If you specify <code>true</code> : The automatic close functionality will be enabled. If you specify <code>false</code> : The automatic close functionality will be disabled. If you specify an invalid value, the default value will be set.	true	--

Legend:

--: Indicates a version earlier than the version 08-00.

(af) Keys beginning with `https`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>https.cipherSuites</code>	Specify the recommended coding suite to be used in <code>HttpsURLConnection</code> .#	#	09-00
<code>https.protocols</code>	Specify the protocol to be used in <code>HttpsURLConnection</code> .#	#	09-00

#

For details about keys, see the JDC documentation.

(ag) Keys beginning with java

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>java.naming.factory.initial</code>	Specify the factory class for the implementation class of the context delegated by <code>InitialContext</code> of JNDI. The operation for each set value is as follows: <code>com.hitachi.software.ejb.jndi.InsContextFactory</code> : Specify this context when normal search functionality is used instead of the JNDI round-robin search functionality. <code>com.hitachi.software.ejb.jndi.GroupContextFactory</code> : Specify this context when the JNDI round-robin search functionality is used during execution of applications (EJB) in the J2EE server.	<code>com.hitachi.software.ejb.jndi.InsContextFactory</code>	--

Legend:

--: Indicates a version earlier than the version 08-00.

(ah) Keys beginning with vbj

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>vbj.java2iioop.jvm.maxHeapSize</code>	Specify the maximum heap size of the <code>java2iioop</code> command that is invoked when a J2EE application is started. Specify the value in the format that is accepted by the <code>-Xmx</code> and <code>-Xms</code> options of the <code>java</code> command. If you specify the value in any other format, the operation may not produce the desired results. Specify as follows: <ul style="list-style-type: none"> Specify a value from 2048 to 4294966272. Specify a value greater than the value specified in <code>vbj.java2iioop.jvm.minHeapSize</code>. When specifying in kilobytes, add the character 'k' or 'K'. When specifying in megabytes, add the character 'm' or 'M'. 	128m	--
<code>vbj.java2iioop.jvm.minHeapSize</code>	Specify the initial heap size of the <code>java2iioop</code> command that is invoked when a J2EE application is started.	16m	--

Key name	Contents	Default value	VR
	<p>Specify the value in the format that is accepted by the <code>-Xmx</code> and <code>-Xms</code> options of the <code>java</code> command. If you specify the value in any other format, the operation may not produce the desired results.</p> <p>Specify as follows:</p> <ul style="list-style-type: none"> Specify a value from 1024 to the value specified by <code>-Xmx</code>. When specifying in kilobytes, add the character 'k' or 'K'. When specifying in megabytes, add the character 'm' or 'M'. 		

Legend:

--: Indicates a version earlier than the version 08-00.

(ai) Keys beginning with `vbroker`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Important note

You cannot specify the Cosminexus TPBroker properties that are not described in the following table (if specified, the operations cannot be guaranteed).

Key name	Contents	Default value	VR	Related information
<code>vbroker.agent.enableLocator</code>	<p>Specify whether to use the Smart Agent.</p> <p>Normally, this property need not be set. You use the default settings for this key.</p> <p>When the CTM linkage functionality is valid (<code>true</code> is specified to the <code>ejbserver.ctm.enabled</code> key) <code>true</code> is automatically set up when you start the J2EE server.</p> <p>If the Smart Agent is required for any other purpose than above, set <code>true</code>.</p> <p>Before you specify <code>true</code> for this property, make sure that the Smart Agent has been started and <code>vbroker.orb.htc.oadNoUse=true</code> has been specified.</p> <p>For details about the Smart Agent, see the manual <i>Borland(R) Enterprise Server VisiBroker(R) Programmers Reference</i>.</p>	false	--	
<code>vbroker.agent.port</code>	<p>Specify the port number of Smart Agent. For details, see the manual <i>Borland(R) Enterprise Server VisiBroker(R) Programmers Reference</i>.</p>	14000	--	

Key name	Contents	Default value	VR	Related information
<code>vbroker.ce.iiop.ccm.htc.readerPerConnection</code>	Specify whether the closing of the connection will be controlled when a timeout occurs during the invocation of the EJB method defined as the remote interface. If <code>true</code> is specified: The closing of the connection when a timeout occurs will be controlled. If <code>false</code> is specified: The closing of the connection when a timeout occurs is not controlled.	false	09-50	
<code>vbroker.ce.iiop.ccm.htc.threadStarter</code>	Specify whether to invoke the thread for managing the reply receiving threads. To set up <code>vbroker.ce.iiop.ccm.htc.readerPerConnection=true</code> , specify <code>true</code> .	false	09-50	
<code>vbroker.orb.htc.comt.entryCount</code>	Specify a value from 100 to 30000000 for the upper-limit of the entry count in one communication trace file of Cosminexus TPBroker.	120000	--	
<code>vbroker.orb.htc.comt.fileCount</code>	Specify a value from 1 to 256 for the upper-limit of the communication trace file count for Cosminexus TPBroker.	3	--	
<code>vbroker.orb.htc.tracePath</code>	Specify a range of 1 to 210 bytes for the path of the output destination of Cosminexus TPBroker trace files. You need to create <code>comtrc</code> and <code>mdltrc</code> as the subdirectories of the specified path beforehand. In the case of default output destination, the subdirectories <code>comtrc</code> and <code>mdltrc</code> are automatically created when the server is started for the first time. Use a forward slash (/) as the delimiter in the directory path. For example, in Windows, if <code>C:\temp\work</code> is to be set as the work directory, specify as follows: (Example of specification) <code>vbroker.orb.htc.tracePath=c:/temp/work</code>	<ul style="list-style-type: none"> In Windows <i>Cosminexus-working-directory\ejb\server-name\logs\TPB\logj</i> In UNIX <i>Cosminexus-working-directory/ejb/server-name/logs/TPB/logj</i> 	--	
<code>vbroker.se.iiop_tp.host</code>	Set the IP address of the EJB container for each J2EE server by specifying any optional value.	None	--	<i>2.14 Fixing the communication port and IP address of the EJB container (TPBroker options) in the EJB Container Functionality Guide</i>

Key name	Contents	Default value	VR	Related information
<code>vbroker.se.iiop_tp.proxyHost#</code>	Specify the name of the host where the J2EE server and CORBA Naming Service are allocated. Set up the host name such that the name is resolved as a NAT IP address with the EJB client. Also, if the EJB client does not use NAT, specify settings such that the name is resolved as a J2EE server IP address with the host.	None	09-50	
<code>vbroker.se.iiop_tp.scm.iiop_tp.listener.port</code>	You can set a communication port for each J2EE server, by specifying any optional value. Make sure that the port number is not the same as that of any other program. If this property is not set, Cosminexus TPBroker sets a random value. Moreover, if you specify <code>true</code> in <code>ejbserver.container.ejbhome.sessionbean.reconnect.enabled</code> , make sure to specify the value and then fix the port number.	0	--	
<code>vbroker.se.iiop_ts.proxyHost#</code>	Specify the name of the host where the J2EE server and CORBA Naming Service are allocated. Set up the host name such that the name is resolved as a NAT IP address with the EJB client. Also, if the EJB client does not use NAT, specify settings such that the name is resolved as a J2EE server IP address with the host.	None	09-50	

Legend:

--: Indicates a version earlier than the version 08-00.

#

These keys are set up for the J2EE server and CORBA Naming Service, if NAT is set up between an EJB client and J2EE server. How you set up the keys depends on the invocation mode of the CORBA Naming Service.

If the invocation mode of the CORBA Naming Service is an in-process and auto-invocation mode, specify these keys in the user property file for J2EE servers. The following is an example of settings where the host name of the computer on which the J2EE server is allocated is `MyJ2EEHost`:

```
# CORBA Naming Service invocation mode settings
ejbserver.naming.startupMode=inprocess

# Settings for communication between the EJB client and J2EE server in a NAT configuration
vbroker.se.iiop_ts.proxyHost=MyJ2EEHost
vbroker.se.iiop_tp.proxyHost=MyJ2EEHost
```

If the CORBA Naming Service is invoked automatically as an out-process, specify these keys in both; the user property file for J2EE servers and the user property for J2EE servers `ejbserver.naming.exec.args`. The following is an example of settings where the host name of the computer on which the J2EE server is allocated is `MyJ2EEHost`. Specify the settings for `ejbserver.naming.exec.args` on one line, delimited with spaces for each `-J`. Also, if a value is set up for `ejbserver.naming.exec.args` in the existing system, specify that value for the command additionally.

```
# CORBA Naming Service invocation mode settings
ejbserver.naming.startupMode=automatic

# Settings for communication between the EJB client and J2EE server in a NAT configuration
vbroker.se.iiop_ts.proxyHost=MyJ2EEHost
vbroker.se.iiop_tp.proxyHost=MyJ2EEHost
```



```
ejbserver.naming.exec.args=-J-Dvbroker.se.iiop_ts.proxyHost=MyJ2EEHost -J-
Dvbroker.se.iiop_tp.proxyHost=MyJ2EEHost
```

If the CORBA Naming Service is invoked manually as an out-process, specify these keys in both, the user property file for J2EE servers and the invocation option of the `nameserv` command. The following is an example of settings where the host name of the computer on which the J2EE server is allocated is `MyJ2EEHost`:

```
# CORBA Naming Service invocation mode settings
ejbserver.naming.startupMode=manual

# Settings for communication between the EJB client and J2EE server in a N
AT configuration
vbroker.se.iiop_ts.proxyHost=MyJ2EEHost
vbroker.se.iiop_tp.proxyHost=MyJ2EEHost
```

An example of executing the `nameserv` command is as follows. Note that to execute the `nameserv` command, specify the settings on one line, delimited with spaces for each `-J`. Also, if the `nameserv` command is being executed in the existing system, add a postscript to that command.

```
nameserv -J-Dvbroker.agent.enableLocator=false
-J-Djava.security.policy=="Application-Server-installation-directory\CC\se
rver\sysconf\cli.policy"
-J-Dvbroker.se.iiop_tp.scm.iiop_tp.listener.port=port-number
-J-Dvbroker.se.iiop_ts.proxyHost=MyJ2EEHost
-J-Dvbroker.se.iiop_tp.proxyHost=MyJ2EEHost
```

(aj) Keys beginning with `webserver.application`

The following table lists the specifiable key. Note that *Default value* is the value that is assumed when the key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.application.lower_version</code>	Specify the version of the Web application that you want to set with the version setup functionality of the Web application. When you specify 2.4, Web applications of version 2.4 or earlier as defined in <code>web.xml</code> are executed as Web applications of version 2.4. When you specify 2.5, Web applications of version 2.5 or earlier as defined in <code>web.xml</code> are executed as Web applications of version 2.5.	None	08-20

(ak) Keys beginning with `webserver.connector`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>webserver.connector.htp.bind_host</code>	<p>Specify the local IP address that is used by the management server or a local host name that can resolve to the local IP address.</p> <p>The single-byte space before and after the IP address or the host name will be ignored. If you do not specify a value, the wild card address is used.</p>	None	--	
<code>webserver.connector.htp.permitted.hosts</code>	<p>Specify the IP address (in decimal notation) or host name of the host to be permitted to access the management server.</p> <p>Note that the local host (the host whose address is associated with <code>localhost</code>^{#3}) can always access the management server implicitly. If this key is omitted, the local host (the host whose address is associated with <code>localhost</code>^{#3}) is the only host that can access the management server.</p> <p>When specifying multiple hosts, demarcate the IP addresses or the host names with a comma (.). If there are no access restrictions, specify only an asterisk (*). The single-byte space before and after the IP address or the host name is ignored.</p>	None	--	
<code>webserver.connector.limit.max_parameter_count</code>	<p>Specify an integer from -1 to 2147483647 as the maximum number of request parameters.</p> <p>The valid range of maximum number of request parameters is a total of the request query strings and number of parameters of the form data with the <code>Content-Type</code> header value as <code>application/x-www-form-urlencoded</code> or <code>multipart/form-data</code>.</p> <p>If you do not want to set up the maximum number of request parameters, specify -1.</p> <p>If you specify a non-numeric value, a numeric value outside the range, a null character string or a whitespace^{#2}, a message is output and the default value will be set.</p> <p>If the number of request parameters exceeds the specified value, the following operations are performed depending on the APIs and the KDJ E39341-W or the KDJ E39342-E message is displayed:</p> <p>APIs that throw <code>IllegalStateException</code>:</p> <ul style="list-style-type: none"> <code>javax.servlet.http.HttpServletRequest.getPart(String)</code> <code>javax.servlet.http.HttpServletRequest.getParts()</code> <p>APIs that return a return value using the read request parameters:</p> <ul style="list-style-type: none"> <code>javax.servlet.ServletRequest.getParameter(String)</code> <code>javax.servlet.ServletRequest.getParameterMap()</code> <code>javax.servlet.ServletRequest.getParameterNames()</code> <code>javax.servlet.ServletRequest.getParameterValues(String)</code> 	10000	09-00	
<code>webserver.connector.limit.max_post_form_data</code>	<p>Specify an integer from -1 to 2147483639 (unit: bytes) for the maximum size of form data of a POST request. If the maximum size is not set, specify -1.</p> <p>If the following numeric values or strings are specified, a message is output and the default value is applied:</p> <ul style="list-style-type: none"> A character string other than numeric values Numeric values outside the specified range Null character strings or whitespaces 	2097152	08-50	

Key name	Contents	Default value	VR	Related information
	<p>If the value of Content-Type header is application/x-www-form-urlencoded:</p> <p>If the value of Content-Length header of the request exceeds the maximum specified size, an error with status code 413 (Request Entity Too Large) is returned, and the message KDJE39336-E is output.</p> <p>When the request body is in the check format, if the received POST request size exceeds the maximum specified size due to an extended Servlet API invocation, a java.lang.IllegalStateException is thrown and the message KDJE39336-E is output.</p> <p>If the value of Content-Type header is multipart/form-data:</p> <p>When the Servlet API invocation is extended, check that the total of the parameter name and size value for the data other than file data from the form data received in multipart format does not exceed the maximum specified size. If the value exceeds the maximum specified size, a java.lang.IllegalStateException is thrown and the message KDJE39336-E is output.</p>			
webserver.connector.nio_http.backlog	<p>Specify the length (in bytes) of the TCP listen queue that stores connection requests from the Web client. You can specify an integer in the range from 1 to 2147483647.</p> <p>The maximum valid specified value or the length of the TCP listen queue that is actually set, is different for every OS.</p>	511	11-00	
webserver.connector.nio_http.bind_host	<p>Specify the IP address or host name that is used by the NIO HTTP server. Halfwidth spaces before and after the IP address or host name are ignored. If no value is specified, the wildcard address is used.</p> <p>If the specified host name or IP address is unresolvable:</p> <p>The KDJE39565-W message is output and the wildcard address is used.</p> <p>If the host name or IP address of a host that is not the local host is specified:</p> <p>The KDJE39567-W message is output and the wildcard address is used.</p>	None	11-00	
webserver.connector.nio_http.hostname_lookups	<p>Specify whether to perform reverse lookup for conversion of the client's IP address into a host name in response to a request received on the NIO HTTP server.</p> <p>If reverse lookup of a host name is performed, the throughput is degraded.</p> <p>If the IP address cannot resolve to a host name, an IP address in a dot-separated format will be output by the getRemoteHost () method of the javax.servlet.ServletRequest interface or to log files.</p> <p>If you specify true:</p> <p>The IP address is converted into a host name.</p> <p>If you specify false:</p> <p>The IP address is not converted into a host name.</p>	false	11-00	
webserver.connector.nio_http.idle_thread_timeout	<p>Specify the maximum length of time (in seconds) for which the threads in the thread pool on the NIO HTTP server can</p>	60	11-00	

Key name	Contents	Default value	VR	Related information
	continue to be idle. You can specify an integer in the range from 1 to 2147483647.			
<code>webserver.connector.nio_http.keep_alive.max_requests</code>	Specify the maximum number of successive connections that can be continued without closing a TCP connection. You can specify an integer in the range from 0 to 2147483647. If you do not want to set the upper limit, specify 0.	0	11-00	
<code>webserver.connector.nio_http.keep_alive.timeout</code>	Specify the time (in seconds) for which to wait for a request without closing a TCP connection. You can specify an integer in the range from 0 to 3600. If you specify 0, no timeout occurs.	0	11-00	
<code>webserver.connector.nio_http.limit.max_headers</code>	Specify an integer from 0 to 32767 for the upper limit of the number of HTTP headers included in the HTTP requests. Specifying the value 0 indicates that no headers can be included. Even if the number of included HTTP headers is less than the value of this property, an error occurs if the total header size exceeds the value specified for the <code>webserver.connector.nio_http.limit.max_request_header</code> property.	100	11-00	
<code>webserver.connector.nio_http.limit.max_request_body</code>	Specify (in bytes) the maximum request body size of an HTTP request. You can specify an integer in the range from -1 to 9223372036854775807. If you do not want to set the upper limit, specify -1. If a request body is sent in chunk format, the size of the chunk header must be included in the specified size.	-1	11-00	
<code>webserver.connector.nio_http.limit.max_request_header</code>	Specify (in bytes) the maximum request header size of an HTTP request. You can specify an integer in the range from 7 to 65536. Even if the actual request header size is less than the maximum set for this property, an error occurs if the number of HTTP headers exceeds the value specified for the <code>webserver.connector.nio_http.limit.max_headers</code> property. The two-byte line break code (CR(0x0d)+LF(0x0A)) that indicates the end of the HTTP header must be included in the specified size.	16384	11-00	
<code>webserver.connector.nio_http.max_connections</code>	Specify the maximum number of the Web client connections that can be established. You can specify an integer in the range from 1 to 2147483647. Note that the actually effective maximum value differs depending on the platform.	1024	11-00	
<code>webserver.connector.nio_http.max_servlet_execute_threads</code>	Specify the maximum number of concurrently executable threads within the web container when the web container executes synchronous servlets via the NIO HTTP server. You can specify an integer in the range from 1 to 2147483647. The value you specify must be equal to or less than the maximum number of threads that can be processed on the NIO HTTP server (value specified for the <code>webserver.connector.nio_http.max_threads</code> parameter). If you specify a value larger than the maximum number of threads that can be processed on the NIO HTTP server, the system outputs the KDJE39010-W message and changes the specified value to the number of concurrent executions for which the web container processes the request.	100	11-00	

Key name	Contents	Default value	VR	Related information
	<p>The maximum number of concurrently executable threads that can be controlled by using this parameter includes only the number of threads for synchronous servlets and does not include the number of other threads, such as those for executing asynchronous servlets and for calling back by asynchronous I/O API functions.</p> <p>The total maximum number of threads that can be processed including those that are not used for executing synchronous servlets is specified by using the <code>webserver.connector.nio_http.max_threads</code> parameter.</p>			
<code>webserver.connector.nio_http.max_threads</code>	Specify the maximum number of threads that can be processed on the NIO HTTP server. You can specify an integer in the range from 1 to 2147483647.	100	11-00	
<code>webserver.connector.nio_http.min_threads</code>	<p>Specify the minimum number of threads that can be processed on the NIO HTTP server. You can specify an integer in the range from 1 to 2147483647.</p> <p>The value you specify must be equal to or less than the maximum number of threads (the value specified for the <code>webserver.connector.nio_http.max_threads</code> parameter). If you specify a value larger than the maximum number of threads, the system outputs the KDJE39010-W message and changes the specified value to the maximum number of threads.</p> <p>Note that the actually effective maximum value differs depending on the platform.</p>	10	11-00	
<code>webserver.connector.nio_http.permitted_hosts</code>	<p>Specify the IP address (in decimal notation) or host name of the host to be permitted to access the NIO HTTP server. To specify multiple IP addresses or host names, specify them as a comma-separated list. If there are no access restrictions, specify only an asterisk (*).</p> <p>Note that the local host can always be accessed even if it is not specified. If you specify a null character string or whitespaces, the system outputs the KDJE39009-W message and changes the specified value to the default value.</p> <p>If the host names you specify are unresolvable, the system outputs the KDJE39563-W message and permits only the local host to access the server.</p> <p>Halfwidth spaces before and after each IP address or host name are ignored.</p>	*	11-00	
<code>webserver.connector.nio_http.port</code>	Specify the port number used by the NIO HTTP server. You can specify an integer in the range from 1 to 65535. Do not specify a port number that has already been used by another application or a port number that has not been secured. If you do so, the KDJE39566-E message is output and the J2EE server does not start.	8008	11-00	
<code>webserver.connector.nio_http.receive_timeout</code>	Specify an integer from 0 to 3600 for the period until timeout (units: seconds), when requests are received from the Web client. If you specify 0, no timeout occurs.	300	11-00	
<code>webserver.connector.nio_http.response.header.server</code>	Specify the value of the Server header that is automatically added to the response.	Cosminexus ComponentContainer	11-00	

Key name	Contents	Default value	VR	Related information
<code>webservice.connector.nio_http.send_timeout</code>	Specify an integer from 0 to 3600 for the period until timeout (units: seconds) when a response is sent to the Web client. When you specify 0, the timeout is not enabled.	300	11-00	

Legend:

--: Indicates a version earlier than the version 08-00.

#1

- The valid maximum value depends on the operating platform.
- Some of the requests arriving in the Web server are passed to the Web container, therefore, the maximum number of concurrent connections of the Web server to be set up must be greater than the total size of the default pending queue and the pending queue of each URL group and Web application + maximum number of concurrently executing threads in each Web container.

In a servlet or JSP performing the database operations, since it is not possible to obtain greater multiplicity than the number of database connections, you need to increase the number of usable database connections, when increasing the concurrently executing number of Web containers.

When tuning the performance, always consider the following relation and adjust the value of each parameter:

Maximum-number-of-concurrent-connections-of-Web-server > *Total-size-of-the-pending-queues-of-each-URL-group-and-Web-application-and-the-default-pending-queue* + *Maximum-number-of-concurrently-executing-threads-in-each-Web-container*

Maximum-number-of-concurrently-executing-threads-in-each-Web-container ≥ *Number-of-database-connections*

For details on controlling the number of concurrently executed threads in Web containers, see *2.14 Controlling the number of concurrently executed threads in Web containers* in the manual *uCosminexus Application Server Web Container Functionality Guide*.

For details about the number of concurrent connections used for processing in the Web server, reference the manual of the Web server.

#2

Whitespace imply single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

#3

This is the address that is associated with `localhost` when the J2EE server starts.

(a) Keys beginning with `webservice.container`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>webservice.container.jaxws.webservice.no_webservice.enabled</code>	When SOAP request messages arrive from the client of the Web Service, specify whether to receive the SOAP request messages and distribute them to the Web Service implementation class if the Web Service implementation class or Provider implementation	none	08-00	

Key name	Contents	Default value	VR	Related information
	<p>class developed using Cosminexus JAX-WS is included even when <code>web.xml</code> is not included in the WAR file either completely or partially.</p> <p>If you specify <code>strict</code> or <code>true</code>:</p> <p>When <code>web.xml</code> is not included in the WAR file, SOAP request messages are distributed to the Web Service implementation class or Provider implementation class based on the information of the <code>@javax.jws.WebService</code> annotation or <code>@javax.xml.ws.WebServiceProvider</code> annotation.</p> <p>If you specify <code>lax</code>:</p> <p>When <code>web.xml</code> is not included in the WAR file either completely or partially, SOAP request messages are distributed to the Web Service implementation class or Provider implementation class based on the information of the <code>@javax.jws.WebService</code> annotation or <code>@javax.xml.ws.WebServiceProvider</code> annotation.</p> <p>If you specify <code>none</code> or <code>false</code>:</p> <p>When <code>web.xml</code> is not included in the WAR file, SOAP request messages are not distributed to the Web Service implementation class.</p> <p>To avoid the occurrence of situations such as those where an unexpected class is associated with the URL by mistake, or where a user is allowed access from outside, the default value is set to <code>none</code> (<code>false</code>).</p>			
<code>webserver.container.jaxws.webservice.wsee.no_webxml.enabled</code>	<p>When SOAP request messages arrive from the client of the Web Service, specify whether to receive the SOAP request messages and distribute them to the Web Service implementation class if the Web Service implementation class or Provider implementation class developed using Cosminexus JAX-WS is included even when <code>web.xml</code> is not included in the WAR file either completely or partially.</p> <p>If you specify <code>strict</code>:</p> <p>When <code>web.xml</code> is not included in the WAR file for setup, SOAP request messages are distributed to the Web Service implementation class based on the information of the <code>@javax.jws.WebService</code> annotation.</p> <p>If you specify <code>lax</code>:</p> <p>When <code>web.xml</code> is not included in the WAR file for setup either completely or partially, SOAP request messages are distributed to the Web Service implementation class based on the information of the <code>@javax.jws.WebService</code> annotation.</p> <p>If you specify <code>none</code>:</p> <p>When <code>web.xml</code> is not included in the WAR file for setup, SOAP request messages are not distributed to the Web Service implementation class.</p>	lax	08-70	

Key name	Contents	Default value	VR	Related information
<code>webserver.container.jaxws.webservice.wsee.warname</code>	<p>Specify the path name of the WAR file for setup, for the Web service implementation class included in the EJB-JAR files^{#1}.</p> <p>The WAR file for setup might be created by the user and auto-generated during deployment. When the WAR file for setup is auto-generated during deployment, this property need not be set up.</p>	CosminexusWSE E.war	08-70	
<code>webserver.container.server_id.enabled</code>	<p>Specify whether to add the HTTP cookie that indicates the server ID to the HTTP response.</p> <p>If you specify <code>true</code>:</p> <p>The HTTP cookie that indicates the server ID is added to the HTTP response. Specify the server ID in <code>webserver.container.server_id.value</code>.</p> <p>If you specify <code>false</code>:</p> <p>The HTTP cookie that indicates the server ID is not added to the HTTP response.</p> <p>If you specify a string other than <code>true</code> or <code>false</code> or if you specify a null character string or a whitespace^{#2}, a message is output and the default value will be set.</p>	false	--	
<code>webserver.container.server_id.name</code>	<p>If you choose to add the HTTP cookie that indicates the server ID to the HTTP response, use this key to specify the name of the HTTP cookie. Specify the value as a string from 1 to 64 characters. You can use single-byte alphanumeric characters (A-Z, a-z, 0-9) or underscores (<code>_</code>). The following name is used by the Web container and is case sensitive:</p> <ul style="list-style-type: none"> • JSESSIONID <p>Notes:</p> <p>If <code>true</code> is specified for the <code>webserver.container.server_id.enabled</code> key and the Cookie name is specified in this property, or if the default <code>ServerID</code> is used and the same Cookie name is specified in the <code>webserver.session.cookie_config.name</code> key, the value of this property is given priority. Note that the default value is used for the Cookie name specified with the <code>webserver.session.cookie_config.name</code> key.</p> <p>If you specify an invalid value, a warning message is output and the default value will be set.</p>	ServerID	--	
<code>webserver.container.server_id.value</code>	<p>If you choose to add the HTTP cookie that indicates the server ID to the HTTP response, use this key to specify the value of the HTTP cookie. Specify the value as a string from 1 to 64 characters. You can use single-byte alphanumeric characters (A-Z, a-z, 0-9) or underscores (<code>_</code>).</p> <p>If you specify <code>true</code> in <code>webserver.container.server_id.enabled</code>, and this property is omitted, or if you specify an invalid value, a null character string, or a whitespace^{#2}, a message is output and the default value will be set.</p>	String generated using the hash function from the host name and J2EE server name/Web container server name (compatibility functionality). The generated value is a 64-character	--	

Key name	Contents	Default value	VR	Related information
		hexadecimal number.		
<code>webserver.container.servlet.default_mapping.enabled</code>	Specify whether to enable the default servlet mapping. If you specify <code>true</code> : The default mapping will be enabled. If you specify <code>false</code> : The default mapping will be disabled.	false	08-00	
<code>webserver.container.thread_control.queue_size</code>	Specify an integer from 0 to 2147483647 for the default size of the pending queues, when the functionality for controlling the number of concurrently executing threads in each Web application is to be used. This functionality is enabled only in the J2EE server mode.	8192	--	<i>2.17 Controlling the number of concurrently executing threads in the Web application in the Web Container Functionality Guide</i>

Legend:

--: Indicates a version earlier than the version 08-00.

#1

When a user creates the WAR file for setup, the WAR file for setup must be created in such a way that the file matches the relative path within the EAR file specified in this property. Note that the WAR file for setup includes the `web.xml` that is used for distributing the SOAP request messages to the Web Services included in an EJB-JAR file.

To deploy the exploded-archive-format applications in which the Web service implementation class is included in an EJB-JAR file and the WAR file for setup does not exist, specify the path name from 1 to 255 bytes. Note that the path length is a total of the following A + B + C:

A: Path length of the directory for an exploded-archive-format application

B: Path delimiter (1 byte)

C: Length of the path specified in this property

To change the value of this property, stop the Web applications that include the EJB Web Services. If you change the property value while the Web application is running, the operations cannot be guaranteed. The other applications might become invalid and an unexpected exception might occur.

#2

Whitespace implies single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

(am) Keys beginning with `webserver.context`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>webserver.context.check_interval</code>	Specify an integer from 0 to 2147483647 (units: seconds) for the interval to detect the update of a Web application.	Value set in <code>ejbserver.deploy.ext.check_interval</code> (default value: 0)	--	<i>15.8 Detecting updates and reloading the J2EE applications in the</i>

Key name	Contents	Default value	VR	Related information
	<p>If you specify 0, the update will not be automatically detected.</p> <p>If the reload functionality of a J2EE application is disabled, you cannot set this property. If you set this property, it is ignored.</p> <p>If you specify a non-numeric value, a numeric value outside the range, or a null character string, a message is output and the default value will be set.</p>			<i>Common Container Functionality Guide</i>
<code>webserver.context.reload_delay_timeout</code>	<p>Specify a negative integer or a value from 0 to 2147483647 (units: seconds) for the maximum delay time of the delay execution functionality for reloading the Web application.</p> <p>If you specify 0, the delay execution functionality for reloading is not used.</p> <p>If the reload functionality of a J2EE application is disabled, you cannot set this property. If you set this property, it is ignored.</p> <p>If you specify a negative integer, the delay execution functionality for reloading is used without specifying the maximum delay time.</p>	0	--	
<code>webserver.context.stop_asyncwait_timeout</code>	<p>Specify the maximum time (in seconds) for which to wait for completion of asynchronous processing before stopping the application. You can specify an integer in the range from 0 to 2147483647.</p> <p>If you specify 0, the system waits for 0 seconds, which means that the system does not wait for completion of asynchronous processing. When the specified time elapses, the system stops the application even if there is asynchronous processing that has not yet been completed. The behavior of asynchronous processing that remains after the application stops depends on the implementation of the application. If all asynchronous processing for the application to be stopped is completed before the specified time elapses, the system immediately stops the application.</p>	30	11-00	
<code>webserver.context.update_interval</code>	<p>Specify an integer from 0 to 2147483647 (units: seconds) for the time interval required for copying the file that you will update. Specify extra time for the interval. The monitoring of a request that is being processed starts after the lapse of the</p>	<code>ejbserver.deploy.ext.update.interval</code> (default value: 0)	--	

Key name	Contents	Default value	VR	Related information
	<p>specified interval from the detection of resource update.</p> <p>If the JSP reload functionality is disabled, you cannot set this property. If you set this property, it is ignored.</p> <p>If you specify a non-numeric value, a numeric value outside the range, or a null character string, a message is output and the default value will be set.</p>			

Legend:

--: Indicates a version earlier than the version 08-00.

(an) Keys beginning with `webserver.dbsfo`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.dbsfo.attribute_data_size.max</code>	Specify the maximum size of the HTTP session attribute information that can be included in the global session information in bytes.	1024	08-00
<code>webserver.dbsfo.check_size.mode</code>	Specify whether to enable the size estimation functionality (database session failover functionality) for the HTTP session attribute information. If you specify <code>on</code> : The size estimation functionality for the HTTP session attribute information will be enabled. If you specify <code>off</code> : The size estimation functionality for the HTTP session attribute information will be disabled.	off	08-00
<code>webserver.dbsfo.connector.name</code>	Specify the optional name of the DB Connector to be used by the database session failover functionality.	COSMINEXUS_SFO_DBCONNECTOR	08-00
<code>webserver.dbsfo.enabled</code>	Specify whether to enable the database session failover functionality. If you specify <code>true</code> : The database session failover functionality will be enabled in all the Web applications on the J2EE server. If you specify <code>false</code> : The database session failover functionality will be disabled.	false	08-00
<code>webserver.dbsfo.exception_type_compat</code>	Specify the compatibility option of the exception that occurs when the <code>HttpServletRequest#getSession</code> method is executed in the error page of the request for which the database session failover functionality is to be controlled. If you specify <code>true</code> : The <code>com.hitachi.software.web.dbsfo.DatabaseAccessException</code> exception will be thrown.	false	08-70

Key name	Contents	Default value	VR
	<p>If you specify <code>false</code>:</p> <p>The <code>com.hitachi.software.web.dbsfo.SessionOperationException</code> exception will be thrown.</p>		
<code>webserver.dbsfo.exclude.extensions</code>	<p>Specify the extension for controlling the database session failover functionality.</p> <p>If the extension matches with the extension specified in the URL path, the database session failover functionality will be disabled in the applicable request. The comparison between the specified extension and the URL is not case sensitive.</p> <p>Also, if the extension for controlling the database session failover functionality is not specified, specify a null character string or a comma (,).</p>	<code>txt,htm,html,jpg,gif,js</code>	08-00
<code>webserver.dbsfo.exclude.uris</code>	<p>Specify a URI for inhibiting the database session failover functionality. If the path of the request URI matches the specified URI, the database session failover functionality is disabled for that request.</p> <p>The comparison of the specified URI with the request URI is case sensitive.</p> <p>If the URI for inhibiting the database session failover functionality is not set, a null character string will be set.</p>	None	08-50
<code>webserver.dbsfo.integrity_mode.enabled</code>	<p>Specify whether to enable the integrity guarantee mode of the database session failover functionality.</p> <p>If you specify <code>true</code>:</p> <p>The integrity guarantee mode will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>The integrity guarantee mode will be disabled.</p>	<code>false</code>	08-70
<code>webserver.dbsfo.negotiation.high_level</code>	<p>Specify whether to continue or cancel the Web application start processing when the negotiation implemented during the startup of a Web application fails while the database session failover functionality is being used.</p> <p>If you specify <code>true</code>:</p> <p>The Web application start processing will be cancelled.</p> <p>If you specify <code>false</code>:</p> <p>The Web application start processing will continue.</p>	<code>false</code>	08-70
<code>webserver.dbsfo.session_read_only.uris</code>	<p>Specify the URI to be used as the reference request of the database session failover functionality. The values that can be specified are as follows:</p> <ul style="list-style-type: none"> • Strings beginning with a forward slash (/) • Normalized URI • URI up to 512 characters <p>To specify multiple URIs, demarcate them with a semicolon (;). If you do not want to set up a reference request, specify a null character string.</p> <p>If the specified URI matches with the request URI, this request becomes a reference request. When the specified URI is compared with the request URI, uppercase and lowercase characters are distinguished.</p>	None	08-70
<code>webserver.dbsfo.thread_read_control_queue.enabled</code>	<p>Specify the operations to be performed when the pending queue space is insufficient, and if the database session failover functionality is used while the functionality for controlling the number of concurrently executing threads for Web applications is enabled.</p> <p>If you specify <code>true</code>:</p> <p>The 503 error will be returned to the client when the pending queue space is insufficient.</p> <p>If you specify <code>false</code>:</p> <p>The 503 error will not be returned to the client when the pending queue space is insufficient.</p>	<code>false</code>	08-70

(ao) Keys beginning with `webserver.errorpage`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.errorpage.stack_trace.enabled</code>	Specify whether to output stack trace in the default error page, when an exception occurs. If you specify <code>true</code> : The stack trace will be output. If you specify <code>false</code> : The stack trace will not be output. If you specify a string other than <code>true</code> or <code>false</code> , or if you specify a null character string or a whitespace#, a message is output and the default value will be set.	false	--

Legend:

--: Indicates a version earlier than the version 08-00.

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Whitespaces imply single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

(ap) Keys beginning with `webserver.http`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.http.request.encoding</code>	Specify the character encoding to be used in the request body and query decoding. The characters that can be specified as the default character encoding are the character encoding supported in the JavaVM. For details about the character encoding supported in JavaVM, see the explanation related to the supported encoding in JDK documentation. The strings that can be specified are the character encoding described in the canonical name for the <code>java.nio</code> API and canonical name for the <code>java.lang</code> API and their optional names.	None	--
<code>webserver.http.request.uri_decode.enabled</code>	Specify whether to decode the servlet path and additional path information. If you specify <code>true</code> : Perform decoding. If you specify <code>false</code> : Do not perform decoding.	false	08-00
<code>webserver.http.response.encoding</code>	Specify the character encoding to be used in the encoding of the response body. The characters that can be specified as the default character encoding are the character encoding supported in the JavaVM. For details about the character encoding supported in JavaVM, see the explanation related to the supported encoding in <i>JDK documentation</i> . The strings that can be specified are the character encoding described in the canonical name for the <code>java.nio</code> API and canonical name for the <code>java.lang</code> API and their optional names.	None	--

Legend:

--: Indicates a version earlier than the version 08-00.

(aq) Keys beginning with webserver.jsp

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>webserver.jsp.additional.import.list</code>	Specify the class name (class name of a fully qualified name or package-name.*) to be imported implicitly during JSP compilation. To specify multiple class names, demarcate the class names with a comma (.). If you specify an invalid value, such as a non-existent class name or a class name not existing in a class path, a message is displayed and a compilation error occurs.	None	08-70	
<code>webserver.jsp.check_interval</code>	Specify an integer from 0 to 2147483647 (units: seconds) for the interval to detect an update in JSP. If you specify 0, the update will not be automatically detected. If the JSP reload functionality is disabled, you cannot set this property. If you set this property, it is ignored. If you specify a non-numeric value, a numeric value outside the range, or a null character string, a message is output and the default value will be set.	Value set in <code>ejbserver.deploy.context.check_interval</code> (default value: 0)	--	<i>15.8 Detecting updates and reloading the J2EE applications in the Common Container Functionality Guide</i>
<code>webserver.jsp.compile.backcompat</code>	Specify the version of the Java language specifications of the Java compiler when you compile the Java source file of a servlet generated from JSP files. Specify this property if the Java source file of a servlet generated from JSP files cannot be compiled because the scripts in the JSP files do not comply with the Java SE 8 language specifications. If the source file of a servlet generated from JSP files can be successfully compiled, you do not need to specify this property. The values that can be specified are as follows: 1.8 or 8: Specify this value if the scripts in the JSP files are written with source code that depends on the Java SE 8 language specifications. 1.7 or 7: Specify this value if the scripts in the JSP files are written with source code that depends on the Java SE 7 language specifications.	false	--	

Key name	Contents	Default value	VR	Related information
	<p>1.6 or 6: Specify this value if the scripts in the JSP files are written with source code that depends on the Java SE 6 language specifications.</p> <p>false: Specify this value if no scripts are written in the JSP files or if the written scripts do not depend on any Java SE language specifications earlier than Java SE 7. In this case, the Java source file is compiled according to the Java SE 8 language specifications.</p> <p>If you specify a string other than a specifiable parameter value, a null character string, or a whitespace#, a message is output, and the default value will be set.</p>			
<code>webserver.jsp.precompile.jsp_work_dir</code>	<p>Specify the directory name for storing the compilation results of the JSP file generated by the JSP pre-compile functionality. You specify the directory name with a string consisting of single-byte alphanumeric characters (A-Z, a-z, 0-9) or underscores (_).</p> <p>If you specify an invalid value, a message is output and the default value will be set. If the following reserved words are specified, a message is output and the default value will be used.</p> <ul style="list-style-type: none"> • classes • lib • tags 	<code>cosminexus_jsp_work</code>	--	
<code>webserver.jsp.keepgenerated</code>	<p>Specify whether to store the java file generated by compiling the JSP files or the tag files.</p> <p>You specify the following values:</p> <p>If you specify <code>true</code>: The java file will be stored.</p> <p>If you specify <code>false</code>: The java file will not be stored.</p>	<code>false</code>	--	
<code>webserver.jsp.pageEncoding</code>	<p>Specify the character encoding for JSP. The characters that can be specified as the default character encoding are the character encoding supported in the JavaVM. For details about the character encoding supported in JavaVM, see the explanation related to the supported encoding in JDK documentation. The strings that can be specified are the character encoding described in the canonical name for the <code>java.nio</code> API and canonical name for the <code>java.lang</code> API and their optional names.</p>	None	--	

Key name	Contents	Default value	VR	Related information
<code>webserver.jsp.translation.backcompat.customAction.declareVariable</code>	<p>Specify whether to output the variable declaration of the script variable corresponding to the second custom tag in the Java code created from JSP files, when the script variable name and the script variable scope overlap in multiple custom tags.</p> <p>true: The script variable from second time onwards is declared.</p> <p>false: The script variable from second time onwards is not declared. You can specify the scope of the (*) script variable with the scope element in the variable elements of the subclass of the <code>javax.servlet.jsp.tagext.TagExtraInfo</code> class or the TLD file.</p>	false	--	
<code>webserver.jsp.translation.backcompat.tag.noCheckRtexprvalue</code>	<p>Specify whether to verify the specification of Expression in an attribute value of a tag in which Expression cannot be specified.</p> <p>true: Do not verify whether the Expression is specified.</p> <p>false: Verify whether the Expression is specified.</p>	false	--	
<code>webserver.jsp.translation.backcompat.tag.rtexprvalueTerminate</code>	<p>The attribute value of the tag begins with '<code><%=</code>' or '<code><%=</code>'. Specify whether to treat the value enclosed with (or ') of the attribute value that does not end with <code>></code> (specify <code>></code>' when it starts with '<code><%=</code>').</p> <p>true: Treated as a string until <code>"</code>.</p> <p>false: Treated as the attribute value until <code>></code>".</p>	false	--	
<code>webserver.jsp.translation.backcompat.taglib.noCheckPrefix</code>	<p>Specify whether to check the availability of the description of custom tags where the prefix specified in the <code>taglib</code> directive is used before the <code>tablib</code> directive.</p> <p>true: Do not check.</p> <p>false: Check.</p>	false	--	
<code>webserver.jsp.translation.backcompat.useBean.noCheckClass</code>	<p>Specify whether to execute the check processing of a class attribute value of the <code><jsp:useBean></code> tag in JSP translation.</p> <p>true: Do not check the class attribute value.</p> <p>false: Check the class attribute value.</p>	false	--	

Key name	Contents	Default value	VR	Related information
<code>webserver.jsp.update.interval</code>	<p>Specify an integer from 0 to 2147483647 (units: seconds) for the interval required to copy the files that are to be monitored for JSP reload. Specify extra time for the interval. JSP is reloaded after the lapse of the interval specified after detecting JSP file update.</p> <p>If the JSP reload functionality is disabled, you cannot set this property. If you set this property, it is ignored.</p> <p>If you specify a non-numeric value, a numeric value outside the range, or a null character string, a message is output and the default value will be set.</p>	Value set in <code>ejbserver.deploy.context.update.interval</code> (default value: 0)	--	
<code>webserver.jsp.translation.customAction.ignoreCaseAttributeName</code>	<p>Specify whether to differentiate upper and lower cases when checking whether the attributes specified in the custom tags are defined in the TLD files or tag files.</p> <p>If you specify <code>true</code>: The case will be ignored.</p> <p>If you specify <code>false</code>: The case will be considered.</p>	false	08-00	
<code>webserver.jsp.translation.useBean.noCheckDuplicateId</code>	<p>Check whether the <code>id</code> attribute value of the <code><jsp:useBean></code> tag is duplicated. If <code>true</code>, a translation error will not occur even if the <code>id</code> attribute value is duplicated. If <code>false</code>, a translation error will occur if the <code>id</code> attribute value is duplicated.</p>	false	08-00	
<code>webserver.jsp.tld.mapping.java_ee_tag_library.enabled</code>	<p>Specify whether TLD of the tag libraries (JSTL, JSF) included in the Java EE specifications and URL will be mapped automatically in Web applications of Servlet 2.5 and later specifications.</p> <p>If you specify <code>true</code>: The TLD and URL will be mapped automatically.</p> <p>If you specify <code>false</code>: The TLD and URL will not be mapped automatically.</p> <p>Also, in Web applications of Servlet 2.5 and subsequent specifications, if you want to use a tag library (JSTL and JSF) other than the library provided by the Application Server, specify <code>false</code>.</p>	true	08-00	
<code>webserver.jsp.jsp_page.bom.enabled</code>	<p>Specify whether to enable the specifications of BOM-based character encoding in the JSP pages of the Web applications of Servlet 2.5 and later specifications.</p> <p>If you specify <code>true</code>: The specifications of BOM-based character encoding will be enabled.</p>	true	08-00	

Key name	Contents	Default value	VR	Related information
	If you specify <code>false</code> : The specifications of BOM-based character encoding will be disabled.			
<code>webserver.jsp.debugging.enabled</code>	Specify whether to enable the JSP debugging functionality. Note that this property is enabled only in the J2EE server mode. If you specify <code>true</code> : The JSP debugging functionality will be enabled and SMAP will be embedded in the servlet class file created from the JSP files. If you specify <code>false</code> : The JSP debugging functionality will be disabled.	<code>false</code>	08-00	

Legend:

--: Indicates a version earlier than the version 08-00.

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Whitespace imply single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

(ar) Keys beginning with `webserver.prf`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.prf.output_header</code>	Specify (as a string value) the HTTP header name that is to be output as the operation name in the performance analysis trace event with the ID 0x8236. If you specify nothing, a null character string, or the name of a non-existing header, nothing will be output as the operation name in the event 0x8236.	None	11-00

(as) Keys beginning with `webserver.servlet`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.servlet_api_exception.getCause.backcompat</code>	Specify settings in such a way so that the root cause exception specified in the constructors <code>ServletException(String, Throwable)</code> and <code>ServletException(Throwable)</code> of <code>javax.servlet.ServletException</code> cannot be acquired using <code>getCause()</code> .	<code>false</code>	08-00

Key name	Contents	Default value	VR
	<p>Specify settings in such a way so that the root cause exception specified in the constructors <code>JspException(String, Throwable)</code> and <code>JspException(Throwable)</code> of <code>javax.servlet.jsp.JspException</code> cannot be acquired using <code>getCause()</code>.</p> <p>If you specify <code>true</code>:</p> <p>You cannot acquire the root cause exception.</p> <p>If you specify <code>false</code>:</p> <p>You can acquire the root cause exception.</p>		
<code>webserver.servlet_api.unsupported.throwUnsupportedOperationException</code>	<p>Specify whether to throw an <code>UnsupportedOperationException</code> exception when an unsupported API method is invoked.</p> <p>If you specify <code>true</code>:</p> <p>An <code>UnsupportedOperationException</code> exception is thrown.</p> <p>If you specify <code>false</code>:</p> <p>A specific value that differs depending on the API method is returned as follows:</p> <p>For the <code>javax.servlet.ServletContext#getJspConfigDescriptor</code> method: <code>null</code></p> <p>For the <code>javax.servlet.ServletContext#getVirtualServerName</code> method: <code>Null</code> character</p> <p>For the <code>javax.servlet.http.HttpServletRequest#changeSessionId</code> method: Session ID of the current HTTP session (If no HTTP session has been created, an <code>IllegalStateException</code> exception is thrown.)</p> <p>For the <code>javax.servlet.http.HttpServletRequestWrapper#changeSessionId</code> method: Same as the method with the same name in <code>javax.servlet.http.HttpServletRequest</code></p>	<code>false</code>	11-00

(at) Keys beginning with `webserver.ServletContainerInitializer_jar`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.ServletContainerInitializer_jar.include.path</code>	Specify the path of the JAR file that includes the <code>ServletContainerInitializer</code> implementation class as an absolute path. When specifying multiple methods, demarcate them with a comma (,). Use a forward slash (/) as the directory delimiter.	None	09-00

Key name	Contents	Default value	VR
	The specified path of the JAR file must also be specified for <code>add.class.path</code> in the <code>usrconf.cfg</code> file (option definition file for J2EE servers).		

(au) Keys beginning with `webserver.session`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Default value	VR	Related information
<code>webserver.session.cookie_config.http_only</code>	Specify whether to add the <code>HttpOnly</code> attribute to the HTTP Cookie indicating the session ID of an HTTP session created with a Web application. If <code>true</code> is specified: The <code>HttpOnly</code> attribute is added to the HTTP Cookie indicating the session ID of an HTTP session created with a Web application. If <code>false</code> is specified: The <code>HttpOnly</code> attribute is not added to the HTTP Cookie indicating the session ID of an HTTP session created with a Web application.	false	09-50	
<code>webserver.session.cookie_config.name</code>	Specify the name of the HTTP Cookie indicating the session ID of an HTTP session created with a Web application, or the path parameter name of the URL. Notes: If <code>true</code> is specified for the <code>webserver.container.server_id.enabled</code> key, specify a value different from the <code>webserver.container.server_id.name</code> key. If you specify the same value as the <code>webserver.container.server_id.name</code> key, the value in the <code>webserver.container.server_id.name</code> key is given priority. The default value is used for the Cookie name specified in this key, and a warning message (KDJE39008-W) is output.	For the HTTP Cookie name JSESSIONID For the URL path parameter jsessionid	09-50	
<code>webserver.session.delete_cookie.backcompat</code>	Specify whether to delete the HTTP Cookie indicating the session ID maintained by the Web client when the HTTP session is disabled.	false	08-00	

Key name	Contents	Default value	VR	Related information
	<p>If you specify <code>true</code>:</p> <p>When the HTTP session is disabled, the HTTP Cookie indicating the session ID maintained by the Web client will not be deleted.</p> <p>If you specify <code>false</code>:</p> <p>When the HTTP session is disabled, an HTTP Cookie that will be used for deleting the HTTP Cookie indicating the session ID maintained by the Web client will be added in the HTTP response header.</p>			
<code>webserver.session.max.log_interval</code>	<p>Specify an integer from 0 to 2147483647 (units: seconds) for the interval to output the following messages:</p> <ul style="list-style-type: none"> • KDJE34380-E This message is output when an attempt is made to generate <code>HttpSession</code> objects in excess of the number of records while the database session failover functionality is being used. • KDJE39225-E This message is output when an attempt is made to generate <code>HttpSession</code> objects in excess of the upper-limit of the number of <code>HttpSessions</code>. <p>After the message KDJE39225-E is output, the output of this message again during the interval specified in this property will be prevented. If you specify 0, you cannot control the output of the message KDJE39225-E. Note that this setting is applicable in each Web application.</p> <p>If you specify a non-numeric value or a numeric value outside the range, a warning message is output and the default value will be set.</p>	60	--	
<code>webserver.session.max.throwHttpSessionLimitExceededException</code>	<p>Specify whether to throw the <code>com.hitachi.software.web.session.HttpSessionLimitExceededException</code> exception when the number of HTTP session objects exceeds the upper limit.</p> <p>If you specify <code>true</code>:</p> <p>The <code>com.hitachi.software.web.session.HttpSessionLimitExceededException</code> exception that is a derived class of the <code>java.lang.IllegalStateException</code> exception will be thrown.</p> <p>If you specify <code>false</code>:</p> <p>The <code>java.lang.IllegalStateException</code> exception will be thrown.</p>	false	08-00	

Key name	Contents	Default value	VR	Related information
<code>webserver.session.server_id.enabled</code>	<p>Specify whether to append server ID to the session ID.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">The server ID will be appended to the session ID.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">The server ID will not be appended to the session ID.</p> <p>Generally, specify <code>true</code> and specify the server ID in <code>webserver.session.server_id.value</code>. If you specify a string other than <code>true</code> or <code>false</code>, or if you specify a null character string or a whitespace[#], a message is output and the default value will be set.</p>	<code>true</code>	--	<i>2.7 Session management functionality in the Web Container Functionality Guide</i>
<code>webserver.session.server_id.value</code>	<p>Specify a string from 1 to 64 characters for the server ID that is to be appended to the session ID. You can use single-byte alphanumeric characters (A-Z, a-z, 0-9) or underscores (<code>_</code>).</p> <p>If you specify <code>true</code> in <code>webserver.session.server_id.enabled</code>, and this property is omitted, or else if you specify an invalid value, a null character string or a whitespace[#] in this property, a message is output and the default value will be set.</p>	String generated using the hash function from the host name and J2EE server name/Web container server name (compatibility functionality). The generated value is a 64-character hexadecimal number.	--	<i>2.7 Session management functionality in the Web Container Functionality Guide</i>
<code>webserver.session.tracking_mode</code>	<p>Specify the method of managing the HTTP sessions created with a Web application. You can either specify <code>COOKIE</code> or <code>URL</code>, or both. When you specify both the session management methods, use a comma (,) to delimit between <code>COOKIE</code> and <code>URL</code>. Note that the single-byte spaces before and after <code>COOKIE</code> or <code>URL</code> are ignored.</p> <p>If only <code>COOKIE</code> is specified</p> <p style="padding-left: 20px;">Only the HTTP Cookie-based session management is enabled. In this case, the URL path parameter indicating the session ID is not included in the string generated by URL rewriting.</p> <p>If only <code>URL</code> is specified</p> <p style="padding-left: 20px;">Only the URL rewriting-based session management is enabled. In this case, the HTTP Cookie information indicating the session ID is not included in the response.</p> <p>If both <code>COOKIE</code> and <code>URL</code> are specified</p> <p style="padding-left: 20px;">Both HTTP Cookie-based session management and URL rewriting-based session management are enabled.</p>	<code>COOKIE, URL</code>	<code>09-50</code>	

Legend:

--: Indicates a version earlier than the version 08-00.

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Whitespace imply single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

(av) Keys beginning with `webserver.static`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.static_content.cache.enabled</code>	<p>Specify enable/disable/forcibly disable the functionality for caching static contents.</p> <p>If you specify <code>true</code>:</p> <p>The functionality for caching static contents will be enabled.</p> <p>If you specify <code>false</code>:</p> <p>The functionality for caching static contents will be disabled.</p> <p>If you specify <code>forceoff</code>:</p> <p>Even if the functionality for caching static contents has been enabled in the DD file (<code>web.xml</code>) or the HITACHI Application Property file, the cache functionality will be forcibly disabled.</p> <p>When this property is <code>false</code> and <code>forceoff</code>, the setting of <code>webserver.static_content.cache.size</code> and <code>webserver.static_content.cache.filesize.threshold</code> becomes disabled.</p> <p>In a Web application, wherein the functionality for caching the static contents is not specified as either enable or disable in the DD file (<code>web.xml</code>) or the HITACHI Application Property file, the value specified in this property becomes valid. In a Web application, wherein the functionality for caching the static contents is set as either enable or disable, the value specified in this property becomes invalid. If, however, you specify <code>forceoff</code>, the value specified in this property becomes valid, irrespective of the settings of the DD file (<code>web.xml</code>) or the HITACHI Application Property file.</p> <p>If a string other than <code>true</code>, <code>false</code>, <code>forceoff</code>, or a null character string or whitespace[#] are specified, a message is output and the default value will be set.</p>	false	--
<code>webserver.static_content.cache.size</code>	<p>Specify an integer from 0 to 2147483647 for the upper limit of the size (units: bytes) that can be cached in the memory when the functionality for caching static contents is enabled.</p> <p>If the value specifying the total cache size in each Web application is exceeded, deletion will begin from the cache with the longest no access time and the deletion of cache repeats until the total size of the cache becomes lesser than the set value.</p> <p>If you specify 0, no upper limit is set for the cacheable size.</p> <p>In a Web application, wherein the cacheable memory size is not set in DD (<code>web.xml</code>) or the HITACHI Application Property file, the value specified in this property becomes valid. In a Web application, wherein the cacheable memory size is set, the value specified in this property becomes invalid.</p> <p>If you specify an invalid value, a value lesser than that specified in <code>webserver.static_content.cache.filesize.threshold</code>, a null character string, or a whitespace[#], a message is output and the default value will be set.</p>	10485760	--
<code>webserver.static_content.cache.filesize.threshold</code>	<p>Specify an integer from 0 to 2147483647 for the file size (units: bytes) that can be cached, when the functionality for caching static contents is enabled.</p> <p>A file of a size exceeding the specified value does not get cached.</p> <p>If you specify 0, no upper limit is set for the file size that can be cached.</p> <p>In a Web application, wherein the file size that can be cached is not set in DD (<code>web.xml</code>) or the HITACHI Application Property file, the value specified in</p>	524288	--

Key name	Contents	Default value	VR
	<p>this property becomes valid. In a Web application, wherein the file size that can be cached is set, the value specified in this property becomes invalid.</p> <p>If you specify an invalid value, a value greater than that specified in <code>webserver.static_content.cache.size</code>, a null character, or a whitespace#, a message is output and the default value will be set.</p>		
<code>webserver.static_content.encoding.extension</code>	<p>Specify an extension to be applied to the character encoding used for static contents. This key is enabled when the <code>webserver.http.response.encoding</code> key is specified.</p> <p>If the value is not specified for the key, this key is disabled.</p>	None	--

Legend:

--: Indicates a version earlier than the version 08-00.

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Whitespace imply single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

(aw) Keys beginning with `webserver.work`

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.work.clean</code>	<p>Specify whether to delete the directory created below the temporary directory for JSP, when starting and shutting down the server.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 2em;">The directory will be deleted.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 2em;">The directory will not be deleted.</p>	false	--
<code>webserver.work.directory</code>	<p>Specify an absolute path for the temporary directory for JSP. Specify the directory name.#</p> <p>Use a forward slash (/) as the delimiter in the directory path.</p> <p>For example, in Windows, if <code>C:\temp\work</code> is to be set as the work directory, specify as follows:</p> <p>(Example of specification)</p> <pre>webserver.work.directory=c:/temp/work</pre>	<ul style="list-style-type: none"> • In Windows <i>Cosminexus-installation-directory</i>\CC\server\repository\server-name\web • In UNIX /opt/ Cosminexus/CC/ server/ repository/ server-name/web 	--

Legend:

--: Indicates a version earlier than the version 08-00.

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The length of the file name is restricted based on the OS to be used. For example, in Windows, the file name is restricted to around 250 bytes. As a result, the servlets and JSPs cannot be executed at a location wherein the directory hierarchy is deep. Particularly, a file name generated from a JSP file becomes longer in proportion to the depth of the directory hierarchy deployed in a Web application and it may not be possible to generate a Java file for a JSP file. To avoid this, make a shallow hierarchy of the directories deployed in a Web application and specify a shallow directory hierarchy by an absolute path in the property `webserver.work.directory`. For details on the Cosminexus work directory, see *Appendix C.1 Work directory of the J2EE server* in the manual *uCosminexus Application Server System Setup and Operation Guide*.

(ax) Keys beginning with webserver.xml

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>webserver.xml.validate</code>	<p>Specify whether to check if the tag library descriptor (TLD file) in the Web application of Servlet 2.3 has been written as per the schema coded in DTD. The specification of this property is disabled in <code>web.xml</code> invoked in the J2EE server mode and in the TLD files of the Web applications of Servlet 2.4 and later versions. All the TLD files included in the Web applications of Servlet 2.4 and later versions are checked, irrespective of the version of TLD.</p> <p>You specify the following values:</p> <p>If you specify <code>true</code>:</p> <ul style="list-style-type: none">Only the tag library descriptor will be checked. <p>If you specify <code>false</code>:</p> <ul style="list-style-type: none">Check will not be performed.	true	--

Legend:

--: Indicates a version earlier than the version 08-00.

(ay) Keys beginning with mail.mime

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
<code>mail.mime.charset</code>	<p>Specify the default character code set to be used in JavaMail. If this property is omitted, the <code>file.encoding</code> property of J2SE is used. This property allows you to change the default character code set applied to files that are used when messages are sent.</p>	None	--
<code>mail.mime.encodeemail.strict</code>	<p>Specify whether to convert the line break code to CR-LF if the data meets all of the following conditions. If you set <code>false</code> for this property, the line break code is converted.</p> <ul style="list-style-type: none">The data contains only ASCII characters.The data includes the CR and LF codes.	false	--
<code>mail.mime.decodeheader.strict</code>	<p>Specify whether to decode an invalid email header that violates RFC 2047 (a delimiter is not included at the start of encoded text). Examples of invalid encoding that violates RFC 2047 are as follows:</p> <ul style="list-style-type: none">Decoding is not performed if <code>true</code> is set for this property.An email header that violates the RFC is decoded if <code>false</code> is set for this property.	true	--
<code>mail.mime.encodefilename</code>	<p>See the standard specifications.</p>	false	09-50
<code>mail.mime.decodefilename</code>	<p>See the standard specifications.</p>	false	09-50
<code>mail.mime.multipart.ignoremissingendboun</code>	<p>See the standard specifications.</p>	true	09-50

Key name	Contents	Default value	VR
mail.mime.encodeemail.ignoremissingboundaryparameter	See the standard specifications.	true	09-50
mail.mime.encodeparameters	See the standard specifications.	false	09-50
mail.mime.decodeparameters	See the standard specifications.	false	09-50

Legend:

--: Indicates a version earlier than the version 08-00.

(az) Keys beginning with manager.j2ee

The Management Server automatically sets this content in a J2EE server. Note that *Default value* is the value that is assumed when a key is not specified.

Because this key is used internally, do not specify or change the settings if nothing is specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Contents	Default value	VR
manager.j2ee.compart	Specifies information required to link with the Management Server. Because the Management Server automatically specifies this information, you cannot edit this key manually. For details about the information that the Management Server specifies automatically, see <i>Appendix E.4 Contents set automatically by Management Server to the J2EE server</i> in the manual <i>uCosminexus Application Server System Setup and Operation Guide</i> .	none	11-00

(6) Examples of coding

```

ejbserver.deploy.stub.generation.scope=ejb
ejbserver.compiler.jvm.maxHeapSize=256m
ejbserver.compiler.jvm.minHeapSize=32m

ejbserver.naming.host=localhost
ejbserver.naming.port=900
ejbserver.naming.protocol=corbaname
ejbserver.naming.startupMode=inprocess
ejbserver.naming.startupWaitTime=1
ejbserver.naming.startupRetryCount=9

ejbserver.logger.enabled.*=Error,Warning,Information,Debug
ejbserver.logger.channels.define.MessageLogFile.filenum=2
ejbserver.logger.channels.define.MessageLogFile.filesize=1048576

ejbserver.application.InitTermProcessClasses=InitTermClass1,InitTermClass2

webserver.connector.http.permitted.hosts=host1,host2
webserver.work.directory=c:/work

```

2.2.4 server.policy (Security policy file for J2EE servers)

(1) Format

The security policy file follows the format of the security policy file of J2SE.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\server\usrconf\ejb*server-name*\
- In UNIX
/opt/Cosminexus/CC/server/usrconf/ejb/server-name/

(3) Functionality

Specify the security policy of the JavaVM that executes the J2EE servers.

If you change the contents of this file while the J2EE server is running, the changes become effective only when the J2EE server is started next.

(4) Examples of coding

The contents of the used policy file are as follows:

```
// (1)
// Grant all permissions to the java extensions
grant codeBase "file:${java.home}/lib/ext/-" {
permission java.security.AllPermission;
};

// (2)
// Grant all permissions to the java tools, etc
// Note: java.home is the jre, not the installation dir for the jdk
grant codeBase "file:${java.home}/../lib/*" {
permission java.security.AllPermission;
};

// (3)
// Grant all permissions to anything loaded from the
// EJB server itself

grant codeBase "file:${ejbserver.install.root}/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${tpbroker.java.home}/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/DABJ/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/manager/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/c4web/lib/*" {
```

```

permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/c4web/exlib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/jaxws/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/jaxrs/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/jaxp/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/CTM/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/PRF/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/wss/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/XMLSEC/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${ejbserver.install.root}/sfo/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${hntplib.home}/classes/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/common/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${ejbserver.install.root}/weld/lib/*" {
permission java.security.AllPermission;
};

// (4)
// Grant all permissions to the container generated stubs and
// implementation classes
grant codeBase "file:${ejbserver.http.root}/ejb/${ejbserver.serverName}/cont
ainers/-" {
permission java.security.AllPermission;
};

// (5)
// Grant all permissions to imported resource (datasource) implementations
// implementation classes
grant codeBase "http://*/ejb/${ejbserver.serverName}/import/resjars/-" {
permission java.security.AllPermission;
};

// (6)
// Grant permissions to resource adapters
//

```

```

grant codeBase "file:${ejbserver.http.root}/ejb/${ejbserver.serverName}/rarjars/-" {

// For uCosminexus TP1 Connector & TP1/Client/J
permission java.util.PropertyPermission "*", "read, write";

// For uCosminexus TP1 Connector & TP1/Client/J & Cosminexus Reliable Messaging
permission java.io.FilePermission "<<ALL FILES>>", "read, write, delete";
permission java.net.SocketPermission "*", "connect,listen,accept";

// For TP1/Message Queue - Access
permission java.lang.RuntimePermission "loadLibrary.*";

// For TP1/Message Queue - Access & Cosminexus Reliable Messaging
permission java.lang.RuntimePermission "modifyThreadGroup";
permission java.lang.RuntimePermission "modifyThread";

// For DB Connector
permission java.lang.reflect.ReflectPermission "suppressAccessChecks";

// For authentication (from J2EE RI server.policy file)
permission javax.security.auth.PrivateCredentialPermission "* * \*\\"", "read";

// For Cosminexus Reliable Messaging
permission javax.security.auth.AuthPermission "modifyPrivateCredentials";
permission java.lang.RuntimePermission "getenv.HRMDIR";

// For Cosminexus SOA FTP Inbound Adapter
permission java.lang.RuntimePermission "getClassLoader";
permission java.lang.RuntimePermission "setContextClassLoader";
permission java.lang.RuntimePermission "accessDeclaredMembers";
};

// (7)
// Grant permissions to JSP/Servlet
//
grant codeBase "file:${ejbserver.http.root}/web/${ejbserver.serverName}/-" {
permission java.lang.RuntimePermission "loadLibrary.*";
permission java.lang.RuntimePermission "queuePrintJob";
permission java.lang.RuntimePermission "modifyThread";
permission java.lang.RuntimePermission "modifyThreadGroup";
permission java.net.SocketPermission "*", "connect";
permission java.io.FilePermission "<<ALL FILES>>", "read, write";
permission java.util.PropertyPermission "*", "read";
permission javax.security.auth.AuthPermission "getSubject";
permission javax.security.auth.AuthPermission "createLoginContext.*";
};

// (8)
// Grant permissions to Cosminexus Service Coordinator
//
grant codeBase "file:${cosminexus.home}/CSC/lib/*" {
permission java.security.AllPermission;
};

```

```

// (9)
// Grant permissions to custom login modules
//
grant codeBase "file:${cosminexus.home}/manager/modules/-" {
permission java.io.FilePermission "<<ALL FILES>>", "read";
permission javax.security.auth.AuthPermission "modifyPrincipals";
permission javax.security.auth.AuthPermission "modifyPublicCredentials";
};

// (10)
// Grant minimal permissions to everything else:
// EJBs
// client implementation classes
grant {
permission java.util.PropertyPermission "*", "read";
permission java.lang.RuntimePermission "queuePrintJob";
permission java.net.SocketPermission "*", "connect";
};

```

The examples of coding from (1) to (10) are as follows:

- (1) Grant the following permission to the class files present below ext directory of JDK:
 - Grant all access permissions
- (2) Grant the following permission to the class files present below lib directory of JDK:
 - Grant all access permissions
- (3) Grant the following permission to the class files used in a J2EE server:
 - Grant all access permissions
- (4) Grant the following permission to class files, such as stub and skeleton that are generated by the J2EE server.
 - Grant all access permissions
- (5) Grant the following permission to the class files of the resources used by a J2EE server:
 - Grant all access permissions
- (6) Grant the following access permissions to the class files of the resource adapters used by a J2EE server:
 - Allow read and write of the entire property information
 - Allow read, write, and deletion of all files
 - Allow connection to the network, standby for connection, and acceptance of a connection for all socket communications
 - Allow loading of all libraries
 - Allow changing of thread groups

- Allow changing of threads
- Allow all reflection operations
- Allow access to all private Credentials owned by any Subject
- Allow changing of sets of private Credentials correlated to the Subject
- Allow the collection of values for the environment variable HRMDIR
- The class loader can be obtained
- The context class loader can be set up
- The declared class members can be accessed

Note

- The directory managed by the J2EE server which is the deployment destination of JAR files in the resource adapter is described.
- All resource adapters running in the J2EE server are within the valid range.

(7)

Grant the following access permissions to the class files of JSPs and servlets:

- Allow loading of all libraries
- Allow print job requests
- Allow changing of threads
- Allow changing of thread groups
- Allow network connection for all socket communications
- Allow read and write for all files
- Allow read of the entire property information
- Subject reference is permitted
- The LoginContext class can be instantiated with any name

(8)

Grant the following access permissions to the class files of Cosminexus Service Coordinator:

- Grant all access permissions

(9)

The custom login module for integrated user management has the following permissions:

- All the files can be read
- Principal and Credential can be added in Subject

(10)

Grant the following access permissions to all class files:

- Allow read of the entire property information
- Allow print job requests
- Allow network connection for all socket communications

(5) Notes

- If you use the `server.policy` file with an invalid syntax or without appropriate access permissions, `java.lang.StackOverflowError` or `java.lang.OutOfMemoryError` occurs, and the J2EE server might terminate abnormally.
- The minimum required access permissions for operating the J2EE server is coded in the `server.policy` file generated when setting up the server. Do not delete and change the coding lines in the generated `server.policy` file.

2.2.5 criticalList.cfg (Protected areas list file)

Set the classes that prohibit method cancellation in the protected area.

If you need to set this protected areas list file, you specify the settings as per the instructions provided in the notes of the documents provided with the configuration software of each Cosminexus product and the related products.

(1) Format

Specify the definition file in the following format:

```
element
```

You can specify either of the following in *element*.

- *class-name*
Specify the class name to be specified in the protected area.
- *prefix-name*
Specify the prefix name of the package that includes the classes specified in the protected area. All classes having the specified prefix are specified as the protected area.

How to specify:

- Specify the specifiable elements by demarcating with a linefeed.
- A blank line is ignored.
- A line beginning with a hash mark (#) is a comment.
- You cannot add a space or a comment after *element*.
(Example) `class-name#comment`
- Code the class name including the package name. Do not, however, mention the suffix ".class".
(Example) `pacA.pacB.pacC.pacD.MyTestClass.class`
In this case, code as `pacA.pacB.pacC.pacD.MyTestClass`.
- You cannot specify the prefix of a class name.
(Example) `pacA.pacB.pacC.pacD.My*`
If you specify a class name in the protected area that uses "My" in the prefix(MyTestClass), you cannot use an asterisk (*) in the class name.
In this case, specify as `pacA.pacB.pacC.*`.
- You cannot specify only an asterisk (*).

- The single-byte space before and after *element* is ignored.
- The double-byte spaces before and after *element* are treated as characters and are considered as invalid values.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\CC\server\usrconf\`
- In UNIX
`/opt/Cosminexus/CC/server/usrconf/`

(3) Examples of coding

When specifying a prefix name

```
#specify-prefix-name  
pacA.pacB.*
```

All classes below the package `pacA.pacB` as well as those included in the package will form the protected area. For example, if `pacA.pacB.pacC.pacD` is present below the package `pacA.pacB.pacC`, all classes below `pacA.pacB.pacC.pacD` will also become the protected area.

When specifying a class name

```
#specify-class-name  
pacX.pacY.pacZ.MyTestpacX.pacY.pacZ.CommonTest
```

(4) Precautions

- The protected areas list file is a product-based definition. This file is enabled in all the J2EE servers running on the machine on which the Cosminexus Component Container is installed.
- The protected areas list file is read when starting a J2EE server. If you want to enable the changed contents, you need to restart the J2EE server.
- If the protected areas list file does not exist or if the settings are invalid when starting a J2EE server, the J2EE server fails to start.

3

Files Used in Batch Servers

This chapter describes the storage location, functionality, and format of the files used in batch servers and the keys that you can specify in the files.

3.1 List of files used in batch servers

The following table lists the files used in batch servers.

Table 3–1: List of files used in batch servers

File name	Classification	Overview	Reference
<code>usrconf.cfg</code>	Option definition file for batch servers	Specify the invocation options of the JavaVM that execute the batch servers.	3.2.1
<code>usrconf.properties</code>	User property file for batch servers	Specify the system properties of the JavaVM that execute the batch servers.	3.2.2
<code>server.policy</code>	Security policy file for batch servers	Specify the security policy of the JavaVM that executes the batch servers.	3.2.3
<code>criticalList.cfg</code>	Protected area list file	Set the classes that prohibit method cancellation in the protected area.	3.2.4
<code>usrconf.cfg</code>	Option definition file for batch applications	Specify invocation options for the JavaVM that executes the <code>cjexecjob</code> command, the <code>cjkilljob</code> command, and the <code>cjlistjob</code> command.	3.2.5
<code>usrconf.properties</code>	User property file for batch applications	Specify the system properties of the JavaVM that executes the <code>cjexecjob</code> command, and the <code>cjkilljob</code> command.	3.2.6

3.2 Details of files used by batch servers

3.2.1 usrconf.cfg (Option definition file for batch servers)

(1) Format

Specify the key as follows:

```
key-name=value
```

How to specify:

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) *key-name=value#comment*

- You cannot code with a character encoding that is different from the runtime character encoding.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\server\usrconf\ejb\server-name
- In UNIX
/opt/Cosminexus/CC/server/usrconf/ejb/server-name/

(3) Functionality

Specify the invocation options of the JavaVM that execute the batch servers.

If you change the contents of this file while the batch server is running, the changes become effective only when the batch server is started next.

(4) Specifiable keys

The following table describes the specifiable keys and the default values. For details about keys, see [2.2.2 *usrconf.cfg* \(Option definition file for J2EE servers\)](#). Furthermore, when referencing, substitute *J2EE server* and *J2EE application* for *Batch server* and *Batch application* respectively.

Important note

If you use multibyte characters within the files, integrate the multibyte characters and encode used in the following locations:

- `usrconf.cfg` (option definition file for batch applications)

- Arguments of the `cjexecjob` command (batch application execution command)
- Source code of the batch application (`java.lang.System.out` or `java.lang.System.err`)

Table 3–2: Specifiable keys and default values in `usrconf.cfg` (batch servers)

Key name	Overview	Default value
<code>add.jvm.arg</code>	This key invokes JavaVM by using the specified option. For details about the Java VM options that can be specified by using <code>add.jvm.arg</code> keys, see 14.1 List of JavaVM extension options and 14.5 Java HotSpot VM options that can be specified in Cosminexus .	For details about default values, see 3.2.1(5) Default values of JavaVM options for batch servers .
<code>add.class.path</code>	Specify the class path for a container extension library. When you specify a path containing a space, you do not need to enclose the path in double quotation marks (""). Also, the path specified in double quotation marks is invalid. To add a JAR file in the class path of a batch application class loader, specify the <code>add.class.path</code> key in the option definition file for batch applications.	None
<code>add.library.path#</code>	Specify the shared library for JNI only when the container extension library uses JNI.	None
<code>batch.service.enabled</code>	Do not edit this key manually. When the batch option is specified in the <code>cjsetup</code> command and executed, <code>true</code> is displayed in the key value.	<code>true</code> (when <code>-batch</code> option is specified in <code>-cjsetup</code> command, and executed)
<code>cpp.library.version</code>	Specify the <code>libstdc++</code> library version to be used in a process. Note that this key is used for Linux. The specifiable string is as follows: 6: Use the <code>libstdc++.so.6</code> library. This key is disabled even if set up on platforms other than Red Hat Enterprise Linux. With version 09-00 or later, only 6 can be set up.	6
<code>ejb.public.directory</code>	Start a batch server using the specified directory as the working directory of batch server.	<ul style="list-style-type: none"> • In Windows <code>Cosminexus-installation-directory\CC\server\public</code> • In UNIX <code>/opt/Cosminexus/CC/server/public</code>
<code>ejb.server.corefilenum</code> (in UNIX)	Specify the number of <code>core</code> files that remain when restarting a batch server.	1
<code>ejb.server.log.directory</code>	Specify the output location directory of the log file. Make sure that the specified log data output-destination directory is not shared with Cosminexus Manager, J2EE servers, or Web container servers (compatibility functionality). If the directory is shared, operations are not guaranteed.	<ul style="list-style-type: none"> • In Windows <code>Cosminexus-working-directory\ejb\server-name\logs</code> • In UNIX <code>Cosminexus-working-directory/ejb/server-name/logs</code>
<code>ejb.server.log.mode</code>	Specify the output format of the log file.	7
<code>ejb.server.log.stdout.filesize</code>	Specify the upper-limit for the size of the <code>cjstdout.log</code> file.	1048576

Key name	Overview	Default value
ejb.server.log.stderr.filesize	Specify the upper-limit for the size of the <code>cjstderr.log</code> file.	1048576
jvm.type	Specify the type of JavaVM to be used.	server

#

If both the `add.library.path` and OS environment variables (such as `LIBPATH`) are set up when executing the `cjstartsv` command or `cjstartweb` command, the `add.library.path` settings have a higher priority.

(5) Default values of JavaVM options for batch servers

The following are the default values of Java VM options for batch servers:

- `-Xms256m`
- `-Xmx512m`
- `-XX:MetaspaceSize=128m`
- `-XX:MaxMetaspaceSize=128m`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:SurvivorRatio=8`
- `-XX:HitachiJavaLog:<ejb.server.log.directory>`
- `-XX:HitachiJavaLogFileSize=4m`
- `-XX:-HitachiUseExplicitMemory`
- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiVerboseGCPrintCause`
- `-XX:+HitachiOutputMilliTime`
- `-XX:-HitachiThreadDumpToStdout`
- `-XX:+HitachiOutOfMemoryAbort`
- `-XX:+HitachiJavaClassLibTrace`
- `-XX:HitachiJavaClassLibTraceLineSize=1024`
- `-XX:+HitachiLocalsSimpleFormat`
- `-XX:+HitachiTrueTypeInLocals`
- `-XX:+HitachiLocalsInStackTrace`
- `-XX:+HitachiUseExplicitMemory`
- `-XX:HitachiExplicitHeapMaxSize=64m`
- `-XX:HitachiExplicitMemoryLogLevel:normal`
- `-XX:HitachiExplicitMemoryJavaLog:<ejb.server.log.directory>`
- `-XX:HitachiExplicitMemoryJavaLogFileSize=4m`

(6) Notes

- Among the values specified in the `add.class.path` key, there are some values for which the `<cosminexus.home>` tag is used to specify the JAR files for the container extension library. These

values indicate the installation destination of Application Server, so you do not need to change the contents coded for the `add.class.path` key. Note that when you add the container extension library to the `add.class.path` key, the installation and uninstallation operations might not be guaranteed. Therefore do not use the `<cosminexus.home>` tag.

- For the `add.jvm.arg` key, do not specify the `--add-modules` or `--module-path` option. If you do so, operations are not guaranteed.

3.2.2 usrconf.properties (User property file for batch servers)

(1) Format

J2SE property file format.

Specify the key as follows:

```
key-name=value
```

How to specify:

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) `key-name=value#comment`

- Use the ISO 8859-1 character encoding according to the Java specifications for the characters to be encoded.
- Specify the path in `CJBATCHUSRCONFDIR` using an absolute path.
- If the format does not conform to Java specifications, the batch server might fail to start.

(Example) When the format contains an invalid Unicode escape sequence (the string after `\U` is not an appropriate Unicode hexadecimal value).

(2) File storage location

- In Windows

`Cosminexus-installation-directory\CC\server\usrconf\ejb\server-name\`

- In UNIX

`/opt/Cosminexus/CC/server/usrconf/ejb/server-name/`

(3) Functionality

Specify the system properties of the JVM that execute the batch servers.

If you specify the same key in the `usrconf.properties` file and in `-D` of `add.jvm.arg` of the `usrconf.cfg` file, the value specified in `usrconf.properties` is given priority.

If you change the contents of this file while the batch server is running, the changes become effective only when the batch server is started next.

(4) Keys reserved in batch servers

A batch server internally uses the keys beginning with the following prefixes. As a result, the keys beginning with these prefixes must not be used in applications.

- ejbserver.*
- webservice.*
- appclient.*
- j2eeserver.*

(5) Keys for customization of batch servers

You can customize the operations of the batch servers by setting the values in the following system property keys.

The keys are classified and explained as follows:

- *Keys beginning with ejbserver.application*
- *Keys beginning with ejbserver.batch*
- *Keys beginning with ejbserver.client*
- *Keys beginning with ejbserver.connectionpool*
- *Keys beginning with ejbserver.connector*
- *Keys beginning with ejbserver.container*
- *Keys beginning with ejbserver.ctm*
- *Keys beginning with ejbserver.deploy*
- *Keys beginning with ejbserver.ext*
- *Keys beginning with ejbserver.http*
- *Keys beginning with ejbserver.instrumentation*
- *Keys beginning with ejbserver.jndi*
- *Keys beginning with ejbserver.jta*
- *Keys beginning with ejbserver.logger*
- *Keys beginning with ejbserver.management*
- *Keys beginning with ejbserver.manager*
- *Keys beginning with ejbserver.naming*
- *Keys beginning with ejbserver.rmi*
- *Keys beginning with ejbserver.server*
- *Keys beginning with ejbserver.stdoutlog*
- *Keys beginning with ejbserver.watch*
- *Keys beginning with https*
- *Keys beginning with java*
- *Keys beginning with vbroker*

- *Keys beginning with `webserver.connector`*

The following table gives an overview of the respective specifiable keys and the default values. For details about the keys, see [2.2.3 `usrconf.properties` \(User property file for J2EE servers\)](#). Furthermore, when referencing, substitute *J2EE server* and *J2EE application* for *Batch server* and *Batch application* respectively.

(a) Keys beginning with `ejbserver.application`

Key name	Overview	Default value
<code>ejbserver.application.InitTermProcessClasses</code>	When using the container extension library, specify the class name of server start/stop hook.	None
<code>ejbserver.application.userlog.CJLogHandler.handler-name.appname</code>	Specify the default application name that is output to the <code>AppName</code> field.	<code>user_app</code>
<code>ejbserver.application.userlog.CJLogHandler.handler-name.count</code>	Specify the number of log files.	2
<code>ejbserver.application.userlog.CJLogHandler.handler-name.encoding</code>	Specify encoding of the character strings to be output.	Null
<code>ejbserver.application.userlog.CJLogHandler.handler-name.filter</code>	Specify the filter in use.	Null
<code>ejbserver.application.userlog.CJLogHandler.handler-name.formatter</code>	Specify the formatter in use.	Null
<code>ejbserver.application.userlog.CJLogHandler.handler-name.level</code>	Specify an upper-limit of a log collection level.	SEVERE
<code>ejbserver.application.userlog.CJLogHandler.handler-name.limit</code>	Specify the capacity of a log file.	1048576
<code>ejbserver.application.userlog.CJLogHandler.handler-name.msgid</code>	Specify the default message ID that is output to the <code>MsgID</code> field.	0001
<code>ejbserver.application.userlog.CJLogHandler.handler-name.path</code>	Specify a value from 1 to 255 bytes for the prefix of a log file name.	<code>user_log</code>
<code>ejbserver.application.userlog.CJLogHandler.handler-name.separator</code>	Use the <code>CJSimpleFormatter</code> and specify a separator to output a message in one sentence.	(Vertical bar)
<code>ejbserver.application.userlog.loggers</code>	Specify a logger name to be used.	None
<code>ejbserver.application.userlog.Logger.logger-name.filter</code>	Specify the filter used in the logger.	Null
<code>ejbserver.application.userlog.Logger.logger-name.handlers</code>	Specify the handler class for a specified logger name.	None
<code>ejbserver.application.userlog.Logger.logger-name.level</code>	Specify the log output level of the logger.	SEVERE

Key name	Overview	Default value
<code>ejbserver.application.userlog.Logger.logger-name.useParentHandlers</code>	Specify whether the log record is to be transmitted from the logger that received the log record to the handler connected to the parent logger.	true

(b) Keys beginning with `ejbserver.batch`

Key name	Overview	Default value
<code>ejbserver.batch.application.exit.enabled</code>	Specify operations of a batch server when VM end method is invoked from the batch application. If you specify <code>true</code> : The batch application thread will end without terminating the JavaVM. If you specify <code>false</code> : The batch server will end.	true
<code>ejbserver.batch.gc.watch.threshold</code>	Specify an integer from 0 to 100 (unit: %) for the threshold value of the memory usage for executing GC. GC is executed when any of the following conditions are met. If 0 is specified, GC is not monitored. <ul style="list-style-type: none"> The ratio of Tenured area consumption size with Tenured domain total size is more than the threshold value (if serial GC is enabled). The ratio of New area total size with Tenured area maximum free size is more than the threshold value (if serial GC is enabled). The ratio of the used Java heap area size to the Java heap area size reaches or exceeds the threshold value (if G1 GC is enabled). The ratio of the used metaspace area size to the maximum metaspace area size reaches or exceeds the threshold value. 	0
<code>ejbserver.batch.schedule.group.name</code>	Specify a group name for the batch servers managed by CTM within 63 characters having alphanumeric characters and underscore (_).	JOBGROUP
<code>ejbserver.batch.queue.length</code>	Specify the value from 1 to 32767 as the length of the schedule queue created with CTM.	50

Note: This key is a user property file-specific key for batch servers. This key does not exist in the user property file for J2EE servers.

(c) Keys beginning with `ejbserver.client`

Key name	Overview	Default value
<code>ejbserver.client.ctm.RequestPriority</code>	Specify the priority (priority order) for extracting the request accumulated in the queues within CTM.	4

(d) Keys beginning with `ejbserver.connectionpool`

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Overview	Default value	Related information
<code>ejbserver.connectionpool.applicationAuthentication.disabled</code>	Specify whether to enable the functionality for optimizing container management sign-on.	false	
<code>ejbserver.connectionpool.association.enabled</code>	Specify whether to enable the connection association functionality.	false	<i>3.14 Functionality for performance tuning in the Common Container</i>

Key name	Overview	Default value	Related information
			<i>Functionality Guide</i>
ejbserver.connectionpool.sharingOutsideTransactionScope.enabled	Specify the operations of the connection sharing when a connection is acquired multiple times outside the transactions managed by the application server.	false	
ejbserver.connectionpool.validation.timeout	Specify the timeout value for the functionality to detect connection failure and the timeout value (unit: seconds) for deleting connections using the functionality to adjust the number of connections as an integer from 1 to 2147483647.	5	

Legend:

Blank cell: Related information does not exist.

(e) Keys beginning with `ejbserver.connector`

Key name	Overview	Default value
ejbserver.connector.logwriter.filenum	Specify the number of log files of a resource adaptor.	4
ejbserver.connector.logwriter.filesize	Specify the size of the log files of a resource adaptor.	2097152

(f) Keys beginning with `ejbserver.container`

Key name	Overview	Default value
ejbserver.container.audit_trail.enabled	Specify whether to enable the database audit trail linkage functionality.	false

(g) Keys beginning with `ejbserver.ctm`

Key name	Overview	Default value
ejbserver.ctm.ActivateTimeOut	When the scheduling functionality is enabled and a batch server starts, the CTM queue will be activated. In such a case, you specify the waiting time (unit: seconds) between 0 and 2147483647. If you specify 0, CTM continues to wait infinitely.	180
ejbserver.ctm.CTMDomain	This property is necessary for using the CTM functionality. Specify name of the CTM domain to which the batch server belongs.	CTMDOMAIN
ejbserver.ctm.CTMID	This property is necessary for using the CTM functionality. You specify CTM identifier of the CTM daemon that controls the batch server.	<i>IP-address</i>
ejbserver.ctm.CTMMYHost	This property is necessary for using the CTM functionality. You specify the host name or IP address used by CTM in the node-switching environment that inherits multi-home or IP address.	<i>host-name-acquired-by-hostname-command</i>
ejbserver.ctm.DeactivateTimeOut	When the scheduling functionality is enabled and the batch server stops, the CTM queue will be deactivated. In such a case, you specify the waiting time (unit: seconds) between 0 and 2147483647.	180
ejbserver.ctm.enabled	Specify whether the scheduling functionality will be used.	false

Key name	Overview	Default value
	<p>If you specify <code>true</code>:</p> <p>The scheduling functionality will be used. When the batch server starts, a connection with CTM will be established and initialized. When successful, the batch server will start with the available scheduling functionality.</p> <p>When an attempt to connect and initialize with CTM fails, the batch server will not start.</p> <p>If you specify <code>false</code>:</p> <p>The scheduling functionality will not be used. The batch server will start without using the scheduling functionality.</p>	

(h) Keys beginning with `ejbserver.deploy`

Key name	Overview	Default value
<code>ejbserver.deploy.exclusive.lockAliveInterval</code>	Specify the maximum wait time until the next response sent from the command is received, after completing the server processing.	60
<code>ejbserver.deploy.resourcefile.scramble.enabled</code>	Specify whether to scramble the DD files related to DataSource, JavaMail, and ResourceAdapter that are expanded below the working directory.	false

(i) Keys beginning with `ejbserver.ext`

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Overview	Default value	Related information
<code>ejbserver.ext.method_observation.interval</code>	<p>If this property is set, it implies:</p> <ul style="list-style-type: none"> Specify whether to use the functionality for monitoring the J2EE application execution time. Specify the time interval for monitoring whether a request processing during operation has timed out and specify the time interval for canceling the timed out request (method). 	0	<i>5. Operations of J2EE Applications in the Operation, Monitoring, and Linkage Guide</i>

(j) Keys beginning with `ejbserver.http`

Key name	Overview	Default value
<code>ejbserver.http.port</code>	Specify the port number of the management server.	28080

(k) Keys beginning with `ejbserver.instrumentation`

Key name	Overview	Default value
<code>ejbserver.instrumentation.enabled</code>	Specify whether to integrate with the Management Server.	true

(l) Keys beginning with `ejbserver.jndi`

Key name	Overview	Default value
<code>ejbserver.jndi.cache</code>	Specify whether to perform caching in naming.	on
<code>ejbserver.jndi.cache.interval</code>	Specify an interval to clear cache, when caching is performed in naming.	0

Key name	Overview	Default value
ejbserver.jndi.cache.interval.clear.option	Decide the operations to be performed in the cache area of naming, after the lapse of the interval.	refresh
ejbserver.jndi.cache.reference	Specify whether to use the caching functionality of DataSource object.	off
ejbserver.jndi.namingservice.group.list	Define the group of logical naming service that is to be searched during the round-robin search.	None
ejbserver.jndi.namingservice.group.specify-group-name.providerurls	Specify the root position of naming services belonging to each group, with a provider URL.	None
ejbserver.jndi.request.timeout	Specify the timeout period of communication with the Naming Service.	0

(m) Keys beginning with `ejbserver.jta`

Key name	Overview	Default value
ejbserver.jta.TransactionManager.defaultTimeOut	Specify the default value of transaction time-out for the transaction started on the batch server.	180

(n) Keys beginning with `ejbserver.logger`

Key name	Overview	Default value
ejbserver.logger.channels.detailed. <i>channel-name</i> [#] .filenum	Specify the number of log files of a batch server.	<ul style="list-style-type: none"> 4, when the channel name is MaintenanceLogFile 2, when the channel name is other than above
ejbserver.logger.channels.detailed. <i>channel-name</i> [#] .filesize	Specify the size of the log files of a batch server.	<ul style="list-style-type: none"> 16777216, when the channel name is MaintenanceLogFile 1048576, when the channel name is other than above
ejbserver.logger.enabled.*	Specify the log level of a batch server.	Error
ejbserver.logger.rotationStyle	Specify the rotation method of the J2EE server log output file. If you specify <code>SHIFT</code> : The log file will be rotated in the shift mode. If you specify <code>WRAP</code> : The log file will be rotated in the wraparound mode.	WRAP

#

You can set the following names as channel name:

- Channels to output logs for the Application Server:

MessageLogFile, MaintenanceLogFile, ExceptionLogFile, ConsoleLogFile, EJBCContainerLogFile, UserOutLogFile, UserErrLogFile

- Channels for output of resource depletion monitoring log

MemoryWatchLogFile, FileDescriptorWatchLogFile, ThreadWatchLogFile, ThreaddumpWatchLogFile, ConnectionPoolWatchLogFile

For acquiring data, see 2.3 *Acquiring the Data* in the manual *uCosminexus Application Server Maintenance and Migration Guide*.

(o) Keys beginning with `ejbserver.management`

Key name	Overview	Default value
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.enabled</code>	Specify whether to enable the monitoring of the frequency of Full GC.	true
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.threshold</code>	Specify the number of Full GC occurrences as the threshold value for monitoring of Full GC.	10
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.interval</code>	Specify the interval at which to check the number of Full GC occurrences for monitoring of Full GC.	600
<code>ejbserver.management.statistics.interval</code>	Specify the statistics collection interval.	60
<code>ejbserver.management.statistics.file.base_time</code>	Specify the base time for time switching operation of the statistic files.	0
<code>ejbserver.management.statistics.file.dir</code>	Specify the directory to output the statistics file.	<ul style="list-style-type: none"> • In Windows <i>Cosminexus-working-directory\ejb\server-name\stats</i> • In UNIX <i>Cosminexus-working-directory/ejb/server-name/stats</i>
<code>ejbserver.management.statistics.file.enabled</code>	Specify whether to enable the functionality to output the statistics file.	true
<code>ejbserver.management.statistics.file.num</code>	Specify the number of statistic files.	7
<code>ejbserver.management.statistics.file.period</code>	Specify the switching time for time switching operation of statistic files.	24

(p) Keys beginning with `ejbserver.manager`

Key name	Overview	Default value
<code>ejbserver.manager.agent.Agent.conf</code>	Specify the settings required for integrating with the Management Server.	None
<code>ejbserver.manager.agent.Agent.enabled</code>	Specify the settings required for integrating with the Management Server.	false
<code>ejbserver.manager.agent.JP1EventAgent.conf</code>	Specify the path of the setup file for JP1 integration.	None

Key name	Overview	Default value
ejbserver.manager.agent.JP1 EventAgent.enabled	Specify whether to integrate with JP1.	false
ejbserver.manager.agent.M EventAgent.conf	Specify the property file for issuing the Management event.	None
ejbserver.manager.agent.M EventAgent.enabled	Specify whether to enable the functionality for issuing the Management event.	false

(q) Keys beginning with `ejbserver.naming`

Key name	Overview	Default value
ejbserver.naming.host	Specify the host name or the IP address that invoke the CORBA Naming Service that the batch server uses.	localhost
ejbserver.naming.nameroot	Specify a name when the name is added to the CORBA Naming Service that is invoked, when the CORBA Naming Service is used in the automatic invocation mode.	None
ejbserver.naming.port	Specify the port numbers of the CORBA Naming Service that the batch server uses.	900
ejbserver.naming.startupRet ryCount	If the CORBA Naming Service still does not start after the lapse of an invocation wait time of the CORBA Naming Service that is specified in <code>ejbserver.naming.startupWaitTime</code> , specify an iteration frequency to await invocation only for the number of seconds specified in <code>ejbserver.naming.startupWaitTime</code> .	9
ejbserver.naming.startupWa itTime	Specify the wait time until the CORBA Naming Service can be used when the batch server is started.	1

(r) Keys beginning with `ejbserver.rmi`

Key name	Overview	Default value
ejbserver.rmi.naming.host	Specify the host name or the IP address of the RMI registry and MBean server used by the batch server in a multi-homed host environment.	None
ejbserver.rmi.naming.port	Specify the port numbers of the RMI registry that is used by the batch server.	23152
ejbserver.rmi.remote.listener.port	Specify the port numbers of the remote object that is exported in to the batch server.	0
ejbserver.rmi.request.timeout	Specify the communication timeout period between the client and the server.	0

(s) Keys beginning with `ejbserver.server`

Key name	Overview	Default value
ejbserver.server.prf.PRFID	Specify the PRF identifier.	PRF_ID
ejbserver.server.threaddump .filenum	Specify an upper limit of the number of files of thread dump when the batch server detects an error and voluntarily outputs the thread dump.	256

(t) Keys beginning with ejbserver.stdoutlog

Key name	Overview	Default value
ejbserver.stdoutlog.autoflush	Specify whether to enable the automatic flush functionality of the user output log and user error log.	false

(u) Keys beginning with ejbserver.watch

Key name	Overview	Default value
ejbserver.watch.enabled	Specify whether to enable the depletion monitoring of all the resources.	true
ejbserver.watch.memory.enabled	Specify whether to enable alert output of memory monitoring.	true
ejbserver.watch.memory.interval	Specify the memory monitoring interval.	60
ejbserver.watch.memory.threshold	Specify the threshold value for monitoring memory usage state.	80
ejbserver.watch.memory.writefile.enabled	Specify whether to output the results of memory monitoring in a file.	true
ejbserver.watch.fileDescriptor.enabled	Specify whether to enable the alert output for file descriptor monitoring. Note that file descriptor monitoring cannot be used in Windows and AIX.	true
ejbserver.watch.fileDescriptor.interval	Specify the file descriptor monitoring interval. Note that file descriptor monitoring cannot be used in Windows and AIX.	60
ejbserver.watch.fileDescriptor.threshold	Specify the threshold value for monitoring the usage of a file descriptor. Note that file descriptor monitoring cannot be used in Windows and AIX.	2147483647
ejbserver.watch.fileDescriptor.writefile.enabled	Specify whether to output the results of file descriptor monitoring in a file. Note that file descriptor monitoring cannot be used in Windows and AIX.	true
ejbserver.watch.thread.enabled	Specify whether to enable alert output of thread monitoring. Note that you cannot monitor the number of threads in Linux.	true
ejbserver.watch.thread.interval	Specify the thread monitoring interval. Note that you cannot monitor the number of threads in Linux.	60
ejbserver.watch.thread.threshold	Specify the threshold value for monitoring the thread usage state. Note that you cannot monitor the number of threads in Linux.	2147483647
ejbserver.watch.thread.writefile.enabled	Specify whether to output the results of thread monitoring to a file. Note that you cannot monitor the number of threads in Linux.	true
ejbserver.watch.threaddump.enabled	Specify whether to enable alert output of thread dump monitoring.	true
ejbserver.watch.threaddump.interval	Specify the time interval for thread dump monitoring.	30
ejbserver.watch.threaddump.threshold	Specify the ratio of the threshold value for thread dump monitoring with respect to the maximum value.	80
ejbserver.watch.threaddump.writefile.enabled	Specify whether to output the results of thread dump monitoring to a file.	true
ejbserver.watch.memory.rate2alert.enabled	Specify whether to enable alert generation for Rate2 in the memory depletion monitoring information that is output by the resource depletion monitoring functionality.	true

(v) Keys beginning with https

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a key is not specified.

VR is the version of Application Server on which the keys are introduced or changed.

Key name	Overview	Default value
https.cipherSuites	Specify the recommended coding suite to be used in <code>HttpsURLConnection</code> .#	#
https.protocols	Specify the protocol to be used in <code>HttpsURLConnection</code> .#	#

#

For details about keys, see the JDK documentation.

(w) Keys beginning with java

Key name	Overview	Default value
java.naming.factory.initial	Specify the factory class for the implementation class of the context delegated by <code>InitialContext</code> of JNDI.	com.hitachi.software.ejb.jndi.InsContextFactory

(x) Keys beginning with vbroker

Key name	Overview	Default value
vbroker.agent.enableLocator	Specify whether to use the Smart Agent. When you start the batch server for using the scheduling functionality, <code>true</code> will be automatically set up.	false
vbroker.agent.port	Specify the port number of Smart Agent.	14000
vbroker.ce.iiop.ccm.htc.readerPerConnection	Specify whether the closing of the connection will be controlled when a timeout occurs during the invocation of the EJB method defined as the remote interface. If <code>true</code> is specified The closing of the connection when a timeout occurs will be controlled. If <code>false</code> is specified The closing of the connection when a timeout occurs is not controlled.	false
vbroker.ce.iiop.ccm.htc.threadStarter	Specify whether to invoke the thread for managing the reply receiving threads. To set up <code>vbroker.ce.iiop.ccm.htc.readerPerConnection=true</code> , specify <code>true</code> .	false
vbroker.orb.htc.comt.entryCount	Specify an upper limit of the entry count for one communication trace file of the Cosminexus TPBroker.	120000
vbroker.orb.htc.comt.fileCount	Specify an upper limit value of the communication trace file count for Cosminexus TPBroker.	3
vbroker.orb.htc.tracePath	Specify a value from 1 to 210 bytes for the output path of Cosminexus TPBroker trace files.	<ul style="list-style-type: none"> In Windows <code>Cosminexus-working-directory\ejb\server-name\logs\TPB\logj</code> In UNIX <code>Cosminexus-working-directory/ejb</code>

Key name	Overview	Default value
		<i>/server-name/ logs/TPB/ logj</i>
vbroker.se.iiop_tp.host	Set the IP address of the EJB container for each batch server by specifying any optional value.	None
vbroker.se.iiop_tp.scm.iioptp.listener.port	You can set a communication port for each batch server, by specifying any optional value.	0

(y) Keys beginning with `webserver.connector`

Key name	Overview	Default value
webserver.connector.ajp13.bind_host	Specify the IP address or the host name used for Web server integration.	None
webserver.connector.ajp13.port	Specify the port number used for communication with the Web server.	8007

3.2.3 server.policy (Security policy file for batch servers)

(1) Format

The security policy file follows the format of the security policy file of J2SE.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\server\usrconf\ejb\server-name
- In UNIX
/opt/Cosminexus/CC/server/usrconf/ejb/server-name/

(3) Functionality

Specify the security policy of the JavaVM that executes the batch servers.

If you change the contents of this file while the batch server is running, the changes become effective only when the batch server is started next.

(4) Examples of coding

The contents of the used policy file are as follows:

```
// (1)
// Grant all permissions to the java extensions
grant codeBase "file:${java.home}/lib/ext/-" {
permission java.security.AllPermission;
};

// (2)
```

```

// Grant all permissions to the java tools, etc
// Note: java.home is the jre, not the installation dir for the jdk
grant codeBase "file:${java.home}/../lib/*" {
permission java.security.AllPermission;
};

// (3)
// Grant all permissions to anything loaded from the
// EJB server itself

grant codeBase "file:${ejbserver.install.root}/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${tpbroker.java.home}/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/DABJ/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/manager/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/c4web/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/c4web/exlib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/jaxp/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/CTM/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/PRF/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/wss/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${cosminexus.home}/XMLSEC/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${ejbserver.install.root}/sfo/lib/*" {
permission java.security.AllPermission;
};
grant codeBase "file:${hntplib.home}/classes/*" {
permission java.security.AllPermission;
};

// (4)
// Grant all permissions to the container generated stubs and
// implementation classes
grant codeBase "file:${ejbserver.http.root}/ejb/${ejbserver.serverName}/cont
ainers/-" {
permission java.security.AllPermission;
};

```

```

// (5)
// Grant all permissions to imported resource (datasource) implementations
// implementation classes
grant codeBase "http://*/ejb/${ejbserver.serverName}/import/resjars/-" {
permission java.security.AllPermission;
};

// (6)
// Grant permissions to resource adapters
//
grant codeBase "file:${ejbserver.http.root}/ejb/${ejbserver.serverName}/rarj
ars/-" {

// For Cosminexus TP1 Connector & TP1/Client/J
permission java.util.PropertyPermission "*", "read, write";

// For Cosminexus TP1 Connector & TP1/Client/J & Cosminexus Reliable Messagi
ng
permission java.io.FilePermission "<<ALL FILES>>", "read, write, delete";
permission java.net.SocketPermission "*", "connect,listen,accept";

// For TP1/Message Queue - Access
permission java.lang.RuntimePermission "loadLibrary.*";

// For TP1/Message Queue - Access & Cosminexus Reliable Messaging
permission java.lang.RuntimePermission "modifyThreadGroup";
permission java.lang.RuntimePermission "modifyThread";

// For DB Connector
permission java.lang.reflect.ReflectPermission "suppressAccessChecks";

// For authentication (from J2EE RI server.policy file)
permission javax.security.auth.PrivateCredentialPermission "* * \*\\"", "rea
d";

// For Cosminexus Reliable Messaging
permission javax.security.auth.AuthPermission "modifyPrivateCredentials";
permission java.lang.RuntimePermission "getenv.HRMDIR";

// For Cosminexus SOA FTP Inbound Adapter
permission java.lang.RuntimePermission "getClassLoader";
permission java.lang.RuntimePermission "setContextClassLoader";
permission java.lang.RuntimePermission "accessDeclaredMembers";
};

// (7)
// Grant permissions to JSP/Servlet
//
grant codeBase "file:${ejbserver.http.root}/web/${ejbserver.serverName}/-" {
permission java.lang.RuntimePermission "loadLibrary.*";
permission java.lang.RuntimePermission "queuePrintJob";
permission java.lang.RuntimePermission "modifyThread";
permission java.lang.RuntimePermission "modifyThreadGroup";
permission java.net.SocketPermission "*", "connect";
permission java.io.FilePermission "<<ALL FILES>>", "read, write";

```

```

permission java.util.PropertyPermission "*", "read";
};

// (8)
// Grant permissions to Cosminexus Service Coordinator
//
grant codeBase "file:${cosminexus.home}/CSC/lib/*" {
permission java.lang.security.AllPermission;
};

// (9)
//
// Grant minimal permissions to everything else:
// Batch applications
// EJBs
// client implementation classes
grant {
permission java.security.AllPermission;
};

```

The examples of coding from (1) to (9) are as follows:

- (1) Grant the following permission to the class files present below ext directory of JDK:
 - Grant all access permissions
- (2) Grant the following permission to the class files present below lib directory of JDK:
 - Grant all access permissions
- (3) Grant the following permission to the class files used in a batch server:
 - Grant all access permissions
- (4) Grant the following permission to class files, such as stub and skeleton that are generated by the batch server.
 - Grant all access permissions
- (5) Grant the following permission to the class files of the resources used by a batch server:
 - Grant all access permissions
- (6) Grant the following access permissions to the class files of the resource adapters used by a batch server:
 - Allow read and write of the entire property information
 - Allow read, write, and deletion of all files
 - Allow connection to the network, standby for connection, and acceptance of a connection for all socket communications
 - Allow loading of all libraries
 - Allow changing of thread groups

- Allow changing of threads
- Allow all reflection operations
- Allow access to all private Credentials owned by any Subject
- Allow changing of sets of private Credentials correlated to the Subject
- Allow the collection of values for the environment variable HRMDIR

Notes:

- The directory managed by the batch server, which is the deployment destination of JAR files in the resource adapter, is described.
- All resource adapters running in the batch server are within the valid range.

(7)

Grant the following access permissions to the class files of JSPs and servlets:

- Allow loading of all libraries
- Allow print job requests
- Allow changing of threads
- Allow changing of thread groups
- Allow network connection for all socket communications
- Allow read and write for all files
- Allow read of the entire property information

(8)

Grant the following access permissions to the class files of Cosminexus Service Coordinator:

- Grant all access permissions

(9)

Grant the following access permissions to all class files:

- Grant all access permissions

(5) Notes

- If you use the `server.policy` file with an invalid syntax or without appropriate access permissions, `java.lang.StackOverflowError` or `java.lang.OutOfMemoryError` occurs, and the batch server might terminate abnormally.
- The minimum required access permissions for operating the batch server is coded in the `server.policy` file generated when setting up the server. Do not delete and change the coding lines in the generated `server.policy` file. However, if the following access permissions are set up, you can delete `java.security.AllPermission` that exists in grant, for which `signedBy`, `codebase`, and `principal` are not specified:
 - `java.util.PropertyPermission "*" , "read";`
 - `java.lang.RuntimePermission "queuePrintJob";`
 - `java.net.SocketPermission "*" , "connect";`

3.2.4 criticalList.cfg (Protected areas list file)

The protected areas list file sets the classes for which method cancellation is prohibited as the protected area.

If you need to set this protected areas list file, you specify the settings as per the instructions provided in the notes of the documents provided with the configuration software of each Cosminexus product and the related products.

(1) Format

Specify the protected area list in the following format:

```
element
```

You can specify either of the following in *element*.

- *class-name*
Specify the class name to be specified in the protected area.
- *prefix-name*
Specify the prefix name of the package that includes the classes specified in the protected area. All classes having the specified prefix are specified as the protected area.

How to specify:

- Specify the specifiable elements by demarcating with a linefeed.
- A blank line is ignored.
- A line beginning with a hash mark (#) is a comment.
- You cannot add a space or a comment after *element*.
(Example) *class-name* #comment
- Code the class name including the package name. Do not, however, mention the suffix ".class".
(Example) pacA.pacB.pacC.pacD.MyTestClass.class
In this case, code as pacA.pacB.pacC.pacD.MyTestClass.
- You cannot specify the prefix of a class name.
(Example) pacA.pacB.pacC.pacD.My*
If you specify a class name in the protected area that uses "My" in the prefix(MyTestClass), you cannot use an asterisk (*) in the class name.
In this case, specify as pacA.pacB.pacC.*.
- You cannot specify only an asterisk (*).
- The single-byte space before and after *element* is ignored.
- The double-byte spaces before and after *element* are treated as characters and are considered as invalid values.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\server\usrconf\
- In UNIX
/opt/Cosminexus/CC/server/usrconf/

(3) Examples of coding

When specifying a prefix name

```
#Specify-prefix-name  
pacA.pacB.*
```

All classes below the package `pacA.pacB` as well as those included in the package will form the protected area. For example, if `pacA.pacB.pacC.pacD` is present below the package `pacA.pacB.pacC`, all classes below `pacA.pacB.pacC.pacD` will also become the protected area.

When specifying a class name

```
#Specify-class-name  
pacX.pacY.pacZ.MyTestpacX.pacY.pacZ.CommonTest
```

(4) Notes

- The protected areas list file is a product-based definition. This file is enabled in all the batch servers running on the machine on which the Cosminexus Component Container is installed.
- The protected areas list file is read when starting a batch server. If you want to enable the changed contents, you need to restart the batch server.
- If the protected areas list file does not exist or if the settings are invalid when starting a batch server, the batch server fails to start.

3.2.5 usrconf.cfg (Option definition file for batch applications)

(1) Format

Specify the key as follows:

```
key-name=value
```

How to specify:

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) `key-name=value#comment`

- You cannot code with a character encoding that is different from the runtime character encoding.
- Specify the path in `CJBATCHUSRCONFDIR` using an absolute path.

(2) File storage location

Set up the path for the storage location of `usrconf.cfg` (option definition file for batch applications) in the environment variable `CJBATCHUSRCONFDIR` or store `usrconf.cfg` (option definition file for batch applications)

in the directory that executes the commands used for batch applications. When you execute the commands used for batch applications, the `usrconf.cfg` file (option definition file for batch applications) will be searched in the following order:

1. Directory set in environment variable (CJBATCHUSRCONFDIR)
2. Directory where `cjexecjob` command (batch application execution command) is executed

(3) Functionality

This file specifies the invocation options for JavaVM that execute batch applications.

If you change the contents of this file while a batch application is running, the changes become effective only when the batch application is started next time.

(4) Defined values

When you execute commands that are used with batch applications, the enabled options will differ depending on whether the scheduling functionality is used.

The following table describes the values defined for each command used with batch applications:

Option name	cjexecjob		ckilljob		cjlistjob	
	Scheduling functionality is not used	Scheduling functionality is used	Scheduling functionality is not used	Scheduling functionality is used	Scheduling functionality is not used	Scheduling functionality is used
<code>add.jvm.arg</code>	Y	Y	N	N	N	N
<code>add.class.path</code>	Y	Y	N	N	N	N
<code>batch.ctm.enabled</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.directory</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.lockInterval</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.lockRetryCount</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.maintenance.fileName</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.maintenance.filesize</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.message.fileName</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.message.filesize</code>	Y	Y	Y	Y	Y	Y
<code>batch.log.stdout.enabled</code>	Y	Y	N	N	N	N
<code>batch.request.timeout</code>	N	Y	N	Y	N	Y
<code>batch.schedule.group.name</code>	N	Y	N	Y	N	Y
<code>batch.vbroker.agent.addr</code>	N	Y	N	Y	N	Y
<code>batch.vbroker.agent.port</code>	N	Y	N	Y	N	Y

Legend:

- Y: Option is enabled.
- N: Option is disabled.

(5) Specifiable keys

The following table describes the specifiable keys and the default values:

Important note

If you use multibyte characters within the file, integrate the multibyte characters and encode used in the following locations:

- `usrconf.cfg` (option definition file for batch servers)
- Arguments of the `cjexecjob` command (batch application execution command)
- Source code of the batch application (`java.lang.System.out` or `java.lang.System.err`)

Table 3–3: Specifiable keys and default values for `usrconf.cfg` (Batch applications)

Key name	Contents	Default value
<code>add.jvm.arg</code>	<p>Pass the specified value to batch application on the batch server. You can specify the following option:</p> <ul style="list-style-type: none"> • <code>-D<property></code> <p>You can specify the following properties:</p> <ul style="list-style-type: none"> • <code>java.endorsed.dirs</code> • <code>java.security.policy</code> • <code>java.class.path</code> • <code>java.library.path</code> <p>Note that if you want to specify a system property, specify the value in the <code>usrconf.properties</code> file without using <code>-D</code>.</p>	None
<code>add.class.path</code>	<p>Add the setup value to the class path of the batch application class loader on the batch server. You can specify only one JavaVM option for this key. If you specify multiple JavaVM options, add new <code>add.class.path</code>.</p> <p>If a path containing space is specified in the value, the path need not be enclosed with double quotation mark ("). Also, values specified in double quotations are not valid.</p> <p>To specify the JAR files for the container extension library, specify the <code>add.class.path</code> key in the option definition file for batch servers.</p>	None
<code>batch.ctm.enabled</code>	<p>Specify whether to use the scheduling functionality.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">The scheduling functionality will be used.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">The scheduling functionality will not be used.</p>	false
<code>batch.log.directory</code>	<p>Specify the output location directory of the log file. Specify the path of the log output location with absolute path or the relative path. You can specify following characters:</p> <ul style="list-style-type: none"> • Single byte alphanumeric character • Underscore (<code>_</code>) • Hyphen (<code>-</code>) • Path demarcation character <p>When the path (including the absolute and relative path up to the current directory when the relative path is specified) that exceeds 180 bytes is specified, a message <code>KDJE40059-W</code> is output, and hence the default value is used. When the default value exceeds 180 bytes, log initialization fails and terminates abnormally. When there is no access permission to directory,</p>	<i>Cosminexus-installation-directory</i> \CC\batch\logs

Key name	Contents	Default value
	<p>or when the file name is specified, a message KDJE55039-W is output and command ends.</p> <p>In Windows, you cannot specify a path that includes a UNC name. In UNIX, you cannot specify a path of an nfs-mounted disk.</p>	
batch.log.lockInterval	<p>Specify the retry interval (unit: milliseconds) as integers from 0 to 2147483647 for failure in an attempt of exclusive processing of log files. If 0 is specified, an error occurs immediately.</p> <p>The commands in batch applications are used to output the KDJE55042-E message and terminate the process.</p> <p>In Windows, specify the value acquired by multiplying the <code>batch.lockRetryCount</code> value and <code>batch.log.lockInterval</code> value in a range from 0 to 2147483647.</p> <p>In Windows use the value acquired by multiplying the <code>batch.log.lockRetryCount</code> value and <code>batch.log.lockInterval</code> value as the wait time of exclusive process.</p>	10
batch.log.lockRetryCount	<p>If the exclusive process of the log file fails, specify the retry frequency (unit: times) in integers from 1 to 2147483647.</p> <p>The commands in batch applications are used to output the KDJE55042-E message and terminate the process.</p>	1000
batch.log.maintenance.fileenum	<p>Specify the number of log files for saving commands to be used in batch applications.</p> <p>Specify integers from 1 to 64. To change the number of files, stop all commands used in the batch application that are output to the corresponding log files (<code>cjexecjob</code>, <code>cjkilljob</code>, and <code>cjlistjob</code>) and move or delete the log files and the log management files under the <code>mmap</code> directory to another directory.</p>	2
batch.log.maintenance.filesize	<p>Specify the file size (unit: bytes) of the log file for saving commands to be used in batch applications.</p> <p>Specify integers from 4096 to 16777216. To change the size, stop all commands used in the batch application that are output to the corresponding log files and move or delete the log files and the log management files under the <code>mmap</code> directory to another directory.</p>	1048576
batch.log.message.fileenum	<p>Specify the number of message log files of the commands to be used in batch applications.</p> <p>Specify integers from 1 to 64. To change the number of files, stop all commands used in the batch application that are output to the corresponding log files and move or delete the log files and the log management files under the <code>mmap</code> directory to another directory.</p>	2
batch.log.message.filesize	<p>Specify the file size (unit: bytes) of the message log file of the commands to be used in batch applications.</p> <p>Specify integers from 4096 to 16777216. To change the size, stop all commands used in the batch application that are output to the corresponding log files and move or delete the log files and the log management files under the <code>mmap</code> directory to another directory.</p>	1048576
batch.log.stdout.enabled	<p>Specify whether to output the messages issued by the batch job input command, with the standard output of batch execution commands.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 40px;">Output the message in the standard output.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 40px;">Do not output the message in the standard output.</p>	true

Key name	Contents	Default value
batch.request.timeout	Specify from 0 to 2147483647 (unit: seconds) as a timeout value for the communication between batch execution commands and batch servers. If you specify 0, the operation continues to wait infinitely.	0
batch.schedule.group.name	Specify a string of 1 to 63 characters having alphanumeric characters and underscore () as the schedule group name of batch servers.	JOBGROUP
batch.vbroker.agent.addr	Specify the IP address that OSAgent is using. You specify this key in the environment in which multiple IP addresses are distributed.	None
batch.vbroker.agent.port	Specify an integer from 1 to 65535 as the port number for connecting to OSAgent.	14000

(6) Notes

- For the `add.jvm.arg` key, do not specify the `--add-modules` or `--module-path` option. If you do so, operations are not guaranteed.

3.2.6 usrconf.properties (User property file for batch applications)

(1) Format

The user property file has the property file format of J2SE.

(2) File storage location

Set up the path for the storage location of `usrconf.properties` (user property file for batch applications) in the environment variable `CJBATCHUSRCONFDIR` or store the `usrconf.properties` (user property file for batch applications) in the directory that executes the `cjexecjob` command (batch application execution command). An `usrconf.cfg` (option definition file for batch applications) is retrieved in the following order when executing the `cjexecjob` command (batch application execution command):

1. Directory set in environment variable (`CJBATCHUSRCONFDIR`)
2. Directory where the `cjexecjob` command (batch application execution command) is executed

(3) Functionality

Specify the system properties of the JavaVM that executes the `cjexecjob` command, and the `cjkilljob` command.

(4) Reserved key of the server management command

The `cjexecjob` command and the `cjkilljob` command internally use the keys beginning with the following prefixes. Therefore, the keys beginning with these prefixes must not be used in applications.

- `ejbserver.*`
- `webserver.*`
- `appclient.*`
- `j2eeserver.*`

(5) Keys for customization of the `cjexecjob` command, and the `ckilljob` command

In the `cjexecjob` command, and the `ckilljob` command, you can customize the operations of the batch servers by setting the values in the following system property keys:

The following table gives an overview of the keys and describes the default values. For details about the keys, see [2.2.3 *usrconf.properties* \(User property file for J2EE servers\)](#). Furthermore, when referencing, substitute *J2EE server* and *J2EE application for Batch server* and *Batch application* respectively.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Overview	Default value	Related information
<code>ejbserver.client.ctm.RequestPriority</code>	Specify the priority (priority order) for extracting the request accumulated in the queues within CTM.	4	
<code>ejbserver.container.rebindpolicy</code>	Specify re-connection and re-sending of requests in the EJB client, in the case of a communication failure when invoking the EJB method.	VB_TRANSPARENT	2.13 Invoking the EJB remote interface in EJB Container Functionality Guide
<code>ejbserver.jndi.request.timeout</code>	Specify the timeout period of communication with the Naming Service.	0	
<code>java.naming.provider.url</code> ^{#1}	Specify the host name and the port number of the CORBA Naming Service that the batch application uses. Furthermore, this key is compatible with the protocol (<code>iioploc</code> or <code>iiopname</code>) used in the old versions. (Specified format) <code>corbaname::[Host name]:[Port number]</code>	Value that communicates with CORBA Naming Service that the batch server uses where the batch application is executed.	
<code>ejbserver.rmi.request.timeout</code>	Specify the communication timeout period between the client and the server.	0	
<code>https.cipherSuites</code>	Specify the recommended cipher suite to be used for <code>HttpsURLConnection</code> . ^{#2}	#2	
<code>https.protocols</code>	Specify the protocol to be used for <code>HttpsURLConnection</code> . ^{#2}	#2	

Legend:

Blank cell: Related information does not exist.

#1

This key is a user property file-specific key for batch applications. This key does not exist in the user property file for J2EE servers.

#2

For details on the keys, see the JDK documentation.

4

Files Used by the Smart Composer Functionality

This chapter describes the formats, storage locations, and the functionality of the files used by the Smart Composer functionality, and the keys specifiable in the files.

4.1 List of files used by the Smart Composer functionality

This section describes the files used by the Smart Composer functionality. The used files will differ for the system executing J2EE applications and for the system executing batch applications. The following are the files used for each system:

4.1.1 Files used in the system for executing J2EE applications

The following table lists the files used in the system for executing J2EE applications:

Table 4–1: List of files used in the system for executing J2EE applications

Classification	File name	Overview
Operating environment settings files for commands	<code>cmxserver.properties</code> (server setting properties file)	This file is used to set up an execution environment for the commands provided by the Smart Composer functionality.
	<code>.cmxrc</code> (client setting properties file)	Enables default value to be set for common arguments of the commands provided by the Smart Composer functionality. This file is used to set different default values for each client.
	<code>cmxclient.properties</code> (common client setting properties file)	Enables default value to be set for common arguments of the commands provided by the Smart Composer functionality. This file is used to set default values common to all clients.
	<code>lb.properties</code> (load balancer definition properties file)	This file is used to set connection information needed for accessing the load balancer.
Definition files for Web system implementation	Easy Setup definition file	Defines a Web system to be built using commands provided by the Smart Composer functionality.
	Configuration change definition files	Defines changes to the configuration of a Web system that was built using commands provided using the Smart Composer functionality.
	Logical server reference definition file [#]	Defines the logical user servers that are to be added to service units in Web systems built using the commands provided by the Smart Composer functionality.
	Host definition file for scale out	Defines the configuration of the Web system at the re-produced destination, when scaling out the Web system of the host unit management model, built using the Smart Composer functionality commands.

#

The logical server reference definition file is used for compatibility with the older version. Use the Easy Setup definition file for setting up the logical user servers.

4.1.2 Files used in the system for executing batch applications

The following table lists the files used in the system for executing batch applications:

Table 4–2: List of files used in the system for executing batch applications

Classification	File name	Overview
Operating environment settings files for commands	<code>cmxserver.properties</code> (server setting properties file)	This file is used to set up an execution environment for the commands provided by the Smart Composer functionality.
	<code>.cmxrc</code> (client setting properties file)	Enables default value to be set for common arguments of the commands provided by the Smart Composer functionality. This file is used to set different default values for each client.
	<code>cmxclient.properties</code> (common client setting properties file)	Enables default value to be set for common arguments of the commands provided by the Smart Composer functionality. This file is used to set default values common to all clients.
Definition files for Web system implementation	Easy Setup definition file	Defines a Web system to be built using commands provided by the Smart Composer functionality.
	Configuration change definition files	Defines changes to the configuration of a Web system that was built using commands provided using the Smart Composer functionality.
	Host definition file for scale out	Defines the configuration of the Web system at the re-produced destination, when scaling out the Web system of the host unit management model, built using the Smart Composer functionality commands.

4.2 Operating environment settings files for the commands of the Smart Composer functionality

4.2.1 cmxserver.properties (server setting properties file)

(1) Format

This file is in the Java properties format.

Files are used by the Smart Composer functionality as server setup property files.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config
- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

This file is used to set up an execution environment for the commands provided by the Smart Composer functionality.

(4) Specifiable keys

The specifiable keys and default values are described below.

Key name	Contents	Default
<code>cmx.max_wait_time</code>	Specifies the maximum amount of time (in seconds) to wait for completion of a command that is executing, in the range from 1 to 2147483647 (seconds). This key is applicable to commands executed with the <code>-wait</code> common option specified. If such a command's processing is not completed within the specified amount of time, the next command executed results in an error.	180

(5) Examples of coding

```
cmx.max_wait_time=360
```

(6) Precautions

- If the parameter is missing or invalid, the default value is assumed.
- If the settings file is updated while the Management Server is running, the updated information is not applied until the next time the Management Server is started.

4.2.2 .cmxrc (client setting properties file)

(1) Format

This file is in the Java properties format.

(2) File storage location

The file is stored in the home directory of an OS user who executes commands.

(3) Functionality

This file is used to set default values for common arguments of the commands provided by the Smart Composer functionality. You use this file to set default values for an individual client.

Copy and use the following template files:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\cmxrc`
- In UNIX
`/opt/Cosminexus/manager/config/templates/.cmxrc`

(4) Specifiable keys

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a parameter is not specified.

VR is the version of Application Server on which parameters are introduced or changed.

Key name	Contents	Specifiable value	Default value	VR
<code>cmx.connector.host^{#1}</code>	Sets host names and IP addresses to be assumed when the <code>-m</code> option is omitted in common arguments. The IP address can be specified as a regular expression using meta characters. If the IP address is specified as a regular expression, the matching IP address will be used from the available local IP addresses. ^{#2}	The values that can be specified are as follows: <ul style="list-style-type: none">• Host name• IPv4 address	None	06-50
<code>cmx.connector.userid</code>	Sets the user ID to be assumed when the <code>-u</code> option is omitted in the common arguments. Specification of this key is ignored if the functionality to omit the management user account is enabled.	User ID of management user account of Management Server	None	06-50
<code>cmx.connector.passwd</code>	Sets the password to be assumed when the <code>-p</code> option is omitted in the common arguments. Specification of this key is ignored if the functionality to omit the management user account is enabled.	Management user account password of Management Server	None	06-50
<code>cmx.wait</code>	Sets <code>true</code> to treat the <code>-wait</code> option in the common argument as the default, and <code>false</code> to treat the <code>-nowait</code> option as the default.	The following strings can be specified: <ul style="list-style-type: none">• <code>true</code>• <code>false</code>	<code>false</code>	06-50

Key name	Contents	Specifiable value	Default value	VR
<code>cmx.verbose</code>	Sets <code>true</code> to treat the <code>-verbose</code> option in the common argument as the default, and <code>false</code> to treat the <code>-noverbose</code> option as the default.	The following strings can be specified: <ul style="list-style-type: none"> <code>true</code> <code>false</code> 	<code>false</code>	06-50
<code>cmx.websystem.name</code>	Specifies the Web system name when the <code>-s</code> option of the following commands is omitted: <ul style="list-style-type: none"> <code>cmx_build_system</code>^{#3} <code>cmx_delete_system</code> <code>cmx_list_model</code>^{#5} <code>cmx_list_status</code> <code>cmx_resume_lb</code>^{#4} <code>cmx_start_target</code> <code>cmx_stop_target</code> <code>cmx_test_lb</code>^{#4} 	Web system name	None	07-50
<code>cmx.lb</code> ^{#4}	Specifies operations for the virtual server of the load balancer, when the <code>-lb</code> option of the <code>cmx_delete_system</code> command is omitted. <ul style="list-style-type: none"> <code>keepvs</code>:The virtual server is not deleted. <code>deletevs</code>:The virtual server is deleted. 	The following strings can be specified: <ul style="list-style-type: none"> <code>keepvs</code> <code>deletevs</code> 	None	07-10
<code>cmx.encoding</code>	Specifies a character encoding assumed when the <code>-encoding</code> option of the <code>cmx_export_model</code> command is omitted. For details about specifiable values, see <i>cmx_export_model (Output an Easy Setup definition file)</i> in the <i>uCosminexus Application Server Command Reference Guide</i> .	Character encoding name	UTF-8	07-50
<code>cmx.indent</code>	Specifies the indent size assumed when the <code>-indent</code> option of the <code>cmx_export_model</code> command is omitted. For details about specifiable values, see <i>cmx_export_model (Output an Easy Setup definition file)</i> in the <i>uCosminexus Application Server Command Reference Guide</i> .	Integers from 0 to 8	2	07-50
<code>cmx.myhost</code>	Specifies the host name of the management server machine assumed when the <code>-myhost</code> option of the <code>cmx_export_model</code> command is omitted. For details about specifiable values, see <i>cmx_export_model (Output an Easy Setup definition file)</i> in the <i>uCosminexus Application Server Command Reference Guide</i> .	Host name	None	07-50

#1

In the following cases, if a value is specified in `webserver.connector.http.bind_host` of `mserver.properties`, also specify the same value in the `cmx.connect.host` key:

- When operating the system for executing J2EE applications in the host unit management model
- In the system for executing batch applications

#2

If the IP address subnet used in the communication with the Administration Agent in the management domain is fixed, and if the IP address to be specified is coded as `192\.\.168\.\.0\.\. .+`, the IP address matches with the IP

address starting with 192.168.0. (for example, 192.168.0.32 or 192.168.0.128), so the setup file can be distributed to all the hosts and can be used without modifications. For details on the regular expressions, check the specifications for the `java.util.regex.Pattern` class in Java.

If multiple IP addresses matching with the specified regular expression are detected, the IP address with the smallest value is used. For example, if 192.168.0.32 and 192.168.0.128 are detected, 192.168.0.32 will be used. In this case, the used IP address is not always the intended IP address, therefore, make sure to code a regular expression such as `192\\.168\\.0\\.1..` to match with only one IP address.

Note the following points for specifying the IP address as a regular expression:

- When specifying a backslash (`\`), specify a double backslash (`\\`). A double backslash (`\\`) will replace a single backslash (`\`).
- Do not specify a colon (`:`). The text after the colon is considered as a port number.

If a value is specified in `webserver.connector.http.bind_host` of `mserver.properties`, specify the same value.

#3

If the `-f` option is specified when the `cmx_build_system` command is executed, the key settings are not applied.

#4

Cannot be used in the system for executing batch applications.

#5

When the `cmx.websystem.name` key is set up, and if you use the `cmx_list_model` command for acquiring all the registered Web system information models, specify the `-all` option.

(5) Examples of coding

```
cmx.connect.host=localhost:28080
cmx.connect.userid=admin
cmx.connect.passwd=p1574809
cmx.wait=true
#cmx.verbose=false
cmx.websystem.name=MyWebSystem
cmx.lb=deletevs
```

(6) Precautions

- You must set appropriate access permissions for this file, because sensitive information, such as the user ID and password, is specified in the file.
- To use non-ASCII characters, match the character encoding between the settings file and the OS locale during execution of commands provided by the Smart Composer functionality. Moreover, when using Japanese, do not specify character strings that include Unicode-encoded characters.
- If a parameter is missing or invalid, the default value is assumed.
- The settings (`true` and `false`) are not case sensitive.

4.2.3 cmxclient.properties (common client setting properties file)

(1) Format

This file is in the Java properties format.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config/`

(3) Functionality

This file is used to set default values for common arguments of the commands provided by the Smart Composer functionality. You use this file to set default values that are common to all clients.

(4) Specifiable keys

The following table lists the specifiable keys. Note that *Default value* is the value that is assumed when a parameter is not specified.

VR is the version of Application Server on which parameters are introduced or changed.

Key name	Contents	Specifiable value	Default value	VR
<code>cmx.apply_user</code>	Sets user IDs for the OS of the clients to which this file is applied. Separate the user IDs with commas. To apply this file when a Windows service invokes a command of the Smart Composer functionality, specify <i>host-name</i> \$ (<i>host-name</i> is the name of the host on which Management Server is operating).	User name registered for OS	None	06-70
<code>cmx.connect.host#1</code>	Sets host names and IP addresses to be assumed when the <code>-m</code> option is omitted in common arguments. The IP address can be specified as a regular expression using meta characters. If the IP address is specified as a regular expression, the matching IP address will be used from the available local IP addresses. ^{#2}	The values that can be specified are as follows: <ul style="list-style-type: none">• Host name• IPv4 address	None	06-50
<code>cmx.connect.userid</code>	Sets the user ID to be assumed when the <code>-u</code> option is omitted in the common arguments. Specification of this property is ignored if the functionality to omit the management user account is enabled.	User ID of management user account of Management Server	None	06-50
<code>cmx.connect.password</code>	Sets the password to be assumed when the <code>-p</code> option is omitted in the common arguments. Specification of this property is ignored if the functionality to omit the management user account is enabled.	Management user account password of Management Server	None	06-50
<code>cmx.wait</code>	Sets <code>true</code> to treat the <code>-wait</code> option in the common argument as the default, and <code>false</code> to treat the <code>-nowait</code> option as the default.	The following strings can be specified: <ul style="list-style-type: none">• <code>true</code>	false	06-50

Key name	Contents	Specifiable value	Default value	VR
		<ul style="list-style-type: none"> • false 		
cmx.verbose	Sets true to treat the <code>-verbose</code> option in the common argument as the default, and false to treat the <code>-noverbose</code> option as the default.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
cmx.websystem.name	Specifies the Web system name when the <code>-s</code> option of the following commands is omitted: <ul style="list-style-type: none"> • <code>cmx_build_system</code>^{#3} • <code>cmx_delete_system</code> • <code>cmx_list_model</code>^{#5} • <code>cmx_list_status</code> • <code>cmx_resume_lb</code>^{#4} • <code>cmx_start_target</code> • <code>cmx_stop_target</code> • <code>cmx_test_lb</code>^{#4} 	Web system name	None	07-50
cmx.lb ^{#4}	Specifies operations for the virtual server of the load balancer, when the <code>-lb</code> option of the <code>cmx_delete_system</code> command is omitted. <ul style="list-style-type: none"> • <code>keepvs</code>: The virtual server is not deleted. • <code>deletevs</code>: The virtual server is deleted. 	The following strings can be specified: <ul style="list-style-type: none"> • <code>keepvs</code> • <code>deletevs</code> 	None	07-10
cmx.encoding	Specifies a character encoding assumed when the <code>-encoding</code> option of the <code>cmx_export_model</code> command is omitted. For details about specifiable values, see <i>cmx_export_model (Output an Easy Setup definition file)</i> in the <i>uCosminexus Application Server Command Reference Guide</i> .	Character encoding name	UTF-8	07-50
cmx.indent	Specifies the indent size assumed when the <code>-indent</code> option of the <code>cmx_export_model</code> command is omitted. For details about specifiable values, see <i>cmx_export_model (Output an Easy Setup definition file)</i> in the <i>uCosminexus Application Server Command Reference Guide</i> .	Integers from 0 to 8	2	07-50
cmx.myhost	Specifies the host name of the management server machine assumed when the <code>-myhost</code> option of the <code>cmx_export_model</code> command is omitted. For details about specifiable values, see <i>cmx_export_model (Output an Easy Setup definition file)</i> in the <i>uCosminexus Application Server Command Reference Guide</i> .	Host name	None	07-50

#1

Note the following when operating the system for executing J2EE applications in the host unit management model or system for executing batch applications:

If a value is specified in `webserver.connector.http.bind_host` of `mserver.properties`, specify the same value also in the `cmx.connect.host` key.

#2

If the IP address subnet used in the communication with the Administration Agent in the management domain is fixed, and if the IP address to be specified is coded as `192\.\.168\.\.0\.\.+`, the IP address matches with the IP address starting with `192.168.0.` (for example, `192.168.0.32` or `192.168.0.128`), so the setup file can

be distributed to all the hosts and can be used without modifications. For details on the regular expressions, check the specifications for the `java.util.regex.Pattern` class in Java.

If multiple IP addresses matching with the specified regular expression are detected, the IP address with the smallest value is used. For example, if `192.168.0.32` and `192.168.0.128` are detected, `192.168.0.32` will be used. In this case, the used IP address is not always the intended IP address, therefore, make sure to code a regular expression such as `192\\.168\\.0\\.1..` to match with only one IP address.

Note the following points for specifying the IP address as a regular expression:

- When specifying a backslash (`\`), specify a double backslash (`\\`). A double backslash (`\\`) will replace a single backslash (`\`).
- Do not specify a colon (`:`). The text after the colon is considered as a port number.

If a value is specified in `webserver.connector.http.bind_host` of `mserver.properties`, specify the same value.

#3

If the `-f` option is specified when the `cmx_build_system` command is executed, the key settings are not applied.

#4

Cannot be used in the system for executing batch applications.

#5

When the `cmx.websystem.name` key is set up, and if you use the `cmx_list_model` command for acquiring all the registered Web system information models, specify the `-all` option.

(5) Examples of coding

```
cmx.apply_user=Administrator,muser1
cmx.connect.host=localhost:28080
cmx.connect.userid=admin
cmx.connect.passwd=p1574809
cmx.wait=true
#cmx.verbose=false
cmx.websystem.name=MyWebSystem
cmx.lb=deletevs
```

(6) Precautions

- You must set appropriate access permissions for this file, because sensitive information, such as the user ID and password, is specified in the file.
- To use non-ASCII characters, match the character encoding between the settings file and the OS locale during execution of commands provided by the Smart Composer functionality. Moreover, when using Japanese, do not specify character strings that include Unicode-encoded characters.
- If a parameter is missing or invalid, the default value is assumed.
- The settings (`true` and `false`) are not case sensitive.
- The values of `cmx.apply_user` are case sensitive in UNIX, but not case sensitive in Windows.
- If `.cmxrc` and `cmxclient.properties` files are both specified, the `.cmxrc` file takes precedence and the `cmxclient.properties` file is not read.
- If a client does not use the `.cmxrc` file and does not have access permissions for the `cmxclient.properties` file, a read error occurs on the `cmxclient.properties` file. Therefore, for each client who

uses Smart Composer functionality commands, make sure that you grant access permissions for the `cmxclient.properties` file by setting the user ID in the `cmx.apply_user` key.

4.2.4 lb.properties (load balancer definition properties file)

(1) Format

This file is in the Java properties format.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config`
- In UNIX
`/opt/Cosminexus/manager/config`

(3) Functionality

This file is used to set connection information needed for accessing the load balancer. You use this file to control the load balancer from Cosminexus.

(4) Specifiable keys

The specifiable keys and default values are described below. Note that which keys can be specified depends on the load balancer control method. For keys that can be set by using the load balancer, which uses direct connection with the use of API, see *18.2.1 lb.properties (load balancer definition property file)* in the *uCosminexus Application Server Security Management Guide*.

Key name	Contents	Default
<code>lb.list</code>	Sets the load balancer's management IP address in dot notation (<code>xxx.xxx.xxx.xxx</code>), where <code>xxx</code> is an integer in the range from 0 to 255. If multiple load balancers are used, set multiple management IPs separated by commas.	None
<code>lb.connect_type.IP-address#1#2</code>	Sets the load balancer connection type. <ul style="list-style-type: none"> • To use Telnet directly, specify <code>telnet</code>. • To use ssh directly, specify <code>ssh</code>. If nothing is specified, <code>jp1_nc</code> (old VR-compatible) is assumed.	<code>jp1_nc</code>
<code>lb.enable_passwd.IP-address</code>	Sets the password required for the Privileged EXEC level set in the load balancer for each load balancer. Note that this property is set in ACOS.	None
<code>lb.ssh.port.IP-address#1</code>	Sets the load balancer's ssh server port number, as an integer in the range from 1 to 65535.	22
<code>lb.ssh.user.IP-address#1</code>	Sets the user name to be used to connect to the load balancer with ssh.	None
<code>lb.ssh.passwd.IP-address#1</code>	Sets the user password to be used to connect to the load balancer with ssh.	None

Key name	Contents	Default
<code>lb.ssh.timeout.IP-address#1#2</code>	Sets the timeout value (in seconds) for when the <code>ssh</code> command is executed for the load balancer. If the process of connecting to the load balancer is not completed within the time set in this key, the Smart Composer functionality command (<code>cmx_build_system</code> , etc) terminates abnormally with a timeout error. Specify an integer in the range from 1 to 2147483.	10
<code>lb.telnet.command_timeout.IP-address</code>	Sets the timeout value (in seconds) for sending commands to the load balancer. If the CLI command issued for the load balancer is not completed within the time set in this key, commands of the Smart Composer functionality (<code>cmx_build_system</code> , etc) terminates abnormally with a timeout error. Specify an integer in the range from 1 to 2147483.	10
<code>lb.telnet.login_prompt.IP-address</code>	Sets the character string to be displayed in the prompt after the login when connecting to the load balancer. To specify spaces at the end, enclose the character string within "" (double quotation mark).	None
<code>lb.telnet.login_timeout.IP-address</code>	Sets the timeout value (in seconds) for the login process when connecting to the load balancer. If the process of connecting to the load balancer is not completed within the time set in this key, the Smart Composer functionality (<code>cmx_build_system</code> , etc) command terminates abnormally with a timeout error. Specify an integer in the range from 1 to 2147483.	10
<code>lb.telnet.passwd.IP-address</code>	Sets the user password for logging in to the load balancer using Telnet.	None
<code>lb.telnet.passwd_prompt.IP-address</code>	Sets the character string appearing in the password input prompt when connecting to the load balancer. To specify spaces at the end, enclose the character string within "" (double quotation mark).	None
<code>lb.telnet.port.IP-address</code>	Sets the port number of the load balancer. Specify an integer in the range from 1 to 65535.	23
<code>lb.telnet.user.IP-address</code>	Sets the user name for logging in to the load balancer using Telnet.	None
<code>lb.telnet.user_prompt.IP-address</code>	Sets the character string appearing in the user name input prompt when connecting to the load balancer. To specify spaces at the end, enclose the character string within "" (double quotation mark).	None

#1

Specify the management IP address of the load balancer that was specified in `lb.list`.

#2

If an invalid value is specified, the `cmx_test_lb`, `cmx_build_system`, `cmx_delete_system`, `cmx_start_target`, and `cmx_stop_target` commands will result in an error.

(5) Examples of coding

```
lb.list=192.168.1.100
lb.enable_passwd.192.168.1.100=adminpw

lb.connect_type.192.168.1.100=telnet
#lb.telnet.port.192.168.1.100=23
lb.telnet.user.192.168.1.100=user01
lb.telnet.passwd.192.168.1.100=user01pw
lb.telnet.user_prompt.192.168.1.100="AX login: "
```

```
lb.telnet.passwd_prompt.192.168.1.100="Password: "  
lb.telnet.login_prompt.192.168.1.100=>  
#lb.telnet.login_timeout.192.168.1.100=10  
#lb.telnet.command_timeout.192.168.1.100=10
```

(6) Precautions

- You must set appropriate access permissions for this file, because the file contains sensitive information such as passwords.
- If a parameter is missing or invalid, the default value is assumed.
- If the settings file is updated while the Management Server is running, the updated information is not applied until the next time the Management Server is started.
- If this file is updated or the settings of the connection between the Management Server machine and load balancer is changed, use the `cmx_test_lb` command for checking the connection with the load balancer. For details about the `cmx_test_lb` command, see 8. *Commands Used with the Smart Composer Functionality* in the *uCosminexus Application Server Command Reference Guide*. If you cannot connect to the load balancer, check the load balancer settings and the definition (definition of the `<load-balancer>` tag) of load balancers in the Easy Setup definition file based on the `cmx_test_lb` command output message. For details about the load balancer settings and the definition (definition of the `<load-balancer>` tag) of load balancers in the Easy Setup definition file, see 4.7.5 *Setting environment for connecting to load balancer* in the *uCosminexus Application Server Virtual System Setup and Operation Guide*.

4.3 Easy Setup definition file

This section describes the Easy Setup definition file.

4.3.1 Overview

You define Web system attributes, load balancers, physical tiers, service units, and the hosts configuring a service unit in the Easy Setup definition file. Define only the required number of Web system attributes, physical tiers, service units, and hosts in the definition file and one load balancer in the Web system.

However, when you control a load balancer from the Application Server (when the Smart Composer functionality is not used for load balancer settings and for starting and locking the real server port), you are not required to define the load balancer. Also, a load balancer is not used in the system for executing batch applications; and therefore, you need not define the load balancer.

You copy and use the following template file:

- If you use compatibility mode:
`Cosminexus-installation-directory\manager\config\templates\cmxdefcombinedmodel_V9.xml`
- If you do not use compatibility mode:
`Cosminexus-installation-directory\manager\config\templates\cmxdefcombinedmodel.xml`

Reference note

The character encoding in the template file is UTF-8.

Important note

Use the Change Configuration definition file to change the system configuration after setting up a system. You cannot change the system configuration by editing the Easy Setup definition file.

System configuration changes are performed only via the `cmx_change_model` command that uses the Change Configuration definition file for adding service units and hosts.

(1) Format

The file format is `xml` format.

(2) Storage location

Store this file at any work location.

4.3.2 Contents specified in the Easy Setup definition file

The following table lists and describes each item of the Easy Setup definition file:

Item name	Description
Tag name	Describes the tag to be set.
Occurrence pattern	Indicates the occurrence frequency of the tag.
Contents	Indicates the contents defined in the key.
Specifiable value	Indicates the value that you can specify in the tag. Displays hyphen (-) when there is no value that you can specify.
Omitting tags	Indicates whether you can omit the key appearing in the definition format.
Omitting values	Indicates whether you can omit the value of the key appearing in the definition format.
Default	Indicates a valid specification value when the contents specified in the key are omitted. Displays "None" when a default value does not exist.
Version	Indicates the version of the Application Server that you can define.

For details about the omission and contents of the default tag values, see each definition in the Easy Setup definition file from the section 4.6.3 onwards.

The following table describes the Easy Setup definition file:

Tag name	Occurrence pattern	Contents	Specifiable value	Default value	VR
<web-system>	0 or more times	Defines a Web system. For defining the multiple Web systems, specify the <web-system> tag for each Web system.	--	None	07-00
<name>	Once	You must define this tag. The <name> tag specifies a name for identifying the Web system.	Specify a string within 32 characters having alphanumeric characters or underscore (_) and hyphen (-).	None	06-50
<display-name>	0 or once	The <display-name> tag specifies a display name of a Web system. There are no restrictions on the permitted characters.	Specify any string within 128 characters.	None	06-50
<description>	0 or once	The <description> tag specifies comments for a Web system. There are no restrictions on the permitted characters.	Specify any string within 1024 characters.	None	06-50
<load-balancer>	0 or once	Defines a load balancer.	--	None	06-50
<name>	0 or once	Specifies name of the load balancer.	Specify a string within 32 characters having alphanumeric	None	06-50

Tag name		Occurrence pattern	Contents	Specifiable value	Default value	VR
				characters or underscore (_) and hyphen (-).		
	<load-balancer-type>	Once	Specifies one of the following as the type of load balancer:	The following strings can be specified: <ul style="list-style-type: none"> • BIG-IPv9 • BIG-IPv10.1 • BIG-IPv10.2 • BIG-IPv11 • ACOS 	None	06-50
	<display-name>	0 or once	Specifies display name of the load balancer. There are no restrictions on the permitted characters.	Specify any string within 128 characters.	None	06-50
	<description>	0 or once	Specifies comments for the load balancer. There are no restrictions on the permitted characters.	Specify any string within 1024 characters.	None	06-50
	<cookie-switching>	0 or once	The <cookie-switching> tag is specified when using the cookie switching functionality of the load balancer.	--	None	06-51
	<cookie-switching-enabled>	0 or once	The <cookie-switching-enabled> tag is specified when using the cookie switching functionality.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-51
	<cookie-name>	0 or once	Specifies cookie name by alphanumeric characters or underscore "_". The following name is used by the Web container and is case sensitive: <ul style="list-style-type: none"> • JSESSIONID 	<ul style="list-style-type: none"> • In BIG-IP Specify a character string of 64 characters or less. Note that the 1st character must be specified as an upper case or lower case character. • For ACOS Specify a character string of 63 characters or less. 	CMX_SERVE R_ID	06-51
	<server-id-rule>	0 or once	In version 08-53 or later versions, do not specify a value in this tag. If specified, the value is disabled.	--	None	06-51

Tag name		Occurrence pattern	Contents	Specifiable value	Default value	VR
	<management-host>	Once	Specifies the management IP address or host name set up in the load balancer.	The following strings can be specified: <ul style="list-style-type: none"> • Host name • IPv4 address 	None	07-50
	<redundant-management-host>	Once	In a system with redundant load balancers, specifies the management IP address or host name set up in the second load balancer.	The following strings can be specified: <ul style="list-style-type: none"> • Host name • IPv4 address 	None	07-50
	<virtual-server>	Once	Defines a virtual server.	--	None	06-50
	<virtual-server-name>	Once	Specifies the virtual server name. If multiple Web systems are to share the same load balancer, make sure that the specified virtual server name is not duplicated among the sharing Web systems.	Specify a string within 31 characters using alphanumeric characters or underscore (_), period (.), and hyphen (-).	None	06-50
	<display-name>	0 or once	Specifies the display name of the virtual server.	Specify any string within 128 characters.	None	06-50
	<description>	0 or once	Specifies a comment about the virtual server.	Specify any string within 1024 characters.	None	06-50
	<ip-address>	Once	Specifies the IP address of the virtual server. If multiple Web systems are to share the same load balancer, make sure that the virtual server's IP address is not duplicated among the sharing Web systems.	The following strings can be specified: <ul style="list-style-type: none"> • Host name • IPv4 address 	None	06-50
	<http-port>	Once	Specifies the HTTP port number of the virtual server, in the range from 1 to 65535.	Specify an integer from 1 to 65535.	None	06-50
	<tier>	One or more times	You must define this tag. Defines the physical tier.	--	None	06-50
	<tier-type>	Once	You must define this tag. Specifies the types of physical tiers.	The following strings can be specified: <ul style="list-style-type: none"> • combined-tier • http-tier • j2ee-tier 	None	06-50

Tag name		Occurrence pattern	Contents	Specifiable value	Default value	VR
				<ul style="list-style-type: none"> ctm-tier free-tier 		
	<j2ee-server-count>	0 or once	Specifies the number of J2EE servers deployed on one host when <code>ctm-tier</code> is specified in the <code><tier-type></code> tag.	Specify an integer from 0 to 32.	1	07-10
	<configuration>	0 or more times	Defines the configuration to be applied to all the logical servers in the physical tier for each type of logical server.	--	None	06-50
	<logical-server-type>	Once	You must define this tag. Specifies the types of logical servers for defining the configuration.	The following strings can be specified: <ul style="list-style-type: none"> web-server j2ee-server performance-tracer ctm-domain-manager component-transaction-monitor smart-agent 	None	06-50
	<server-no>	0 or once	Specifies the number for identifying the J2EE server when a common configuration is specified for specific J2EE servers within the physical tier. Specify a unique number in the physical tier.	For 1 to the value specified for <code><j2ee-server-count></code>	None	07-10
	<param>	One or more times	You must define this tag. Defines the name and value of a parameter used for setting up the logical server environment.	--	None	06-50
	<param-name>	Once	The <code><param-name></code> tag specifies the parameter name.	For details about specifiable values, see the description in 4.8 System configuration patterns and	None	06-50

Tag name					Occurrence pattern	Contents	Specifiable value	Default value	VR
							<i>defined logical servers.</i>		
				<code><param-value></code>	One or more times	The <code><param-value></code> tag specifies the value set for parameters.	For details about specifiable values, see the description in 4.8 System configuration patterns and defined logical servers.	None	06-50
				<code><unit></code>	One or more times	You must define this tag. Defines a service unit.	--	None	06-50
				<code><name></code>	One	You must define this tag. The <code><name></code> tag specifies the name for identifying the service unit.	Specify a string within 32 characters using alphanumeric characters or underscore (<code>_</code>) and hyphen (<code>-</code>).	None	06-50
				<code><display-name></code>	0 or once	The <code><display-name></code> tag specifies the display name of the service unit. There are no restrictions on the permitted characters.	Specify any string within 128 characters.	None	06-50
				<code><description></code>	0 or once	The <code><description></code> tag specifies the comments for the service unit. There are no restrictions on the permitted characters.	Specify any string within 1024 characters.	None	06-50
				<code><allocated-host></code>	One or more times	You must define this tag. Defines the reference to the host that configures a service unit.	--	None	06-50
				<code><host-ref></code>	One	You must define this tag. Specifies the host name specified in the <code><name></code> tag in the host definition, the host name defined in the already setup Web system, or <code>@myhost</code> .	The values that can be specified are as follows: <ul style="list-style-type: none"> • Host name • IPv4 address • <code>@myhost</code> 	None	06-50
				<code><hosts-for></code>	One	You must define this tag. Specifies the type of physical tier to which the host specified in the <code><host-ref></code> tag belongs.	The following strings can be specified: <ul style="list-style-type: none"> • <code>combined-tier</code> • <code>http-tier</code> 	None	06-50

Tag name				Occurrence pattern	Contents	Specifiable value	Default value	VR
						<ul style="list-style-type: none"> • j2ee-tier • ctm-tier • free-tier 		
			<define-server>	0 or more times	Defines the configuration for each logical server that belongs to the physical tier specified in the <hosts-for> tag.	--	None	07-00
			<logical-server-name>	0 or once	The <logical-server-name> tag specifies the name for identifying a logical server or a cluster.	Specify a string within 128 characters using alphanumeric characters or underscore (_) and hyphen (-).	cmx_Web-system-name_service-unit-name_type_serial-number	07-00
			<display-name>	0 or once	The <display-name> tag specifies the display name of the logical server. There are no restrictions on the permitted characters.	Specify any string within 128 characters.	None	07-00
			<description>	0 or once	The <description> tag specifies the comments for a logical server. There are no restrictions on the permitted characters.	Specify any string within 1024 characters.	None	07-00
			<logical-server-type>	Once	You must define this tag. Specifies the types of logical servers for defining the configuration.	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • web-server • j2ee-server • performance-tracer • ctm-domain-manager • component-transaction-monitor • smart-agent • naming-service 	None	07-00

Tag name					Occurrence pattern	Contents	Specifiable value	Default value	VR
							<ul style="list-style-type: none"> • user-server 		
				<cluster-ref>	0 or once	Specifies the cluster name when setting up a logical server as a cluster member.	Specify a string within 128 characters using alphanumeric characters or underscore (_) and hyphen (-).	None	07-50
				<server-no>	0 or once	Specifies the number for identifying the J2EE server when a configuration is specified for a specific J2EE server in the service unit. Specify a unique number on the host.	For 1 to the value specified for <j2ee-server-count>	None	07-10
				<configuration>	0 or once	Defines the configuration to be applied for each logical server.	--	None	07-00
				<param>	One or more times	You must define this tag. Defines the name and value of a parameter used for setting up the logical server environment.	--	None	07-00
				<param-name>	Once	The <param-name> tag specifies the parameter name.	For details about specifiable values, see the description in <i>4.8 System configuration patterns and defined logical servers</i> .	None	07-00
				<param-value>	One or more times	The <param-value> tag specifies the value set for parameters.	For details about specifiable values, see the description in <i>4.8 System configuration patterns and defined logical servers</i> .	None	07-00
<host>					0 or more times	Defines a host.	--	None	06-50
				<host-name>	Once	The <host-name> tag specifies a name or an IP address for identifying a host. If the host is connected to multiple network segments and have multiple IP addresses, set either of the following items:	The following strings can be specified: <ul style="list-style-type: none"> • Host name • IPv4 address • @myhost 	None	07-50

Tag name	Occurrence pattern	Contents	Specifiable value	Default value	VR
		<ul style="list-style-type: none"> IP address in the network used for communication between servers or between a load balancer and server Host name in the network used for communication between servers or between a load balancer and server 			
<display-name>	0 or once	Specifies the display name of the host. There are no restrictions on the permitted characters.	Specify any string within 128 characters.	None	06-50
<description>	0 or once	Specifies a comment about the host within 1,024 characters. There are no restrictions on the permitted characters.	Specify any string within 1024 characters.	None	06-50
<agent-host>	0 or once	<p>Specifies the host name, IP address, or @myhost of the Cosminexus Administration Agent.</p> <p>If the host is connected to multiple network segments and have multiple IP addresses, set either of the following items:</p> <ul style="list-style-type: none"> IP address in the network used for communication between Management Server and a server Host name in the network used for communication between Management Server and a server 	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> Host name IPv4 address @myhost 	Value specified in host-name	07-50
<agent-port>	0 or once	The <agent-port> tag specifies a port number of the Cosminexus Administration Agent.	Specify an integer from 1 to 65535.	20295	06-50

Legend:

--: Not applicable

4.3.3 Defining a Web system

(1) <web-system>

Contents

Defines a Web system. For defining the multiple Web systems, specify the <web-system> tag for each Web system.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(2) <name>**Contents**

You must define this tag.

The <name> tag specifies a name for identifying the Web system.

This name must be unique within the management domain. Specify this name in the -s option of the Smart Composer functionality commands.

Specifiable value

Specify a string within 32 characters using alphanumeric characters or underscore () and hyphen (-).

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(3) <display-name>**Contents**

The <display-name> tag specifies a display name of a Web system. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 128 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <description>**Contents**

The <description> tag specifies comments for a Web system. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 1024 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

4.3.4 Defining a load balancer

(1) <load-balancer>

Contents

Defines a load balancer.

If the Smart Composer functionality is not used to set up the load balancer or to start and shut down the real server port, there is no need to define a load balancer (from the <load-balancer> tag through the </load-balancer> tag). Note that the load balancer need not be defined in the system for executing batch applications.

Specifiable value

--

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(2) <name>

Contents

Specifies a name for the load balancer, as a maximum of 32 characters.

Specifiable value

Specify a string within 32 characters using alphanumeric characters or underscore (_) and hyphen (-).

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(3) <load-balancer-type>

Contents

Specifies one of the following as the type of load balancer: The types of load balancers are as follows:

BIG-IPv9

Specified when BIG-IP v9 is used.

BIG-IPv10.1

Specified when BIG-IP v10.1 is used.

BIG-IPv10.2

Specified when BIG-IP v10.2 is used.

BIG-IPv11

Specified when BIG-IP v11 is used.

ACOS

Specified when ACOS is used.

Make sure that you specify this tag when you use the Smart Composer functionality to set up the load balancer.

Specifiable value

The following strings can be specified:

- BIG-IPv9
- BIG-IPv10.1
- BIG-IPv10.2
- BIG-IPv11
- ACOS

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(4) <display-name>

Contents

Specifies the display name of the load balancer, as a maximum of 128 characters. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 128 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <description>

Contents

Specifies a comment about the load balancer, as a maximum of 1,024 characters. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 1024 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

4.3.5 Defining cookie switching

(1) <cookie-switching>

Contents

The <cookie-switching> tag is specified when using the cookie switching functionality of the load balancer.

This setting enables a series of HTTP requests to be processed by a single Web server or J2EE server.

Specifiable value

--

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(2) <cookie-switching-enabled>

Contents

The <cookie-switching-enabled> tag is specified when using the cookie switching functionality.

Specifiable value

The following strings can be specified:

- true

The <cookie-switching-enabled> tag is specified when using the cookie switching functionality.

- false

Specify false if you do not want to use the cookie switching functionality.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(3) <cookie-name>

Contents

The <cookie-name> tag specifies a cookie name with a string of 1 to 64 characters.

The permitted name is a combination of alphanumeric characters or underscore (_).

The following name is used by the Web container and is case sensitive:

- JSESSIONID

Note:

This specification is disabled when you specify ACOS in <load-balancer-type> and API in lb.connect_type.IP-address of lb.properties.

Specifiable value

- For BIG-IP

Specify a character string of 64 characters or less with alphanumeric characters or underscore "_". Note that the 1st character must be specified as an upper case or lower case character.

- For ACOS

Specify a character string of 63 characters or less with alphanumeric characters or underscore "_".

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <server-id-rule>

Contents

In version 08-53 or later versions, do not specify a value in this tag. If specified, the value is disabled.

Specifiable value

In version 08-53 or later versions, do not specify a value in this tag. If specified, the value is disabled.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <management-host>

Contents

Specifies the management IP address or host name set up in the load balancer.

If the same load balancer is between multiple Web systems, specify the same management IP address or host name in the Web systems sharing the load balancer.

Specifiable value

The following strings can be specified:

- Host name

Specifies the management IP address in dot notations (*xxx.xxx.xxx.xxx*) where *xxx* is an integer in the range from 0 to 255.

- IPv4 address

The permitted host name is the combination of alphanumeric characters or underscore (`_`) and hyphen (`-`).

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(6) <redundant-management-host>

Contents

In a system with redundant load balancers, specifies the management IP address or host name set up in the second load balancer.

If the same load balancer is between multiple Web systems, specify the same management IP address or host name in the Web systems sharing the load balancer.

For details about tags specifiable in each definition, see [4.7 Tags that can be specified in the Easy Setup definition file and the configuration change definition files](#).

Specifiable value

The following strings can be specified:

- Host name

The permitted host name is the combination of alphanumeric characters or underscore () and hyphen (-).

- IPv4 address

Specifies the management IP address in dot notations (*xxx.xxx.xxx.xxx*) where *xxx* is an integer in the range from 0 to 255.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

4.3.6 Defining a virtual server

(1) <virtual-server>

Contents

Defines a virtual server.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(2) <virtual-server-name>

Contents

Specifies the name of the virtual server as from 1 to 31 characters.

If multiple Web systems are to share the same load balancer, make sure that the specified virtual server name is not duplicated among the sharing Web systems.

Specifiable value

Specify a string within 31 characters using alphanumeric characters or underscore (), period (.), and hyphen (-).

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(3) <display-name>

Contents

Specifies the display name of the virtual server.

Specifiable value

Specify any string within 128 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <description>**Contents**

Specifies a comment about the virtual server.

Specifiable value

Specify any string within 1024 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <ip-address>**Contents**

The <ip-address> tag specifies a host name or a IP address for the virtual server.

If multiple Web systems are to share the same load balancer, make sure that the virtual server's IP address is not duplicated among the sharing Web systems.

Specifiable value

The following strings can be specified:

- Host name
- IPv4 address

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(6) <http-port>**Contents**

Specifies the HTTP port number of the virtual server, in the range from 1 to 65535.

For BIG-IP 1500, AX2000, or load balancer blade AC51L4, if the same load balancer is shared between multiple Web systems, make sure that the HTTP port number of the virtual server is not repeated in the sharing Web systems.

Specifiable value

Specify an integer from 1 to 65535.

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

4.3.7 Defining a physical tier

(1) <tier>

Contents

You must define this tag.

Defines the physical tier.

There are five types of physical tiers; combined-tier, http-tier, j2ee-tier, ctm-tier and free-tier. These physical tiers, single or combination of multiple tiers configure a Web system.

The specifiable physical tier configurations are as follows:

- combined-tier configuration
- http-tier and j2ee-tier configuration^{#1}
- http-tier configuration^{#2}
- j2ee-tier configuration
- ctm-tier configuration
- free-tier configuration^{#1}

^{#1} You can use this configuration in a system set up with the Smart Composer functionality. You cannot use this configuration with a virtual system.

^{#2} You can use this configuration in a virtual system. You cannot use this configuration with a system set up with the Smart Composer functionality.

In the combined-tier configuration

Configure the Web server and J2EE server included in the service unit on one host, and define them in one <tier> tag.

In the http-tier and j2ee-tier configuration

Configure the Web server and J2EE server included in the service unit on different hosts, and define them in two <tier> tags.

In the http-tier configuration

Configure the Web server included in a service unit on one host and define the server in one <tier> tag. To use the http-tier configuration, you must prepare the virtual server of the j2ee-tier configuration associated with the virtual server group information file.

In the ctm-tier configuration

The ctm-tier defines tags in a Web system different from the Web system defining the combined-tier, http-tier, and j2ee-tier. For the ctm-tier configuration, configure the CTM-related logical server included in a service unit (CTM domain manager, CTM, and Smart Agent) and a J2EE server on one host, and define the servers in one <tier> tag.

Also, to allocate an integrated naming scheduler server, define the Web system separately for the integrated naming scheduler server and for the CTM.

The Web system for the integrated naming scheduler server configures the CTM-related logical server included in a service unit (CTM domain manager, CTM, and Smart Agent) on one host and defines the server in one <tier> tag.

To use the ctm-tier configuration in a virtual system, you must prepare the virtual server belonging to the management units of the combined-tier configuration in addition to the virtual server belonging to the management units of the ctm-tier configuration.

In the free-tier configuration

A configuration that does not match the definition of any other physical tier is defined as `! tier` tag.

The `free-tier` physical tier is used in only the Easy Setup definition file generated during execution of `cmx_export_model`. In other cases, do not create the Easy Setup definition file that includes `free-tier`.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(2) <tier-type>

Contents

You must define this tag.

Specifies the types of physical tiers. The types of physical tiers are as follows:

- `combined-tier`
- `http-tier`
- `j2ee-tier`
- `ctm-tier`
- `free-tier`

Specifiable value

The following strings can be specified:

- `combined-tier`
- `http-tier`
- `j2ee-tier`
- `ctm-tier`
- `free-tier`

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(3) <j2ee-server-count>

Contents

Specifies the number of J2EE servers to be deployed on one host, when `ctm-tier` is specified in the `<tier-type>` tag, as an integer in the range from 0 to 32.

Specifiable value

Specify the value using an integer from 0 to 32.

In the Web system for the integrated naming scheduler server

Specify 0.

Web system for CTM

Specifies the number of J2EE servers to be deployed in one host for each Web system.

Note that when the configuration of the Web system is changed, the number of J2EE servers cannot be changed.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <configuration>

Contents

Defines the configuration to be applied to all the logical servers in the physical tier for each type of logical server.

For example, to define two configurations, such as Web server and J2EE server, use two <configuration> tags for definition, one for defining the Web server and the other for defining the J2EE server.

Specifiable value

--

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <logical-server-type>

Contents

You must define this tag.

Specifies the types of logical servers for defining the configuration. The types of logical server are as follows:

- web-server:Web server
- j2ee-server:J2EE server
- performance-tracer:Performance tracer
- ctm-domain-manager:CTM domain manager
- component-transaction-monitor:CTM
- smart-agent:Smart Agent

The logical server that can define the configuration varies according to the physical tier type. The types of physical tiers are as follows:

In combined-tier

Web server, J2EE server, and performance tracer

In http-tier

Web server and performance tracer

In j2ee-tier

J2EE server and performance tracer

In ctm-tier

The logical servers that can be defined are different for each Web system.

- In the Web system for the integrated naming scheduler server
CTM domain manager, CTM, Smart Agent, and the performance tracer
- Web system for CTM
CTM domain manager, CTM, Smart Agent, J2EE server, and performance tracer

Note:

In a physical tier definition, you cannot specify the logical server configuration included in the user server and free-tier configuration. Specify these logical server configurations using unit definitions.

Specifiable value

The following strings can be specified:

- web-server
- j2ee-server
- performance-tracer
- ctm-domain-manager
- component-transaction-monitor
- smart-agent

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(6) <server-no>

Contents

Specifies the number for identifying the J2EE server when a common configuration is specified for specific J2EE servers within the physical tier.

The specifiable range is from 1 to the value specified in <j2ee-server-count>. Specify a unique number in the physical tier.

You can only specify this tag when ctm-tier is specified in the <tier-type> tag, and when the <j2ee-server-count> tag is specified.

This tag must not be specified if a common configuration is to be specified for all the J2EE servers within the physical tier.

Specifiable value

For 1 to the value specified for <j2ee-server-count>

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(7) <param>

Contents

You must define this tag.

Defines the name and value of a parameter used for setting up the logical server environment.

Enclose one parameter in each `<param>` tag.

For specifying the multiple values in a parameter, specify the `<param-value>` tag for each value.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(8) `<param-name>`

Contents

The `<param-name>` tag specifies the parameter name.

Specifiable value

For details about specifiable values, see *4.8 System configuration patterns and defined logical servers*.

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(9) `<param-value>`

Contents

The `<param-value>` tag specifies the value set for parameters.

Specifiable value

For details about specifiable values, see *4.8 System configuration patterns and defined logical servers*.

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

4.3.8 Defining a service unit

(1) `<unit>`

Contents

You must define this tag.

Defines a service unit.

For defining the multiple service units, specify the `<unit>` tag for each service unit to be defined.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(2) <name>**Contents**

You must define this tag.

The `<name>` tag specifies the name for identifying the service unit. This name must be unique within the Web system. Specify this name in the `-unit` option of the Smart Composer functionality commands.

Specifiable value

Specify a string within 32 characters having alphanumeric characters or underscore (`_`) and hyphen (`-`).

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(3) <display-name>**Contents**

The `<display-name>` tag specifies the display name of the service unit. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 128 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <description>**Contents**

The `<description>` tag specifies the comments for the service unit. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 1024 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <allocated-host>

Contents

You must define this tag.

Defines the reference to the host that configures a service unit. Specify only one <allocated-host> tag. You can specify multiple <allocated-host> tags in a Web system with free-tier configuration.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(6) <host-ref>

Contents

You must define this tag.

The <host-ref> tag specifies the host name specified in the <name> tag of the host definition, the host name defined in the built Web system, IP address, or @myhost.

When specifying @myhost, the value in the <host-name> tag in the host definition is automatically set up during the system setup.

If there are multiple hosts, the same host cannot be shared in the same service unit.

Specifiable value

The following strings can be specified:

- Host name
- IPv4 address
- @myhost

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(7) <hosts-for>

Contents

You must define this tag.

Specifies the type of physical tier to which the host specified in the <host-ref> tag belongs. The types of physical tiers are as follows:

- combined-tier
- http-tier
- j2ee-tier
- ctm-tier
- free-tier

Specifiable value

The following strings can be specified:

- `combined-tier`
- `http-tier`
- `j2ee-tier`
- `ctm-tier`
- `free-tier`

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

4.3.9 Defining a logical server

(1) <define-server>

Contents

Defines the configuration for each logical server that belongs to the physical tier specified in the `<hosts-for>` tag. For example, if the `<hosts-for>` tag is the `http-tier`, you can define one logical server each for the Web server and for the performance tracer respectively. For defining multiple logical servers, specify the `<define-server>` tag for each logical server.

Specifiable value

--

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(2) <logical-server-name>

Contents

The `<logical-server-name>` tag specifies the name for identifying a logical server or a cluster.

Specifiable value

Specify a string within 128 characters having alphanumeric characters or underscore (`_`) and hyphen (`-`).

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(3) <display-name>

Contents

The <display-name> tag specifies the display name of the logical server. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 128 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <description>

Contents

The <description> tag specifies the comments for a logical server. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 1024 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <logical-server-type>

Contents

You must define this tag.

Specifies the types of logical servers for defining the configuration.

The types of logical server are as follows:

- web-server:Web server
- j2ee-server:J2EE server
- performance-tracer:Performance tracer
- ctm-domain-manager:CTM domain manager
- component-transaction-monitor:CTM
- smart-agent:Smart Agent
- naming-service:Naming service
- user-server:User server

The logical server that can define the configuration of the host varies according to the physical tier type. The types of physical tiers are as follows:

In combined-tier

Web server, J2EE server, performance tracer, and user server

In http-tier

Web server, performance tracer, and user server

In j2ee-tier

J2EE server, performance tracer, and user server

In ctm-tier

The logical servers that can be defined are different for each Web system.

- In the Web system for the integrated naming scheduler server
CTM domain manager, CTM, Smart Agent, performance tracer, and user server
- Web system for CTM
CTM domain manager, CTM, Smart Agent, J2EE server, performance tracer, and user server

In free-tier

Web server, J2EE server, CTM domain manager, CTM, Smart Agent, Naming Service, performance tracer, Web server cluster, J2EE server cluster, and user server

Specifiable value

The following strings can be specified:

- web-server
- j2ee-server
- performance-tracer
- ctm-domain-manager
- component-transaction-monitor
- smart-agent
- naming-service
- user-server

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(6) <cluster-ref>**Contents**

Specifies the cluster name when setting up a logical server as a cluster member.

If the logical server to be set up as a cluster member is the J2EE server, this tag specifies the J2EE server cluster name, and for the Web server this tag specifies the Web server cluster name.

Logical servers other than the J2EE server and Web server cannot be set up as a cluster member.

This tag is defined only for the free-tier configuration.

Specifiable value

Specify a string within 128 characters having alphanumeric characters or underscore (`_`) and hyphen (`-`).

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(7) <server-no>

Contents

Specifies the number for identifying the J2EE server when a configuration is specified for a specific J2EE server in the service unit.

Specify a unique number on the host. Make sure that you specify this tag when specifying the J2EE server configuration when <j2ee-server-count> tag is specified in the physical tier definition.

Specifiable value

For 1 to the value specified for <j2ee-server-count>

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(8) <configuration>

Contents

Defines the configuration to be applied for each logical server.

If the environment settings defined in the physical tier definition are to be used for operation, there is no need to define the <configuration> tag.

This tag cannot be specified when J2EE server cluster or Web server cluster is specified in <logical-server-type>.

Specifiable value

--

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

4.3.10 Defining a logical server configuration

(1) <param>

Contents

You must define this tag.

Defines the name and value of a parameter used for setting up the logical server environment. Enclose one parameter in each <param> tag.

For specifying the multiple values in a parameter, specify the <param-value> tag for each value.

Specifiable value

--

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(2) <param-name>**Contents**

The <param-name> tag specifies the parameter name.

Specifiable value

For details about specifiable values, see *4.8 System configuration patterns and defined logical servers*.

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(3) <param-value>**Contents**

The <param-value> tag specifies the value set for parameters.

Specifiable value

For details about specifiable values, see *4.8 System configuration patterns and defined logical servers*.

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

4.3.11 Defining a host**(1) <host>****Contents**

Defines a host.

For defining multiple hosts, specify the host tag for each host. A host can be shared among multiple Web systems.

Specifiable value

--

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(2) <host-name>

Contents

The <host-name> tag specifies a name or an IP address for identifying a host.

When specifying the host name for which the IP address cannot be changed, an error occurs during the system setup.

You can also specify @myhost in the <host-name> tag. If you specify @myhost, the host name is automatically replaced with the host name for the management server machine in the destination environment during system setup.

Specifiable value

The following strings can be specified:

- Host name
- IPv4 address
- @myhost

Omitting tags

Cannot be omitted.

Omitting values

Cannot be omitted.

(3) <display-name>

Contents

Specifies the host display name within 128 characters. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 128 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(4) <description>

Contents

Specifies a comment about the host within 1,024 characters. There are no restrictions on the permitted characters.

Specifiable value

Specify any string within 1024 characters.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(5) <agent-host>

Contents

Specifies the host name or IP address of the Cosminexus Administration Agent.

You can also specify @myhost in the <agent-host> tag. When specifying @myhost, the value in the <host-name> tag in the host definition is automatically set up during the system setup.

Specifiable value

The following strings can be specified:

- Host name
- IPv4 address
- @myhost

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

(6) <agent-port>**Contents**

The <agent-port> tag specifies a port number of the Cosminexus Administration Agent.

Specifiable value

Specify an integer from 1 to 65535.

Omitting tags

Can be omitted.

Omitting values

Can be omitted.

4.4 Configuration change definition files

4.4.1 Details of configuration change definition files

(1) Format

This file is in the XML format.

(2) File storage location

Store this file at any work location.

(3) Functionality

These are definition files used to change the configuration of a Web system built using commands of the Smart Composer functionality. There are two configuration change definition files, one for changing logical server parameters, and the other for adding a service unit or a host.

Copy and use the following template files:

For changing logical server parameters:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\cmxmodcombinedmodel.xml`
- In UNIX
`/opt/Cosminexus/manager/config/templates/cmxmodcombinedmodel.xml`

Note:

The configuration change definition file for changing the logical server parameters is used for compatibility with the earlier versions. For changing the logical server parameters, use the Easy Setup definition file.

For adding a service unit or a host:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\cmxaddcombinedmodel.xml`
- In UNIX
`/opt/Cosminexus/manager/config/templates/cmxaddcombinedmodel.xml`

Reference note

The character encoding in the template file is UTF-8.

(4) Specifiable elements

In the configuration change definition files, you can specify some of the tags that are specified in a Easy Setup definition file.

The following describes the difference between a configuration change definition file and a Easy Setup definition file.

(a) Configuration change definition file for changing logical server parameters

This subsection shows the structure of a configuration change definition file for changing logical server parameters. Specify the `<model-modification>` and `<web-system>` tags in this format.

Structure of a configuration change definition file for changing logical server parameters

```
<model-modification xmlns="http://www.cosminexus.com/mngsvr/schema/ModelModification-2.5">
  <!-- Definition of the Web system subject to configuration change -->
  <web-system>
    <!-- Definition of the Web system attributes subject to configuration change -->
    <name>Web-system-name</name>

    <!-- Logical server definition for physical tier for which parameters are to be changed -->
    <tier>
      <tier-type>type-of-physical-tier</tier-type>
      <configuration>
        <logical-server-type>type-of-logical-server</logical-server-type>
        <param>
          <param-name>parameter-name</param-name>
          <param-value>parameter-value-1</param-value>
          :
          <param-value>parameter-value-n</param-value>
        </param>
        <param>
          :
        </configuration>
      </configuration>
    </tier>
    <tier>
      :
    </tier>

    <!-- Logical server definition for service unit for which parameters are to be changed -->
    <unit>
      <name>service-unit-name</name>
      <allocated-host>
        <host-ref>host-name-or-IP-address-of-host-configuring-the-service-unit</host-ref>
        <hosts-for>type-of-physical-tier-to-which-the-component-host-belongs</hosts-for>
      <define-server>
        <logical-server-type>type-of-logical-server</logical-server-type>
        <configuration>
          <param>
            <param-name>parameter-name</param-name>
            <param-value>parameter-value-1</param-value>
            :
            <param-value>parameter-value-n</param-value>
          </param>
          <param>
            :
          </configuration>
        </configuration>
      </define-server>
    </unit>
  </web-system>
</model-modification>
```

```

        <configuration>
        :
    </allocated-host>
    <allocated-host>
        :
    </unit>
    <unit>
        :
    </web-system>
    <web-system>
        :
</model-modification>

```

The following describes how this file is different from a Easy Setup definition file in each definition.

- Definition of Web system attributes
 - For the Web system name in the <name> tag, specify the name of the Web system whose configuration is to be changed.
- Definition of physical tier

Specify this definition if you are changing the configuration for a type of logical server in the physical tier.

 - Make sure that you define the <configuration> tag. However, this tag can be omitted if the configuration of the physical tier is created by using the `cmx_trans_param` command to expand an abstract parameter.
 - You can omit the <param-value> tag. When this tag is omitted, the system deletes all parameter values that have been set and restores the default values.
- Definition of service unit

Specify this definition if you are changing the configuration for a specific logical server in a service unit.

 - If the <j2ee-server-count> tag is specified in the physical tier definition in the Web system for CTM, make sure to specify the <server-no> tag for changing the configuration of the specific J2EE server.
 - You can omit the <param-value> tag. When this tag is omitted, the system deletes all parameter values that have been set and restores the default values.

For details about the tags that can be specified for each definition, see [4.7 Tags that can be specified in the Easy Setup definition file and the configuration change definition files](#).

(b) Configuration change definition file for adding a service unit or a host

This subsection shows the structure of a configuration change definition file for adding a service unit or a host. Specify the <unit-addition> and <web-system> tags in this format.

Structure of a configuration change definition file for adding a service unit or a host

```

<unit-addition xmlns="http://www.cosminexus.com/mngsvr/schema/UnitAddition-2
.5">
    <!-- Definition of the Web system subject to configuration change -->
    <web-system>
        <!-- Definition of the Web system attributes subject to configuration ch
ange -->
        <name>Web-system-name</name>
        <addition-mode>addition-mode</addition-mode>

        <!-- Definition of service unit to be added -->

```

```

<unit>
  <name>service-unit-name</name>
  <display-name>display-name-of-service-unit</display-name>
  <description>comment-on-service-unit</description>
  <allocated-host>
    <host-ref>host-name-or-IP-address-of-host-configuring-the-service-un
it</host-ref>
    <hosts-for>type-of-physical-tier-to-which-component-host-belongs</ho
sts-for>
    <define-server>
      <logical-server-name>logical-server-name</logical-server-name>
      <display-name>display-name-of-logical-server</display-name>
      <description>comment-on-logical-server</description>
      <logical-server-type>type-of-logical-server</logical-server-type>
      <configuration>
        <param>
          <param-name>parameter-name</param-name>
          <param-value>parameter-value-1</param-value>
          :
          <param-value>parameter-value-n</param-value>
        </param>
        <param>
          :
        </configuration>
      </configuration>
    </allocated-host>
  </allocated-host>
  :
</unit>
<unit>
  :
</web-system>
<web-system>
  :

<!-- Definition of host to be added -->
<host>
  <host-name>host-name-or-IP-address</host-name>
  <display-name>display-name-of-host</display-name>
  <description>comment-on-host</description>
  <agent-host>host-name-or-IP-address-of-Administration-Agent</agent-host>
  <agent-port>port-number-of-Cosminexus-Administration Agent</agent-port>
</host>
<host>
  :
</unit-addition >

```

The following describes how this file is different from a Easy Setup definition file in each definition.

- Definition of Web system attributes
 - For the Web system name in the <name> tag, specify the name of the Web system whose configuration is to be changed.
 - To implement scale out using JP1/SC/DPM, specify "DEPLOYED" in the <addition-mode> tag. The <addition-mode> tag can only be specified in the configuration change definition file for adding service units and hosts.

- Definition of service unit
 - The same as for a Easy Setup definition file.
- Definition of host
 - The same as for a Easy Setup definition file.

For details about the tags that can be specified for each definition, see [4.7 Tags that can be specified in the Easy Setup definition file and the configuration change definition files](#).

4.5 Logical server reference definition file

4.5.1 Details of the logical server reference definition file

(1) Format

This file is in the XML format.

(2) File storage location

Store this file at any work location.

(3) Functionality

This is a definition file used to add user-defined logical servers (logical user server) to service units in Web systems built using commands of the Smart Composer functionality. The file defines information needed to associate logical user server with service units.

Copy and use the following template files:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\cmxaddserverref.xml`
- In UNIX
`/opt/Cosminexus/manager/config/templates/cmxaddserverref.xml`

Note that the logical server reference definition file is used for compatibility with the older version. Use this file for adding the logical user servers into the built system. It is recommended that you use the Easy Setup definition file for adding the logical user server.

(4) Specifiable elements

You define in a logical server reference definition file the name of a logical server to be added, and you define the target Web system and service unit to which the logical server is to be added. You can define as many Web systems, service units, and logical servers as you need.

The structure of a logical server reference definition file is shown below. Specify the `<server-reference>` and `<web-system>` tags in this format.

Structure of a logical server reference definition file

```
<server-reference xmlns="http://www.cosminexus.com/mngsvr/schema/ServerReference-2.0">
  <!-- Definition of Web system -->
  <web-system>
    <!-- Definition of Web system attributes -->
    <name>Web-system-name</name>

    <!-- Definition of service unit -->
    <unit>
      <name>service-unit-name1</name>
      <logical-server-ref>logical-server-name-1</logical-server-ref>
    </unit>
  </web-system>
</server-reference>
```

```

        :
        <logical-server-ref>logical-server-name-n</logical-server-ref>
    </unit>
    <unit>
        :
    </web-system>
    <web-system>
        :
    </server-reference>

```

The following table lists and describes each tag and the default values:

Tag names	Contents	Default
web-system	Defines a Web system. For defining the multiple Web systems, specify the <web-system> tag for each Web system.	None
name	Specifies a name for identifying the Web system, within 32 characters. This name must be unique within the domain. Specify this name in the -s option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	None
unit	Defines a service unit. For defining the multiple service units, specify the <unit> tag for each service unit to be defined.	None
name	Specifies a name for identifying the service unit, as a maximum of 32 characters. This name must be unique within the Web system. Specify this name in the -unit option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	None
logical-server-ref	Specifies the name of the logical user server that is to be added to the service unit, as up to 128 characters. Specify the name that was specified in the <logical-server-name> tag in the logical user server definition file. Specify a logical user server that has been added by the mngsvrutil add userserver command. To define multiple logical user servers, specify a <logical-server-ref> tag for each logical user server.	None

(5) Examples of coding

This example adds the usersv1 and usersv2 logical user servers to the unit1 service unit, and the usersv3 and sersv4 logical user servers to the unit2 service unit.

```

<?xml version="1.0" encoding="UTF-8"?>
<server-reference xmlns="http://www.cosminexus.com/mngsvr/schema/ServerReference-2.0">
  <web-system>
    <name>MyWebSystem</name>
    <unit>
      <name>unit1</name>
      <logical-server-ref>usersv1</logical-server-ref>
      <logical-server-ref>usersv2</logical-server-ref>
    </unit>
    <unit>
      <name>unit2</name>
      <logical-server-ref>usersv3</logical-server-ref>

```

```
    <logical-server-ref>usersv4</logical-server-ref>
  </unit>
</web-system>
</server-reference>
```


4.6 Host definition file for scale out

4.6.1 Details of the host definition file for scale out

(1) Format

This file is in the XML format.

(2) File storage location

Store this file at any work location.

(3) Functionality

This is a definition file for scaling out the Web system of the host unit management model, built using the commands provided with the Smart Composer functionality. This file defines the Web system information of the re-produced destination host.

Copy and use the following template files:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\cmxscaleouthostdef.xml`
- In UNIX
`/opt/Cosminexus/manager/config/templates/cmxscaleouthostdef.xml`



Reference note

The character encoding in the template file is UTF-8.

(4) Specifiable elements

The host definition file for scaling out defines the host to be added and load balancer to be used in the Web system at the re-produced destination.

The structure of the host definition file for scaling out is as follows. Specify the `<host-scaleout>` and `<web-system>` tags in this format.

Organization of the host definition file for scale out

```
<host-scaleout xmlns="http://www.cosminexus.com/mngsvr/schema/HostScaleOut-2.5">
  <!-- Definition of the Web system at re-produced destination -->
  <web-system>
    <!-- Definition of Web system attributes -->
    <name>Web-system-name</name>
  </web-system>

  <!-- Definition of the re-produced destination host -->
  <host>
```

```

<host-name>host-name-or-IP-address</host-name>
<display-name>display-name-of-host</display-name>
<description>comment-on-host</description>
<agent-host>host-name-or-IP-address-of-Cosminexus-Administration-Agent</
agent-host>
</host>
</host-scaleout>

```

The following table lists and describes each tag and the default values:

Tag names	Contents	Default
web-system	Defines the Web system at the re-produced destination. Specify this tag to change the definition of the Web system at the re-produced destination. For defining the multiple Web systems, specify the <web-system> tag for each Web system.	None
name	Specifies the name of the Web system at the re-produced destination for changing the settings.	None
host [#]	Defines the re-produced destination host. A host can be shared among multiple Web systems.	None
host-name	Specifies the host name or IP address for operations. Specifies the host name within 32 characters. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-). Specifies the IP address in dot notations (xxx.xxx.xxx.xxx) where xxx is an integer in the range from 0 to 255.	None
display-name	Specifies the host display name within 128 characters. There are no restrictions on the permitted characters.	None
description	Specifies a comment about the host within 1,024 characters. There are no restrictions on the permitted characters.	None
agent-host	Specifies the host name or IP address of the Cosminexus Administration Agent. Specifies the host name within 32 characters. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-). Specifies the IP address in dot notations (xxx.xxx.xxx.xxx) where xxx is an integer in the range from 0 to 255.	Value specified in the <host-name> tag

#

If the host definition is omitted, the host name of the re-produced destination host is assumed to be the <host-name> tag, and the host will be defined.

(5) Examples of coding

The following table describes an example of items specified in the re-produced source host and re-produced destination host:

Table 4–3: Example of items specified in the re-produced source host and re-produced destination host

Setup items	Re-produced source host	Re-produced destination host
Web system name	MyWebSystem	MyWebSystem
Host name	apsvA	apsvA
IP address	192.168.1.20	192.168.1.21
Management IP address	192.168.100.20	192.168.100.21

The following example describes the scale out using the disk image created by duplicating the host apsvA. This is a coding example for scaling out the system to execute J2EE applications.

```
<?xml version="1.0" encoding="UTF-8"?>
<host-scaleout xmlns="http://www.cosminexus.com/mngsvr/schema/HostScaleOut-2
.1">
  <!-- Definition of the Web system at the reproduction destination -->
  <web-system>
    <!-- Definition of Web system attributes -->
    <name>MyWebSystem</name>
  </web-system>
  <!-- Definition of reproduction destination host -->
  <host>
    <host-name>apsvA</host-name>
    <agent-host>192.168.100.21</agent-host>
  </host>
</host-scaleout>
```

4.7 Tags that can be specified in the Easy Setup definition file and the configuration change definition files

This section describes the tags that can be specified in the Easy Setup definition file, the configuration definition change file for changing logical server parameters, and the configuration change definition file for adding a service unit or a host.

This section also describes the tags used for the system executing J2EE applications, and tags used for the system executing batch applications for individual systems.

For details about the structure of a Easy Setup definition file, see [4.3 Easy Setup definition file](#). For details about the structure of a configuration definition change file, see [4.4 Configuration change definition files](#).

4.7.1 Tags that can be specified in the system for executing J2EE applications

This subsection describes the tags that can be specified in the system executing J2EE applications.

(1) Definition of Web system attributes

The following table describes the contents that can be defined as Web system attributes:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
web-system	Defines a Web system. For defining the multiple Web systems, specify the <web-system> tag for each Web system.	O#1	O	O#2	None
name	Specifies a name for identifying the Web system, within 32 characters. This name must be unique within the management domain. Specify this name in the -s option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	M	M	M	None
addition-mode	Specifies the addition mode. <ul style="list-style-type: none"> DEPLOYED#3 Specifies addition mode when scaling out the disk image using JP1/SC/DPM. If addition mode is specified, deployment of the J2EE application and resource adapter is not required during system construction. NORMAL Specify this tag for a normal scale-out. 	--	--	O	NORMAL
display-name	Specifies the display name of the Web system within 128 characters. There are no restrictions on the permitted characters.	O	O	--	None
description	Specifies a comment about the Web system within 1,024 characters. There are no restrictions on the permitted characters.	O	O	--	None

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a Web system is defined.

O: Optional.

--: Not applicable.

#1
This tag can be omitted if the Web system to be used is already defined using the Smart Composer functionality.

#2
This tag can be omitted if no service unit is to be added.

#3
For applying these settings, you must import and start the resource adapter in a batch using the Smart Composer functionality commands beforehand. For details, see *4.1.24 Starting the system (when using CUI)* in the *uCosminexus Application Server System Setup and Operation Guide*.

(2) Definition of load balancer

Define the load balancer under the `<load-balancer>` tag. The following table describes the contents that can be defined:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
<code>load-balancer</code>	Defines a load balancer. If the Smart Composer functionality is not used to set up the load balancer or to start and shut down the real server port, there is no need to define a load balancer (from the <code><load-balancer></code> tag through the <code></load-balancer></code> tag).	O	--	--	None
<code>name</code>	Specifies a name for the load balancer, as a maximum of 32 characters. The permitted name is a combination of alphanumeric characters, underscore (<code>_</code>), and hyphen (<code>-</code>).	O	--	--	None
<code>load-balancer-type</code> ^{#1}	Specifies one of the following as the type of load balancer: <ul style="list-style-type: none"> BIG-IPv9 BIG-IPv10.1 BIG-IPv10.2 BIG-IPv11 ACOS Make sure that you specify this tag when you use the Smart Composer functionality to set up the load balancer.	M	--	--	None
<code>display-name</code>	Specifies the display name of the load balancer, as a maximum of 128 characters. There are no restrictions on the permitted characters.	O	--	--	None
<code>description</code>	Specifies a comment about the load balancer, as a maximum of 1,024 characters. There are no restrictions on the permitted characters.	O	--	--	None
<code>cookie-switching</code>	Specifies that the cookie switching functionality is to be used. This setting enables a series of HTTP requests to be processed by a single Web server or J2EE server.	O ^{#2}	--	--	None
<code>cookie-switching-enabled</code>	Specifies <code>true</code> to use the cookie switching functionality and <code>false</code> to not use it.	O	--	--	<code>false</code>
<code>cookie-name</code>	Specifies the cookie name. The permitted characters are the combination of alphanumeric characters, the underscore (<code>_</code>),	O	--	--	<code>CMX_SERVER_ID</code>

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	<p>and the hyphen (-). The following name is used by the Web container and is case sensitive:</p> <ul style="list-style-type: none"> • JSESSIONID <p>In BIG-IP 1500, specify a character string of 1 to 64 characters. Note that the 1st character must be specified as an upper case or lower case character.</p> <p>In ACOS, specify a character string of 1 to 63 characters.</p>				
server-id-rule	In version 08-53 or later versions, do not specify a value in this tag. If specified, the value is disabled.	O	--	--	None
management-host	<p>Specifies the management IP address or host name set up in the load balancer. Specifies the management IP address in dot notations (xxx.xxx.xxx.xxx) where xxx is an integer in the range from 0 to 255. A host name can be a combination of alphanumeric characters, underscore (_), and hyphen (-).</p> <p>If the same load balancer is between multiple Web systems, specify the same management IP address or host name in the Web systems sharing the load balancer.</p>	M	--	--	None
redundant-management-host	<p>In a system with redundant load balancers, specifies the management IP address or host name set up in the second load balancer. Specifies the management IP address in dot notations (xxx.xxx.xxx.xxx) where xxx is an integer in the range from 0 to 255. A host name can be a combination of alphanumeric characters, underscore (_), and hyphen (-).</p> <p>If the same load balancer is between multiple Web systems, specify the same management IP address or host name in the Web systems sharing the load balancer.</p>	O	--	--	None
virtual-server	Defines a virtual server.	M	--	--	None
virtual-server-name	<p>Specifies the name of the virtual server as from 1 to 31 characters. The permitted characters are the combination of alphanumeric characters, underscore (_), and hyphen (-).</p> <p>If multiple Web systems are to share the same load balancer, make sure that the specified virtual server name is not duplicated among the sharing Web systems.</p>	M	--	--	None
display-name	Specifies the display name of the virtual server.	O	--	--	None
description	Specifies a comment about the virtual server.	O	--	--	None
ip-address	<p>Specifies the IP address of the virtual server.</p> <p>If multiple Web systems are to share the same load balancer, make sure that the virtual server's IP address is not duplicated among the sharing Web systems.</p>	M	--	--	None
http-port	<p>Specifies the HTTP port number of the virtual server, in the range from 1 to 65535.</p> <p>For BIG-IP v9 or ACOS, if the same load balancer is shared between multiple Web systems, make sure that the HTTP port number of the virtual server is not repeated in the sharing Web systems.</p>	M	--	--	None

Legend:

- P: Indicates the configuration definition change file, for changing logical server parameters.
- U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a load balancer is defined.

O: Optional.

--: Not applicable.

#1

The supported types of load balancers differ depending on the version of Application Server. The following table shows the Application Server versions and supported load balancers:

Application Server version	Supported load balancer
09-50	BIG-IPv9, BIG-IPv10.1, BIG-IPv10.2, BIG-IPv11, ACOS
09-00, 08-70, and 08-53	BIG-IPv9, BIG-IPv10.1, BIG-IPv10.2, ACOS
08-50	BIG-IPv9, ACOS
08-00	Loadflowbal, BIG-IP, BIG-IPv9

#2

This tag can be omitted when the load balancer's cookie switching functionality is not used.

(3) Definition of physical tier

Define the physical tier according to the configuration of the built system. Define the physical tier under the `<tier>` tag. The following table describes the contents that can be defined:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
tier	<p>Defines the physical tier.</p> <p>There are five types of physical tiers; combined-tier, http-tier, j2ee-tier, ctm-tier and free-tier. Each physical tier combines single or multiple tiers to configure a Web system.</p> <p>The specifiable physical tier configurations as follows:</p> <ul style="list-style-type: none"> combined-tier configuration http-tier and j2ee-tier configuration j2ee-tier configuration ctm-tier configuration free-tier configuration <p>In the combined-tier configuration</p> <p>Configure the Web server and J2EE server included in the service unit on one host, and define them in one <code><tier></code> tag.</p> <p>In the http-tier and j2ee-tier configuration</p> <p>Configure the Web server and J2EE server included in the service unit on different hosts, and define them in two <code><tier></code> tags.</p> <p>In the ctm-tier configuration</p> <p>The ctm-tier defines tags in a Web system different from the Web system defining the combined-tier, http-tier, and j2ee-tier. The ctm-tier defines tags separately for the integrated naming scheduler server and for CTM.</p> <ul style="list-style-type: none"> Web system for the integrated naming scheduler server <p>Configures the CTM-related logical server^{#1} included in the service unit on one host, and define in one <code><tier></code> tag.</p>	M	O ^{#2}	--	None

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	<ul style="list-style-type: none"> Web system for CTM Configures the CTM-related logical server ^{#1} and J2EE server included in the service unit on one host, and define in one <tier> tag. In the free-tier configuration A configuration that does not match the definition of any other physical tier is defined as 1 tier tag.				
tier-type	Specifies one of the following as the type of physical tier: <ul style="list-style-type: none"> combined-tier http-tier j2ee-tier ctm-tier free-tier 	M	M	--	None
j2ee-server-count	Specifies the number of J2EE servers to be deployed on one host, when ctm-tier is specified in the <tier-type> tag, as an integer in the range from 0 to 32. <ul style="list-style-type: none"> In the Web system for the integrated naming scheduler server Specify 0. Web system for CTM Specifies the number of J2EE servers to be deployed in one host for each Web system. Note that when the configuration of the Web system is changed, the number of J2EE servers cannot be changed.	O	--	--	1
configuration	Defines the configuration to be applied to all the logical servers in the physical tier for each type of logical server. For example, to define two configurations, such as Web server and J2EE server, use two <configuration> tags for definition, one for defining the Web server and the other for defining the J2EE server.	O ^{#3}	M ^{#4}	--	None
logical-server-type	Specifies the types of logical servers for defining the configuration. The following are the specifiable types the logical servers: <ul style="list-style-type: none"> web-server:Web server j2ee-server:J2EE server performance-tracer:Performance tracer ctm-domain-manager:CTM domain manager component-transaction-monitor:CTM smart-agent:Smart Agent The logical server that can define the configuration varies according to the physical tier type. In combined-tier Web server, J2EE server, and performance tracer In http-tier Web server and performance tracer In j2ee-tier J2EE server and performance tracer	M	M	--	None

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	<p>In <code>ctm-tier</code></p> <p>The logical servers that can be defined are different for each Web system.</p> <ul style="list-style-type: none"> In the Web system for the integrated naming scheduler server <ul style="list-style-type: none"> CTM domain manager, CTM, Smart Agent, and the performance tracer Web system for CTM <ul style="list-style-type: none"> CTM domain manager, CTM, Smart Agent, J2EE server, and performance tracer 				
<code>server-no</code>	<p>Specifies the number for identifying the J2EE server when a common configuration is specified for specific J2EE servers within the physical tier. The specifiable range is from 1 to the value specified in <code><j2ee-server-count></code>. Specify a unique number in the physical tier. You can only specify this tag when <code>ctm-tier</code> is specified in the <code><tier-type></code> tag, and when the <code><j2ee-server-count></code> tag is specified.</p> <p>This tag must not be specified if a common configuration is to be specified for all the J2EE servers within the physical tier.</p>	O	O	--	None
<code>param^{#5}</code>	<p>Defines the name and value of a parameter used for setting up the logical server environment. Enclose one parameter in each <code><param></code> tag.</p>	M	M	--	None
<code>param-name^{#5}</code>	<p>Specifies the name of the parameter used for setting up the environment for the logical server.</p>	M	M	--	None
<code>param-value^{#5}</code>	<p>Specifies the value to be set up in the parameter specified in the <code><param-name></code> tag. For specifying the multiple values in a parameter, specify the <code><param-value></code> tag for each value.</p>	M	O ^{#6}	--	None

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a Web system is defined.

O: Optional.

--: Not applicable.

Note:

In a physical tier definition, you cannot specify the logical server configuration included in the user server and free-tier configuration. Specify these logical server configurations using unit definitions.

#1

The CTM-related logical server has the CTM domain manager, CTM, and Smart Agent.

#2

This tag can be omitted if the physical tier definition is not changed.

#3

This tag can be omitted if the environment settings assumed in the Management Server during creation of the logical server are used for operations.

#4

This tag can be omitted if the `cmx_trans_param` command is used for expanding the abstract parameter to create the physical tier configuration.

#5

The parameters specifiable in the <param> tag depend on the logical server type. Additionally, the logical server to be defined depends on the configuration pattern of the system. For checking the logical servers to be defined, see [4.8 System configuration patterns and defined logical servers](#). For details on the parameters that can be specified in each logical server, see the sections from [4.12](#) onwards as per the type of logical server used.

#6

This tag can be omitted if the parameter specified in the <param-name> tag is to be deleted.

(4) Definition of the service unit

Define the service unit under the <unit> tag. The following table describes the contents that can be defined:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
unit	Defines a service unit. For defining the multiple service units, specify the <unit> tag for each service unit to be defined.	M	O#1	M	None
name	Specifies a name for identifying the service unit, as a maximum of 32 characters. This name must be unique within the Web system. Specify this name in the -unit option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	M	O#2	M	None
display-name	Specifies the display name of the service unit within 128 characters. There are no restrictions on the permitted characters.	O	O	O	None
description	Specifies a comment about the service unit within 1,024 characters. There are no restrictions on the permitted characters.	O	O	O	None
allocated-host	Defines the reference to the host that configures a service unit. Specify only one <allocated-host> tag. You can specify multiple <allocated-host> tags in a Web system with free-tier configuration.	M	M	M	None
host-ref	Specifies the host name specified in the <name> tag in the host definition, the host name defined in the already setup Web system, or @myhost. When specifying @myhost, the value in the <host-name> tag in the host definition is automatically set up during the system setup. If there are multiple hosts, the same host cannot be shared in the same service unit.	M	M	M	None
hosts-for	Specifies one of the following values as the type of physical tier to which the host specified in the <host-ref> tag belongs: <ul style="list-style-type: none"> • combined-tier • http-tier • j2ee-tier • ctm-tier • free-tier 	M	M	M	None
define-server	Defines the configuration for each logical server that belongs to the physical tier specified in the <hosts-for> tag.	O#3	M	O#3	None

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	For example, if <code>http-tier</code> is specified in the <code><hosts-for></code> tag, you can define one logical server for each of the Web server and the performance tracer. For defining multiple logical servers, specify the <code><define-server></code> tag for each logical server.				
<code>logical-server-name</code>	Specifies a name for identifying the logical server or cluster within 128 characters. Specify this name in the <code>-s</code> option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (<code>_</code>), and hyphen (<code>-</code>).	O	--	O	<code>cmx_Web-system-name_service-unit-name_type_serial-number</code>
<code>display-name</code>	Specifies the display name of the logical server within 128 characters. There are no restrictions on the permitted characters.	O	O	O	None
<code>description</code>	Specifies a comment about the logical server within 1,024 characters. There are no restrictions on the permitted characters.	O	O	O	None
<code>logical-server-type</code>	<p>Specifies the types of logical servers for defining the configuration. The following are the specifiable types the logical servers:</p> <ul style="list-style-type: none"> • <code>web-server</code>: Web server • <code>j2ee-server</code>: J2EE server • <code>performance-tracer</code>: Performance tracer • <code>ctm-domain-manager</code>: CTM domain manager • <code>component-transaction-monitor</code>: CTM • <code>smart-agent</code>: Smart Agent • <code>naming-service</code>: Naming service • <code>user-server</code>: User server^{#6} <p>The logical server that can define the configuration of the host varies according to the physical tier type.</p> <p>In combined-tier Web server, J2EE server, performance tracer, and user server</p> <p>In http-tier Web server, performance tracer, and user server</p> <p>In j2ee-tier J2EE server, performance tracer, and user server</p> <p>In ctm-tier The logical servers that can be defined are different for each Web system.</p> <ul style="list-style-type: none"> • In the Web system for the integrated naming scheduler server CTM domain manager, CTM, Smart Agent, performance tracer, and user server • Web system for CTM CTM domain manager, CTM, Smart Agent, J2EE server, performance tracer, and user server 	M	M	M	None

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	In free-tier Web server, J2EE server, CTM domain manager, CTM, Smart Agent, Naming Service, performance tracer, Web server cluster, J2EE server cluster, and user server				
cluster-ref	Specifies the cluster name when setting up a logical server as a cluster member. If the logical server to be set up as a cluster member is the J2EE server, this tag specifies the J2EE server cluster name, and for the Web server this tag specifies the Web server cluster name. Logical servers other than the J2EE server and Web server cannot be set up as a cluster member. This tag is defined only for the free-tier configuration.	O	--	--	None
server-no	Specifies the number for identifying the J2EE server when a configuration is specified for a specific J2EE server in the service unit. The specifiable range is from 1 to the value specified in <j2ee-server-count>. Specify a unique number on the host. Make sure that you specify this tag when specifying the J2EE server configuration when <j2ee-server-count> tag is specified in the physical tier definition.	O	O	O	None
configuration	Defines the configuration to be applied for each logical server. If the environment settings defined in the physical tier definition are to be used for operation, there is no need to define the<configuration> tag. This tag cannot be specified when J2EE server cluster or Web server cluster is specified in <logical-server-type>.	O	O	O	None
param ^{#4}	Defines the name and value of a parameter used for setting up the logical server environment. Enclose one parameter in each <param> tag.	M	M	M	None
param-name ^{#4}	Specifies the name of the parameter used for setting up the environment for the logical server. For the specifiable parameter names, see <i>4.8 System configuration patterns and defined logical servers</i> .	M	M	M	None
param-value ^{#4}	Specifies the value to be set up in the parameter specified in the <param-name> tag. For specifying the multiple values in a parameter, specify the <param-value> tag for each value. For details on the parameter settings, see <i>4.8 System configuration patterns and defined logical servers</i> .	M	O ^{#5}	M	None

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a Web system is defined.

O: Optional.

--: Not applicable.

Note:

You cannot set up the logical server configuration included in the free-tier configuration, in the configuration change definition file.

#1

This tag can be omitted if the service unit definition is not changed.

#2

Can be omitted when `cmx.websystem.name` is specified in the client setting properties file or common client setting properties file.

#3

This tag can be omitted if the configuration is not defined for each logical server.

#4

The parameters specifiable in the `<param>` tag depend on the logical server type. Additionally, the logical server to be defined depends on the configuration pattern of the system. For checking the logical servers to be defined, see [4.8 System configuration patterns and defined logical servers](#). For details on the parameters that can be specified in each logical server, see the sections from [4.12](#) onwards as per the type of logical server used.

#5

This tag can be omitted if the parameter specified in the `<param-name>` tag is to be deleted.

#6

You can specify `user-server` in the Easy Setup definition file and the configuration definition change file for adding a service unit. You cannot specify `user-server` in the configuration definition change file for changing a service unit.

(5) Definition of host

Define the information about the host to be used under the `<host>` tag. The following table describes the contents that can be defined:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
<code>host</code>	Defines a host. For defining multiple hosts, specify the host tag for each host. A host can be shared among multiple Web systems.	O#1	--	O#2	None
<code>host-name</code>	Specifies a name or IP address for identifying the host within 32 characters. A host name can be a combination of alphanumeric characters, underscore (<code>_</code>), and hyphen (<code>-</code>). Specifies the management IP address in dot notations (<code>xxx.xxx.xxx.xxx</code>) where <code>xxx</code> is an integer in the range from 0 to 255. When specifying the host name for which the IP address cannot be changed, an error occurs during the system setup. You can also specify <code>@myhost</code> in the <code><host-name></code> tag. If you specify <code>@myhost</code> , the host name is automatically replaced with the host name for the management server machine in the destination environment during system setup.	M	--	M	None
<code>display-name</code>	Specifies the host display name within 128 characters. There are no restrictions on the permitted characters.	O	--	O	None
<code>description</code>	Specifies a comment about the host within 1,024 characters. There are no restrictions on the permitted characters.	O	--	O	None
<code>agent-host</code>	Specifies the host name or IP address of the Cosminexus Administration Agent. Specifies the host name within 32 characters. The permitted name is a combination of alphanumeric characters, underscore (<code>_</code>), and hyphen (<code>-</code>). Specifies the IP address in dot notations (<code>xxx.xxx.xxx.xxx</code>) where <code>xxx</code> is an integer in the range from 0 to 255. You can also specify <code>@myhost</code> in the <code><agent-host></code> tag. When specifying <code>@myhost</code> , the value in the <code><host-name></code> tag in the host definition is automatically set up during the system setup.	O	--	O	Value specified in <code>host-name</code>

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
agent-port	Specifies the port number of the Cosminexus Administration Agent, in the range from 1 to 65535.	O	--	O	20295

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a host is defined.

O: Optional.

--: Not applicable.

Note:

The host definition is not output when @myhost is specified in the <host-ref> tag in the unit definition, and the values in the <display-name> tag, <description> tag, <agent-host> tag, or <agent-port> tag in the host definition are omitted. In such a case, the Management Server automatically generates a value in the <host-name> tag of the host definition, as and when required. The host name is the computer name automatically created in the Management Server in Windows, and is the host name set up using the hostname command in UNIX. If the host does not contain any logical servers, the Management Server automatically deletes that host.

#1

This tag can be omitted if the host to be used is already defined using the Smart Composer functionality.

#2

This tag can be omitted if the host definition is not changed.

4.7.2 Tags that can be specified in the system for executing batch applications

This subsection describes the tags that can be specified in the system for executing batch applications.

(1) Definition of Web system attributes

The following table describes the contents that can be defined as Web system attributes:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
web-system	Defines a Web system. For defining the multiple Web systems, specify the <web-system> tag for each Web system.	O#1	O	O#2	None
name	Specifies a name for identifying the Web system, within 32 characters. This name must be unique within the management domain. Specify this name in the -s option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	M	M	M	None
addition-mode	Specifies the addition mode. <ul style="list-style-type: none"> DEPLOYED#3 Specifies addition mode when scaling out the disk image using JP1/SC/DPM. If addition mode specified,	--	--	O	NORMAL

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	deployment of the J2EE application and resource adapter is not required during system construction. <ul style="list-style-type: none"> NORMAL Specify this tag for a normal scale-out.				
display-name	Specifies the display name of the Web system within 128 characters. There are no restrictions on the permitted characters.	O	O	--	None
description	Specifies a comment about the Web system within 1,024 characters. There are no restrictions on the permitted characters.	O	O	--	None

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a Web system is defined.

O: Optional.

--: Not applicable.

#1
This tag can be omitted if the Web system to be used is already defined using the Smart Composer functionality.

#2
This tag can be omitted if no service unit is to be added.

#3
For applying these settings, you must import and start the resource adapter in a batch using the Smart Composer functionality commands beforehand. For details, see the *uCosminexus Application Server System Setup and Operation Guide*.

(2) Definition of physical tier

Define the physical tier under the <tier> tag.

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
tier	Defines the physical tier. In the system for executing batch applications, specify j2ee-tier or ctm-tier in the physical tier. Each physical tier define j2ee-tier in the <tier> tag.	M	O ^{#1}	--	None
tier-type	Specifies the types of physical tiers. In the system for executing batch applications, specify j2ee-tier or ctm-tier.	M	M	--	None
configuration	Defines the configuration to be applied to all the logical servers in the physical tier for each type of logical server.	O ^{#2}	M ^{#3}	--	None
logical-server-type	Specifies the types of logical servers for defining the configuration. In the system for executing batch applications, define the batch server as the logical J2EE server. The following are the types of logical servers that can be specified in the tags: <ul style="list-style-type: none"> j2ee-server:J2EE server performance-tracer:Performance tracer 	M	M	--	None

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	<ul style="list-style-type: none"> ctm-domain-manager:CTM domain manager component-transaction-monitor:CTM smart-agent:Smart Agent <p>The logical server that can define the configuration varies according to the physical tier type.</p> <p>In j2ee-tier J2EE server and performance tracer</p> <p>In ctm-tier CTM domain manager, CTM, Smart Agent, J2EE server and performance tracer</p>				
param ^{#4}	Defines the name and value of a parameter used for setting up the logical server environment. Enclose one parameter in each <param> tag.	M	M	--	None
param-name ^{#4}	Specifies the name of the parameter used for setting up the environment for the logical server.	M	M	--	None
param-value ^{#4}	Specifies the value to be set up in the parameter specified in the <param-name> tag. For specifying the multiple values in a parameter, specify the <param-value> tag for each value.	M	O ^{#5}	--	None

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a Web system is defined.

O: Optional.

--: Not applicable.

Note:

In a physical tier definition, you cannot specify the logical server configuration included in the user server and free-tier configuration. Specify these logical server configurations using unit definitions.

#1

This tag can be omitted if the physical tier definition is not changed.

#2

This tag can be omitted if the environment settings assumed in the Management Server during creation of the logical server are used for operations.

#3

This tag can be omitted if the `cmx_trans_param` command is used for expanding the abstract parameter to create the physical tier configuration.

#4

The parameters specifiable in the <param> tag depend on the logical server type. Additionally, the logical server to be defined depends on the configuration pattern of the system. For checking the logical servers to be defined, see [4.8 System configuration patterns and defined logical servers](#). For details on the parameters that can be specified in each logical server, see the sections from [4.12](#) onwards as per the type of logical server used.

#5

This tag can be omitted if the parameter specified in the <param-name> tag is to be deleted.

(3) Definition of the service unit

Define the service unit under the <unit> tag. The following table describes the contents that can be defined:

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
unit	Defines a service unit. For defining the multiple service units, specify the <unit> tag for each service unit to be defined.	M	O#1	M	None
name	Specifies a name for identifying the service unit, as a maximum of 32 characters. This name must be unique within the Web system. Specify this name in the -unit option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	M	O#2	M	None
display-name	Specifies the display name of the service unit within 128 characters. There are no restrictions on the permitted characters.	O	O	O	None
description	Specifies a comment about the service unit within 1,024 characters. There are no restrictions on the permitted characters.	O	O	O	None
allocated-host	Defines the reference to the host that configures a service unit. Specify only one <allocated-host> tag.	M	M	M	None
host-ref	Specifies the host name specified in the <name> tag in the host definition, the host name defined in the already setup Web system, or @myhost. When specifying @myhost, the value in the <host-name> tag in the host definition is automatically set up during the system setup. If there are multiple hosts, the same host cannot be shared in the same service unit.	M	M	M	None
hosts-for	Specifies the type of physical tier to which the host specified in the <host-ref> tag belongs. Specify j2ee-tier or ctm-tier in the system for executing batch applications.	M	M	M	None
define-server	Defines the configuration for each logical server that belongs to the physical tier specified in the <hosts-for> tag. For example, if j2ee-tier is specified in the <hosts-for> tag, you can define one logical server for each of the batch server and the performance tracer. For defining multiple logical servers, specify the <define-server> tag for each logical server.	O#3	M	O#3	None
logical-server-name	Specifies a name for identifying the logical server or cluster within 128 characters. Specify this name in the -s option of the Smart Composer functionality commands. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-).	O	--	O	cmx_Web-system-name_service-unit-name_type_serial-number
display-name	Specifies the display name of the logical server within 128 characters. There are no restrictions on the permitted characters.	O	O	O	None
description	Specifies a comment about the logical server within 1,024 characters. There are no restrictions on the permitted characters.	O	O	O	None
logical-server-type	Specifies the types of logical servers for defining the configuration. In the system for executing batch applications,	M	M	M	None

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
	<p>define the batch server as the logical J2EE server. The following are the types of logical servers that can be specified in the tags:</p> <ul style="list-style-type: none"> • j2ee-server:J2EE server • performance-tracer:Performance tracer • ctm-domain-manager:CTM domain manager • component-transaction-monitor:CTM • smart-agent:Smart Agent • user-server:User server <p>The logical server that can define the configuration of the host varies according to the physical tier type.</p> <p>In j2ee-tier J2EE server, performance tracer, and user server</p> <p>In ctm-tier CTM domain manager, CTM, Smart Agent, J2EE server, performance tracer, and user server</p>				
configuration	Defines the configuration to be applied for each logical server. If the environment settings defined in the physical tier definition are to be used for operation, there is no need to define the <configuration> tag.	O	O	O	None
param ^{#4}	Defines the name and value of a parameter used for setting up the logical server environment. Enclose one parameter in each <param> tag.	M	M	M	None
param-name ^{#4}	Specifies the name of the parameter used for setting up the environment for the logical server. For the specifiable parameter names, see <i>4.8 System configuration patterns and defined logical servers</i> .	M	M	M	None
param-value ^{#4}	Specifies the value to be set up in the parameter specified in the <param-name> tag. For specifying the multiple values in a parameter, specify the <param-value> tag for each value. For details on the parameter settings, see <i>4.8 System configuration patterns and defined logical servers</i> .	M	O ^{#5}	M	None

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a Web system is defined.

O: Optional.

--: Not applicable.

Note:

In the configuration change definition file you cannot set up the logical server configuration included in the free-tier configuration.

#1

This tag can be omitted if the service unit definition is not changed.

#2

Can be omitted when `cmx.websystem.name` is specified in the client setting properties file or common client setting properties file.

#3

This tag can be omitted if the configuration is not defined for each logical server.

#4

The parameters specifiable in the <param> tag depend on the logical server type. Additionally, the logical server to be defined depends on the configuration pattern of the system. For checking the logical servers to be defined, see [4.8 System configuration patterns and defined logical servers](#). For details on the parameters that can be specified in each logical server, see the sections from 4.12 onwards as per the type of logical server used.

#5

This tag can be omitted if the parameter specified in the <param-name> tag is to be deleted.

(4) Definition of host

Tag names	Contents	Easy Setup definition file	Configuration definition change file		Default
			P	U	
host	Defines a host. For defining multiple hosts, specify the host tag for each host. A host can be shared among multiple Web systems.	O#1	--	O#2	None
host-name	Specifies a name or IP address for identifying the host within 32 characters. A host name can be a combination of alphanumeric characters, underscore (_), and hyphen (-). Specifies the management IP address in dot notations (xxx.xxx.xxx.xxx) where xxx is an integer in the range from 0 to 255. When specifying the host name for which the IP address cannot be changed, an error occurs during the system setup. You can also specify @myhost in the <host-name> tag. If you specify @myhost, the host name is automatically replaced with the host name for the management server machine in the destination environment during system setup.	M	--	M	None
display-name	Specifies the host display name within 128 characters. There are no restrictions on the permitted characters.	O	--	O	None
description	Specifies a comment about the host within 1,024 characters. There are no restrictions on the permitted characters.	O	--	O	None
agent-host	Specifies the host name or IP address of the Cosminexus Administration Agent. Specifies the host name within 32 characters. The permitted name is a combination of alphanumeric characters, underscore (_), and hyphen (-). Specifies the IP address in dot notations (xxx.xxx.xxx.xxx) where xxx is an integer in the range from 0 to 255. You can also specify @myhost in the <agent-host> tag. When specifying @myhost, the value in the <host-name> tag in the host definition is automatically set up during the system setup.	O	--	O	Value specified in host-name
agent-port	Specifies the port number of the Cosminexus Administration Agent, in the range from 1 to 65535.	O	--	O	20295

Legend:

P: Indicates the configuration definition change file, for changing logical server parameters.

U: Indicates the configuration definition change file, for adding a service unit or host.

M: Mandatory if a host is defined.

O: Optional.

--: Not applicable.

Note:

The host definition is not output when @myhost is specified in the <host-ref> tag in the unit definition, and the values in the <display-name> tag, <description> tag, <agent-host> tag, or <agent-port> tag in the host definition are omitted. In such a case, the Management Server automatically generates a value in the <host-name> tag of the host definition, as and when required. The host name is the computer name automatically created in the Management Server in Windows, and is the host name set up using the hostname command in UNIX. If the host does not contain any logical servers, the Management Server automatically deletes that host.

#1

This tag can be omitted if the host to be used is already defined using the Smart Composer functionality.

#2

This tag can be omitted if the host definition is not changed.

4.8 System configuration patterns and defined logical servers

The type of defined logical server depends on the configuration pattern of a system to be set up. This section describes the parameters that can be specified in logical servers.

4.8.1 Building a system for executing J2EE applications

You specify the configuration for each logical server (definition of the `<configuration>` tag) in the 'physical tier definition' and 'service unit definition' of the Easy Setup definition file and the configuration change definition file. The parameters that you can specify in the configuration differ for each defined logical server.

Also, some specifiable parameters are common for all the logical servers. For details about common logical server parameters, see [4.9 Parameters applicable to all logical servers](#).

The following table lists the defined logical server types and the specifiable parameters:

Table 4–4: List of defined logical server types and specifiable parameters (In J2EE applications)

Defined logical server type	Specifiable parameter	Reference
Logical Web server	Parameters that can be specified in the logical Web server	4.10
Logical J2EE server	Parameters used for setting up the user properties for the J2EE server	4.11.2
	Parameters used for setting up the option definitions for the J2EE server	4.11.3
	Parameters applicable to the JavaVM system properties for the J2EE server	4.11.4
	Extension parameters of J2EE server	4.11.5
	Parameters used for setting up the Management Agent properties	4.11.10
	Parameters used for setting up the properties for issuing Management events	4.11.11
	Parameters used for setting up JP1 integration	4.11.12
	Parameters used for setting up the usage of SecurityManager	4.11.13
Logical performance tracer	Parameters applicable to logical performance tracers	4.12
Logical CTM domain manager	Parameters applicable to the logical CTM domain manager	4.13
Logical CTM	Parameters applicable to the logical CTM	4.14
Logical Smart Agent	Parameters applicable to the logical Smart Agent	4.15
Logical user server	Parameters applicable to the logical user server	4.16

If the physical tier type of the Easy Setup definition file output using the `cmx_export_model` command is `free-tier`, the Logical Naming Service is output. For details about the parameters output to the Logical Naming Service, see [4.17 Parameters applicable to the Logical Naming Service](#).

4.8.2 Building a system for executing batch applications

You define the following logical servers in a system for executing batch applications:

- Logical J2EE server[#]
- Logical performance tracer
- Logical CTM domain manager
- Logical CTM
- Logical Smart Agent

[#] Define the batch server as the logical J2EE server.

Also, the parameters that you can specify in the configuration (definition of the <configuration> tag) differ for each defined logical server.

Also, some specifiable parameters are common for all the logical servers. For details about common logical server parameters, see [4.9 Parameters applicable to all logical servers](#).

The following table lists the defined logical server types and the specifiable parameters:

Table 4–5: List of defined logical server types and specifiable parameters (For batch applications)

Defined logical server type	Specifiable parameter	Reference
Logical J2EE server used as batch server	Parameters used for setting up the user properties for the batch server	4.11.6
	Parameters used for setting up the option definitions for the batch server	4.11.7
	Parameters applicable to the JavaVM system properties for the batch server	4.11.8
	Extension parameters of the batch server	4.11.9
	Parameters used for setting up the Management Agent properties	4.11.10
	Parameters used for setting up the properties for issuing Management events	4.11.11
	Parameters used for setting up JPI integration	4.11.12
	Parameters used for setting up the usage of SecurityManager [#]	4.11.13
Logical performance tracer	Parameters applicable to logical performance tracers	4.12
Logical CTM domain manager	Parameters applicable to the logical CTM domain manager	4.13
Logical CTM	Parameters applicable to the logical CTM	4.14
Logical Smart Agent	Parameters applicable to the logical Smart Agent	4.15

[#] Make sure that you specify this parameter in the batch server.

4.9 Parameters applicable to all logical servers

This subsection describes the parameters that can be commonly specified for the following logical servers:

- Logical Web server
- Logical J2EE server
- Logical performance tracer
- Logical CTM domain manager
- Logical CTM
- Logical Smart Agent
- Logical user server
- Logical Naming Service

4.9.1 Parameters common to all logical servers

The following table describes the parameters that can be commonly specified in each logical server.

In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–6: Parameters common to all logical servers

Value of param-name	Value of param-value	Specifiable value	Default value	VR
additional.startcmd# 1	Specifies the options to be added to the start command.	Specify alphanumeric characters and signs (\$%'^^+_@:,. /). Alternatively, specify a string from 1 to 256 consecutive hyphen (-) or double backslashes (\).	None	06-50 07-00
mstartup.force.watch time	Specifies the time for monitoring forced termination of the logical server in seconds. When 0 is specified, monitoring is not performed. Specify 0, 60, 300, 600, or 1800. When thread dump is output during the forced termination of a J2EE server and if the forced termination monitoring time is shorter than the time at which thread dump output ends, note that the J2EE server process will end before the thread dump output finishes completely.	Specify 0, 60, 300, 600, or 1800.	60	07-60
mstartup.no	Specifies the starting order of the server during batch start as an integer. For not executing the batch start, specify -1.	Specify the value using an integer from -1 to 999.	<ul style="list-style-type: none"> • Performance tracer: <u>0</u> • Smart Agent: <u>10</u> • Naming Service: <u>20</u> • CTM domain manager: <u>30</u> • CTM: <u>40</u> 	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
			<ul style="list-style-type: none"> J2EE server: <u>80</u> Web server: <u>90</u> User server: <u>900</u> 	
mstartup.premised.serverName#2	Specifies the premise logical server.	Specify a string within 128 characters using alphanumeric characters, underscore (_), and hyphen (-).	None	07-50
mstartup.restartcnt	Specifies the automatic restart count for logical servers. Specify 0, 1, 5, 10, or 1000.	Specify 0, 1, 5, 10, or 1000.	1	06-50
mstartup.retrywait	Specifies the automatic restart retry interval for logical servers, in seconds. Specify 0, 60, 300, 600, or 1800.	Specify 0, 60, 300, 600, or 1800.	60	06-50
mstartup.start.watchtime	Specifies the logical server start monitoring time, in seconds. Specify 0, 60, 300, 600, or 3600. When 0 is specified, monitoring is not performed.	Specify 0, 60, 300, 600, or 3600.	600	06-50 07-00
mstartup.watchtime	Specifies the logical server termination monitoring time, in seconds. Specify 0, 60, 300, 600, or 1800. When 0 is specified, monitoring is not performed. In some cases, HWSGracefulStopTimeout directive settings are required. See 4.8.4 Notes on setting the HWSGracefulStopTimeout directive and the Manager stop watch time in the manual uCosminexus Application Server System Setup and Operation Guide.#6	Specify 0, 60, 300, 600, or 1800.	60	06-50
realservername#3	Specifies the name of the real server. Make sure that you specify a unique name within the same host. This value cannot be changed after executing the cmx_build_system command.	Specify a string within 128 characters beginning with an alphanumeric character and having alphanumeric characters, underscore (_), and hyphen (-).	logical-server-name	06-50 07-00
user.env.variable	Specifies the environment variable used for starting the server. #4 To specify multiple values, specify multiple <param-value> tags. When specifying environment variable values, you can include the names of environment variables that have already been defined. The following is an example of specifying the value of an environment variable by including the name of an environment variable that has already been defined. PATH=%{PATH};C:\userlib The environment variable that has already been defined is indicated by using the format %{variable-name}. When the logical server starts, %{variable-name} is replaced by the value of the environment variable that has already been defined.	Specify any string.	None#5	07-50

#1
Cannot be specified in the logical user server.
If you want to add multiple startup options, specify multiple options demarcated by spaces in one param-value tag.
(Example)


```
<param-name>additional.startcmd</param-name>  
<param-value>-CTMClientConnectCount 128 -CTMEntryCount 256</param-value>
```

#2

Cannot be specified in the logical performance tracer.

#3

Can only be specified in the logical Web server, and logical J2EE server.

#4

To specify multiple values, specify multiple `<param-value>`.

(Example)

```
<param-name>user.env.variable</param-name>  
<param-value>AAA=1024</param-value>  
<param-value>BBB=2048</param-value>
```

#5

If `user.env.variable` is not specified, the default environment variable is set up in the logical server. For details on environment variables set up in the logical server by default, see [4.1.13 Check points on setting environment variables of the logical server](#) in the *uCosminexus Application Server System Setup and Operation Guide*.

#6

When specifying a value other than 0 for the Web server, specify a value that is larger than the value of the `KeepAliveTimeout` parameter defined for the Web server. For details about the Web server definitions, see [4.10.2 Parameters used for setting up the definitions for the Web server](#).

4.10 Parameters applicable to logical Web servers

This section describes the parameters applicable to the logical Web server.

4.10.1 Parameters used for setting up the method of linking a web server with a J2EE server

The following table describes the parameters used for setting up the method of linking a web server with a J2EE server. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–7: Parameters used for setting up the method of linking a web server with a J2EE server

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>manager.web.send_request_method#1</code>	<p>Specifies the method of linking a web server with a J2EE server. You can specify either of the following values:</p> <p><code>reverseproxy</code>:</p> <p>A reverse proxy is used. Specify this to link with a J2EE server that is not in V9 compatibility mode. If you specify this when the linkage-target J2EE server is in V9 compatibility mode, request processing fails because requests cannot be forwarded to the J2EE server. To link with a J2EE server in V9 compatibility mode, specify <code>redirector</code> so that linkage is performed by using a redirector.</p> <p><code>redirector</code>:</p> <p>A redirector is used. Specify this to link with a J2EE server in V9 compatibility mode. If the linkage-target J2EE server is not in V9 compatibility mode, request processing fails because requests cannot be forwarded to the J2EE server. To link with a J2EE server that is not in V9 compatibility mode, specify <code>reverseproxy</code> so that linkage is performed by using a reverse proxy.</p> <p>If you specify <code>reverseproxy</code> when specifying <code>item</code> for the <code>SetBy</code> parameter, the parameters shown in 4.10.4 Parameters used for setting up a reverse proxy become effective when you distribute the settings.</p> <p>If you specify <code>reverseproxy</code>, you cannot specify <code>text</code> for the <code>SetBy</code> parameter.</p> <p>If you want to directly specify the contents of configuration files, you need to specify <code>redirector</code>.#2</p> <p>If the host on which the Web server is running is UNIX, the worker MPM module is included when <code>reverseproxy</code> is specified, and the prefork MPM module is included when <code>redirector</code> is specified. For details about worker MPM and prefork MPM, see the manual <i>Cosminexus HTTP Server</i>.</p> <p>If the host on which the Web server is running is UNIX and you plan to change a value after it has been specified, delete the Web server environment in advance by using the <code>hwsserveredit -delete</code> command.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> <code>reverseproxy</code> <code>redirector</code> 	<code>reverseproxy</code>	11-00

#1

You cannot change this parameter after the Web server has been built.

Specifying this parameter affects the following items:

- The value that is specified for this parameter might not be valid depending on what is specified for the parameters used for setting up the definitions for the Web server. For details about the Web server definitions, see [4.10.2 Parameters used for setting up the definitions for the Web server](#).

#2

If you specify `redirector`, you can use the following method to link via a reverse proxy, even when the J2EE server is not in V9 compatibility mode:

- For the `SetBy` parameter, specify `text`.
- For the `AllText` parameter, specify the contents of the `httpsd.conf` file (HTTP Server configuration file) that contains the reverse proxy settings.

For details about the reverse proxy settings, see [4.7 Setting the reverse proxy](#) in the manual *uCosminexus Application Server HTTP Server User Guide*.

4.10.2 Parameters used for setting up the definitions for the Web server

The following table describes the parameters used for setting up the definitions, for the Web server:

For details about the contents to be specified in `param-value` corresponding to "Value in `param-name`", see the description on the list of directives in the manual *Cosminexus HTTP Server*. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–8: Parameters used for setting up the definitions for the Web server

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>SetBy</code>	<p>Specifies how to set up the Web server.</p> <p><code>item</code>: Specified for each item.</p> <p><code>text</code>: The contents of <code>httpsd.conf</code> (Cosminexus HTTP Server definition file) are specified directly.</p> <p>If you use a reverse proxy as the J2EE server linkage method (<code>manager.web.send_request_method</code>), do not specify <code>text</code>. If you want to directly specify the settings in configuration files, select the method that uses a <code>redirector</code>.</p> <p>Even when you selected a <code>redirector</code>, you can use the following method to link via a reverse proxy:</p> <ul style="list-style-type: none">• For the <code>SetBy</code> parameter, specify <code>text</code>.• For the <code>AllText</code> parameter, specify the contents of the <code>httpsd.conf</code> file (Cosminexus HTTP Server definition file) that contains the reverse proxy settings. <p>For details about the reverse proxy settings, see 4.7 Setting the reverse proxy in the manual <i>uCosminexus Application Server HTTP Server User Guide</i>.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none">• <code>item</code>• <code>text</code>	<code>item</code>	08-70
<code>CoreDumpDirectory</code>	<p>Specifies the directory for dumping core. You can specify an absolute path or a relative path from the value specified in the <code>ServerRoot</code> directive. Note that the users and groups</p>	Specify any string.	<code>&</code> { <code>hws.home</code> }/ <code>servers/</code>	06-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	specified in the User and Group directives must be given write permission for the specified directory. Note that this specified value is only enabled in UNIX.		HWS_server-name	
Group	Specifies the group name used when server processes operate. Note that this specified value is only enabled in UNIX.	Specify a string within 16 characters using alphanumeric characters and underscore (_).	bin	06-50 07-00
HWSKeepStartServers	Specifies whether to maintain the number of server processes at the number specified in the StartServers directive only. If you specify On: The running server processes are maintained at only the number specified in the StartServers directive. If the number of server processes becomes less than the value specified in the StartServers directive, new processes are generated. <ul style="list-style-type: none"> prefork MPM This functionality is enabled when the value specified in each directive related to the process count has the following relationship: $\text{MinSpareServers} < \text{StartServers} \leq \text{MaxClients}$ and $\text{MinSpareServers} < \text{MaxSpareServers} \leq \text{MaxClients}$ If the value set in the StartServers directive is less than the value set in the MinSpareServers directive, the number of server processes is maintained at the value in the MinSpareServers directive. worker MPM This functionality is enabled when the values specified for the directives related to the number of processes and number of threads have the following relationships: $\text{MinSpareThreads} < \text{StartServers} \times \text{ThreadsPerChild} \leq \text{MaxClients}, \text{ and}$ $\text{MinSpareThreads} < \text{MaxSpareThreads} \leq \text{MaxClients}$ If the value of the StartServers directive multiplied by the value of the ThreadsPerChild directive is smaller than the value specified for the MinSpareThreads directive, the number of server processes will be maintained according to the value specified for the MinSpareThreads directive. If you specify Off: The running server processes are not maintained at the number specified in the StartServers directive. For details about the other directives related to the process count, see the manual <i>Cosminexus HTTP Server</i> . Note that this specified value is only enabled in UNIX.	The following strings can be specified: <ul style="list-style-type: none"> On Off 	Off	06-50
HWSLogTimeVerbose	Specifies whether an error log and a request log time, the time required for the request processing of the access log (%T), and the time at which request processing is started (%t) will be displayed in milliseconds.	The following strings can be specified: <ul style="list-style-type: none"> On Off 	On	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<p>If you specify <code>On</code>:</p> <p style="padding-left: 20px;">The time will be displayed up to milliseconds.</p> <p>If you specify <code>Off</code>:</p> <p style="padding-left: 20px;">The time will be displayed up to milliseconds.</p> <p>Note that an error log only includes the error log specified in the <code>ErrorLog</code> directive. The error log of the CGI script specified in the <code>ScriptLog</code> directive will not be considered.</p>			
<code>KeepAliveTimeout</code>	<p>Specifies the request waiting time for the <code>KeepAlive</code> connection in seconds. If a next request does not arrive from the client even after the lapse of time is greater than this time, the connection will be terminated. In <code>KeepAlive</code>, the server process is occupied with a specific client. If more time is required than the standard time for moving from a certain Web page to the next Web page, <code>KeepAlive</code> causes the timeout to occur, terminates the connection, and applies the server process to the processing of other requests.</p> <p>For details about directives, see the manual <i>Cosminexus HTTP Server</i>.</p>	Specify the value using an integer from 0 to 65535.	3	06-50
<code>ServerName</code>	<p>Specifies the server name and port number of Cosminexus HTTP Server.</p> <p>Specify the server name using FQDN (Fully Qualified Domain Name) or IP address.</p> <p>For details on the contents specified, see the manual <i>Cosminexus HTTP Server</i>.</p>	Server name and port number	www.example.com	08-70
<code>Listen</code>	<p>Specifies an IP address and a port number that will receive a request. Unlike the <code>Port</code> directive, multiple values can be specified. You specify this tag for defining a virtual host. If you specify the <code>Listen</code> directive, the <code>Port</code> directive and the <code>BindAddress</code> directive will be ignored.</p> <p>You can also specify IPv6 address as the IP address. When you specify IPv6 address, enclose the IPv6 address within square brackets ([]). However, if you omit the IP address and specify only the port number, only the requests using the IPv4 address will be received. Therefore, when using the IPv6 address, make sure that you specify the IPv6 address in the <code>Listen</code> directive.</p>	<p>The values that can be specified are as follows:</p> <ul style="list-style-type: none"> • IPv4 address^{#3}: Port number • Host name^{#3}: Port number • @myhost: Port number 	None	07-50
<code>LogLevel</code>	<p>Specifies error levels to be output in an error log. The log of a level higher than the specified level will be output. However, the notice level log will be output regardless of this specification. Also, the messages, output before the level specification analysis ends such as when Cosminexus HTTP Server starts, might be output regardless of this specification.</p> <p>The following are the error levels in their order of superiority:</p> <ul style="list-style-type: none"> • <code>emerg</code>: Emergency message • <code>alert</code>: Prompt processing request message • <code>crit</code>: Critical status message • <code>error</code>: General error message • <code>warn</code>: Warning level message • <code>notice</code>: Standard but important message 	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • <code>emerg</code> • <code>alert</code> • <code>crit</code> • <code>error</code> • <code>warn</code> • <code>notice</code> • <code>info</code> • <code>debug</code> 	info	06-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> • <code>info</code>: Information message, trace of external module and CGI program runtime module^{#1} • <code>debug</code>: Debug level message, internal module trace, and module trace corresponding to <code>info</code>^{#1} 			
<code>MaxClients</code>	<p>Specifies the maximum number of clients that can be connected at the same time.</p> <p>When the server starts, the number of processes specified in the <code>StartServer</code> directive start and wait for requests. If many requests are issued concurrently, multiple processes process the requests. If the number of processes waiting for the requests becomes less than the number specified in the <code>MinSpareServers</code> directive, new processes will be generated gradually. At this time, processes are generated until the process count reaches the number specified in this directive. After this, when the request processing ends and the processes waiting for requests increase, the processes will be terminated up to the number specified in the <code>MaxSpareServers</code> directive.</p> <p>For details about the other directives related to the process count, see the manual <i>Cosminexus HTTP Server</i>.</p> <p>Note that this specified value takes effect only in UNIX and when the value of the <code>manager.web.send_request_method</code> parameter is <code>redirector</code>.</p>	Specify the value using an integer from 1 to 1024.	150	06-50
<code>StartServers</code>	<p>Specifies the number of server processes used for starting the Web server. For details about the other directives related to the process count, see the manual <i>Cosminexus HTTP Server</i>.</p> <p>Note that this specified value takes effect only in UNIX and when the value of the <code>manager.web.send_request_method</code> parameter is <code>redirector</code>.</p>	Specify the value using an integer from 0 to 1024.	5	06-50
<code>ThreadsPerChild</code>	<p>Specifies the number of threads to be started as the server. The specified thread count indicates the maximum number of concurrent connections of the server.</p> <p>For details about directives, see the manual <i>Cosminexus HTTP Server</i>.</p> <p>Note that this value is enabled only in Windows.</p>	Specify the value using an integer from 1 to 1024.	50	06-50
<code>User</code>	<p>Specifies the user name used when the server process is running.</p> <p>Note that this specified value is only enabled in UNIX.</p>	Specify a string within 16 characters using alphanumeric characters and underscore (<code>_</code>).	<code>bin</code>	06-50 07-00
<code>DocumentRoot</code>	<p>Specifies an absolute path for the document root directory storing the contents.</p> <p>For details about directives, see the manual <i>Cosminexus HTTP Server</i>.</p>	Specify any string.	<code>&#amp;</code> <code>{hws.home}/</code> <code>htdocs</code>	08-00
<code>AppendDirectives</code>	<p>Specifies the directive contents to be added when a Web server is set up for each item (item is specified in the <code>SetBy</code> parameter).^{#2} You cannot use multibyte characters. For details about specifiable directives, see the manual <i>HTTP Server</i>.</p> <p>Do not specify the <code>PidFile</code> directive as an additional directive. If you do so, the logical web server fails to start. The information specified for this parameter is output to a file generated by Management Server. Also note that</p>	Specify any string.	None	08-70

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<p>the following <code>Include</code> directive is added at the end of the <code>httpsd.conf</code> file (HTTP Server definition file) by Management Server:</p> <ul style="list-style-type: none"> • <code>Include HTTP-Server-installation-directory/servers/HWS_logical-web-server's-real-server-name/conf/httpsd_manager.conf</code> <p>Note that redundantly specified directives that must not be specified redundantly are also added to the preceding file. Check the contents of the <code>httpsd.conf</code> file (HTTP Server definition file) and the <code>httpsd_manager.conf</code> file for redundantly specified directives that must not be specified redundantly. If there are such directives, modify the web server definition to eliminate the redundancy. For the directives that must not be specified redundantly, see the manual <i>HTTP Server</i>.</p>			
<code>AllText</code> ^{#4}	<p>Specifies the contents of <code>httpsd.conf</code> (Cosminexus HTTP Server definition file) when the Web server files are directly set up (text is specified in the <code>SetBy</code> parameter). ^{#2} For details on <code>httpsd.conf</code> (Cosminexus HTTP Server definition file), see the manual <i>Cosminexus HTTP Server</i>.</p>	Specify any string.	None	08-70
<code>HWSPrfId</code>	<p>Specifies the character string that was specified as the PRF identifier when the PRF daemon was started. Note, however, that this specification is ignored if you use a redirector.</p>	<p>Specify a string that is 0 to 31 characters long and consists of alphanumeric characters and/or symbols. Specifying a string that begins with <code>CTM</code>, <code>ctm</code>, <code>TSC</code>, or <code>tsc</code> results in an error. For symbols, only an underscore (<code>_</code>) can be used.</p>	PRF identifier of the PRF daemon of the same service unit as this web server	11-00
<code>MaxClients.worker</code>	<p>Specifies the maximum number of clients that can connect simultaneously (the <code>MaxClients</code> directive). When a server starts, the number of processes specified by the <code>StartServers</code> directive start and wait for requests. If many requests occur simultaneously, the requests are processed by using multiple threads. If the number of threads that remain waiting for requests becomes smaller than the number specified for the <code>MinSpareThreads</code> directive, new processes are generated. At this time, processes are generated until the number of threads reaches the number specified for this directive. Thereafter, when request processing finishes and the threads waiting for requests increase, processes are finished until the number of threads is at or below the number specified for the <code>MaxSpareThreads</code> directive. For details about directives, see the manual <i>Cosminexus HTTP Server</i>. Note that this specified value takes effect only in UNIX and when the value of the <code>manager.web.send_request_method</code> parameter is <code>reverseproxy</code>.</p>	<p>Specify an integer in the range from the value of <code>ThreadsPerChild.worker</code> to $(1,000 \times \text{ThreadsPerChild.worker})$.</p>	400	11-00
<code>ThreadsPerChild.worker</code>	<p>Specifies the number of server threads that are generated with respect to a single server process (the <code>ThreadsPerChild</code> directive). For details about directives, see the manual <i>Cosminexus HTTP Server</i>.</p>	<p>Specify an integer in the range from 1 to 1,000.</p>	40	11-00

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	Note that this specified value takes effect only in UNIX and when the value of the <code>manager.web.send_request_method</code> parameter is <code>reverseproxy</code> .			
<code>StartServers.worker</code>	Specifies the number of server processes when a Web server starts (the <code>StartServers</code> directive). For details about directives, see the manual <i>Cosminexus HTTP Server</i> . Note that this specified value takes effect only in UNIX and when the value of the <code>manager.web.send_request_method</code> parameter is <code>reverseproxy</code> .	Specify an integer from 0 to (<code>MaxClients.worker</code> ÷ <code>ThreadsPerChild.worker</code>).	2	11-00

#1

You can specify settings to output the module trace in the request log instead of the error log. For more details, see the manual *Cosminexus HTTP Server*.

#2

Specify the param-value value in the CDATA section.

(Example)

```
<param-name>AppendDirectives</param-name>
<param-value>
<![CDATA[
<Location /server-status>
:
</Location>
]]>
</param-value>
```

#3

When specifying an IPv4 address or host name, specify the value of the `<host-name>` tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend.

Host names are character strings of a maximum of 255 characters in length, and can consist of alphanumeric characters, underscores (`_`), periods (`.`), and hyphens (`-`).

Port numbers are halfwidth numeric character values from 1 to 65535.

#4

If you have built multiple logical Web servers, you need to specify a unique value for each logical Web server for the `PidFile` directive.

4.10.3 Parameters used for setting up the log output method of Cosminexus HTTP Server

This table describes the parameters used for setting up the log output method of Cosminexus HTTP Server. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–9: Parameters used for setting up the log output method of the Cosminexus HTTP Server log

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>CustomDivideFileNum</code>	Enabled when <code>Div</code> is specified in <code>HttpsCustomMethod</code> .	Specify the value using an integer from 0 to 256.	8	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	Specifies the number of divided log files. If the number of divided files exceeds the number specified here, the oldest files are deleted. If 0 is specified, the files are not deleted.			
CustomDivideTimeDifference	Enabled when Div is specified in HttpsdCustomMethod. Specifies the standard time for dividing the log files (unit: minutes) in a range from -1439 to 1439 as the difference for GMT. If 0 is specified, January 1, 1970, 0:0:0 (GMT) becomes the standard time.	Specify the value using an integer from -1439 to 1439.	540	07-50
CustomDivideTimeInterval	Enabled when Div is specified in HttpsdCustomMethod. Specifies the time interval used for one log file in a range from 1 to 31536000.	Specify the value using an integer from 1 to 31536000.	86400	07-50
CustomWraparoundFileNum	Enabled when Wrap is specified in HttpsdCustomMethod. Specifies the maximum number of log files to be output in a range from 1 to 256. If the size of the log file exceeds the size specified in CustomWraparoundFilesize, log is output to the next log file. In such a case, if the same number of log files as the maximum number specified in this parameter are already created, the files are re-used from the file with the name .001.	Specify the value using an integer from 1 to 256.	5	07-50
CustomWraparoundFilesize	Enabled when Wrap is specified in HttpsdCustomMethod. Specifies the maximum size of the log file (units: kilobytes) in a range from 1 to 2097151. During log output, if the log file size exceeds the maximum size specified in this parameter, the log is output to the next log file. In such a case, the contents of the log file in which the log is output are cleared.	Specify the value using an integer from 1 to 2097151.	8192	07-50
ErrorDivideFileNum	Enabled when Div is specified in HttpsdErrorMethod. Specifies the number of divided log files in a range from 0 to 256. If the number of divided files exceeds the number specified here, the oldest files are deleted. If 0 is specified, the files are not deleted.	Specify the value using an integer from 0 to 256.	8	07-50
ErrorDivideTimeDifference	Enabled when Div is specified in HttpsdErrorMethod. Specifies the standard time for dividing the log files (unit: minutes) in a range from -1439 to 1439 as the difference for GMT. If 0 is specified, January 1, 1970, 0:0:0 (GMT) becomes the standard time.	Specify the value using an integer from -1439 to 1439.	540	07-50
ErrorDivideTimeInterval	Enabled when Div is specified in HttpsdErrorMethod. Specifies the time interval used for one log file in a range from 1 to 31536000.	Specify the value using an integer from 1 to 31536000.	86400	07-50
ErrorWraparoundFileNum	Enabled when Wrap is specified in HttpsdErrorMethod. Specifies the maximum number of log files to be output in a range from 1 to 256. If the size of the log file exceeds the size specified in ErrorWraparoundFilesize, log is output to the next log file. In such a case, if the same number of log files as the maximum number specified in this parameter are already created, the files are re-used from the file with the name .001.	Specify the value using an integer from 1 to 256.	5	07-50
ErrorWraparoundFilesize	Enabled when Wrap is specified in HttpsdErrorMethod. Specifies the maximum size of the log file (units: kilobytes) in a range from 1 to 2097151.	Specify the value using an integer from 1 to 2097151.	8192	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	During log output, if the log file size exceeds the maximum size specified in this parameter, the log is output to the next log file. In such a case, the contents of the log file in which the log is output are cleared.			
HttpsdcustomLogFileDir	Specifies the directory to output the access log output by the Web server.	Specify any string.	Logs	07-50
HttpsdcustomLogFormat	<p>Specifies the label name provided by Cosminexus HTTP Server or an optional format.</p> <p>The formats corresponding to the label names provided by Cosminexus HTTP Server are as follows:</p> <ul style="list-style-type: none"> • common • combined • combinedio • hws_std • hws_trace <p>To specify a format other than the above, specify the optional format. The contents specified in the format are set up in the argument of the CustomLog directive in httpsd.conf (Cosminexus HTTP Server definition file).</p> <p>For details on the contents to be specified in the format, see the description about the CustomLog directive in the manual <i>Cosminexus HTTP Server</i>.</p> <p>When you are using UNIX and the value of the <code>manager.web.send_request_method</code> parameter is <code>reverseproxy</code>, if you directly edit <code>httpsd.conf</code>, do not delete the <code>LogFormat</code> directive that is specified by default.</p>	Specify any string with a maximum of 1024 characters.	hws_std	07-50
HttpsdcustomMethod	<p>Specifies one of the following as the log output method for access log:</p> <p>Off: Does not change the settings in <code>httpsd.conf</code> (Cosminexus HTTP Server definition file) If <code>httpsd.conf</code> is not edited, the default value is set.</p> <p>On: Outputs the log with a monotonic increase.</p> <p>Div: Divides and outputs the log in fixed time units.</p> <p>Wrap: Divides the log by the file size and outputs the log with wraparound.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • Off • On • Div • Wrap 	Div	07-50
HttpsdcustomErrorLogFileDir	Specifies the directory to output the error log output by the Web server.	Specify any string.	Logs	07-50
HttpsdcustomErrorMethod	<p>Specifies one of the following as the error log output method:</p> <p>Off: Does not change the settings in <code>httpsd.conf</code> (Cosminexus HTTP Server definition file) If <code>httpsd.conf</code> is not edited, Wrap is set.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • Off • On • Div • Wrap 	Wrap	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<p>On: Outputs the log with a monotonic increase.</p> <p>Div: Divides and outputs the log in fixed time units.</p> <p>Wrap: Divides the log by the file size and outputs the log with wraparound.</p>			
HttpsLogFileDir	Specifies the directory to which log information is to be output by the Web server.	Specify any string.	Logs	06-50 07-50
HttpsRequestLogFileDir	Specifies the directory to output the request log output by the Web server.	Specify any string.	Logs	07-50
HttpsRequestMethod	<p>Specifies one of the following as the request log output method:</p> <p>Off: Does not change the settings in httpsd.conf (Cosminexus HTTP Server definition file) If httpsd.conf is not edited, the default value is set.</p> <p>On: Outputs the log with a monotonic increase.</p> <p>Div: Divides and outputs the log in fixed time units.</p> <p>Wrap: Divides the log by the file size and outputs the log with wraparound.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • Off • On • Div • Wrap 	Div	07-50
HWSRequestIofilter	<p>Enabled when "on" is set up in HWSRequestLogLevel. Specified when the I/O filter trace showing the execution trigger is output for the I/O filter function implemented in the module. The amount of output is large, so specification in real operations is not recommended.</p> <p>Specify one of the following values:</p> <p>true: Output the I/O filter trace</p> <p>false: Do not output the I/O filter trace</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • true • false 	false	07-50
HWSRequestLogLevel	<p>Specifies whether to output to the request log. Specify one of the following values:</p> <p>on: Output the I/O filter trace</p> <p>none: Do not output the I/O filter trace</p> <p>If "on" is set up in this parameter, the following parameter settings are enabled:</p> <ul style="list-style-type: none"> • HWSRequestIofilter • HWSRequestModuleDebug • HWSRequestModuleInfo • HWSRequestRequest <p>By default, the following parameters are output:</p>	<p>The following strings can be specified: Note that the value is not case sensitive.</p> <ul style="list-style-type: none"> • on • none 	On	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> HWSRequestModuleInfo HWSRequestRequest 			
HWSRequestModuleDebug	<p>Enabled when "on" is set up in HWSRequestLogLevel. Specified when the module trace for internal module is output and trace corresponding to external module is output. The amount of output is large, so specification in real operations is not recommended.</p> <p>Specify one of the following values:</p> <p>true: Output the I/O filter trace</p> <p>false: Do not output the I/O filter trace</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> true false 	false	07-50
HWSRequestModuleInfo	<p>Enabled when "on" is set up in HWSRequestLogLevel. Specified when module trace is output for the external module.</p> <p>Specify one of the following values:</p> <p>true: Output the I/O filter trace</p> <p>false: Do not output the I/O filter trace</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> true false 	true	07-50
HWSRequestRequest	<p>Enabled when "on" is set up in HWSRequestLogLevel. Specified in the following cases:</p> <ul style="list-style-type: none"> When trace is output after connection is established and after response is complete When trace is to be output even after receiving the next request line for KeepAlive connection <p>Specify one of the following values:</p> <p>true: Output the I/O filter trace</p> <p>false: Do not output the I/O filter trace</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> true false 	true	07-50
RequestDivideFileNum	<p>Enabled when Div is specified in HttpsdRequestMethod. Specifies the number of divided log files in a range from 0 to 256. If the number of divided files exceeds the number specified here, the oldest files are deleted. If 0 is specified, the files are not deleted.</p>	Specify the value using an integer from 0 to 256.	8	07-50
RequestDivideTimeDifference	<p>Enabled when Div is specified in HttpsdRequestMethod. Specifies the standard time for dividing the log files (unit: minutes) in a range from -1439 to 1439 as the difference for GMT. If 0 is specified, January 1, 1970, 0:0:0 (GMT) becomes the standard time.</p>	Specify the value using an integer from -1439 to 1439.	540	07-50
RequestDivideTimeInterval	<p>Enabled when Div is specified in HttpsdRequestMethod. Specifies the time interval used for one log file in a range from 1 to 31536000.</p>	Specify the value using an integer from 1 to 31536000.	86400	07-50
RequestWraparoundFileNum	<p>Enabled when Wrap is specified in HttpsdRequestMethod. Specifies the maximum number of log files to be output in a range from 1 to 256.</p> <p>If the size of the log file exceeds the size specified in RequestWraparoundFilesize, log is output to the next log</p>	Specify the value using an integer from 1 to 256.	5	07-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	file. In such a case, if the same number of log files as the maximum number specified in this parameter are already created, the files are re-used from the file with the name .001.			
RequestWraparoundFilesize	Enabled when Wrap is specified in HttpsdRequestMethod. Specifies the maximum size of the log file (units: kilobytes) in a range from 1 to 2097151. During log output, if the log file size exceeds the maximum size specified in this parameter, the log is output to the next log file. In such a case, the contents of the log file in which the log is output are cleared.	Specify the value using an integer from 1 to 2097151.	8192	07-50

4.10.4 Parameters used for setting up a reverse proxy

The following table describes the parameters that can be used to set up a reverse proxy. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Note:

The parameters used for setting up a reverse proxy are effective only if `reverseproxy` is specified for the `manager.web.send_request_method` parameter and `item` is specified for the `SetBy` parameter.

Table 4–10: Parameters used for setting up a reverse proxy

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>manager.web.reverseproxy.mapping</code>	Specifies an entry that maps the request transfer source and destination for the reverse proxy. Specify the source and destination with an intervening space as follows: <i>source-path destination-protocol destination-J2EE-server [communications-timeout-setting]</i> <i>source-path:</i> Specify the path of the request to be transferred to the J2EE server by using a URL that begins with a forward slash (/). Do not specify multiple instances of the same path. If you do so, the system outputs the KEOS24506-W message and ignores the specification. <i>destination-protocol:</i> Specify the protocol that will be used when the request is transferred to the J2EE server. You can specify <code>http</code> or <code>ws</code> . <i>destination-J2EE-server:</i> Specify the name of the logical server for the J2EE server to which the request is to be forwarded. If you specify a name of a logical server for a J2EE server that does not exist, the message KEOS24507-W is output and the specified value is ignored. If you specify multiple values, the correct values take effect, even when KEOS24507-W is output.	The following strings can be specified: <ul style="list-style-type: none"> <i>source-path</i> Character string beginning with a forward slash (/) <i>destination-protocol</i> <code>http</code> or <code>ws</code> <i>destination-J2EE-server</i> The name of a logical server of a J2EE server <i>communications-timeout-setting</i> Specify an integer from 1 to 65535. 	<i>/ http name-of-logical-server-of-J2EE-server-for-same-service-unit-as-Web-server</i>	11-00

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<p>If no names of logical servers for a J2EE server are specified at all, the omission value is specified.</p> <p><i>communications-timeout-setting:</i></p> <p>Specify, in the following format, the time (in seconds) to wait when sending or receiving communications with respect to the J2EE server.</p> <p><code>timeout=communications-timeout</code></p> <p>You can omit this setting.</p> <p>The settings specified for this parameter are passed to the following directives on the web server:</p> <p><code>ProxyPass path-name URL communications-timeout-setting</code></p> <p><code>HWSPoxyPassReverseCookie path</code></p> <p><i>path:</i></p> <p>The value specified for <i>source-path</i></p> <p><i>URL:</i></p> <p><code>protocol://host:portpath</code></p> <p>The details of each element in <i>URL</i> are as follows:</p> <ul style="list-style-type: none"> - <i>protocol:</i> Value specified for <i>destination-protocol</i> - <i>host:</i> Host of the J2EE server in the same service unit as this web server - <i>port:</i> Port number of the NIO HTTP server for the J2EE server in the same service unit as this web server - <i>path:</i> The value specified for <i>source-path</i> <p><i>communications-timeout-setting:</i></p> <p><code>timeout=value-specified-for-communications-timeout-setting</code></p> <p>If the setting for <i>communications-timeout-setting</i> has been omitted, the timeout key will not be output.</p> <p>When building the system, the reverse proxy configuration file (<code>httpsd_reverseproxy.conf</code>) is generated in the same directory that contains <code>httpsd.conf</code>, and the settings related to reverse proxy are written. In <code>httpsd.conf</code>, a setting for including <code>httpsd_reverseproxy.conf</code> via the <code>Include</code> directive is added.</p> <p>The following are details about the directives that are output to the reverse proxy configuration file (<code>httpsd_reverseproxy.conf</code>).</p> <p><code>LoadModule proxy_module modules/mod_proxy.so (in Windows)</code></p> <p><code>LoadModule proxy_http_module modules/mod_proxy_http.so (in Windows)</code></p> <p><code>LoadModule proxy_wstunnel_module modules/mod_proxy_wstunnel.so (in Windows)</code></p> <p><code>LoadModule proxy_module libexec/mod_proxy.so (in UNIX)</code></p> <p><code>LoadModule proxy_http_module libexec/mod_proxy_http.so (in UNIX)</code></p>			

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	LoadModule proxy_wstunnel_module libexec/mod_proxy_wstunnel.so (in UNIX) HWSPrfId <i>PRFID</i> ProxyErrorOverride On Off ProxyPreserveHost On ProxyPass <i>path-name</i> <i>URL communications-timeout-setting</i> HWSProxyPassReverseCookie <i>path-name</i> The preceding directives are output in the order in which they appear in the definition file. If you define multiple request mapping entries, note that the definition order is meaningful. For details, see the manual <i>HTTP Server</i> .			
ProxyErrorOverride	Specifies whether to override the response header and response body from the J2EE server. For details, see the <i>Cosminexus HTTP Server</i> .	The following strings can be specified: <ul style="list-style-type: none"> • On • Off 	None	11-00

4.11 Parameters applicable to logical J2EE servers

This subsection describes the parameters that are applicable to logical J2EE servers.

In the logical J2EE server, the applicable parameters differ depending on whether the J2EE server or the batch server is used. The following table describes the applicable parameters, and the parameter references for each server:

Table 4–11: Correspondence between the server to be used and references of the parameters to be specified

Server to be used	Parameters to be specified
J2EE server	Parameters used for setting up the compatibility mode of the J2EE server (see 4.11.1)
	Parameters used for setting up the user properties for the J2EE server (see 4.11.2)
	Parameters used for setting up the option definitions for the J2EE server (see 4.11.3)
	Parameters applicable to the JavaVM system properties for the J2EE server (see 4.11.4)
	Extension parameters of J2EE server (see 4.11.5)
	Parameters that set up the usage for integrated user management (see 4.11.14)
Batch server	Parameters used for setting up the user properties for the batch server (see 4.11.6)
	Parameters used for setting up the option definitions for the batch server (see 4.11.7)
	Parameters applicable to the JavaVM system properties for the batch server (see 4.11.8)
	Extension parameters of the batch server (see 4.11.9)
J2EE server and batch server	Parameters used for setting up the Management Agent properties (see 4.11.10)
	Parameters used for setting up the properties for issuing Management events (see 4.11.11)
	Parameters used for setting up JP1 integration (see 4.11.12)
	Parameters used for setting up usage of SecurityManager (see 4.11.13)
	Parameters that set up the files to be used in the JavaVM startup parameters (see 4.11.15)

4.11.1 Parameters used for setting up the compatibility mode of the J2EE server

The following table describes the parameter used for setting up the compatibility mode of the J2EE server. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–12: Parameters used for setting up the compatibility mode of the J2EE server

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>manager.j2ee.compat</code>	Specify whether to use the compatibility mode of the J2EE server. none: V9 compatibility mode is not used.	The following strings can be specified: <ul style="list-style-type: none"> • none • v9 	none	11-00

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	v9: V9 compatibility mode is used. After you have set this parameter, if you want to change the setting, beforehand, use the <code>cyjsetup -d</code> command to delete the J2EE server environment.			

4.11.2 Parameters used for setting up the user properties for the J2EE server

This section describes the parameters used for setting up the user properties for the J2EE server.

For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3 *usrconf.properties \(User property file for J2EE servers\)*](#). When you reference the section, read the key as parameter. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Note that the specification method of parameters for which "Value in param-name" is specified is different from `usrconf.properties` (user property file for J2EE servers).

The following describes the specification format.

Specification format

```
<param-name>parameter</param-name>
<param-value>value</param-value>
```

Among the parameters that can be specified in `usrconf.properties` (the user property file for the J2EE server), specify any parameters that do not appear either in the table in [4.11.4 *Parameters applicable to the JavaVM system properties for the J2EE server*](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.properties</param-name>
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>ex.properties</param-name>
<param-value>parameter=value</param-value>
<param-value>parameter=value</param-value>
```

(1) Parameters beginning with `ejbserver.application`

The following table describes the parameters beginning with `ejbserver.application`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(a\) *Keys beginning with `ejbserver.application`*](#). When you reference the section, read the key as parameter.

Table 4–13: Parameters beginning with `ejbserver.application`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.application.InitTermProcessClasses^{#1}</code>	Specify any string.	None	06-50
<code>ejbserver.application.userlog.CJLogHandler.handler-name.appname</code>	Specify single byte character set of 0 to 16 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Period (.) • Dollar sign (\$) • Underscore (_) • Vertical bar () • Colon (:) • Ampersand (&) • At mark (@) • Hash mark (#) • Percent sign (%) • Hyphen (-) 	user_app	06-50 07-00
<code>ejbserver.application.userlog.CJLogHandler.handler-name.count</code>	(If <code>CJMessageFileHandler</code> is used) 2-16 (If <code>CJMPMessageFileHandler</code> is used) 2-64	2	06-50 07-00
<code>ejbserver.application.userlog.CJLogHandler.handler-name.encoding</code>	Specify 0 to 1024 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Plus sign (+) • Colon (:) • Period (.) • Underscore (_) • Hyphen (-) 	None	06-50 07-00
<code>ejbserver.application.userlog.CJLogHandler.handler-name.filter</code>	Specify a class character set of 0 to 4096 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Period (.) • Dollar sign (\$) • Underscore (_) 	None	06-50 07-00
<code>ejbserver.application.userlog.CJLogHandler.handler-name.formatter</code>	Specify a class character set of 0 to 4096 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Period (.) • Dollar sign (\$) • Underscore (_) 	None	06-50 07-00
<code>ejbserver.application.userlog.CJLogHandler.handler-name.level</code>	The following strings can be specified: <ul style="list-style-type: none"> • OFF • SEVERE • WARNING • INFO • CONFIG • FINE • FINER • FINEST 	SEVERE	06-50 07-00

Value of param-name	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> • ALL 		
<code>ejbserver.application.userlog.CJLogHandler.handler-name.limit</code>	(If CJMessageFileHandler is used) 8192-2147483647 (If CJMPMessageFileHandler is used) 8192-16777216	1048576	06-50 07-00 07-50
<code>ejbserver.application.userlog.CJLogHandler.handler-name.msgid</code>	Specify single byte character set of 0 to 21 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Period (.) • Dollar sign (\$) • Underscore (_) • Vertical bar () • Colon (:) • Ampersand (&) • At mark (@) • Hash mark (#) • Percent sign (%) • Hyphen (-) 	0001	06-50 07-00
<code>ejbserver.application.userlog.CJLogHandler.handler-name.path</code>	Specify any string in the range of 1 to 255 bytes.	user_log	06-50
<code>ejbserver.application.userlog.CJLogHandler.handler-name.separator</code>	Specify single byte character set of 0 to 1024 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Period (.) • Dollar sign (\$) • Underscore (_) • Vertical bar () • Colon (:) • Ampersand (&) • At mark (@) • Hash mark (#) • Percent sign (%) • Hyphen (-) 	Vertical bar ()	06-50 07-00
<code>ejbserver.application.userlog.Logger.logger-name.filter</code>	Specify a class character set of 0 to 4096 bytes using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Period (.) • Dollar sign (\$) • Underscore (_) 	None	06-50 07-00
<code>ejbserver.application.userlog.Logger.logger-name.handlers#1</code>	Specify a class character set of 1 to 1024 bytes beginning with alphanumeric characters. Also, when specifying multiple values, delimit with commas (,).	None	06-50 07-00
<code>ejbserver.application.userlog.Logger.logger-name.level</code>	The following strings can be specified: <ul style="list-style-type: none"> • OFF • SEVERE • WARNING • INFO 	SEVERE	06-50

Value of param-name	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> • CONFIG • FINE • FINER • FINEST • ALL • null 		
<code>ejbserver.application.userlog.Logger.logger-name.useParentHandlers</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.application.userlog.loggers#1</code>	Specify a class path within 1024 characters. When specifying multiple values, delimit with commas (.). You can specify the following characters in the class path: <ul style="list-style-type: none"> • Alphanumeric characters • Dollar sign (\$) • Underscore (_) • Period (.) However, the class path must begin with an alphanumeric character.	None	06-50 07-00
<code>ejbserver.application.userlog.menu.handlers.#1#2</code>	Specify the list of handler names. When specifying multiple values, delimit with commas (.).	None	06-50 07-00

#1

To specify multiple values in param-value, delimit the values with commas (.).

(Example)

`<param-value>value1, value2, value3</param-value>`

#2

When you delete the handler name from this parameter, also delete the related parameter (`ejbserver.application.userlog.CJLogHandler.handler-name-to-be-deleted.XXX`).

Note that the key corresponding to this parameter does not exist [2.2.3\(5\)\(a\) Keys beginning with *ejbserver.application*](#).

(2) Parameters beginning with `ejbserver.client`

The following table describes the parameters beginning with `ejbserver.client`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(c\) Keys beginning with *ejbserver.client*](#). When you reference the section, read the key as parameter.

Table 4–14: Parameters beginning with `ejbserver.client`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.client.ctm.RequestPriority</code>	Specify the value using an integer from 1 to 8.	4	06-50 07-10

(3) Parameters beginning with `ejbserver.commonj`

The following table describes the parameters beginning with `ejbserver.commonj`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(d\) Keys beginning with *ejbserver.commonj*](#). When you reference the section, read the key as parameter.

Table 4–15: Parameters beginning with `ejbserver.commonj`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.commonj.WorkManager.non_daemon_work_threads</code>	Specify the value using an integer from 1 to 65535.	10	08-50

(4) Parameters beginning with `ejbserver.compiler`

The following table describes the parameters beginning with `ejbserver.compiler`.

Table 4–16: Parameters beginning with `ejbserver.compiler`

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>ejbserver.compiler.jvm.minHeapSize[#]</code>	Specifies the maximum heap size of the javac command invoked when a J2EE application is started. Specify a value that satisfies the condition <code>ejbserver.compiler.jvm.minHeapSize ≤ ejbserver.compiler.jvm.maxHeapSize</code> . This parameter is valid in version 09-00-01 or earlier, and is ignored even if specified in version 09-00-02 or later.	Specify the value using an integer from 1 to 4095.	256	06-50 07-00
<code>ejbserver.compiler.jvm.maxHeapSize[#]</code>	Specifies a range of 1 to 4095 (unit: megabytes) as the initial heap size of the javac command invoked when a J2EE application is started. Specify a value that satisfies the condition <code>ejbserver.compiler.jvm.minHeapSize ≤ ejbserver.compiler.jvm.maxHeapSize</code> . This parameter is valid in version 09-00-01 or earlier, and is ignored even if specified in version 09-00-02 or later.	Specify the value using an integer from 1 to 4095.	32	06-50 07-00

[#]

When this value is specified in megabytes, the characters `m` or `M` are not required.
Also, you cannot specify the value in Kilobytes adding the characters `k` or `K`.

(5) Parameters beginning with `ejbserver.connectionpool`

The following table describes the parameters beginning with `ejbserver.connectionpool`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(f\) Keys beginning with `ejbserver.connectionpool`](#). When you reference the section, read the key as parameter.

Table 4–17: Parameters beginning with `ejbserver.connectionpool`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.connectionpool.association.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> <code>true</code> <code>false</code> 	false	07-50
<code>ejbserver.connectionpool.validation.timeout</code>	Specify the value using an integer from 1 to 2147483647.	5	08-00

(6) Parameters beginning with `ejbserver.connector`

The following table describes the parameters beginning with `ejbserver.connector`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(g\) Keys beginning with `ejbserver.connector`](#). When you reference the section, read the key as parameter.

Table 4–18: Parameters beginning with `ejbserver.connector`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.connector.logwriter.filename</code>	Specify the value using an integer from 1 to 16.	4	06-50 07-00
<code>ejbserver.connector.logwriter.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	2097152	06-50 07-00

(7) Parameters beginning with `ejbserver.container`

The following table describes the parameters beginning with `ejbserver.container`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(h\) Keys beginning with `ejbserver.container`](#). When you reference the section, read the key as parameter.

Table 4–19: Parameters beginning with `ejbserver.container`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.container.audit_trail.enabled</code>	The following strings can be specified: <ul style="list-style-type: none">• true• false	false	07-60
<code>ejbserver.container.passivate.scan.interval</code>	Specify an integer from 0 to 2147483 (unit: seconds).	0	06-50
<code>ejbserver.container.remove.scan.interval</code>	Specify an integer from 0 to 153722867280912 (unit: minutes).	5	06-50

(8) Parameters beginning with `ejbserver.ctm`

The following table describes the parameters beginning with `ejbserver.ejb`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(i\) Keys beginning with `ejbserver.ctm`](#). When you reference the section, read the key as parameter.

Table 4–20: Parameters beginning with `ejbserver.ctm`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.ctm.ActivateTimeout</code>	Specify an integer from 0 to 2147483647 (unit: seconds).	180	06-50 07-10
<code>ejbserver.ctm.CTMID</code>	The following strings can be specified: <ul style="list-style-type: none">• String that does not begin with 'ctm' or 'CTM' and is maximum 31 characters using alphanumeric characters, underscore (<code>_</code>), and period (<code>.</code>).• IP address	ctm-tier: <i>IP-address-of-used-CTM-with-period-replaced-by-underscore(_</i>	07-50

Value of param-name	Specifiable value	Default value	VR
		& {cosminexus.home}/CC/ server/repository/ &{server.name}	

(10) Parameters beginning with `ejbserver.distributedtx`

The following table describes the parameters beginning with `ejbserver.distributedtx`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(k\) Keys beginning with `ejbserver.distributedtx`](#). When you reference the section, read the key as parameter.

Table 4–22: Parameters beginning with `ejbserver.distributedtx`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.distributedtx.ots.recoverFailMessageCount</code>	Specify the value using an integer from 0 to 2147483647.	0	09-00
<code>ejbserver.distributedtx.ots.status.directory1</code>	Specify any string with a maximum of 200 characters.	otsstatus	06-70
<code>ejbserver.distributedtx.ots.status.directory2</code>	Specify any string with a maximum of 200 characters.	None	06-70
<code>ejbserver.distributedtx.recovery.port</code>	Specify the value using an integer from 1 to 65535.	20302	06-50 07-00
<code>ejbserver.distributedtx.rollbackClientTxOnSystemException</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
<code>ejbserver.distributedtx.XATransaction.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50

(11) Parameters beginning with `ejbserver.DynamicStubLoading`

The following table describes the parameters beginning with `ejbserver.DynamicStubLoading`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(l\) Keys beginning with `ejbserver.DynamicStubLoading`](#). When you reference the section, read the key as parameter.

Table 4–23: Parameters beginning with `ejbserver.DynamicStubLoading`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.DynamicStubLoading.Enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50

(12) Parameters beginning with `ejbserver.ejb`

The following table describes the parameters beginning with `ejbserver.ejb`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(m\) Keys beginning with `ejbserver.ejb`](#). When you reference the section, read the key as parameter.

Table 4–24: Parameters beginning with `ejbserver.ejb`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.ejb.timerservice.maxCallbackThreads</code>	Specify the value using an integer from 1 to 100.	1	07-00
<code>ejbserver.ejb.timerservice.retryCount</code>	Specify the value using an integer from 0 to 2147483646.	1	07-00
<code>ejbserver.ejb.timerservice.retryInterval</code>	Specify an integer from 1 to 604800 (unit: seconds).	5	07-00

(13) Parameters beginning with `ejbserver.ext`

The following table describes the parameters beginning with `ejbserver.ext`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(n\) Keys beginning with `ejbserver.ext`](#). When you reference the section, read the key as parameter.

Table 4–25: Parameters beginning with `ejbserver.ext`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.ext.method_observation.interval</code>	Specify an integer from 0 to 86400 (unit: seconds).	0	06-50

(14) Parameters beginning with `ejbserver.http`

The following table describes the parameters beginning with `ejbserver.http`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(o\) Keys beginning with `ejbserver.http`](#). When you reference the section, read the key as parameter.

Table 4–26: Parameters beginning with `ejbserver.http`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.http.port</code>	Specify the value using an integer from 1 to 65535.	28008	07-50 11-00

(15) Parameters beginning with `ejbserver.instrumentation`

The following table describes the parameters beginning with `ejbserver.instrumentation`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(p\) Keys beginning with `ejbserver.instrumentation`](#). When you reference the section, read the key as parameter.

Table 4–27: Parameters beginning with `ejbserver.instrumentation`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.instrumentation.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50 07-00

(16) Parameters beginning with ejbserver.jca

The following table describes the parameters beginning with `ejbserver.jca`. For details about the contents to be specified in param-value corresponding to 'Value of param-name' see the [2.2.3\(5\)\(r\) Keys beginning with ejbserver.jca](#). When you reference the section, read the key as parameter.

Table 4–28: Parameters beginning with `ejbserver.jca`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.jca.adapter.tp1.bind_host</code>	The values that can be specified are as follows: <ul style="list-style-type: none">• IPv4 address• Host name	Valid local address selected automatically according to the system	08-50

(17) Parameters beginning with ejbserver.jndi

The following table describes the parameters beginning with `ejbserver.jndi`. For details about the contents to be specified in param-value corresponding to 'Value of param-name' see the [2.2.3\(5\)\(s\) Keys beginning with ejbserver.jndi](#). When you reference the section, read the key as parameter.

Table 4–29: Parameters beginning with `ejbserver.jndi`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.jndi.cache</code>	The following strings can be specified: <ul style="list-style-type: none">• on• off	on	06-50
<code>ejbserver.jndi.cache.interval</code>	Specify an integer from 0 to 2147483647 (unit: seconds).	0	06-50
<code>ejbserver.jndi.cache.interval.clear.option</code>	The following strings can be specified: <ul style="list-style-type: none">• refresh• check	refresh	06-50
<code>ejbserver.jndi.global.enabled</code>	The following strings can be specified: <ul style="list-style-type: none">• true• false	true	09-00
<code>ejbserver.jndi.naming-service.group.specify-group-name.providerurls</code>	Specify a string lined up in the following order: 'corbaname::'1 to 255 alphanumeric characters or @myhost':0 to 65535 numeric characters'. Specify a string that is delimited one or more times with a semi-colon (;) and repeated.	None	07-50
<code>ejbserver.jndi.naming-service.group.list</code>	Specify the Logical Naming Service group delimiting with semi-colon (;). The Logical Naming Service group consists within 30 alphanumeric characters or underscore (_).	None	07-50
<code>ejbserver.jndi.request.timeout</code>	Specify an integer from 0 to 86400 (unit: seconds).	0	06-50

(18) Parameters beginning with ejbserver.jta

The following table describes the parameters beginning with ejbserver.jta. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(t\) Keys beginning with ejbserver.jta](#). When you reference the section, read the key as parameter.

Table 4–30: Parameters beginning with ejbserver.jta

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.jta.TransactionManager.defaultTimeout</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	180	06-50

(19) Parameters beginning with ejbserver.logger

The following table describes the parameters beginning with ejbserver.logger. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(u\) Keys beginning with ejbserver.logger](#). When you reference the section, read the key as parameter.

Table 4–31: Parameters beginning with ejbserver.logger

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.logger.access_log.nio_http.format</code>	Specify the format. You can specify a value that is not longer than 1,024 characters. You can use ASCII codes 32 to 126 (decimal) to specify the format.	<code>%h %{X-Forwarded-For}i %l %u %d %rootap "%r" %s %b %D %S</code>	11-00
<code>ejbserver.logger.access_log.websocket.enabled</code>	Specify either of the following values: <ul style="list-style-type: none"> <code>true</code> <code>false</code> 	<code>false</code>	11-00
<code>ejbserver.logger.access_log.websocket.format</code>	Specify the format. You can specify a value that is not longer than 1,024 characters. You can use ASCII codes 32 to 126 (decimal) to specify the format.	<code>%TS %IO %OPCODE %ROOTAP %URI %FIN %PAYLOAD DATALEN %CLIENTA P %CLOSERE ASON</code>	11-00
<code>ejbserver.logger.channels.delfine.ConnectionPoolWatchLogFile.filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.delfine.ConnectionPoolWatchLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.delfine.ConsoleLogFile.filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.delfine.ConsoleLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.logger.channels.de fine.DevelopmentLogFile.file num</code>	Specify an integer from 1 to 16.	4	09-50
<code>ejbserver.logger.channels.de fine.DevelopmentLogFile.file size</code>	Specify an integer from 4096 to 2147483647.	1048576	09-50
<code>ejbserver.logger.Development LogFile.level</code>	The following values can be specified: <ul style="list-style-type: none"> • OFF (Do not output) • SEVERE • WARNING • INFO • CONFIG • FINE • FINER • FINEST • ALL (Output everything) 	OFF	09-50
<code>ejbserver.logger.channels.de fine.EJBContainerLogFile.fil enum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.EJBContainerLogFile.fil esize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.ExceptionLogFile.filenu m</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.ExceptionLogFile.files ize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.FileDescriptorWatchLogF ile.fileenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.FileDescriptorWatchLogF ile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.HttpSessionWatchLogFile .fileenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.HttpSessionWatchLogFile .filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.MaintenanceLogFile.file num</code>	Specify the value using an integer from 1 to 16.	4	07-50
<code>ejbserver.logger.channels.de fine.MaintenanceLogFile.file size</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	16777216	07-50
<code>ejbserver.logger.channels.de fine.MemoryWatchLogFile.file num</code>	Specify the value using an integer from 1 to 16.	2	07-50

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.logger.channels.de fine.MemoryWatchLogFile.file size</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.MessageLogFile.filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.MessageLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.NIOHTTPAccessLogFile.fi lenum</code>	Specify the value using an integer from 1 to 16.	16	11-00
<code>ejbserver.logger.channels.de fine.NIOHTTPAccessLogFile.fi lesize</code>	Specify the value using an integer from 4096 to 2147483647.	4194304	11-00
<code>ejbserver.logger.channels.de fine.RequestQueueWatchLogFil e.filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.RequestQueueWatchLogFil e.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.ThreaddumpWatchLogFile. filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.ThreaddumpWatchLogFile. filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.ThreadWatchLogFile.file num</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.ThreadWatchLogFile.file size</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.UserErrLogFile.filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.UserErrLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.UserOutLogFile.filenum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.UserOutLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.WebContainerLogFile.fil enum</code>	Specify the value using an integer from 1 to 16.	2	07-50
<code>ejbserver.logger.channels.de fine.WebContainerLogFile.fil esize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejbserver.logger.channels.de fine.WebServletLogFile.fil enum</code>	Specify the value using an integer from 1 to 16.	4	07-50

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.logger.channels.detailed.WebServletLogFile.filesize</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	4194304	07-50
<code>ejbserver.logger.channels.detailed.WebSocketAccessLogFile.filenum</code>	Specify the value using an integer from 1 to 16.	16	11-00
<code>ejbserver.logger.channels.detailed.WebSocketAccessLogFile.filesize</code>	Specify an integer in the range from 4096 to 2147483647.	4194304	11-00
<code>ejbserver.logger.enabled.*</code>	Specify the following strings delimiting with commas (,): <ul style="list-style-type: none"> • Error • Warning • Information • Debug 	Error	07-50
<code>ejbserver.logger.rotationTime</code>	Specify in the HHMMSS format.	None	09-50
<code>ejbserver.logger.rotationStyle</code>	The following strings can be specified: <ul style="list-style-type: none"> • SHIFT • WRAP 	WRAP	09-50
<code>ejbserver.logger.systemlog.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50

(20) Parameters beginning with `ejbserver.management`

The following table describes the parameters beginning with `ejbserver.management`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(v\) Keys beginning with `ejbserver.management`](#). When you reference the section, read the key as parameter.

Table 4–32: Parameters beginning with `ejbserver.management`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	07-00
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.interval</code>	Specify the value using an integer from 1 to 2147483647 (unit: seconds).	600	07-00
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.threshold</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	10	07-00
<code>ejbserver.management.statistics.interval</code>	Specify an integer from 1 to 86400 (unit: seconds).	60	07-00
<code>ejbserver.management.stats_file.base_time</code>	Specify an integer from 0 to 1439 (unit: minutes).	0	07-00
<code>ejbserver.management.stats_file.dir</code>	Specify any string.	[In Windows] <i>Cosminexus-working-</i>	07-00

Value of param-name	Specifiable value	Default value	VR
		<i>directory/ejb/</i> <i>server-name/</i> <i>stats</i> [In UNIX] <i>Cosminexus-</i> <i>working-</i> <i>directory/ejb/</i> <i>server-name/</i> <i>stats</i>	
<code>ejbserver.management.stats_file.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	07-00
<code>ejbserver.management.stats_file.num</code>	Specify the value using an integer from 2 to 168.	7	07-00
<code>ejbserver.management.stats_file.period</code>	Specify an integer from 1 to 744 (unit: hours).	24	07-00
<code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	09-00
<code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.high_threshold</code>	Specify an integer from 1 to 100 (unit: %)	80	09-00
<code>ejbserver.management.webcontainer.stats_monitor.waiting_request_count.low_threshold</code>	Specify an integer from 0 to 99 (unit: %)	0	09-00
<code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	09-00
<code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.high_threshold</code>	Specify an integer from 1 to 100 (unit: %)	80	09-00
<code>ejbserver.management.webcontainer.stats_monitor.whole_waiting_request_count.low_threshold</code>	Specify an integer from 0 to 99 (unit: %)	0	09-00

(21) Parameters beginning with `ejbserver.manager`

The following table describes the parameters beginning with `ejbserver.manager`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(w\) Keys beginning with *ejbserver.manager*](#). When you reference the section, read the key as parameter.

Table 4–33: Parameters beginning with `ejbserver.manager`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.manager.agent.JP1EventAgent.conf</code>	Specify any string.	<i>Cosminexus-</i> <i>installation-</i> <i>directory/</i> <i>manager/</i>	07-50

Value of param-name	Specifiable value	Default value	VR
		config/ manager. <i>real-server-name</i> .properties	
ejbserver.manager.agent.JPEventAgent.enabled	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
ejbserver.manager.agent.MEventAgent.conf	Specify any string.	<i>Cosminexus-installation-directory</i> / manager/ config/ mevent. <i>real-server-name</i> .properties	07-50
ejbserver.manager.agent.MEventAgent.enabled	You can specify the following strings: <ul style="list-style-type: none"> • true • false 	true	06-50 07-00

(22) Parameters beginning with `ejbserver.naming`

The following table describes the parameters beginning with `ejbserver.naming`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(x\) Keys beginning with `ejbserver.naming`](#). When you reference the section, read the key as parameter.

Table 4–34: Parameters beginning with `ejbserver.naming`

Value of param-name	Specifiable value	Default value	VR
ejbserver.naming.host	The following strings can be specified: <ul style="list-style-type: none"> • Host name • IPv4 address • @myhost 	Same host as the J2EE server	07-50
ejbserver.naming.port ^{#1}	Specify the value using an integer from 1 to 65535.	900	07-50
ejbserver.naming.startupMode ^{#2}	The following strings can be specified: <ul style="list-style-type: none"> • manual • inprocess 	inprocess	07-50
ejbserver.naming.startupRetryCount ^{#1}	Specify the value using an integer from 0 to 2147483647.	9	07-50
ejbserver.naming.startupWaitTime ^{#1}	Specify an integer from 0 to 2147483647 (unit: seconds).	1	07-50

#1

If a value other than 'inprocess' is specified in `ejbserver.naming.startupMode`, the value is ignored.

#2

You cannot specify automatic.

(23) Parameters beginning with `ejbserver.rmi`

The following table describes the parameters beginning with `ejbserver.rmi`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(y\) Keys beginning with `ejbserver.rmi`](#). When you reference the section, read the key as parameter.

Table 4–35: Parameters beginning with `ejbserver.rmi`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.rmi.localinvocation.scope</code>	The following strings can be specified: <ul style="list-style-type: none"> • none • app • all 	app	06-50
<code>ejbserver.rmi.naming.host</code>	The following strings can be specified: <ul style="list-style-type: none"> • Host name • IPv4 address • @myhost <p>Note</p> <p>When specifying a host name or IPv4 address, specify the value of the <code><host-name></code> tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend.</p>	None	07-50
<code>ejbserver.rmi.naming.port</code>	Specify the value using an integer from 1 to 65535.	23152	07-00
<code>ejbserver.rmi.passbyreference</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
<code>ejbserver.rmi.remote.listener.port</code>	Specify the value using an integer from 0 to 65535.	23550	07-00
<code>ejbserver.rmi.request.timeout</code>	Specify an integer from 0 to 86400 (unit: seconds).	0	06-50 07-00

(24) Parameters beginning with `ejbserver.server`

The following table describes the parameters beginning with `ejbserver.server`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(aa\) Keys beginning with `ejbserver.server`](#). When you reference the section, read the key as parameter.

Table 4–36: Parameters beginning with `ejbserver.server`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.server.prf.PRFID</code>	The following strings can be specified: <ul style="list-style-type: none"> • String that does not begin with 'ctm', 'CTM', 'tsc', and 'TSC' and is maximum 31 characters using alphanumeric characters and underscore (_). • CTMDOMAIN 	PRF-identifier-of-PRF-used	07-50
<code>ejbserver.server.threaddump.filename</code>	Specify the value using an integer from 1 to 2147483647.	256	06-50
<code>ejbserver.server.eheap.httpsession.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true 	true	08-00

Value of param-name	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> • false 		

(25) Parameters beginning with `ejbserver.stateful`

The following table describes the parameters beginning with `ejbserver.Stateful`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(ab\) Keys beginning with `ejbserver.stateful`](#). When you reference the section, read the key as parameter.

Table 4–37: Parameters beginning with `ejbserver.stateful`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.stateful.passivate.switch</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50

(26) Parameters beginning with `ejbserver.stdoutlog`

The following table describes the parameters beginning with `ejbserver.stdoutlog`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(ac\) Keys beginning with `ejbserver.stdoutlog`](#). When you reference the section, read the key as parameter.

Table 4–38: Parameters beginning with `ejbserver.stdoutlog`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.stdoutlog.autoflush</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00

(27) Parameters beginning with `ejbserver.watch`

The following table describes the parameters beginning with `ejbserver.watch`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(ad\) Keys beginning with `ejbserver.watch`](#). When you reference the section, read the key as parameter.

Table 4–39: Parameters beginning with `ejbserver.watch`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.watch.defaultRequestQueue.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.defaultRequestQueue.interval</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	30	06-50
<code>ejbserver.watch.defaultRequestQueue.threshold</code>	Specify an integer from 1 to 100 (unit:%).	80	06-50
<code>ejbserver.watch.defaultRequestQueue.writefile.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.watch.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.fileDescriptor.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.fileDescriptor.interval</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	60	06-50
<code>ejbserver.watch.fileDescriptor.threshold</code>	Specify the value using an integer from 1 to 2147483647.	2147483647	06-50
<code>ejbserver.watch.fileDescriptor.writefile.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.memory.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.memory.interval</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	60	06-50
<code>ejbserver.watch.memory.threshold</code>	Specify an integer from 1 to 100 (unit: %).	80	06-50
<code>ejbserver.watch.memory.writefile.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.thread.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.thread.interval</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	60	06-50
<code>ejbserver.watch.thread.threshold</code>	Specify the value using an integer from 1 to 2147483647.	2147483647	06-50
<code>ejbserver.watch.thread.writefile.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.threaddump.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50
<code>ejbserver.watch.threaddump.interval</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	30	06-50
<code>ejbserver.watch.threaddump.threshold</code>	Specify an integer from 1 to 100 (unit: %).	80	06-50
<code>ejbserver.watch.threaddump.writefile.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50

(28) Parameters beginning with ejbserver.webj2ee

The following table describes the parameters beginning with `ejbserver.webj2ee`. For details about the contents to be specified in `param-value` corresponding to 'Value of param-name', see [2.2.3\(5\)\(ae\) Keys beginning with ejbserver.webj2ee](#). When you reference the section, read the key as parameter.

Table 4–40: Parameters beginning with `ejbserver.webj2ee`

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.webj2ee.connection</code> <code>AutoClose.enabled</code>	The following strings can be specified: <ul style="list-style-type: none">• <code>true</code>• <code>false</code>	<code>true</code>	06-50 07-00

(29) Parameters beginning with https

The following table describes the specifiable keys and the parameters beginning with `https`. For details on the contents to be specified in `param-value` corresponding to the *Value of param-name* column, see the description in [2.2.3\(5\)\(af\) Keys beginning with https](#). When you reference this section, read the key as a parameter.

Value of param-name	Specifiable value	Default value	VR
<code>https.cipherSuites</code>	#	#	09-50
<code>https.protocols</code>	#	#	09-50

#

For details on the keys, see the JDK documentation.

(30) Parameters beginning with java

The following table describes the parameters beginning with `java`. For details about the contents to be specified in `param-value` corresponding to 'Value of param-name', see [2.2.3\(5\)\(ag\) Keys beginning with java](#). When you reference the section, read the key as parameter.

Table 4–41: Parameters beginning with `java`

Value of param-name	Specifiable value	Default value	VR
<code>java.naming.factory.initial</code>	The following strings can be specified: <ul style="list-style-type: none">• <code>com.hitachi.software.ejb.jndi.InsContextFactory</code>• <code>com.hitachi.software.ejb.jndi.GroupContextFactory</code>	<code>com.hitachi.software.ejb.jndi.InsContextFactory</code>	06-50

(31) Parameters beginning with vbj

The following table describes the parameters beginning with `vbj`.

Table 4–42: Parameters beginning with `vbj`

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>vbj.java2iioop.jvm</code> <code>.maxHeapSize#</code>	Specifies the maximum heap size of the <code>java2iioop</code> command invoked when a J2EE application starts.	Specify the value using an integer from 1 to 4095.	128	06-50 07-00

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	Specify the value that satisfies the condition <code>vbj.java2iiop.jvm.minHeapSize ≤ vbj.java2iiop.jvm.maxHeapSize</code> .			
<code>vbj.java2iiop.jvm.minHeapSize#</code>	Specifies a range of 1 to 4095 (unit: megabytes) as the initial heap size of the <code>java2iiop</code> command invoked when a J2EE application starts. Specify the value that satisfies the condition <code>vbj.java2iiop.jvm.minHeapSize ≤ vbj.java2iiop.jvm.maxHeapSize</code> .	Specify the value using an integer from 1 to 4095.	16	06-50 07-00

Note:

When this value is specified in megabytes, the characters `m` or `M` are not required.
Also, you cannot specify the value in Kilobytes adding the characters `k` or `K`.

(32) Parameters beginning with `vbroker`

The following table describes the parameters beginning with `vbroker`. For details about the contents to be specified in `param-value` corresponding to 'Value of param-name', see [2.2.3\(5\)\(ai\) Keys beginning with `vbroker`](#). When you reference the section, read the key as parameter.

Table 4–43: Parameters beginning with `vbroker`

Value of param-name	Specifiable value	Default value	VR
<code>vbroker.agent.port</code>	Specify the value using an integer from 1 to 65535.	14000	07-50
<code>vbroker.se.iiop_tp.host</code>	The following strings can be specified: <ul style="list-style-type: none"> IPv4 address Host name @myhost <p>Note</p> <p>When specifying a host name or IPv4 address, specify the value of the <code><host-name></code> tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend.</p>	None	07-50
<code>vbroker.se.iiop_tp.scm.iiop_tp.listener.port</code>	Specify the value using an integer from 0 to 65535.	0	06-50 07-00

(33) Parameters beginning with `webserver.application`

The following table describes the parameters beginning with `webserver.application`. For details about the contents to be specified in `param-value` corresponding to 'Value of param-name', see [2.2.3\(5\)\(aj\) Keys beginning with `webserver.application`](#). When you reference the section, read the key as parameter.

Table 4–44: Parameters beginning with `webserver.application`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.application.lower_version</code>	The following strings can be specified: <ul style="list-style-type: none"> 2.4 2.5 	None	08-50

(34) Parameters beginning with `webserver.connector`

The following table describes the parameters beginning with `webserver.connector`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(ak\) Keys beginning with `webserver.connector`](#). When you reference the section, read the key as parameter.

Table 4–45: Parameters beginning with `webserver.connector`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.connector.http.bind_host</code>	Specify one of the following values: <ul style="list-style-type: none"> Host name IPv4 address @myhost <p>Note</p> <ul style="list-style-type: none"> When specifying a host name or IPv4 address, specify the value of the <code><host-name></code> tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend. 	None	07-50
<code>webserver.connector.http.permitted.hosts#</code>	The values that can be specified are as follows: <ul style="list-style-type: none"> IPv4 address Host name Asterisk (*) 	None	06-50 07-00
<code>webserver.connector.limit.max_parameter_count</code>	Specify the value using an integer from -1 to 2147483647.	10000	09-00
<code>webserver.connector.limit.max_post_form_data</code>	Specify the value using an integer from -1 to 2147483647.	2097152	08-50
<code>webserver.connector.nio_http.port</code>	Specify the value using an integer from 1 to 65535.	8008	11-00
<code>webserver.connector.nio_http.backlog</code>	Specify the value using an integer from 1 to 2147483647.	511	11-00
<code>webserver.connector.nio_http.bind_host</code>	The values that can be specified are as follows: <ul style="list-style-type: none"> Host name IP address <p>Note</p> <p>When specifying a host name or IP address, specify the value of the <code><host-name></code> tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend.</p>	None	11-00
<code>webserver.connector.nio_http.idle_thread_timeout</code>	Specify the value using an integer from 1 to 2147483647.	60	11-00
<code>webserver.connector.nio_http.keep_alive.max_requests</code>	Specify the value using an integer from 0 to 2147483647.	0	11-00
<code>webserver.connector.nio_http.keep_alive.timeout</code>	Specify the value using an integer from 0 to 3600.	0	11-00
<code>webserver.connector.nio_http.limit.max_headers</code>	Specify the value using an integer from 0 to 32767.	100	11-00
<code>webserver.connector.nio_http.limit.max_request_body</code>	Specify the value using an integer from -1 to 2147483647.	-1	11-00

Value of param-name	Specifiable value	Default value	VR
<code>webserver.connector.nio_http.limit.max_request_header</code>	Specify the value using an integer from 7 to 65536.	16384	11-00
<code>webserver.connector.nio_http.max_connections</code>	Specify the value using an integer from 1 to 2147483647.	1024	11-00
<code>webserver.connector.nio_http.max_servlet_execute_threads</code>	Specify the value using an integer from 1 to 2147483647.	100	11-00
<code>webserver.connector.nio_http.max_threads</code>	Specify the value using an integer from 1 to 2147483647.	100	11-00
<code>webserver.connector.nio_http.min_threads</code>	Specify the value using an integer from 1 to 2147483647.	10	11-00
<code>webserver.connector.nio_http.permitted.hosts</code>	Specify a comma-separated list of IP addresses or host names. You can also specify an asterisk (*). The characters you can use to specify IP addresses or host names are alphanumeric characters, underscores (_), hyphens (-), and periods (.). Do not place spaces before and after each comma (,).	*	11-00
<code>webserver.connector.nio_http.receive_timeout</code>	Specify the value using an integer from 0 to 3600.	300	11-00
<code>webserver.connector.nio_http.response.header.server</code>	Specify any string.	Cosminexus ComponentContainer	11-00
<code>webserver.connector.nio_http.send_timeout</code>	Specify the value using an integer from 0 to 3600.	300	11-00

#

To specify multiple values in param-value, delimit the values with commas (,).

(Example)

<param-value>value1, value2, value3</param-value>

(35) Parameters beginning with `webserver.container`

The following table describes the parameters beginning with `webserver.container`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(al\) Keys beginning with `webserver.container`](#). When you reference the section, read the key as parameter.

Table 4–46: Parameters beginning with `webserver.container`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.container.server_id.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-51
<code>webserver.container.server_id.name</code>	Specify a string of 1 to 64 characters using alphanumeric characters and underscore (_). Note that if you specify the string JSESSIONID, an error will occur.	Null character (The value of cookie-name specified in the load balancer settings is	06-51 07-00 07-50

Value of param-name	Specifiable value	Default value	VR
		automatically set.)	
webserver.container.server_id.value	Specify a string of 1 to 64 characters using alphanumeric characters and the underscore (_).	String generated using the hash function from the host name and J2EE server name/Web container server name (compatibility function)	06-51 07-10 07-50
webserver.container.thread_control.queue_size	Specify the value using an integer from 0 to 2147483647.	8192	06-50
webserver.container.jaxws.webservice.no_webxml.enabled	The following strings can be specified: <ul style="list-style-type: none"> • strict • true • lax • none • false 	none	08-00
webserver.container.jaxws.webservice.wsee.no_webxml.enabled	The following strings can be specified: <ul style="list-style-type: none"> • strict • lax • none 	lax	08-70
webserver.container.jaxws.webservice.wsee.warname	Specifies the relative path of the WAR file for setup existing in the EAR file.	Cosminexus WSEE.war	08-70
webserver.container.servlet.default_mapping.enabled	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00

(36) Parameters beginning with webserver.context

The following table describes the parameters beginning with webserver.context. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(am\) Keys beginning with webserver.context](#). When you reference the section, read the key as parameter.

Table 4–47: Parameters beginning with webserver.context

Value of param-name	Specifiable value	Default value	VR
webserver.context.check_interval	Specify an integer from 0 to 2147483647 (unit: seconds).	None	07-00
webserver.context.reload_delay_timeout	Specify an integer from -2147483648 to 2147483647 (unit: seconds).	0	07-00
webserver.context.update_interval	Specify an integer from 0 to 2147483647 (unit: seconds).	None	07-00

(37) Parameters beginning with `webserver.dbsfo`

The following table describes the parameters beginning with `webserver.dbsfo`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(an\) Keys beginning with `webserver.dbsfo`](#). When you reference the section, read the key as parameter.

Table 4–48: Parameters beginning with `webserver.dbsfo`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.dbsfo.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00
<code>webserver.dbsfo.exclude.uris</code>	Specify a normalized URI in character string starting from a forward slash (/).	None	08-50
<code>webserver.dbsfo.connector.name</code>	Specify any string.	COSMINEX US_SFO_DB CONNECTOR	08-00
<code>webserver.dbsfo.attribute_data_size.max</code>	Specify the value using an integer from 128 to 10485760.	1024	08-00
<code>webserver.dbsfo.exclude.extensions</code>	Specify a string within 512 characters using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Brackets (()) • Exclamation mark (!) • Percent sign (%) • Dollar sign (\$) • Ampersand (&) • Single quote (') • Plus sign (+) • Hyphen (-) • Equal sign (=) • At mark (@) • Underscore (_) • Tilde (~) • Period (.) • Comma (,) When specifying multiple extensions, delimit with commas (,).	txt,htm,html,jpg,gif,js	08-00
<code>webserver.dbsfo.check_size.mode</code>	The following strings can be specified: <ul style="list-style-type: none"> • on • off 	off	08-00
<code>webserver.dbsfo.exception_type_compat</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-70
<code>webserver.dbsfo.integrity_mode.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-70
<code>webserver.dbsfo.negotiation_high_level</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-70

Value of param-name	Specifiable value	Default value	VR
<code>webserver.dbsfo.session_read_only.uris</code>	Specify a normalized URI in character string starting from a forward slash (/).	None	08-70
<code>webserver.dbsfo.thread_control_queue.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-70

(38) Parameters beginning with `webserver.http`

The following table describes the parameters beginning with `webserver.http`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(ap\) Keys beginning with `webserver.http`](#). When you reference the section, read the key as a parameter.

Table 4–49: Parameters beginning with `webserver.http`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.http.request.encoding</code>	Specify any string with a maximum of 1024 characters.	None	07-10
<code>webserver.http.request.uri_decode.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-50
<code>webserver.http.response.encoding</code>	Specify any string with a maximum of 1024 characters.	None	07-10

(39) Parameters beginning with `webserver.jsp`

The following table describes the parameters beginning with `webserver.jsp`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(aq\) Keys beginning with `webserver.jsp`](#). When you reference the section, read the key as parameter.

Table 4–50: Parameters beginning with `webserver.jsp`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.jsp.additional.import.list</code>	Specify any string.	None	08-70
<code>webserver.jsp.check_interval</code>	Specify an integer from 0 to 2147483647 (unit: seconds).	None	07-00
<code>webserver.jsp.compile.backcompat</code>	You can specify the following values and strings: <ul style="list-style-type: none"> • 7 • 1.7 • 6 • 1.6 • 5 • 1.5 • 1.4 • 1.3 • 1.2 • true • false 	false	06-50 07-00 09-60 09-70

Value of param-name	Specifiable value	Default value	VR
<code>webserver.jsp.debugging.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00
<code>webserver.jsp.jsp_page.bom.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	08-00
<code>webserver.jsp.keepgenerated</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
<code>webserver.jsp.pageEncoding</code>	Specify any string with a maximum of 1024 characters.	None	07-10
<code>webserver.jsp.tld.mapping.java_ee_tag_library.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	08-00
<code>webserver.jsp.translation.customAction.ignoreCaseAttributeName</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00
<code>webserver.jsp.translation.backcompat.customAction.declareVariable</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-60
<code>webserver.jsp.translation.backcompat.tag.noCheckRtexprvalue</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-60
<code>webserver.jsp.translation.backcompat.tag.rtexprvalueTerminate</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-60
<code>webserver.jsp.translation.backcompat.taglib.noCheckPrefix</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-60
<code>webserver.jsp.translation.backcompat.useBean.noCheckClasses</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-60
<code>webserver.jsp.translation.useBean.noCheckDuplicateId</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00
<code>webserver.jsp.update.interval</code>	Specify the value using an integer from 0 to 2147483647.	None	07-00

(40) Parameters beginning with `webserver.servlet`

The following table describes the parameters beginning with `webserver.servlet`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(as\) Keys beginning with `webserver.servlet`](#). When you reference the section, read the key as parameter.

Table 4–51: Parameters beginning with `webserver.servlet`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.servlet_api.exception.getCause.backcompat</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00
<code>webserver.ServletContainerInitializerJar.include.path</code>	There are no restrictions on the permitted characters. When specifying multiple values, delimit with commas (,). Use a forward slash (/) as the directory path delimiter.	None	09-00

(41) Parameters beginning with `webserver.session`

The following table describes the parameters beginning with `webserver.session`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(au\) Keys beginning with `webserver.session`](#). When you reference the section, read the key as parameter.

Table 4–52: Parameters beginning with `webserver.session`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.session.cookie_config.http_only</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	09-50
<code>webserver.session.cookie_config.name</code>	Specify any string.	JSESSIONID	09-50
<code>webserver.session.server_id.value</code>	Specify a string within 64 characters using alphanumeric characters and underscore (_).	String generated using the hash function from the host name and J2EE server name/Web container server name (compatibility functionality) #	06-50 07-10 07-50
<code>webserver.session.max.throwHttpSessionLimitExceededException</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00
<code>webserver.session.tracking_mode</code>	The following strings can be specified: <ul style="list-style-type: none"> • COOKIE • URL 	Specify both COOKIE and URL	09-50

#

Management Server automatically sets an 8-digit hexadecimal except for the free-tier.

(42) Parameters beginning with `webserver.static`

The following table describes the parameters beginning with `webserver.static`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(av\) Keys beginning with `webserver.static`](#). When you reference the section, read the key as parameter.

Table 4–53: Parameters beginning with `webserver.static`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.static_content.cache.enabled</code>	The following strings can be specified: <ul style="list-style-type: none">• true• false• forceoff	false	06-70
<code>webserver.static_content.cache.filesize.threshold</code>	Specify the value using an integer from 0 to 2147483647.	524288	06-70
<code>webserver.static_content.cache.size</code>	Specify the value using an integer from 0 to 2147483647.	10485760	06-70 07-00
<code>webserver.static_content.encoding.extension</code>	Specify any string.	None	07-60

(43) Parameters beginning with `webserver.work`

The following table describes the parameters beginning with `webserver.work`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(aw\) Keys beginning with `webserver.work`](#). When you reference the section, read the key as parameter.

Table 4–54: Parameters beginning with `webserver.work`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.work.clean</code>	The following strings can be specified: <ul style="list-style-type: none">• true• false	false	06-50
<code>webserver.work.directory</code>	Specify any string.	(In Windows) & {cosminexus.home} \CC\server\repository\ & {server.name} \web (In UNIX) & {cosminexus.home}/CC /server/repository/ & {server.name}/web	06-50

(44) Parameters beginning with `webserver.xml`

The following table describes the parameters beginning with `webserver.xml`. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.3\(5\)\(ax\) Keys beginning with `webserver.xml`](#). When you reference the section, read the key as parameter.

Table 4–55: Parameters beginning with `webserver.xml`

Value of param-name	Specifiable value	Default value	VR
<code>webserver.xml.validate</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50

4.11.3 Parameters used for setting up the option definitions for the J2EE server

The following table describes the parameters used for setting up the option definitions for the J2EE server. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [2.2.2 *usrconf.cfg* \(Option definition file for J2EE servers\)](#). In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

The following describes the specification format.

Specification format

```
<param-name>parameter</param-name>
<param-value>value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>
<param-value>value</param-value>
<param-value>value</param-value>
```

Among the parameters that can be specified in `usrconf.cfg` (the option definitions file for the J2EE server), specify any parameters that do not appear either in the table in [4.11.5 *Extension parameters of J2EE server*](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.param</param-name>
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>ex.param</param-name>
<param-value>parameter=value</param-value>
<param-value>parameter=value</param-value>
```

If you use this format to specify the parameters described in this section, correct operation cannot be guaranteed.

Table 4–56: Parameters used for setting up the option definitions for the J2EE server

Value of param-name	Specifiable value	Default value	VR
add.jvm.arg#	<p>This key invokes JavaVM by using the specified option.</p> <p>If you want to specify the system properties, do not use -D, but specify in <code>usrconf.properties</code> file.</p> <p>When specifying multiple options, use the same key name and specify multiple times as follows:</p> <p>(Example of specification)</p> <pre>add.jvm.arg= -Xms128m add.jvm.arg= -Xmx256m</pre> <p>You cannot specify multiple options as shown in the following example. If you specify the options as shown below, the initialization of JavaVM will fail.</p> <p>(Example of specification)</p> <pre>add.jvm.arg=-Xms128m -Xmx256m</pre> <p>For details about the Java VM options that can be specified by using <code>add.jvm.arg</code> keys, see <i>14.5 Java HotSpot VM options that can be specified in Cosminexus</i>.</p> <p>For details about Java VM extension options, see <i>14.1 List of JavaVM extension options</i>.</p>	<p>For details about default values, see <i>2.2.2(5) Default values of the JavaVM options in J2EE servers</i>.</p>	07-50
ejb.public.directory	Specify any string.	<p>(In Windows)</p> <pre>&amp;{cosminexus.home} \CC\server\public</pre> <p>(In UNIX)</p> <pre>&amp;{cosminexus.home}/CC/ server/public</pre>	06-50
ejb.server.log.directory	Specify any string with a maximum of 200 characters.	<p>(In Windows)</p> <pre>Cosminexus-working-directory/ejb/ server-name/logs</pre> <p>(In UNIX)</p> <pre>Cosminexus-working-directory/ejb/ server-name/logs</pre>	06-50

Note:

The value specification format is as follows:

(Example)

```
<param-name>add.jvm.arg</param-name>
```

```
<param-value>-Xms256m</param-value>
```

```
<param-value>-Xmx512m</param-value>
```

```
:
```

4.11.4 Parameters applicable to the JavaVM system properties for the J2EE server

The following table describes the parameters applicable to the JavaVM system properties for the J2EE server. For details about the values to be specified in 'Value of param-name', see [2.2.3 *usrconf.properties \(User property file for J2EE servers\)*](#). In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

The specification format for specifying the parameters applicable to the JavaVM system properties for the J2EE server is as follows:

Specification format

```
<param-name>parameter</param-name>
<param-value>Value</param-value>
```

For specifying the multiple values, specify multiple `<param-value>`.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>
<param-value>Value</param-value>
<param-value>Value</param-value>
```

Among the parameters that can be specified in `usrconf.properties` (the user property file for the J2EE server), specify any parameters that do not appear either in the table in [4.11.2 *Parameters used for setting up the user properties for the J2EE server*](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.properties</param-name>
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>ex.properties</param-name>
<param-value>parameter=value</param-value>
<param-value>parameter=value</param-value>
```

Note that you can use this format to specify the parameters described in the table in this section.

Table 4–57: Parameters applicable to the JavaVM system properties for the J2EE server

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.connectionpool.applicationAuthentication.disabled</code>	The following strings can be specified: <ul style="list-style-type: none">• true• false	false	07-50
<code>ejbserver.connectionpool.association.enabledDespiteUnshareableSetting</code>	The following strings can be specified: <ul style="list-style-type: none">• true• false	false	07-50

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.connectionpool.sharingOutsideTransactionScope.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.container.bmp.backcompatible</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.container.ejbhome.sessionbean.reconnect.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.container.rebindpolicy</code>	The following strings can be specified: <ul style="list-style-type: none"> • VB_TRANSPARENT • NO_RECONNECT 	VB_TRANS PARENT	07-50
<code>ejbserver.container.security.disabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.ctm.CTMDomain</code>	The following strings can be specified: <ul style="list-style-type: none"> • String that does not begin with 'ctm', 'CTM', 'tsc', and 'TSC' and is maximum 31 characters using alphanumeric characters and underscore (_). • CTMDOMAIN 	CTMDOMAI N	07-50
<code>ejbserver.ctm.CTMMHost</code>	Specify 1 to 255 characters using the following characters: <ul style="list-style-type: none"> • Alphanumeric characters • Underscore (_) • Period (.) • Hyphen (-) 	host-name-acquired-by-hostname-command	07-50
<code>ejbserver.ctm.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	ctm-tier: true Others: false	07-50
<code>ejbserver.deploy.app.stopforcibly.disabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.deploy.exclusive.lockAliveInterval</code>	Specify an integer from 1 to 2147483647 (unit: seconds).	60	07-50
<code>ejbserver.deploy.stub.generation.scope</code>	The following strings can be specified: <ul style="list-style-type: none"> • ejb • app 	ejb	07-50
<code>ejbserver.distributedtx.recovery.completionCheckOnStopping.timeout</code>	Specify an integer from -1 to 2147483647 (unit: seconds).	-1	07-50
<code>ejbserver.ejb.cmp20.cmr.use.existing_table</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.jndi.cache.reference</code>	The following strings can be specified: <ul style="list-style-type: none"> • on • off 	off	07-50

Value of param-name	Specifiable value	Default value	VR
<code>ejbserver.manager.agent.Agent.conf#1</code>	Specify any string.	<i>Cosminexus-installation-directory/manager/config/mngagent.real-server-name.properties</i>	07-50
<code>ejbserver.manager.agent.Agent.enabled#1</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	07-50
<code>ejbserver.manager.jplevent.event_server_name</code>	Specify any string.	localhost	07-50
<code>ejbserver.naming.exec.args</code>	Specify any string.	None	07-50
<code>ejbserver.naming.nameroot</code>	Specify a string having alphanumeric characters and underscore (_).	None	07-50
<code>ejbserver.naming.protocol</code>	The following strings can be specified: <ul style="list-style-type: none"> • corbaname • iioploc • iiopname 	corbaname	07-50
<code>ejbserver.rmi.stateless.unique_id.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>ejbserver.server.mutex.invocation.timeout</code>	Specify an integer from 45 to 92233720368547758 (unit: seconds).	45	07-50
<code>vbroker.agent.enableLocator#2</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>vbroker.orb.htc.comt.entryCount</code>	Specify the value using an integer from 100 to 30000000.	120000	07-50
<code>vbroker.orb.htc.comt.fileCount</code>	Specify the value using an integer from 1 to 256.	3	07-50
<code>vbroker.orb.htc.tracePath</code>	Specify any string in the range of 1 to 210 bytes.	(In Windows) <i>Cosminexus-working-directory\ejb\server-name\logs\TPB\logj</i> (In UNIX) <i>Cosminexus-working-directory/ejb/server-name/logs/TPB/logj</i>	07-50

Value of param-name	Specifiable value	Default value	VR
<code>webserver.errorpage.stack_trace.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>webserver.jsp.precompile.jsp_work_dir</code>	Specify a string having alphanumeric characters and underscore (_).	cosminexus_jsp_work	07-50
<code>webserver.session.max.log_interval</code>	Specify the value using an integer from 0 to 2147483647.	60	07-50
<code>webserver.session.server_id.enabled</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	07-50
<code>webserver.sfo.negotiation.ignore_serverId</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	07-50
<code>webserver.session.delete_cookie.backcompat</code>	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-00

#1

Settings are not recommended because the Management Server sets the value automatically.

#2

Settings are not required normally.

4.11.5 Extension parameters of J2EE server

The following table describes the extension parameters of J2EE server. For the details about the values to be specified in 'Value of param-name', see [2.2.2 *usrconf.cfg* \(Option definition file for J2EE servers\)](#). Also, for details about `batch.service.enabled`, see [3.2.1 *usrconf.cfg* \(Option definition file for batch servers\)](#). In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

The specification format for specifying the extension parameters of the J2EE server is as follows:

Specification format

```
<param-name>parameter</param-name>
<param-value>Value</param-value>
```

For specifying the multiple values, specify multiple `<param-value>`.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>
<param-value>Value</param-value>
<param-value>Value</param-value>
```

Among the parameters that can be specified in `usrconf.cfg` (the option definitions file for the J2EE server), specify any parameters that do not appear either in the table in [4.11.3 *Parameters used for setting up the option definitions for the J2EE server*](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.param</param-name>  
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>ex.param</param-name>  
<param-value>parameter=value</param-value>  
<param-value>parameter=value</param-value>
```

Note that you can use this format to specify the parameters described in the table in this section.

Table 4–58: Parameters applicable to the extension parameters of J2EE server

Key name	Specifiable value	Default value	VR
<code>add.class.path</code>	Specify any string.	None	07-50
<code>add.library.path</code>	Specify any string.	None	07-50
<code>cpp.library.version</code>	Specify 6. Only 6 can be specified with version 09-00 or later.	6	07-50
<code>ejb.server.corefilenum</code> (In UNIX)	Specify the value using an integer from 0 to 16.	1	07-50
<code>ejb.server.log.mode</code>	Specify 6 or 7.	7	07-50
<code>ejb.server.log.stdout.file size</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>ejb.server.log.stderr.file size</code>	Specify an integer from 4096 to 2147483647 (unit: bytes).	1048576	07-50
<code>jvm.type</code>	The following strings can be specified: <ul style="list-style-type: none">• server• client	server	07-50
<code>batch.service.enabled</code>	false [#]	false	07-60

Note:

For specifying the multiple values in `param-value`, specify multiple `<param-value>`.

(Example)

```
<param-name>parameter-name</param-name>
```

```
<param-value>Value</param-value>
```

```
<param-value>Value</param-value>
```

#

Do not specify true in `batch.service.enabled` parameter. The value is false by default. You can specify this parameter only during the initial setup of the Web system. Do not change the value when changing the Web system configuration.

4.11.6 Parameters used for setting up the user properties for the batch server

This section describes the parameters used for setting up the user properties for the batch server.

For details about the contents to be specified in `param-value` corresponding to 'Value of `param-name`', see [3.2.2 *usrconf.properties \(User property file for batch servers\)*](#). When you reference the section, read the key as parameter. In the table below, *Default value* means the value that is assumed when the parameter is not specified.

The following describes the specification format.

Specification format

```
<param-name>parameter</param-name>
<param-value>value</param-value>
```

Among the parameters that can be specified in `usrconf.properties` (the user property file for the batch server), specify any parameters that do not appear either in the table in [4.11.8 *Parameters applicable to the JavaVM system properties for the batch server*](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.properties</param-name>
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>ex.properties</param-name>
<param-value>parameter=value</param-value>
<param-value>parameter=value</param-value>
```

(1) Parameters beginning with `ejbserver.application`

The following table describes the parameters beginning with `ejbserver.application`.

Table 4–59: Parameters beginning with `ejbserver.application`

Value of <code>param-name</code>	Default value
<code>ejbserver.application.InitTermProcessClasses#1</code>	None
<code>ejbserver.application.userlog.CJLogHandler.handler-name.appname</code>	user_app
<code>ejbserver.application.userlog.CJLogHandler.handler-name.count</code>	2
<code>ejbserver.application.userlog.CJLogHandler.handler-name.encoding</code>	None
<code>ejbserver.application.userlog.CJLogHandler.handler-name.filter</code>	None
<code>ejbserver.application.userlog.CJLogHandler.handler-name.formatter</code>	None
<code>ejbserver.application.userlog.CJLogHandler.handler-name.level</code>	SEVERE
<code>ejbserver.application.userlog.CJLogHandler.handler-name.limit</code>	1048576
<code>ejbserver.application.userlog.CJLogHandler.handler-name.msgid</code>	0001
<code>ejbserver.application.userlog.CJLogHandler.handler-name.path</code>	user_log
<code>ejbserver.application.userlog.CJLogHandler.handler-name.separator</code>	
<code>ejbserver.application.userlog.Logger.logger-name.filter</code>	None

Value of param-name	Default value
<code>ejbserver.application.userlog.Logger.logger-name.handlers^{#1}</code>	None
<code>ejbserver.application.userlog.Logger.logger-name.level</code>	SEVERE
<code>ejbserver.application.userlog.Logger.logger-name.useParentHandlers</code>	true
<code>ejbserver.application.userlog.loggers^{#1}</code>	None
<code>ejbserver.application.userlog.menu.handlers.^{#1#2}</code>	None

#1

To specify multiple values in param-value, delimit the values with commas (,).

(Example)

```
<param-value>value1, value2, value3</param-value>
```

#2

The list of handler names is specified in this parameter.

When you delete the handler name from this parameter, also delete the related parameter (`ejbserver.application.userlog.CJLogHandler.handler-name-to-be-deleted.XXX`).

Note that the key corresponding to this parameter is not included in 3.3 `usrconf.properties` (User property file for batch servers).

(2) Parameters beginning with `ejbserver.batch`

The following table describes the parameters beginning with `ejbserver.batch`:

Table 4–60: Parameters beginning with `ejbserver.batch`

Value of param-name	Default value
<code>ejbserver.batch.application.exit.enabled</code>	true
<code>ejbserver.batch.gc.watch.threshold</code>	0
<code>ejbserver.batch.queue.length</code>	50
<code>ejbserver.batch.schedule.group.name</code>	JOBGROUP

(3) Parameters beginning with `ejbserver.client`

The following table describes the parameters beginning with `ejbserver.client`.

Table 4–61: Parameters beginning with `ejbserver.client`

Value of param-name	Default value
<code>ejbserver.client.ctm.RequestPriority</code>	4

(4) Parameters beginning with `ejbserver.connectionpool`

The following table describes the parameters beginning with `ejbserver.connectionpool`.

Table 4–62: Parameters beginning with `ejbserver.connectionpool`

Value of param-name	Default value
<code>ejbserver.connectionpool.association.enabled</code>	false
<code>ejbserver.connectionpool.validation.timeout</code>	5

(5) Parameters beginning with `ejbserver.connector`

The following table describes the parameters beginning with `ejbserver.connector`.

Table 4–63: Parameters beginning with `ejbserver.connector`

Value of param-name	Default value
<code>ejbserver.connector.logwriter.filenum</code>	4
<code>ejbserver.connector.logwriter.filesize</code>	2097152

(6) Parameters beginning with `ejbserver.container`

The following table describes the parameters beginning with `ejbserver.connector`.

Table 4–64: Parameters beginning with `ejbserver.connector`

Value of param-name	Default value
<code>ejbserver.container.audit_trail.enabled</code>	false

(7) Parameters beginning with `ejbserver.deploy`

The following table describes the parameters beginning with `ejbserver.deploy`.

Table 4–65: Parameters beginning with `ejbserver.deploy`

Value of param-name	Default value
<code>ejbserver.deploy.resourcefile.scramble.enabled</code>	false

(8) Parameters beginning with `ejbserver.ext`

The following table describes the parameters beginning with `ejbserver.ext`.

Table 4–66: Parameters beginning with `ejbserver.ext`

Value of param-name	Default value
<code>ejbserver.ext.method_observation.interval</code>	0

(9) Parameters beginning with `ejbserver.http`

The following table describes the parameters beginning with `ejbserver.http`.

Table 4–67: Parameters beginning with `ejbserver.http`

Value of param-name	Default value
<code>ejbserver.http.port</code>	28080

(10) Parameters beginning with `ejbserver.instrumentation`

The following table describes the parameters beginning with `ejbserver.instrumentation`.

Table 4–68: Parameters beginning with `ejbserver.instrumentation`

Value of param-name	Default value
<code>ejbserver.instrumentation.enabled</code>	true

(11) Parameters beginning with `ejbserver.jndi`

The following table describes the parameters beginning with `ejbserver.jndi`.

Table 4–69: Parameters beginning with `ejbserver.jndi`

Value of param-name	Default value
<code>ejbserver.jndi.cache</code>	on
<code>ejbserver.jndi.cache.interval</code>	0
<code>ejbserver.jndi.cache.interval.clear.option</code>	refresh
<code>ejbserver.jndi.namingservice.group.<i>specify-group-name</i>.providerurls</code>	None
<code>ejbserver.jndi.namingservice.group.list</code>	None
<code>ejbserver.jndi.request.timeout</code>	0

(12) Parameters beginning with `ejbserver.jta`

The following table describes the parameters beginning with `ejbserver.jta`.

Table 4–70: Parameters beginning with `ejbserver.jta`

Value of param-name	Default value
<code>ejbserver.jta.TransactionManager.defaultTimeOut</code>	180

(13) Parameters beginning with `ejbserver.logger`

The following table describes the parameters beginning with `ejbserver.logger`.

Table 4–71: Parameters beginning with `ejbserver.logger`

Value of param-name	Default value
<code>ejbserver.logger.channels.define.ConnectionPoolWatchLogFile.filenum</code>	2
<code>ejbserver.logger.channels.define.ConnectionPoolWatchLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.ConsoleLogFile.filenum</code>	2
<code>ejbserver.logger.channels.define.ConsoleLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.EJBContainerLogFile.filenum</code>	2
<code>ejbserver.logger.channels.define.EJBContainerLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.ExceptionLogFile.filenum</code>	2
<code>ejbserver.logger.channels.define.ExceptionLogFile.filesize</code>	1048576

Value of param-name	Default value
<code>ejbserver.logger.channels.define.FileDescriptorWatchLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.FileDescriptorWatchLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.MaintenanceLogFile.fileenum</code>	4
<code>ejbserver.logger.channels.define.MaintenanceLogFile.filesize</code>	16777216
<code>ejbserver.logger.channels.define.MemoryWatchLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.MemoryWatchLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.MessageLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.MessageLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.ThreaddumpWatchLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.ThreaddumpWatchLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.ThreadWatchLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.ThreadWatchLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.UserErrLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.UserErrLogFile.filesize</code>	1048576
<code>ejbserver.logger.channels.define.UserOutLogFile.fileenum</code>	2
<code>ejbserver.logger.channels.define.UserOutLogFile.filesize</code>	1048576
<code>ejbserver.logger.enabled.*</code>	Error, Warning

(14) Parameters beginning with `ejbserver.management`

The following table describes the parameters beginning with `ejbserver.management`.

Table 4–72: Parameters beginning with `ejbserver.management`

Value of param-name	Default value
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.enabled</code>	true
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.interval</code>	600
<code>ejbserver.management.JVM.stats_monitor.FullGCCCount.threshold</code>	10
<code>ejbserver.management.statistics.interval</code>	60
<code>ejbserver.management.stats_file.base_time</code>	0
<code>ejbserver.management.stats_file.dir</code>	(In Windows) <i>Cosminexus-working-directory\ejb\server-name\stats</i> (In UNIX) <i>Cosminexus-working-directory/ejb/server-name/stats</i>
<code>ejbserver.management.stats_file.enabled</code>	true
<code>ejbserver.management.stats_file.num</code>	7

Value of param-name	Default value
<code>ejbserver.management.stats_file.period</code>	24

(15) Parameters beginning with `ejbserver.manager`

The following table describes the parameters beginning with `ejbserver.manager`.

Table 4–73: Parameters beginning with `ejbserver.manager`

Value of param-name	Default value
<code>ejbserver.manager.agent.JP1EventAgent.conf</code>	None
<code>ejbserver.manager.agent.JP1EventAgent.enabled</code>	false
<code>ejbserver.manager.agent.MEventAgent.conf</code>	None
<code>ejbserver.manager.agent.MEventAgent.enabled</code>	true

(16) Parameters beginning with `ejbserver.naming`

The following table describes the parameters beginning with `ejbserver.naming`.

Table 4–74: Parameters beginning with `ejbserver.naming`

Value of param-name	Default value
<code>ejbserver.naming.host</code>	Same host as the batch server
<code>ejbserver.naming.port</code>	900
<code>ejbserver.naming.startupRetryCount</code>	9
<code>ejbserver.naming.startupWaitTime</code>	1

(17) Parameters beginning with `ejbserver.rmi`

The following table describes the parameters beginning with `ejbserver.rmi`.

Table 4–75: Parameters beginning with `ejbserver.rmi`

Value of param-name	Default value
<code>ejbserver.rmi.naming.host</code>	None
<code>ejbserver.rmi.naming.port</code>	23152
<code>ejbserver.rmi.remote.listener.port</code>	0
<code>ejbserver.rmi.request.timeout</code>	0

(18) Parameters beginning with `ejbserver.server`

The following table describes the parameters beginning with `ejbserver.server`.

Table 4–76: Parameters beginning with `ejbserver.server`

Value of param-name	Default value
<code>ejbserver.server.prf.PRfid</code>	None

Value of param-name	Default value
<code>ejbserver.server.threaddump.filenum</code>	256

(19) Parameters beginning with `ejbserver.stdoutlog`

The following table describes the parameters beginning with `ejbserver.stdoutlog`.

Table 4–77: Parameters beginning with `ejbserver.stdoutlog`

Value of param-name	Default value
<code>ejbserver.stdoutlog.autoflush</code>	false

(20) Parameters beginning with `ejbserver.watch`

The following table describes the parameters beginning with `ejbserver.watch`.

Table 4–78: Parameters beginning with `ejbserver.watch`

Value of param-name	Default value
<code>ejbserver.watch.enabled</code>	true
<code>ejbserver.watch.fileDescriptor.enabled</code>	true
<code>ejbserver.watch.fileDescriptor.interval</code>	60
<code>ejbserver.watch.fileDescriptor.threshold</code>	2147483647
<code>ejbserver.watch.fileDescriptor.writefile.enabled</code>	true
<code>ejbserver.watch.memory.enabled</code>	true
<code>ejbserver.watch.memory.interval</code>	60
<code>ejbserver.watch.memory.threshold</code>	80
<code>ejbserver.watch.memory.writefile.enabled</code>	true
<code>ejbserver.watch.thread.enabled</code>	true
<code>ejbserver.watch.thread.interval</code>	60
<code>ejbserver.watch.thread.threshold</code>	2147483647
<code>ejbserver.watch.thread.writefile.enabled</code>	true
<code>ejbserver.watch.threaddump.enabled</code>	true
<code>ejbserver.watch.threaddump.interval</code>	30
<code>ejbserver.watch.threaddump.threshold</code>	80
<code>ejbserver.watch.threaddump.writefile.enabled</code>	true

(21) Parameters beginning with `java`

The following table describes the parameters beginning with `java`.

Table 4–79: Parameters beginning with java

Value of param-name	Default value
java.naming.factory.initial	com.hitachi.software.ejb.jndi.InsContextFactory

(22) Parameters beginning with vbroker

The following table describes the parameters beginning with vbroker.

Table 4–80: Parameters beginning with vbroker

Value of param-name	Default value
vbroker.agent.port	14000
vbroker.se.iioptp.host	None
vbroker.se.iioptp.scm.iioptp.listener.port	0

(23) Parameters beginning with webserver.connector

The following table describes the parameters beginning with webserver.connector.

Table 4–81: Parameters beginning with webserver.connector

Value of param-name	Default value
webserver.connector.http.bind_host	None
webserver.connector.http.permitted.hosts#	None

#

To specify multiple values in param-value, delimit the values with commas (,).

(Example)

```
<param-value>value1, value2, value3</param-value>
```

4.11.7 Parameters used for setting up the option definitions for the batch server

The following table describes the parameters used for setting up the option definitions for the batch server. For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [3.2.1 usrconf.cfg \(Option definition file for batch servers\)](#). In the table below, *Default value* means the value that is assumed when the parameter is not specified.

The following describes the specification format.

Specification format

```
<param-name>parameter</param-name>
<param-value>value</param-value>
```

To specify multiple values, specify multiple <param-value> elements.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>
<param-value>value</param-value>
<param-value>value</param-value>
```

Among the parameters that can be specified in `usrconf.cfg` (the option definitions file for the J2EE server), specify any parameters that do not appear either in the table in [4.11.9 Extension parameters of the batch server](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.param</param-name>
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>ex.param</param-name>
<param-value>parameter=value</param-value>
<param-value>parameter=value</param-value>
```

If you use this format to specify the parameters described in this section, correct operation cannot be guaranteed.

Table 4–82: Parameters used for setting up the option definitions for the batch server

Value of param-name	Default value
add.jvm.arg#	None
ejb.public.directory	[In Windows] &{cosminexus.home}\CC\server\public [In UNIX] &{cosminexus.home}/CC/server/public
ejb.server.log.directory	[In Windows] <i>Cosminexus-working-directory</i> \ejb\server-name\logs [In UNIX] <i>Cosminexus-working-directory</i> /ejb/server-name/logs

#

The value specification format is as follows:

(Example)

```
<param-name>add.jvm.arg</param-name>
<param-value>-Xms256m</param-value>
<param-value>-Xmx512m</param-value>
:
```

4.11.8 Parameters applicable to the JavaVM system properties for the batch server

The following table describes the parameters applicable to the JavaVM system properties for the batch server. For the details about the values to be specified in 'Value of param-name', see [3.2.2 usrconf.properties \(User property file for batch servers\)](#). In the table below, *Default value* means the value that is assumed when the parameter is not specified.

The following describes the specification format.

Specification format

```
<param-name>parameter</param-name>  
<param-value>value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>  
<param-value>value</param-value>  
<param-value>value</param-value>
```

Among the parameters that can be specified in `usrconf.properties` (the user property file for the batch server), specify any parameters that do not appear either in the table in [4.11.6 Parameters used for setting up the user properties for the batch server](#) or in the table in this section by using the following format.

Specification format

```
<param-name>parameter</param-name>  
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple `<param-value>` elements.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>  
<param-value>parameter=value</param-value>  
<param-value>parameter=value</param-value>
```

Note that you can use this format to specify the parameters described in the table in this section.

Table 4–83: Parameters applicable to the JavaVM system properties for the batch server

Value of param-name	Default value
<code>ejbserver.connectionpool.applicationAuthentication.disabled</code>	false
<code>ejbserver.connectionpool.sharingOutsideTransactionScope.enabled</code>	false
<code>ejbserver.deploy.exclusive.lockAliveInterval</code>	60
<code>ejbserver.jndi.cache.reference</code>	off
<code>ejbserver.manager.agent.Agent.conf^{#1}</code>	<i>Cosminexus-installation-directory/manager/config/mngagent.real-server-name.properties</i>
<code>ejbserver.manager.agent.Agent.enabled^{#1}</code>	true
<code>ejbserver.manager.jplevent.event_server_name</code>	localhost
<code>ejbserver.naming.nameroot</code>	None
<code>vbroker.agent.enableLocator^{#2}</code>	false
<code>vbroker.orb.htc.comt.entryCount</code>	120000

Value of param-name	Default value
vbroker.orb.htc.comt.fileCount	3
vbroker.orb.htc.tracePath	[In Windows] Cosminexus-working-directory\ejb\server-name\logs\TPB\logj [In UNIX] Cosminexus-working-directory/ejb/server-name/logs/TPB/logj

#1

Settings are not recommended because the Management Server sets the value automatically.

#2

Settings are not required normally.

4.11.9 Extension parameters of the batch server

The following table describes the extension parameters of the batch server. Make sure to specify the batch.service.enabled parameter for the batch server. Specify true in the parameter value.

For the details about the values to be specified in 'Value of param-name', see [3.2.1 usrconf.cfg \(Option definition file for batch servers\)](#). In the table below, *Default value* means the value that is assumed when the parameter is not specified.

The following describes the specification format.

Specification format

```
<param-name>parameter</param-name>
<param-value>value</param-value>
```

To specify multiple values, specify multiple <param-value> elements.

Specification format when multiple values are specified

```
<param-name>parameter</param-name>
<param-value>value</param-value>
<param-value>value</param-value>
```

Among the parameters that can be specified in `usrconf.cfg` (the option definitions file for the J2EE server), specify any parameters that do not appear either in the table in [4.11.7 Parameters used for setting up the option definitions for the batch server](#) or in the table in this section by using the following format.

Specification format

```
<param-name>ex.param</param-name>
<param-value>parameter=value</param-value>
```

To specify multiple values, specify multiple <param-value> elements.

Specification format when multiple values are specified

```
<param-name>ex.param</param-name>
<param-value>parameter=value</param-value>
<param-value>parameter=value</param-value>
```

Note that you can use this format to specify the parameters described in the table in this section.

Table 4–84: Batch server extension parameters

Value of param-name	Default value
add.class.path	None
add.library.path	None
batch.service.enabled ^{#1}	false
cpp.library.version	6
ejb.server.corefilenum ^{#2}	1
ejb.server.log.mode	None
ejb.server.log.stderr.filesize	1048576
ejb.server.log.stdout.filesize	1048576
jvm.type	server

#1

Make sure to specify the batch.service.enabled parameter. Specify true in the settings. If the parameter is omitted, false is set. You can specify this parameter only during the initial setup of the Web system. Do not change the value when changing the Web system configuration.

#2

Parameter for UNIX.

4.11.10 Parameters used for setting up the Management Agent properties

The following table describes the parameters used for setting up the Management Agent properties. You can specify these parameters in the J2EE server and the batch server.

For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [8.2.5 mngagent.actual-server-name.properties \(Management Agent property file\)](#). When you reference the section, read the key as parameter. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–85: Parameters used for setting up the Management Agent properties

Value of param-name	Specifiable value	Default value	VR
mngagent.connector.host	<p>The values that can be specified are as follows:</p> <ul style="list-style-type: none"> • Host name • IPv4 address • @myhost <p>Note</p> <p>When specifying a host name or IPv4 address, specify the value of the <host-name> tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend.</p>	Value defined in vbroker.se.iiop_tp.host	07-50

Value of param-name	Specifiable value	Default value	VR
	For host names, specify character strings of a maximum of 255 characters in length, consisting of alphanumeric characters, underscores (_), periods (.), and hyphens (-).		
mngagent.connector.port	Specify the value using an integer from 1 to 65535.	Value defined in vbroker.se.iioptp.scm.iioptp.listener.port	07-50
mngagent.log.filesize	Specify the value using an integer from 4096 to 2147483647.	65536	06-50 07-00 07-50

4.11.11 Parameters used for setting up the properties for issuing Management events

The following table describes the parameters used for setting up the properties for issuing Management events. You can specify these parameters in the J2EE server and the batch server.

For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [8.2.11 Property file for issuing Management events](#). When you reference the section, read the key as parameter. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–86: Parameters used for setting up the properties for issuing Management events

Value of param-name	Specifiable value	Default value	VR
manager.mevent.message_id.list	Specify any string.	None	06-50
manager.mevent.retry.interval	Specify the value using an integer from 1 to 86400.	10	06-50
manager.mevent.retry.limit	Specify the value using an integer from 0 to 86400.	0	06-50
manager.mevent.send.max	Specify the value using an integer from 1 to 1000.	10	06-50
manager.mevent.send.timeout	Specify the value using an integer from 10 to 600.	90	06-50
manager.mevent.sender.bind.host	Specify one of the following values: <ul style="list-style-type: none"> • Host name • IPv4 address • @myhost <p>Note</p> <p>When specifying a host name or IPv4 address, specify the value of the <host-name> tag in the host definition. If you specify a different value, a warning message (KEOS24186-W) might be output, and the settings might not be what you intend.</p> <p>For host names, specify character strings of a maximum of 255 characters in length,</p>	None	07-50

Value of param-name	Specifiable value	Default value	VR
	consisting of alphanumeric characters, underscores (_), periods (.), and hyphens (-).		

4.11.12 Parameters used for setting up JP1 integration

The following table describes the parameters used for setting up JP1 integration. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

You can specify these parameters in the J2EE server and the batch server.

Table 4–87: Parameters used for setting up JP1 integration

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>manager.jp levent.system.filtering.severity.alert</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Alert of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
<code>manager.jp levent.system.filtering.severity.critical</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Critical of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
<code>manager.jp levent.system.filtering.severity.emergency</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Emergency of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50
<code>manager.jp levent.system.filtering.severity.error</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Error of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	06-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
<code>manager.jp levent.system.filtering.severity.information</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Information of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: • true • false	false	06-50
<code>manager.jp levent.system.filtering.severity.notice</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Notice of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: • true • false	false	06-50
<code>manager.jp levent.system.filtering.severity.warning</code>	The item used for specifying the filtering of the JP1 events issued by the system. Specifies whether to issue the severity level Warning of the JP1 event. Specify one of the following values: true: Permit issuance. false: Do not permit issuance.	The following strings can be specified: • true • false	false	06-50
<code>manager.jp levent.user.filtering.enabled</code>	Specifies whether to filter a user JP1 event. Specify one of the following values: true: The user JP1 event will be filtered. false: The user JP1 event will not be filtered.	The following strings can be specified: • true • false	false	06-50
<code>manager.jp levent.user.filtering.filter</code>	\n in the specified string is converted into linefeed.	Specify any string.	None	06-50
<code>manager.jp levent.user.mapping.level.config</code>	Specifies the severity of the JP1 event for the log level "CONFIG" in the mapping of the user JP1 events. Specify one of the following values: • Emergency: Emergency • Alert: Alert • Critical: Critical • Error: Error • Warning: Warning • Notice: Notice • Information: Information If the value is not specified, a JP1 event is not issued.	The following strings can be specified: • Emergency • Alert • Critical • Error • Warning • Notice • Information	Not specified	06-50
<code>manager.jp levent.user.mapping.level.fine</code>	Specifies the severity of the JP1 event for the log level "FINE" in the mapping of the user JP1 events. Specify one of the following values: • Emergency: Emergency	The following strings can be specified: • Emergency • Alert • Critical	Not specified	06-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> Alert: Alert Critical: Critical Error: Error Warning: Warning Notice: Notice Information: Information <p>If the value is not specified, a JP1 event is not issued.</p>	<ul style="list-style-type: none"> Error Warning Notice Information 		
<code>manager.jp levent.user.mapping. level.finer</code>	<p>Specifies the severity of the JP1 event for the log level "FINER" in the mapping of the user JP1 events. Specify one of the following values:</p> <ul style="list-style-type: none"> Emergency: Emergency Alert: Alert Critical: Critical Error: Error Warning: Warning Notice: Notice Information: Information <p>If the value is not specified, a JP1 event is not issued.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> Emergency Alert Critical Error Warning Notice Information 	Not specified	06-50
<code>manager.jp levent.user.mapping. level.finest</code>	<p>Specifies the severity of the JP1 event for the log level "FINEST" in the mapping of the user JP1 events. Specify one of the following values:</p> <ul style="list-style-type: none"> Emergency: Emergency Alert: Alert Critical: Critical Error: Error Warning: Warning Notice: Notice Information: Information <p>If the value is not specified, a JP1 event is not issued.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> Emergency Alert Critical Error Warning Notice Information 	Not specified	06-50
<code>manager.jp levent.user.mapping. level.info</code>	<p>Specifies the severity of the JP1 event for the log level "INFO" in the mapping of the user JP1 events. Specify one of the following values:</p> <ul style="list-style-type: none"> Emergency: Emergency Alert: Alert Critical: Critical Error: Error Warning: Warning Notice: Notice Information: Information <p>If the value is not specified, a JP1 event is not issued.</p>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> Emergency Alert Critical Error Warning Notice Information 	Not specified	06-50
<code>manager.jp levent.user.mapping. level.severe</code>	<p>Specifies the severity of the JP1 event for the log level "SEVERE" in the mapping of the user JP1 events. Specify one of the following values:</p> <ul style="list-style-type: none"> Emergency: Emergency Alert: Alert Critical: Critical Error: Error Warning: Warning Notice: Notice Information: Information 	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> Emergency Alert Critical Error Warning Notice Information 	Not specified	06-50

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	If the value is not specified, a JP1 event is not issued.			
manager.jp levent.use r.mapping. level.warn ing	Specifies the severity of the JP1 event for the log level "WARNING" in the mapping of the user JP1 events. Specify one of the following values: <ul style="list-style-type: none"> • Emergency: Emergency • Alert: Alert • Critical: Critical • Error: Error • Warning: Warning • Notice: Notice • Information: Information If the value is not specified, a JP1 event is not issued.	The following strings can be specified: <ul style="list-style-type: none"> • Emergency • Alert • Critical • Error • Warning • Notice • Information 	Not specified	06-50

4.11.13 Parameters used for setting up the usage of SecurityManager

The following table describes the parameters used for setting up the usage of SecurityManager. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

You can specify these parameters in the J2EE server and the batch server.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Table 4–88: Parameters used for setting up the SecurityManager usage

Value of param-name	Value of param-value	Specifiable value	Default value	VR	Related information
use.security	Specifies whether to use SecurityManager in the J2EE server startup options. Specify one of the following values: true: Use functionality. false: Do not use functionality.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	06-50	2.2.5 <i>Preventing invalid processing in the Security Management Guide</i>

4.11.14 Parameters that set up the usage for integrated user management

The following table describes the parameters used for setting up the usage for integrated user management. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Note that the parameters that set up the usage for integrated user management are only enabled when you specify true in the jaas.ua.enabled parameter.

Table 4–89: Parameters that set up the usage for integrated user management

Value of param-name	Value of param-value	Specifiable value	Default value	VR
jaas.ua.enabled	Specifies whether to enable JAAS of JavaVM. Enabling JAAS of JavaVM allows you to use applications that use integrated user management. Specify one of the following values: true: Enable. false: Disable.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	08-70
java.security.auth.login.config	Specifies the JAAS configuration file. If specified using the relative path, the configuration file under the <i>Cosminexus-installation-directory/manager/config</i> directory is applied.	Specify any string.	(In Windows) &#amp;#x2013; {cosminexus.home}\manager\config\jaas.conf (In UNIX) &#amp;#x2013; {cosminexus.home}/manager/config/jaas.conf	08-70
com.cosminexus.admin.auth.config	Specifies the configuration file for integrated user management. If specified using the relative path, the configuration file under the <i>Cosminexus-installation-directory/manager/config</i> directory is applied.	Specify any string.	(In Windows) &#amp;#x2013; {cosminexus.home}\manager\config\ua.conf (In UNIX) &#amp;#x2013; {cosminexus.home}/manager/config/ua.conf	08-70
com.cosminexus.admin.auth.passwordScramble.enable	Specifies whether to enable the functionality that decodes scrambled passwords in configuration files for integrated user management. Specify one of the following values: true: Enable. false: Disable.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	false	08-70
jaas.config.load_exclusively#	Chooses whether to ignore the login configurations specified in files other than the files specified in the JAAS configuration file. Specify one of the following values: true: The specified login configuration will be ignored and the configuration of the JAAS configuration file is enabled. false: The specified login configuration is enabled.	The following strings can be specified: <ul style="list-style-type: none"> • true • false 	true	08-70

#

If true is specified in this parameter, \= is added as follows to the value of the java.security.auth.login.config parameter in the usrconf.properties file at the distribution destination:

(Example): java.security.auth.login.config=\=config-file

4.11.15 Parameters that set up the files to be used in the JavaVM startup parameters

The following table describes the parameters that set up the files to be used in the JavaVM startup parameters. In the table below, *Default value* means the value that is assumed when the parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–90: Parameters that set up the files to be used in the JavaVM startup parameters

Value of param-name	Value of param-value	Specifiabl e value	Default value	VR
AutoExplicitMemoryText	Specifies the contents of the auto-allocation setup file to be used in the auto-allocation functionality of the Explicit Memory Management functionality. The contents specified here are applied to <i>Cosminexus-installation-directory/CC/server/usrconf/ejb/real-server-name/auto_explicit_memory.cfg</i> .#	String of one or more characters	None	09-00
UserPrfText	Specifies the contents of the user-extended performance analysis trace setup file to be used in user-extended performance analysis trace. The contents specified here are applied to <i>Cosminexus-installation-directory/CC/server/usrconf/ejb/real-server-name/userprf.cfg</i> .#	String of one or more characters	None	09-00

#

Specify the param-value value in the CDATA section.

(Example)

```
<param-name>UserPrfText</param-name>
```

```
<param-value>
```

```
<![CDATA[
```

```
:
```

```
]]>
```

```
</param-value>
```

The single-byte spaces and linefeeds before and after all the contents specified in the CDATA section are ignored.

4.12 Parameters applicable to logical performance tracers

This subsection describes the parameters that are applicable to logical performance tracers.

The following table describes the parameters that are applicable to logical performance tracers. In the following table, Default value is the value that is assumed when a parameter is not specified. *VR* is the version of Application Server on which parameters are introduced or changed.

Table 4–91: Parameters applicable to logical performance tracers

Value of param-name	Value of param-value	Specifiable value	Default value	VR
PRFID	Specify the PRF identifier.	If a string beginning with 'TSC', 'tsc' or 'CTM' and 'ctm' is specified, an error will occur.	PRF_ID	06-50 07-00
prfspool	Specifies the PRF trace output directory. In Windows, the value specified here must match with the value specified in the system environment variable PRFSPOOL.	Specify any string with a maximum of 256 characters.	&{cosminexus.home}/PRF/spool	06-50 07-00
PrfTraceBufferSize	Specifies the size of the buffer memory for the performance tracer. Specify a value that satisfies the condition $\text{PrfTraceFileSize} \geq \text{PrfTraceBufferSize}$.	Specify the value using an integer from 512 to 102400.	8192	06-50
PrfTraceCount	Specifies the number of files for the performance tracer.	Specify 4, 16, 32, 64, 128, or 256.	4	06-50
PrfTraceFileSize	Specifies the file size for the performance tracer in Kilobytes. Specify a value that satisfies the condition $\text{PrfTraceFileSize} \geq \text{PrfTraceBufferSize}$.	The following strings can be specified: <ul style="list-style-type: none"> • 1024 • 4096 • 8192 • 16384 • 32768 • 65536 • 131072 • 262144 • 524288 • 1048576 	32768	06-50 07-00
PrfTraceLevel	Specifies the trace collection level for the performance tracer. Set up one of the following values: <ul style="list-style-type: none"> • STANDARD: Standard level • DETAIL: Detail level • Optional trace collection level value: For details about specifiable values, see the description for the argument <code>-PrfTraceLevel</code> of the <code>cprfstart (start PRF daemon)</code> command in the 	The following strings can be specified: <ul style="list-style-type: none"> • STANDARD • DETAIL • Any trace level value 	STANDARD	06-50 07-00

Value of param-name	Value of param-value	Specifiable value	Default value	VR
	<i>uCosminexus Application Server Command Reference Guide.</i>			

4.13 Parameters applicable to the logical CTM domain manager

This section describes the parameters applicable to the logical CTM domain manager.

The following table describes the parameters applicable to the logical CTM domain manager. In the table below, *Default value* means the value that is assumed when the parameter is not specified.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Table 4–92: Parameters applicable to the logical CTM domain manager

Value of param-name	Value of param-value	Default value	Related information
<code>cdm.agent.port</code>	Specify the port number of Smart Agent. This parameter can only be used for free-tier.	14000	
<code>cdm.AliveCheckCount</code>	Specifies the monitoring interval coefficient for the operating state between CTM domain managers as an integer in the range from 2 to 255.	2	
<code>cdm.port</code>	Specifies the port number used by the CTM domain manager to exchange the CTM domain configuration information as an integer in the range from 5001 to 65535. To start multiple CTM domain managers that have the same CTM domain name on different hosts, specify the same value for the <code>-CTMPort</code> option. If this parameter is omitted, the system references the service name file. If no port number is specified in the service name file, 20137 is used. A CTM domain manager uses both the TCP and UDP protocols for each port number. Therefore, make sure that a port number used by a CTM domain manager is not used as a UDP port number for another use.	20137	
<code>cdm.prf.PRFID</code>	Specify the PRF identifier. If you specify a PRF identifier when the PRF daemon is invoked, specify the same PRF identifier. If the PRF identifier is omitted when invoking the PRF daemon, do not specify the PRF identifier. If the PRF identifier does not match, performance analysis trace cannot be acquired. This parameter can only be used for free-tier.	None	
<code>cdm.SendHost#</code>	Specifies the host IP address on which the CTM domain manager, which is present in different network segments and which becomes the distribution destination of the CTM domain configuration information, operates. The IP address specified at this time is the IP address specified in the <code><host-name></code> tag in the host definition. Due to this specification, the CTM configuration information can be distributed among the CTM domains consisting of multiple network segments.	None	

Value of param-name	Value of param-value	Default value	Related information
cdm.SendHostInterval	Specifies the interval for sending the CTM domain configuration information for the host specified in cdm.SendHost as an integer in the range from 0 to 65535 (unit: seconds). If the interval is not specified, it indicates that the interval is the same as the broadcast interval. If 0 is specified indicates that the configuration information is not to be sent.	None	
cdm.SendInterval	Specifies the interval at which the CTM domain manager broadcasts the CTM domain configuration information within the network segment as an integer in the range from 0 to 65535 (units: seconds). 0 indicates that the configuration information is not to be sent.	60	
cdm.SubnetMask	Specifies the subnet mask of the network.	255.255.255.0	
ctmdomainname	Specifies the name of the CTM domain to which the CTM domain manager belongs, within 31 characters. You can specify alphanumeric characters and underscore (_). Do not specify a string other than "CTMDOMAIN", such as a string beginning with "CTM" or "ctm". The name must be unique on the same host.	CTMDOMAIN	<i>3.3.5 CTM domains and CTM domain managers in the Expansion Guide</i>
ctmspool	Specifies the CTM execution environment directory. Use "/" as the file separator.	&{cosminexus.home}/CTM/spool	

#

To specify multiple values in param-value, delimit the values with commas (,).

(Example)

<param-value>value1, value2, value3</param-value>

4.14 Parameters applicable to the logical CTM

This section describes the parameters applicable to the logical CTM.

The following table describes the parameters applicable to the logical CTM. In the table below, *Default value* means the value that is assumed when the parameter is not specified.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Table 4–93: Parameters applicable to the logical CTM

Value of param-name	Value of param-value	Default value	Related information
ctm.Agent	Specifies whether to use the ORB gateway functionality of the CTM regulator. Specify one of the following values: In the systems executing batch applications, make sure that you specify '1'. 1: Use functionality. 0: Do not use functionality.	0	
ctm.cdm	Specify the CTM domain name of the CTM domain manager to be used. Specify the CTM domain name of the CTM domain manager from the same host.	CTMDOMAIN	
ctm.CreatePolicy	Chooses the CTM node selection policy for the create request. Specify one of the following values: normalDispatch: Chooses the CTM daemon according to the load status in the schedule queue. priorDispatch: Chooses the CTM daemon that has received the create request on higher priority. However, if the schedule queue registered in that CTM daemon has a high load or is locked, it chooses another CTM daemon.	normalDispatch	<i>3.8 Load balancing of requests in the Expansion Guide</i>
ctm.DCSendTimeOut	Specifies the timeout value for forwarding requests of the communication between CTMs as an integer in the range from 0 to 2147483647 (unit: seconds). Indicates that 0 is not specified.	180	
ctm.DispatchParallelCount	Specifies the maximum number of threads for distributing the request messages from the client to the J2EE server within CTM as an integer in the range from 0 to 32767.	255	
ctm.DispatchPolicy	Chooses the policy for scheduling requests. normalDispatch: Schedules requests according to the load status in the schedule queue.	priorDispatch	<i>3.8 Load balancing of requests in the Expansion Guide</i>

Value of param-name	Value of param-value	Default value	Related information
	<p>priorDispatch:</p> <p>Schedules requests giving priority to the schedule queue registered in the CTM daemon that received the request. However, if the schedule queue registered in that CTM daemon has a high load or is locked, schedules the request to a schedule queue registered in another CTM daemon.</p>		
ctm.EjbPort	Specifies the port number that the EJB client will use to find new CTM daemon connections as an integer in the range from 5001 to 65535. If this value is not specified, the OS automatically uses the assigned port number.	Automatically	
ctm.LoadCheckInterval	Specifies the time interval for monitoring the load in the schedule queue as an integer in a range from 0 to 32767 (unit: seconds). 0 indicates that load status will not be monitored at fixed time intervals.	10	
ctm.LogFileCount	Specifies the number of CTM log files. The specifiable values are 2, 4, 8, 16, 24, and 32.	2	
ctm.LogFileSize	Specifies the maximum size of one CTM log file as an integer in the range from 1 to 3 (unit: megabyte).	1	
ctm.MaxRequestCount	Specifies the number of requests that can be concurrently registered in the CTM queue registered in CTM as an integer in the range from 1 to 32767.	50	
ctm.ns.port	Specifies the port number of the naming service paired with CTM as an integer in the range from 1 to 65535.	20348	
ctm.NsBindHost	<p>Specifies whether to assign a specific IP address to the machine when multiple IP addresses are assigned to one machine. Specify one of the following values:</p> <p>true: Assign a specific IP address.</p> <p>false: Do not assign a specific IP address.</p>	false	
ctm.port	Specifies the port number to be used by CTM as an integer in the range from 5001 to 65535.	20138	
ctm.QueueCount	Specifies the number of CTM queues that can be registered in CTM as an integer in the range from 1 to 32767.	128	
ctm.QueueDeleteWait	Specifies the waiting time for reserving the CTM queue in which the abnormally terminated J2EE server was registered, and for awaiting the restart of the J2EE server as an integer in the range from 0 to 2147483647 (unit: seconds).	0	
ctm.QueueInterval	Specifies the time interval for requesting the processing rate of the system termination	None	

Value of param-name	Value of param-value	Default value	Related information
	threshold value as an integer in the range from 1 to 32767 (unit: seconds).		
ctm.QueueRate	Specifies the threshold value of the retention rate to migrating to the queue retention monitoring state as an integer in the range from 0 to 99 (unit: %).	None	
ctm.QueueRegistCount	Specifies the number of J2EE applications that can share the same CTM queue as an integer in the range from 1 to 32767.	64	
ctm.RegOption	Specifies the setup file for the CTM regulator with the absolute path of the CTM active host (string of maximum 256 characters).	None	
ctm.RegStart	Specifies the number of processes of the CTM regulator to be started automatically when starting CTM as an integer in the range from 0 to 32767.	1	
ctm.RequestCount	Specifies how many times should a timeout occur for the lock to be set up automatically as an integer in the range from 1 to 32767.	None	
ctm.RequestInterval	Specifies the time interval for requesting the timeout occurrence frequency as an integer in the range from 1 to 32767 (unit: seconds).	None	
ctm.ServerCacheSize	Specifies the size of the cache table for storing the configuration information about the CTM domain as an integer in the range from 1 to 32767 (unit: kilobyte).	1024	
ctm.ServerConnectCount	Specifies the maximum number of J2EE servers connected to CTM as an integer in the range from 0 to 32767.	64	
ctm.StatsFileCount	Specifies the number of generations of CTM operation statistics information. The specifiable values are 3, 4, 16, 32, 64, 128, and 256.	3	
ctm.StatsFileSize	Specifies the size of the CTM operation statistics information file in megabytes. The specifiable values are 1, 2, 3, 4, 8, 16, 32, 64, 128, 256, 512, and 1024.	3	
ctm.StatsInterval	Specifies the time interval to output the CTM operation statistics information in a file as an integer in the range from 1 to 1440 (unit: minutes).	1	
ctm.StatsUse	Specifies whether to acquire the CTM operation statistics information. Specify one of the following values: Y: Collected. N: Not collected.	Y	
ctm.SystemDown	Specifies whether to terminate the system. Specify one of the following values:	1	

Value of param-name	Value of param-value	Default value	Related information
	<p>1: Terminate.</p> <p>0: Do not terminate.</p>		
ctm.SystemDownRate	Specifies the threshold value for the processing rate to migrate to system termination as an integer in the range from 1 to 100 (unit: %)	None	
ctm.TSCGwOption	Specifies the setup file for the OTM gateway with the absolute path of the CTM active host (string of maximum 256 characters).	None	
ctm.TSCGwStart	<p>Specifies the number of processes of OTM gateway to be started automatically when CTM is started as an integer in the range from 0 to 32767.</p> <p>0 indicates that the OTM gateway is not to be started.</p>	0	
ctm.WatchQueue	<p>Specifies whether to perform stationary monitoring of the queue. Specify one of the following values:</p> <p>true: Perform stationary monitoring of the queue.</p> <p>false: Do not perform stationary monitoring of the queue.</p>	false	
ctm.WatchRequest	<p>Specifies whether to lock the queue when a timeout occurs while a request is being sent to the J2EE server. Specify one of the following values:</p> <p>true: Lock the queue.</p> <p>false: Do not lock the queue.</p>	false	
ctmid	<p>Specifies the CTM identifier as a string of maximum 31 characters. You can use alphanumeric characters, underscore (_), and period (.). (Period (.) can only be specified in IP addresses). Do not specify strings beginning with "CTM" or "ctm".</p> <p>When specifying this parameter, a unique value must be specified in all the logical CTM servers within the management domain.</p> <p>If an IP address is specified, period (.) is replaced by underscore (_).</p>	Value-specified-in-the- <agent-host>-tag-in- the- host- definition#_CTM-port- number	

#

If the host name is specified in the <agent-host> tag, a value converted into the IP address is specified. If an IP address is specified in the <agent-host> tag, period (.) is replaced by underscore (_).

4.15 Parameters applicable to the logical Smart Agent

This section describes the parameters applicable to the logical Smart Agent.

The following table describes the parameters applicable to the logical Smart Agent. In the table below, *Default value* means the value that is assumed when the parameter is not specified.

Table 4–94: Parameters applicable to the logical Smart Agent

Value of param-name	Value of param-value	Default value
<code>smartagent.port</code>	Specifies the port number for monitoring the Smart Agent as an integer in the range from 5001 to 65535.	14000

4.16 Parameters applicable to the logical user server

This section describes the parameters applicable to the logical user server.

For details about the contents to be specified in param-value corresponding to 'Value of param-name', see [8.2.19 Logical user server definition file](#). When you reference the section, read the element name as parameter.

The following table describes the parameters applicable to the logical user server. In the table below, *Default value* means the value that is assumed when the parameter is not specified.

Table 4–95: Parameters applicable to the logical user server

Value of param-name	Default value
<code>forceStop.arg#1</code>	None
<code>getProcessID.arg#1</code>	None
<code>getProcessID.timeout#2</code>	180
<code>group-id</code>	None
<code>isAlive.arg#1</code>	None
<code>isAlive.timeout#2</code>	180
<code>start.arg#1</code>	None
<code>start-time-watch-interval</code>	1
<code>stop.arg#1</code>	None
<code>type</code>	direct
<code>user-id</code>	None
<code>watch-interval#3</code>	Value (10 if the <code>adminagent.userserver.watch.interval</code> key is omitted) of the <code>adminagent.userserver.watch.interval</code> key of the Administration Agent property file.
<code>working-dir</code>	<code>Cosminexus-installation-directory/manager/bin</code>

#1

See the description related to the element name <arg> in [8.2.19 Logical user server definition file](#).

#2

See the description related to the element name <timeout> in [8.2.19 Logical user server definition file](#).

#3

The value specified in this parameter is valid when specified concurrently with the `adminagent.userserver.watch.interval` key of the Administration Agent property file.

4.17 Parameters applicable to the Logical Naming Service

This section describes the parameters applicable to the Logical Naming Service.

The following table describes the parameters applicable to the Logical Naming Service. In the following table, Default value means the value assumed when the parameter is omitted:

Table 4–96: Parameters applicable to the Logical Naming Service

Value of param-name	Value of param-value	Default value
<code>ns.agenthost</code>	Specifies whether to fix the Administration Agent host when fixing the host. true: Assign a specific IP address. false: Do not assign a specific IP address.	false
<code>ns.agent.port</code>	Specify the port number of Smart Agent.	14000
<code>ns.bind.host</code>	Specifies whether to assign to the specific IP address. Specify one of the following values: true: Assign a specific IP address. false: Do not assign a specific IP address.	false
<code>port</code>	Specifies the port number to be used when the naming service is running.	900

5

Files Used in Server Management Commands

This chapter explains the format, storage location, and functionality of files used in server management commands and the keys that you can specify in these files.

5.1 List of files used in server management commands

The following table lists the files used in server management commands:

Table 5–1: List of files used in server management commands

File name	Classification	Overview	Reference
usrconf(in UNIX)	Option definition file for server management commands	This file specifies the invocation options of the JavaVM that executes the server management commands. This file is for UNIX.	5.2.1
usrconf.bat(in Windows)	Option definition file for server management commands	This file specifies the invocation options of the JavaVM that executes the server management commands. This file is for Windows.	5.2.2
usrconf.properties	System property file for server management commands	This file specifies the system properties of the JavaVM that executes the server management commands.	5.2.3

5.2 Details of files used for server management commands

5.2.1 usrconf (Option definition file for server management commands for UNIX)

(1) Format

This option definition file is in the shell script file format.

Specify the key as follows:

```
set key-name=value
```

(2) File storage location

/opt/Cosminexus/CC/admin/usrconf/

(3) Functionality

This file specifies the invocation options of the JavaVM that executes the server management commands. Note that this file is for UNIX.

(4) Specifiable keys

The following table describes the specifiable keys and the default values:

Key name	Contents	Default
USRCONF_JVM_ARGS	This key invokes JavaVM by using the specified option. You can specify the following JavaVM options: <ul style="list-style-type: none">• -Xmssize• -Xmxsize• -Xsssize• -Xdebug• -XrunlibraryName• -Dejbserver.log.directory#• -XX:MetaspaceSize• -XX:MaxMetaspaceSize	For details about default values, see 5.2.1(6) Default value for JavaVM options in server management commands .
USRCONF_JVM_CLPATH	This key adds the set value to the class path. If you want to specify multiple values, demarcate them with a colon (:).	None
USRCONF_JVM_LIBPATH	This key adds the set value to the environment variable of library search path. If you want to specify multiple values, demarcate them with a colon (:).	None

Even if you specify `-Dejbserver.log.directory`, log data will be output to the default log output destination for server management commands when the following operations are performed:

- Use the `mngsvrutil` command to display a list of J2EE applications
`mngsvrutil list appStatus | resStatus | resJavaBeansStatus`

- Perform **Manage logical server applications** on the management portal
- Use Remote Management of Management Server
- Perform operations on the HCSC server

(5) JavaVM options that can be specified in USRCONF_JVM_ARGS (in usrconf)

This section describes the Java HotSpot VM options that you can specify in USRCONF_JVM_ARGS and points to note when specifying these options.

The following table describes Java HotSpot VM options that you can specify in USRCONF_JVM_ARGS. *VR* is the version of Application Server on which parameters are introduced or changed.

Key name	Contents	Specifiable value	VR
-Xms	This key sets the initial size for the Java heap.	The input is not limited.	06-00
-Xmx	<p>This key sets the maximum size for the Java heap.</p> <ul style="list-style-type: none"> • If a command cannot be executed normally because memory becomes insufficient during command execution, specify this option to increase the maximum size of the memory allocation pool. • If a server management command is started when the operation-target file is large, the <code>java.lang.OutOfMemoryError</code> message might be displayed on the console from which the command was started. If this message is displayed, specify this option and the <code>-Xms</code> option to adequately tune the Java VM memory allocation size. <p>Example: <code>set USRCONF_JVM_ARGS="-Xms64m -Xmx256m"</code></p>	The input is not limited.	06-00
-Xss	This key sets the maximum size for one stack area.	The input is not limited.	06-00
-Xdebug	This key invokes JavaVM with the debugger in enable status.	The input is not limited.	06-00
-Xrun	This key loads the library.	The input is not limited.	06-00
-Dejbserver.log.directory	This key specifies the path of the directory where the log file is output. Use a forward slash (/) as the delimiter in the directory path.	The input is not limited.	06-00
-XX:MetaspaceSize	This key sets the minimum threshold value for Full GC in the metaspace area. This value is used in the calculation of changing the threshold value.	The input is not limited.	09-70
-XX:MaxMetaspaceSize	This key specifies the maximum size for the Metaspace area.	The input is not limited.	09-70

(6) Default value for JavaVM options in server management commands

The following is the default value for JavaVM options in server management commands:

- `-Xmx512m`

(7) Examples of coding

```
#!/bin/csh -f
```

```
set USRCONF_JVM_ARGS="-Xms64m -Xmx512m"
set USRCONF_JVM_CLPATH=/usr/home/lib/mylib.jar
set USRCONF_JVM_LIBPATH=/usr/home/bin
```

(8) Precautions

- The CLASSPATH environment variable set by shell is disabled in the server management commands, but the other environment variables (such as PATH) are enabled.
- Do not use the following characters in the value to be specified:
Double quotation mark ("), ampersand (&), vertical bar (|), less-than sign (<) and greater-than sign (>)
- JavaVM options that are not specified in USRCONF_JVM_ARGS are set to the JavaVM default values. For details about JavaVM options, see *14.4 Default values of the Java HotSpot VM options that can be specified in Cosminexus*. However, if `-Dejbserver.log.directory` is not specified, `/opt/Cosminexus/CC/admin/logs` is applied.
- When you use Eclipse Plug-ins using Management Server for performing operations, the specification of this file is invalid. When you use Eclipse Plug-ins using Management Server for performing operations, specify the values in the option definition file for the Administration Agent (`adminagentuser.cfg`).

5.2.2 usrconf.bat (Option definition file for server management commands for Windows)

(1) Format

This option definition file is in the batch file format of Win32.

Specify the key as follows:

```
set key-name=value
```

(2) File storage location

Cosminexus-installation-directory\CC\admin\usrconf\

(3) Functionality

This file specifies the invocation options of the JavaVM that executes the server management commands. Note that this file is for Windows.

(4) Specifiable keys

The following table describes the specifiable keys and the default values:

Key name	Contents	Default
USRCONF_JVM_ARGS	This key invokes JavaVM by using the specified option. You can specify the following JavaVM options: <ul style="list-style-type: none"> • <code>-Xms</code>size • <code>-Xmx</code>size 	For details about default values, see <i>5.2.2(5) Default values of the JavaVM invocation options that</i>

Key name	Contents	Default
	<ul style="list-style-type: none"> • <code>-Xsssize</code> • <code>-Xdebug</code> • <code>-XrunlibraryName</code> • <code>-Dejbserver.log.directory</code> • <code>-XX:MetaspaceSize</code> • <code>-XX:MaxMetaspaceSize</code> 	<i>execute the server management commands (In usrconf.bat).</i>
USRCONF_JVM_CLASSPATH	This key adds the set value to the class path. If you want to specify multiple values, demarcate the values with a semicolon (;).	None
USRCONF_JVM_LIBPATH	This key adds the set value to the environment variable of library search path. If you want to specify multiple values, demarcate the values with a semicolon (;).	None

(5) Default values of the JavaVM invocation options that execute the server management commands (In usrconf.bat)

The following table describes JavaVM options that you can specify in USRCONF_JVM_ARGS:

Key name	Contents	Specifiable value	Default	VR
-Xms	This key sets the initial size for the Java heap.	The input is not limited.	None	06-00
-Xmx	<p>This key sets the maximum size for the Java heap.</p> <ul style="list-style-type: none"> • If a command cannot be executed normally because memory becomes insufficient during command execution, specify this option to increase the maximum size of the memory allocation pool. • If a server management command is started when the operation-target file is large, the <code>java.lang.OutOfMemoryError</code> message might be displayed on the console from which the command was started. If this message is displayed, specify this option and the <code>-Xms</code> option to adequately tune the Java VM memory allocation size. <p>Example:</p> <pre>set USRCONF_JVM_ARGS="-Xms64m -Xmx256m"</pre>	The input is not limited.	512m	06-00
-Xss	This key sets the maximum size for one stack area.	The input is not limited.	None	06-00
-Xdebug	This key invokes JavaVM with the debugger in enable status.	The input is not limited.	None	06-00
-Xrun	This key loads the library.	The input is not limited.	None	06-00
-Dejbserver.log.directory	This key specifies the path of the directory where the log file is output. Use a	The input is not limited.	None	06-00

Key name	Contents	Specifiable value	Default	VR
	forward slash (/) as the delimiter in the directory path.			
-XX:MetaspaceSize	This key sets the minimum threshold value for Full GC in the metaspace area. This value is used in the calculation of changing the threshold value.	The input is not limited.	None	09-70
-XX:MaxMetaspaceSize	This key specifies the maximum size for the Metaspace area.	The input is not limited.	None	09-70

(6) Examples of coding

```
set USRCONF_JVM_ARGS=-Xms64m -Xmx512m
set USRCONF_JVM_CLASSPATH=C:\home\lib\mylib.jar
set USRCONF_JVM_LIBPATH=C:\home\bin
```

(7) Precautions

- The CLASSPATH environment variable set at the command prompt is disabled in the server management commands, but the other environment variables (such as PATH) are enabled.
- Do not use the following characters in the specified value:
Double quotation mark ("), ampersand (&), vertical bar (|), less-than sign (<) and greater-than sign (>)
- When you use Eclipse Plug-ins using Management Server for performing operations, the specification of this file is invalid. When you use Eclipse Plug-ins using Management Server for performing operations, specify the values in the option definition file for the Administration Agent (`adminagentuser.cfg`).

5.2.3 usrconf.properties (System property file for server management commands)

(1) Format

J2SE property file format.

Specify the key as follows:

```
key-name=value
```

Specification methods

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.
(Example) `key-name=value#comment`
- Use the ISO 8859-1 character encoding according to the Java specifications for the characters to be encoded.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\CC\admin\usrconf\`
- In UNIX
`/opt/Cosminexus/CC/admin/usrconf/`

(3) Functionality

This file specifies the system properties of the JavaVM that executes the server management commands.

(4) Reserved keys of server management commands

The server management commands internally use the keys beginning with the following prefixes. As a result, the keys beginning with these prefixes must not be used in applications.

- `ejbserver.*`
- `webservice.*`
- `applclient.*`
- `j2eeserver.*`

(5) Keys for customization of server management commands

In the server management commands, you can customize the operations of a J2EE server by setting a value in the keys of the following system properties:

The keys are classified and explained as follows:

- *Keys beginning with `ejbserver.cui`*
- *Key beginning with `ejbserver.deploy`*
- *Key beginning with `ejbserver.logger`*
- *Keys beginning with `ejbserver.naming`*
- *Key beginning with `ejbserver.rmi`*
- *Keys beginning with `vbroker`*

(a) Keys beginning with `ejbserver.cui`

Key name	Contents	Specifiable value	Default	VR
<code>ejbserver.cui.checkmethod.compatible</code>	Specify how to check the methods in the property file specified in the arguments while executing the <code>cjsetappprop</code> command or <code>cjsetresprop</code> command. The methods specified in the following tags of the property file are the arguments of the check method: <ul style="list-style-type: none">• <code><method-permission></code>• <code><container-transaction></code>• <code><exclude-list></code>	Specify one of the following values: <ul style="list-style-type: none">• <code>true</code>• <code>false</code>	<code>false</code>	07-50

Key name	Contents	Specifiable value	Default	VR
	<ul style="list-style-type: none"> • <ejb-method-observation-timeout> • <ejb-transaction-timeout># 			
ejbserver.cui.exitcode.compatible	<p>Specify whether to return the exit code "1", when execution is no longer possible due to an exclusive error during the execution of a server management command.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">In the case of an exclusive error, completion code "1" will be returned.</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">In the case of an exclusive error, completion code "2" will be returned.</p> <p style="padding-left: 20px;">In the case of a timeout error, completion code "3" will be returned.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	false	06-00
ejbserver.cui.logfile.compatible	<p>Specify whether to adopt the log output form of version 07-00 and later or the log output form of version 06-70 and earlier. The specifiable values and the operation are as follows:</p> <p>If you specify <code>false</code>:</p> <p style="padding-left: 20px;">The log output form of version 07-00 and later will be adopted.</p> <p>If you specify <code>true</code>:</p> <p style="padding-left: 20px;">The log output form of version 06-70 and earlier will be adopted.</p> <p>If you specify an invalid value (other than all characters of <code>true</code> or <code>false</code> in lower-case), a message is output and the default value will be set.</p> <p>If operations are performed by Eclipse Plug-in using Management Server, this specification becomes invalid and the value is assumed as <code>false</code>.</p> <p>Note that you can calculate the disk space required for the log output directory of the server management commands using the following expression:</p> <p>If <code>false</code> is specified:</p> <p style="padding-left: 20px;">18,624 KB + TPBroker trace information</p> <p>If <code>true</code> is specified:</p> <p style="padding-left: 20px;">51,655 KB + TPBroker trace information</p> <p>For details on the disk space required to output the TPBroker trace information, see the description related to disk occupancy in <i>TPBroker Operation Guide</i>.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	false	07-00

Key name	Contents	Specifiable value	Default	VR
ejbserver.cui.optionallname.enabled	<p>Specify when an optional name is specified in the EJBHome object from the server management command, when using the JNDI functionality for managing the user-specified namespace.</p> <p>If you specify <code>true</code>:</p> <p>You can specify an optional name from the server management command.</p> <p>If you specify <code>false</code>:</p> <p>You cannot specify an optional name from the server management command.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	05-05

The following contents are checked according to the values set with these keys.

Table 5–2: List of contents checked according to the settings for the keys

Location where the methods are specified in the property file	Values specified for the properties	
	true	false
<method-permission>	Y	Y
<container-transaction>	N	Y
<exclude-list>	Y	Y
<ejb-method-observation-timeout>	N	Y
<ejb-transaction-timeout>	N	Y

Legend:

Y: Error occurs if the specified method does not exist in the Enterprise Bean.

N: The check to learn whether the specified method exists in the Enterprise Bean is not implemented.

(b) Key beginning with `ejbserver.deploy`

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Contents	Specifiable value	Default	VR	Related information
ejbserver.deploy.annotations.load_check.enabled	<p>Specify whether to ignore an exception that occurs when the class is loaded for acquiring the annotation information.</p> <p>If you specify <code>true</code>:</p> <p>An error will occur and the processing will be interrupted.</p> <p>If you specify <code>false</code>:</p> <p>The exception log will be acquired and the processing will continue.</p>	<p>The strings that you can specify are as follows:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>false</code>	08-00	<i>14.3 Classes to be loaded and the class path required for loading the classes in the Common Container Functionality Guide</i>

(c) Key beginning with `ejbserver.logger`

Key name	Contents	Specifiable value	Default	VR
<code>ejbserver.logger.enabled.*</code>	Specify the log level output by a server management command. If you specify only one log level, only the log of the applicable log level is output. When specifying multiple log levels, demarcate each level-name string with a comma (,). Specify either one or more from among Error, Warning, Information and Debug. Normally, use the default value.	Specify the following strings using a comma (,) as a delimiter: <ul style="list-style-type: none"> • Error • Warning • Information • Debug 	Error, Warning	06-00

(d) Keys beginning with `ejbserver.naming`

Key name	Contents	Specifiable value	Default	VR
<code>ejbserver.naming.host</code>	Specify the host name or the IP address that the CORBA Naming Service invokes during the execution of a server management command. When using the name switching functionality, do not use "localhost" as the host name. Specify the host name or the IP address that the CORBA Naming Service invokes. If the CORBA Naming Service is used in the automatic invocation mode (<code>ejbserver.naming.startupMode=automatic</code> or <code>inprocess</code>), specify either the default value ("localhost"), or the host name or IP address that starts the J2EE server.	Specify one of the following values: <ul style="list-style-type: none"> • IPv4 address • Host name (String within 255 characters specified using single byte alphanumeric characters or symbols (_.-)) • @myhost 	localhost	06-00
<code>ejbserver.naming.port</code>	While executing the server management command, specify the port number of the CORBA Naming Service used as the Naming Service by the J2EE server.	Specify the value using an integer from 1 to 65535.	900	06-00
<code>ejbserver.naming.protocol</code>	Specify the protocol for accessing the CORBA Naming Service during the execution of the server management commands. Currently, only <code>corbaname</code> is supported. You can, however, perform operations even with the protocols (<code>iioploc</code> or <code>iiopname</code>) that were in use in the older versions.	The input is not limited.	corbaname	06-00

(e) Key beginning with `ejbserver.rmi`

Key name	Contents	Specifiable value	Default	VR
<code>ejbserver.rmi.request.timeout</code>	Specify an integer from 0 to 86400 for the communication timeout period (units: seconds) when a server management command could not return a response due to a communication failure. If you specify 0, the timeout does not occur. If you specify a value that exceeds 86400, a warning message is output and the default value is applied. If you specify a value smaller than the value of the <code>ejbserver.deploy.exclusive.lockAliveInterval</code> user property key for J2EE servers, a timeout becomes likely to occur during	Specify the value using an integer from 0 to 86400.	180 (seconds)	06-00

Key name	Contents	Specifiable value	Default	VR
	<p>execution of a server management command. Therefore, we recommend that you specify a value larger than the value of the <code>ejbserver.deploy.exclusive.lockAliveInterval</code> user property key for J2EE servers.</p> <p>Note that using the following commands, when the application does not terminate within the time period specified in the <code>-t</code> option, this key becomes the timeout value for the period until the forced termination processing is completed:</p> <ul style="list-style-type: none"> • <code>cjstopapp</code> • <code>cjreplaceapp</code> • <code>cjreloadapp</code> 			

(f) Keys beginning with vbroker

Key name	Contents	Specifiable value	Default	VR
<code>vbroker.orb.htc.tracePath</code>	<p>Specify a range of 1 to 210 bytes for the path of the output destination of Cosminexus TPBroker trace files. You need to create <code>comtrc</code> and <code>mdltrc</code> as the subdirectories of the specified path beforehand. In the case of default output destination, the subdirectories <code>comtrc</code> and <code>mdltrc</code> are automatically created when the server is started for the first time. Use a forward slash (/) as the delimiter in the directory path. For example, if <code>C:\temp\work</code> is set as the working directory, specify as follows: (Example of specification) <code>vbroker.orb.htc.tracePath=c:/temp/work</code></p>	The input is not limited.	<p><i>Cosminexus-installation-directory</i>\CC\admin\logs\TPB\logj or /opt/ Cosminexus/CC/admin/ logs/TPB/logj</p>	06-00
<code>vbroker.se.iiop_tp.scm.iioptp.lis.tener.port</code>	<p>You can specify any value to fix the port that receives messages from the J2EE server. Make sure that the port number is not repeated in other programs. The same key name exists in the user property file for J2EE servers. Make sure that the port number is not repeated. If this property is not set, Cosminexus TPBroker sets a random value.</p>	The input is not limited.	0	06-50

(6) Examples of coding

```
ejbserver.naming.host=localhost
ejbserver.naming.port=900
```

6

Files Used in Cosminexus JMS Provider

This chapter describes the formats, storage locations, and functionality of the files used in Cosminexus JMS Provider and the keys that you can specify in the files.

6.1 List of files used in Cosminexus JMS Provider

The following table lists and describes the files used in Cosminexus JMS Provider:

Table 6–1: List of files used in Cosminexus JMS Provider

File name	Classification	Overview	Reference
<code>admin.properties</code>	Management command properties file	Specifies the log output of management commands.	6.2.1
<code>commonconfig.properties</code>	CJMSP broker common properties file	Specifies all system properties of CJMSP broker in a batch.	6.2.2
<code>config.properties</code>	CJMSP broker individual properties file	Specifies system properties of CJMSP broker individually.	6.2.3

6.2 Details of files used by Cosminexus JMS Provider

6.2.1 admin.properties (Management command properties file)

(1) Format

Specify the key as follows:

```
Key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- If the value specified is not within the range, the value outside the range is used. If a value is not specified, the previous value is used. In such cases, a warning message appears on the console.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\cjmsp\var\admin\config\
- In UNIX
/opt/Cosminexus/CC/cjmsp/var/admin/config/

Note that hereafter *Cosminexus-installation-directory*\CC\cjmsp (In Windows) or /opt/Cosminexus/CC/cjmsp (In UNIX) are represented as <CJMSP_HOME>.

(3) Functionality

Specifies the log output of management commands.

Note that property values are validated even before initialization of the log. If an invalid value is specified as a property in this file, the log contents are output only to the console and not to the log file.

To change the following properties, the changed contents are enabled when all log files under <CJMSP_HOME>\var\admin\log directory (In Windows) or <CJMSP_HOME>/var/admin/log directory (In UNIX) are deleted.

- admin.logger.ExceptionLogFile.fileenum
- admin.logger.ExceptionLogFile.filesize
- admin.logger.MessageLogFile.fileenum
- admin.logger.MessageLogFile.filesize

(4) Specifiable keys

The following are the keys that can be specified. Note that "If value is not specified" in the table refers to the value of a non-specified key, and "VR" refers to the version of Application Server for which the keys are introduced or changed.

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>admin.logger.ExceptionLogFile.file num</code>	Specify the maximum number of log files to be created.	1 to 16	2	2	08-50
<code>admin.logger.ExceptionLogFile.file path</code>	Specify the absolute path of the storage location of the log file. The file is created automatically with the name, <code>cjmsadmin_errN.log</code> . <code>N</code> refers to the number of log files. If the specified directory does not exist, Cosminexus JMS Provider displays a warning message and default contents are applied. Also, if the default directory does not exist, Cosminexus JMS Provider creates a default directory and enables its use. Specify a path with read and write permission. If a path with only read permission is specified, the default contents are applied. If the default path has only read permission, the operation fails. For details about the characters and length of the path that can be specified as the directory name, see the limitations of OS to be used. Note that if you specify <code>\</code> in the path, specify as <code>\\</code> and escape.	path-name	<ul style="list-style-type: none"> • In Windows <CJMSP_HOME>\var\admin\log • In UNIX <CJMSP_HOME>/var/admin/log 	<ul style="list-style-type: none"> • In Windows <CJMSP_HOME>\var\admin\log • In UNIX <CJMSP_HOME>/var/admin/log 	08-50
<code>admin.logger.ExceptionLogFile.file size</code>	Specify the maximum value for the log file size in bytes.	8192 to 4194304	1048576	1048576	08-50
<code>admin.logger.MessageLogFile.file num</code>	Specify the maximum value of the number of files to be created.	1 to 16	2	2	08-50
<code>admin.logger.MessageLogFile.file path</code>	Specify the absolute path of the storage location of the log file. The file is created automatically with the name, <code>cjmsadmin_msgN.log</code> . <code>N</code> refers to the number of log files. If the specified directory does not exist, Cosminexus JMS Provider displays a warning message and default contents are applied. Also, if the default directory does not exist,	path-name	<ul style="list-style-type: none"> • In Windows <CJMSP_HOME>\var\admin\log • In UNIX <CJMSP_HOME>/var/admin/log 	<ul style="list-style-type: none"> • In Windows <CJMSP_HOME>\var\admin\log • In UNIX <CJMSP_HOME>/var/admin/log 	08-50

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
	<p>Cosminexus JMS Provider creates a default directory and enables its use.</p> <p>Specify a path with read and write permission. If a path with only read permission is specified, the default contents are applied. If the default path has only read permission, the operation fails.</p> <p>For details about the characters and length of the path that can be specified as the directory name, see the limitations of OS to be used.</p> <p>Note that if you specify \ in the path, specify as \\ and escape.</p>				
<code>admin.logger.MessageLogFile.filesize</code>	Specify the maximum value of the log file size.	8192 to 4194304	1048576	1048576	08-50
<code>admin.logger.MessageLogFile.trace.level</code>	Specify the log level. Information is recorded in the log file on the basis of the specified level.	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> • ERROR • WARNING • INFO 	ERROR	ERROR	08-50

6.2.2 commonconfig.properties (CJMSP broker common properties file)

(1) Format

Specify the key as follows:

```
Key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- If the value specified is not within the range, the value outside the range is used. If a value is not specified, the previous value is used. In such cases, a warning message appears on the console.

(2) File storage location

- In Windows
Cosminexus-installation-directory\CC\cjmsp\lib\props\broker\

- In UNIX
/opt/Cosminexus/CC/cjmsp/lib/props/broker/

(3) Functionality

Describes the property files for batch setting of all CJMSP broker properties.

If the contents of the file are changed while CJMSP broker is running, the changed contents are applied and enabled when CJMSP broker restarts.

(4) Specifiable keys

The following are the keys that can be specified. For details, see [6.2.3 config.properties \(CJMSP broker individual properties file\)](#).

(a) Connection service

The following are the keys that can be specified for the connection service. For details, see [6.2.3\(4\)\(a\) Connection service](#).

- `imq.hostnamekey`

(b) Persistence service

The following are the keys that can be specified for the persistence service. For details, see [6.2.3\(4\)\(b\) Persistence service](#).

- `imq.persist.file.sync.enabledkey`

(c) Settings for creating destinations automatically

The following are the keys that can be specified for creating destinations automatically. For details, see [6.2.3\(4\)\(c\) Settings for creating destinations automatically](#).

- `imq.autocreate.destination.maxNumMsgskey`
- `imq.autocreate.destination.maxTotalMsgByteskey`
- `imq.autocreate.queue.consumerFlowLimitkey`
- `imq.autocreate.topic.consumerFlowLimitkey`

(d) Setting monitoring properties

The following shows the keys that can be set for monitoring properties. For details, see [6.2.3\(4\)\(d\) Setting monitoring properties](#).

- `imq.metrics.intervalkey`

(e) CJMSP broker log properties

The following are the keys that can be set for CJMSP broker log properties. For details, see [6.2.3\(4\)\(e\) CJMSP broker log properties](#).

- `broker.logger.ExceptionLogFile.filenamekey`
- `broker.logger.ExceptionLogFile.filesizekey`

- `broker.logger.MessageLogFile.filenamekey`
- `broker.logger.MessageLogFile.filesizekey`
- `broker.logger.MessageLogFile.trace.levelkey`

6.2.3 config.properties (CJMSP broker individual properties file)

(1) Format

Specify the key as follows:

```
Key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- If the value specified is not within the range, the value outside the range is used. If a value is not specified, the previous value is used. In such cases, a warning message appears on the console.

(2) File storage location

The default storage locations are as follows. Note that you can change the storage location of the `var` directory in the `-varhome` option of the `cjmsbroker` command.

- In Windows
`Cosminexus-installation-directory\CC\cjmsp\var\instances\<CJMSP broker instance name>\props\`
- In UNIX
`/opt/Cosminexus/CC/cjmsp/var/instances/<CJMSP broker instance name>/props/`

Hereafter, `Cosminexus-installation-directory\CC\cjmsp` (In Windows) or `/opt/Cosminexus/CC/cjmsp` (In UNIX) is represented as `<CJMSP_HOME>`.

(3) Functionality

Specify the system properties to execute an individual CJMSP broker.

If different values are specified for `config.properties` and `commonconfig.properties`, then the priority is given to the value of `config.properties`.

If the contents of the file are changed while CJMSP broker is running, the changed contents are applied and enabled when CJMSP broker restarts.

(4) Specifiable keys

The following are the keys that can be specified. Note that "If value is not specified" in the table refers to the value of a non-specified key, and "VR" refers to the version of Application Server for which the keys are introduced or changed.

(a) Connection service

Properties related to the connection service are as follows:

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.admin.tcp.port</code>	<p>Specify the port number for the <code>admin</code> service.</p> <p>If a firewall is used for establishing a connection with CJMSP broker, you must use this property to specify a static port number.</p> <p>In the following cases, the port mapper allocates a dynamic port number.</p> <ul style="list-style-type: none"> • If 0 is specified • If a user specifies a value outside the range (above 65535) <p>If -1 or 1 to 1024 is specified, the operation is not guaranteed.</p>	0, 1025 to 65535	0	0	08-50
<code>imq.hostname</code>	<p>Specify a default host name or IP address for all connection services.</p> <p>Hitachi recommends you to specify this property when Cosminexus JMS Provider is to be installed in multiple servers.</p> <p>If an invalid character string is specified in the host name, CJMSP broker cannot start. If localhost or loopback address (127.*.*) is specified, remote connection to CJMSP broker is not enabled.</p> <p>Note that if a value is not specified for this property, (if specified up to <code>imq.hostname=</code>), when CJMSP broker starts, it connects to the CJMSP broker of the local host. At this stage, host name is not output. For example, if a value is not specified in this property, but 7676 is specified in <code>imq.portmapper.port</code>, when CJMSP broker starts, :7676 is output.</p>	--	--	host-name	08-50
<code>imq.jms.tcp.port</code>	<p>Specify the port number for the <code>jms</code> service.</p> <p>If a firewall is used for establishing a connection with CJMSP broker, you must use this property to specify a static port number.</p> <p>In the following cases, the port mapper allocates a dynamic port number.</p> <ul style="list-style-type: none"> • If 0 is specified • If a user specifies a value outside the range (above 65535) <p>If -1 or 1 to 1024 is specified, the operation is not guaranteed.</p> <p>If you specify a port number that is already in use, the broker starts successfully, but the <code>jms</code> service cannot be used. If you execute the <code>cjmsicmd list svc</code> command in this state, the status of the <code>jms</code> service is displayed as UNKNOWN. UNKNOWN indicates that the service is not running or is unavailable.</p>	0, 1025 to 65535	0	0	08-50

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.portmapper.port</code>	Specify the port number of the port mapper for the CJMSP client to connect to CJMSP broker. If multiple CJMSP broker instances start on the same host, different port mapper port numbers must be specified for each port mapper.	1025 to 65535	7676	7676	08-50

Legend:

--: Not applicable.

(b) Persistence service

Properties related to persistence service are as follows:

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.persist.file.sync.enabled</code>	Specify whether to execute synchronous or asynchronous write process in the data file on memory. If <code>true</code> is specified, synchronous write process is executed. In such cases, loss of data is prevented if a system error occurs, but process efficiency is affected. If <code>false</code> is specified, asynchronous write process is executed. Hitachi recommends you to execute efficiency tests and then decide which one to specify. If <code>javax.jms.DeliveryMode.PERSISTENT</code> is specified as the delivery mode in the application, we recommend that you specify <code>true</code> for this property.	The values that can be specified are as follows: <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	false	false	08-50

(c) Settings for creating destinations automatically

Properties related to settings for creating destinations automatically are as follows:

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.autocreate.destination.maxNumMsgs</code>	Specify the maximum value of the number of messages not received. If -1 or 0 is specified, the number of messages become unlimited.	-1 to 2147483647	100000	100000	08-50

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.autocreate.destination.maxTotalMsgBytes</code>	Specify the maximum byte value of the total memory size for messages not received. To specify units, add the following character strings at the end of the value. If a unit is not specified, it is considered as byte. <ul style="list-style-type: none"> • Byte: b • Kilobyte: k • Megabyte: m If -1 or 0 is specified, the number of messages become unlimited.	-1 to 2147483647 (unit: bytes)	10m	10m	08-50
<code>imq.autocreate.queue.consumerFlowLimit</code>	Specify the maximum value of the number of messages to be delivered to the queue consumer in the same batch. If -1 is specified, the number of messages are unlimited.	The values that can be specified are as follows: <ul style="list-style-type: none"> • -1 • Integers from 1 to 2147483647 	100	100	08-50
<code>imq.autocreate.topic.consumerFlowLimit</code>	Specify the maximum value of the number of messages to be delivered to the topic consumer in the same batch. If -1 is specified, the number of messages are unlimited.	The values that can be specified are as follows: <ul style="list-style-type: none"> • -1 • Integers from 1 to 2147483647 	1000	1000	08-50

(d) Setting monitoring properties

Properties related to monitoring settings are as follows:

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.metrics.interval</code>	Specify the write time of the matrix information in the logger and console, in units of seconds. If 0 is specified, the matrix is not output.	0 to 2147483647	0	0	08-50

(e) CJMSP broker log properties

Properties related to CJMSP broker log are as follows:

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>broker.logger.ExceptionLogFile.filenum</code>	Specify the maximum value of the number of files to be created.	1 to 16	2	2	08-50
<code>broker.logger.ExceptionLogFile.filesize</code>	Specify the maximum value of the log file size. If the maximum value exceeds, a new file is created and the contents of the log file are output to the new file.	8192 to 4194304	1048576	1048576	08-50
<code>broker.logger.MessageLogFile.filenum</code>	Specify the maximum value of the number of files to be created.	1 to 16	2	2	08-50
<code>broker.logger.MessageLogFile.filesize</code>	Specify the maximum value of the log file size. If the maximum value exceeds, the contents of the log file are output to the new file.	8192 to 4194304	1048576	1048576	08-50
<code>broker.logger.MessageLogFile.trace.level</code>	Specify the log level. Information is output to the log file on the basis of the specified level.	The following strings can be specified: <ul style="list-style-type: none"> • ERROR • WARNING • INFO 	ERROR	ERROR	08-50

(f) Other properties

Other properties are as follows:

Key name	Contents	Specifiable value	If a value outside the range is specified	If the value is not specified	VR
<code>imq.instanceconfig.version</code>	This property is used for internal processes. Do not change the settings.	--	--	--	08-50

Legend:

--: Not applicable.

7

Files Used with CTM

This chapter describes the formats, storage locations, and functionality of files used in CTM, and the keys that can be specified in these files.

7.1 List of files used in CTM

The following table lists and describes the files used in CTM.

Table 7–1: List of files used in CTM

File name	Classification	Overview	Reference
(Optional)#	CTM user environment variable definition file	This file specifies the environment variables required for executing the <code>ctmstart</code> command (which starts the CTM daemon).	7.2.1
(Optional)#	CTM command option file	This file is used to specify, in advance, the arguments (command options) that are used to automatically start the CTM regulator when the <code>ctmstart</code> command (start the CTM daemon) is executed.	7.2.2

#

In Windows, you can use alphanumeric characters, periods (.), backslashes (\), colons (:), plus signs (+), or hyphens (-). In UNIX, you can use alphanumeric characters, periods (.), forward slashes (/), plus signs (+), or hyphens (-).

To use CTM to perform request scheduling and load balancing, you must also specify information in the `usrconf.properties` file for J2EE servers, in addition to the files shown in [Table 7-1](#). In the `usrconf.properties` file, specify whether to use CTM, the CTM domain name, the CTM identifier of the CTM daemon, and the host name used by CTM. For details about the CTM keys of the `usrconf.properties` file for J2EE servers, see [2.2.3\(5\)\(i\) Keys beginning with `ejbserver.ctm`](#).

7.2 Details of files used for CTM

7.2.1 CTM user environment variable definition file

(1) Format

Specify the file in the following format:

environment-variable-name=value

- You cannot omit the environment variable name, the equal sign (=), or the value.
- The characters from the beginning of a line to the character immediately before the first equal sign (=) are regarded as the environment variable name.
- The characters from the character immediately after the first equal sign to the character immediately before the end of the line or file are regarded as the value.
- A line beginning with a hash mark (#) is regarded as a comment. If there is a hash mark in the middle of the line, characters from the character after the hash mark to the end of the line are regarded as a comment. Spaces and tabs specified before a hash mark are ignored.
- You cannot specify a hash mark (#) as the value of an environment variable.
- To specify one definition on multiple lines, put a continuation character (\) immediately before the line break. Spaces and tabs immediately before the continuation character are ignored. If there is a continuation character in the middle of the line, the characters from the character after the continuation character to the end of the line are regarded as a comment. For this reason, to specify a continuation character, specify it at the end of the line.
- If the specified environment variable already exists, the value of that environment value will be overwritten with the specified value. If the specified environment variable does not already exist, it will be added.

(2) File storage location

You can specify a storage location and file name of your choice. You can use the following characters in the file name:

- In Windows
Alphanumeric characters, periods (.), backslashes (\), colons (:), plus signs (+), and hyphens (-)
- In UNIX
Alphanumeric characters, periods (.), forward slashes (/), plus signs (+), and hyphens (-)

(3) Functionality

This file is used to specify the environment variables required for executing the `ctmstart` command (start the CTM daemon).

(4) Specifiable keys

You can specify any environment variable name except for the following:

- Environment variable names beginning with `CTM` or `ctm`

(5) Examples of coding

- In Windows

```
# Comment line
LANG=ja_JP.SJIS                # Comment.
C:\Program Files\HITACHI\Cosminexus\CTM\lib\ctmj2sv.jar:  \
C:\Program Files\HITACHI\Cosminexus\java\classes.zip      # Continued li
ne
```

- In UNIX

```
# Comment line
LANG=ja_JP.SJIS                # Comment
CLPATH=/opt/Cosminexus/CTM/lib/ctmj2sv.jar:  \
/opt/java/lib/classes.zip        # Continued line
```

(6) Notes

- You cannot specify an environment variable name beginning with `CTM` or `ctm`.
- You can specify a string consisting of alphanumeric characters or underscores (`_`) for an environment variable name.
- You cannot specify spaces or tabs before the environment variable name. You must specify the environment variable name from the beginning of the line.
- You cannot specify spaces or tabs between the environment variable name and the equal sign (`=`) or between the equal sign and the environment variable definition.
- If the environment variable definition file contains `%AAA%` (in Windows) or `$AAA` (in UNIX), the string `%AAA%` or `$AAA` is treated as a character string and is not expanded to the environment variable `AAA`.
- To specify a blank line, which does not contain any environment variable definition or comment, specify a line break code only (without spaces or tabs).
- The definition is considered invalid in the following cases:
 - The environment variable definition does not contain an equal sign (`=`).
 - A line begins or ends with an equal sign (`=`).
 - An environment variable name begins with `CTM` or `ctm`.
 - A line contains only spaces or tabs.
- When specifying environment variables in Windows, note the following regarding the use of continuation characters (`\`):
 - Make sure that a backslash (`\`) used to specify a path name is not confused with a continuation character (`\`).
 - Make sure that necessary spaces are not omitted.

The following are examples of specifications, where `<LF>` represents a line break code.

Example 1: Specifying `c:\` for the environment variable `ROOT_PATH`

Item	Incorrect example	Correct example
Coding of the CTM user environment variable definition file	<pre>ROOT_PATH=c:\<LF> ROOT_PORT=18000<LF></pre>	<pre>ROOT_PATH=c:\#\<LF> ROOT_PORT=18000<LF></pre>
Specified environment variable	<pre>ROOT_PATH=c:ROOT_PORT=18000</pre>	<pre>ROOT_PATH=c:\ ROOT_PORT=18000</pre>

In the incorrect example, the backslash (\) in `c:\` is misinterpreted as a continuation character. In such cases, specify a hash mark (#) immediately after the backslash (\) so that the backslash will not be treated as a continuation character.

Example 2: Specifying `C:\Program Files\Cosminexus\CTM` for the environment variable `CTMDIR`

Item	Incorrect example	Correct example
Coding of the CTM user environment variable definition file	<code>CTMDIR=C:\Program \<LF>Files\Cosminexus\CTM<LF></code>	<code>CTMDIR=C:\Program Files\<LF>\Cosminexus\CTM<LF></code>
Specified environment variable	<code>CTMDIR=C:\ProgramFiles\Cosminexus\CTM</code>	<code>CTMDIR=C:\Program Files\Cosminexus\CTM</code>

In the incorrect example, the space in `Program Files` is omitted because it is specified immediately before the continuation character. Revise the specification so that the continuation character is not directly preceded by a space.

7.2.2 CTM command option file

(1) Format

Specify the file in the following format:

argument value

(2) File storage location

You can specify a storage location and file name of your choice. You can use the following characters in the file name:

- In Windows
Alphanumeric characters, periods (.), backslashes (\), colons (:), plus signs (+), or hyphens (-)
- In UNIX
Alphanumeric characters, periods (.), forward slashes (/), plus signs (+), or hyphens (-)

(3) Functionality

This file is used to specify, in advance, the arguments (command options) that are used to automatically start the CTM regulator when the `ctmstart` command (start the CTM daemon) is executed. When this file is specified for the `-CTMRegOption` option of the `ctmstart` command, the CTM regulator automatically starts based on the information specified in this file.

Note that, when the `-CTMRegStart` option is not specified, the specification of the `-CTMRegOption` option and the information specified in this file are ignored.

(4) Specifiable keys

You can specify arguments of the `ctmregltd` command. For details about the `ctmregltd` command, see *ctmregltd (start CTM regulator)* in the *uCosminexus Application Server Command Reference Guide*. If you do not specify this file, the CTM regulator inherits the values of the arguments (excluding the arguments `"-CTMPort"` and `"-CTMEjbPort"`) that were specified for the `"ctmstart"` command as the default values.

(5) Example of coding

```
-CTMClientConnectCount 64
```

(6) Notes

- You can use alphanumeric characters, spaces, hyphens (-), periods (.), and forward slashes (/) in the command option file.
- Do not specify anything other than command options.

8

Files Used with Cosminexus Manager

This chapter describes the storage location, functionality and format of the files used with Cosminexus Manager and the keys that you can specify in the files.

8.1 List of files used with Cosminexus Manager

The following table lists the files used with Cosminexus Manager:

Table 8–1: List of files used with Cosminexus Manager

File name	Classification	Overview	Reference
<code>adminagent.properties</code>	Administration Agent property file	Specify the settings related to the Administration agent.	8.2.1
<code>AdminAgentrc</code>	Setup file for automatic start of Administration Agent	Specify the settings for automatic start of Administration Agent. Only Windows and Linux are the target OSs.	8.2.2
<code>adminagentuser.cfg</code>	Option definition file for Administration Agent	Specify the invocation options for the JavaVM that executes the Administration Agent.	8.2.3
<code>adminagent.xml</code>	Administration Agent settings file	Specify the settings for starting up the logical server or updating the settings files on behalf of the system administrator.	8.2.4
<code>mngagent.actual-server-name.properties</code>	Management Agent property file	Specify the settings for defining the operations of the Management Agent.	8.2.5
<code>mserver.properties</code>	Management Server environment settings file	Specify the settings for the port number used by the Management Server.	8.2.6
<code>mserver.cfg</code>	Management Server option definition file	Specify the system properties for the Management Server.	8.2.7
<code>mserverenv.cfg</code>	Management Server environment variable definition file	Set the environment variables for operating the Management Server.	8.2.8
<code>manager.cfg</code>	Manager settings file	Specify the shared Manager settings.	8.2.9
<code>maction.properties</code>	Property file for execution of Management actions	Define the Management action corresponding to the message ID reported in the Management event.	8.2.10
(Optional)	Property file for issuing Management events	Define the operations for issuing Management events.	8.2.11
(Optional)	Message ID list file for issuing Management events	Define the message IDs that are reported as Management events.	8.2.12
(Optional)	Backup scope definition file for the Management Server management files	Define the target file saved with the <code>mstrexport</code> command.	8.2.13
<code>.mngsvrutilrc</code>	Client-side definition file of the <code>mngsvrutil</code> command	Specify the default values for the <code>mngsvrutil</code> command options.	8.2.14
<code>mngsvrutil.properties</code>	Server-side definition file of the <code>mngsvrutil</code> command	Specify the settings for the execution environment of the <code>mngsvrutil</code> command.	8.2.15
<code>mngsvrutilcl.properties</code>	Client-side shared definition file of the <code>mngsvrutil</code> command	Specify the shared definition settings for the default values of the <code>mngsvrutil</code> command options.	8.2.16
<code>.mngsvrmonitorrc</code>	Settings file of the monitor startup command for JP1/IM integration	In the case of integrating with JP1/IM, specify the settings required for starting up the Management Server operation portal from the JP1/IM screen. This file is for Windows.	8.2.17

File name	Classification	Overview	Reference
setup.cfg	Setup file for the Setup Wizard	Specifies the Setup Wizard-related settings.	8.2.18
(Optional)	Logical user server definition file of the mngsvrutil command	Define the contents of the logical user server to be added.	8.2.19
<ul style="list-style-type: none"> • mserver.jplevent.system.mapping.properties • manager.jplevent.system.mapping.properties • manager.logical-server-name.jplevent.system.mapping.properties 	System log message mapping file for JP1/IM integration	Define the mapping between the Cosminexus system messages and the criticality of JP1 events.	8.3

8.2 Details of files used by Cosminexus Manager

8.2.1 adminagent.properties (Administration Agent property file)

(1) Format

J2SE property file format.

The adminagent.properties is a property file of the Administration Agent.

If the format does not conform to Java specifications, a failure might occur when the Management Server starts.

Example:

When an invalid Unicode escape sequence is included (the character string that follows the `\u` portion is not a valid Unicode hexadecimal value)

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config/`

(3) Functionality

Specify the settings related to the Administration agent.

(4) Specifiable keys

The specifiable keys and default values are described below. Note that "Default" refers to the value or operation assumed when the key is not specified. "VR" refers to the Application Server version introduced or changed by the key.

Key name	Contents	Specifiable value	Default value	VR
<code>{adminagent.adapter.allowedHosts}</code>	<p>Specify a host name or an IP address that can access to the server.</p> <p>To specify multiple IP addresses, demarcate using commas (,) and you do not insert any spaces. You can specify the IP address as a regular expression using meta characters. When an IP address is specified as a regular expression, the Administration Agent uses an available local IP address that matches the expression. If multiple IP addresses exist, all the IP addresses that match the expression will be granted the access permission.</p> <p>Note that when you specify an IP address as a regular expression, you cannot specify multiple values using commas (,).</p>	<p>The values that can be specified are as follows:</p> <ul style="list-style-type: none">• Host name• IPv4 address	None	05-05
<code>adminagent.adapter.bind_host</code>	<p>Specify the host name or the IP address that will be used for communicating with the Administration Agent. You can choose any of the IP addresses for communication, when using Administration Agent on a host that has multiple physical network interfaces or a host that has multiple logical IP addresses assigned for a single physical network interface.</p> <p>If an invalid value is specified, the Administration Agent will terminate abnormally.</p>	<p>The values that can be specified are as follows:</p> <ul style="list-style-type: none">• Host name• IPv4 address	None	06-00

Key name	Contents	Specifiable value	Default value	VR
	You can specify the IP address as a regular expression using meta characters. When the IP address is specified as a regular expression, the Administration Agent uses an available local IP address that matches the expression. ^{#1}			
adminagent.adapter.port	Specify port numbers used by the server functionality.	Specify the value using an integer from 1 to 65535.	20295	05-05
adminagent.cluster.localaddress.check	Specify whether to stop the standby node during node switching in the Application Server. During node switching in the Application Server, if the logical server and Administration Agent in the standby node are not stopped, this key will stop the logical server and Administration Agent. If you specify true: The running logical server and Administration Agent in the standby node are stopped during the node switching in the Application Server. The local address is checked and if the cluster IP address is not specified, the logical server will be stopped and then the Administration Agent will be stopped. If you specify false: The running logical server and Administration Agent in the standby node are not stopped during the node switching in the Application Server.	Specify one of the following values: • true • false	false	07-10
adminagent.finalization.stop_servers	Specify whether to stop the logical server when the Administration Agent terminates. If you specify true: All the logical servers will be stopped in the Administration Agent termination processing. If you specify false: The logical servers will not be stopped in the Administration Agent termination processing.	Specify one of the following values: • true • false	false	06-50
adminagent.forcestop.threaddump	Specify whether to output the thread dump when the J2EE server is terminated forcefully. J2EE servers are the only logical servers to which the above setting are applicable. If you specify true: Thread dump will be output. In such cases, the forced termination processing is same as the case when the <code>cjstopsv</code> command is executed with the <code>-fd</code> option. ^{#2} If you specify false: Thread dump will not be output.	Specify one of the following values: • true • false	false	06-50
adminagent.forcestop.threaddump.interval	Specify an integer from 1 to 2147483647 (unit: seconds) for the interval to confirm the completion of thread dump output, when settings are specified to output thread dump during the forced termination of the J2EE server. When the value outside the range of 1 to 2147483647 is specified, the default value will be set.	Specify the value using an integer from 1 to 2147483647.	1	06-50
adminagent.forcestop.threaddump.timeout	Specify an integer from -1 to 2147483647 (unit: seconds) for the output wait time for thread dump, crash dump, or core output when <code>Do not monitor</code> is set for Forced stop monitoring time in the settings for starting and stopping the J2EE server. If you specify -1, the system waits until thread dump, crash dump, or core output finishes. When you specify the value outside the range of -1 to 2147483647, the default value will be set.	Specify the value using an integer from -1 to 2147483647.	45	06-50

Key name	Contents	Specifiable value	Default value	VR
	If the specified time passes and the thread dump, crash dump, or core output is not yet finished, the J2EE server is forcibly stopped. ^{#2}			
<code>adminagent.hws.group</code>	When using Cosminexus HTTP Server, specify the group name of the user starting Cosminexus HTTP Server. When omitted, start with the group name of the Administration Agent. This key is for UNIX. ^{#3}	Group name	None	08-00
<code>adminagent.hws.owner</code>	When using Cosminexus HTTP Server, specify the name of the user starting Cosminexus HTTP Server. When omitted, start with the user name of the administration agent. Note that this key is used for UNIX. ^{#3}	User name	None	08-00
<code>adminagent.hws.sys_cmd.abnormal_end.traceinfo</code>	Specify whether to collect the Web server internal trace, when executing the command for error detection. If you specify <code>true</code> : The internal trace will be collected. If you specify <code>false</code> : The internal trace will not be collected.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>true</code>	07-00
<code>adminagent.hws.watch.method</code>	Specify the HTTP method for checking the operation of Cosminexus HTTP Server when 2 is specified in <code>adminagent.hws.watch.level</code> . For the specifiable method, you can specify either "HEAD" or "OPTIONS". ^{#4} If you specify "HEAD": Accesses the URL specified in the key <code>adminagent.hws.watch.url</code> and checks whether returns any response. If you specify "OPTIONS": Checks whether the Web server can receive HTTP methods. If you specify a forward slash (/) as <i>path</i> in the <code>ProxyPass</code> directive, all URLs are redirected to the web container of the J2EE server. In this case, therefore, we recommend that you specify <code>OPTIONS</code> so that URL access does not occur.	Specify one of the following values: • <code>HEAD</code> • <code>OPTIONS</code>	<code>HEAD</code> ^{#5}	06-50
<code>adminagent.hws.watch.url</code>	Specify the URL for confirming the operations of Cosminexus HTTP Server, when "HEAD" is specified in <code>adminagent.hws.watch.method</code> . The Administrator Agent will determine the status of Hitachi Web Server from the response of this URL, so specify a URL that is actually accessible. Note that you specify the URL as an absolute path starting with "http" or as a relative path from the root context. When building multiple Web servers on the same host, specify the URL as a relative path. (Example of specification) When you specify <code>http://HostA:80/index.html</code> : <code>adminagent.hws.watch.url=http://HostA:80/index.html</code> When you specify <code>http://localhost:port-number/index.html</code> (in a multiple server configuration): <code>adminagent.hws.watch.url=index.html</code>	URL	Root context (<code>http://localhost:port-number/</code>)	06-00
<code>adminagent.j2ee.process.console_event.enabled</code>	Specify whether to display the console output information of the J2EE server to the Eclipse Plug-in using Management Server. If you specify <code>true</code> : The console output information will be output to the Eclipse Plug-in using Management Server. If you specify <code>false</code> : The console output information will not be output to the Eclipse Plug-in using Management Server.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>false</code>	07-10

Key name	Contents	Specifiable value	Default value	VR
	<p>The key <code>adminagent.process.consolelog.enabled</code> must be set to true.</p> <p>Since this consumes resources, Hitachi recommends that the key be set to false in operations that do not use Eclipse Plug-ins using Management Server.</p>			
<code>adminagent.j2ee.process.consolelog.enabled</code>	<p>Specify whether to output the console output information for the J2EE server in the console log.</p> <p>If you specify <code>true</code>:</p> <p>The console output information will be output to the console log.</p> <p>If you specify <code>false</code>:</p> <p>The console output information will not be output to the console log.</p> <p>The key <code>adminagent.process.consolelog.enabled</code> must be set to true.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>false</code>	07-10
<code>adminagent.j2ee.sys_cmd.abnormal_end.javatrace</code>	<p>Specify whether to acquire J2EE server stack trace when executing the command for error detection.</p> <p>If you specify <code>true</code>:</p> <p>The stack trace will be acquired.</p> <p>If you specify <code>false</code>:</p> <p>The stack trace will not be acquired.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	07-00
<code>adminagent.j2ee.sys_cmd.abnormal_end.threaddump</code>	<p>Specify whether to collect the J2EE server thread dump when executing the command for error detection.</p> <p>If you specify <code>true</code>:</p> <p>The J2EE server thread dump will be collected.</p> <p>If you specify <code>false</code>:</p> <p>The J2EE server thread dump will not be collected.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	06-50
<code>adminagent.jp1event.event_server_name</code>	<p>Specify a value same as the address set for the <code>ports</code> key in the event server settings file (<code>conf</code>) of the JP1/Base event service that is being used. If multiple addresses are specified for the <code>ports</code> key, choose any one of the specified addresses. When using an event service that has the value '0.0.0.0' (default value) specified for the <code>ports</code> key address, either omit this key or specify the host name of the local machine or <code>localhost</code>.</p>	Host name or IPv4 dotted notation	<code>localhost</code>	06-70
<code>adminagent.jp1event_enabled</code>	<p>Specify whether JP1 events will be issued from the Administration Agent.</p> <p>If you specify <code>true</code>:</p> <p>JP1 events will be issued.</p> <p>If you specify <code>false</code>:</p> <p>JP1 events will not be issued.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>false</code>	06-70
<code>adminagent.log.fileenum</code>	Specify an integer from 1 to 16 for the number of log files.	Specify the value using an integer from 1 to 16.	4	05-05
<code>adminagent.log.filesize</code>	Specify a numeric value from 65536 to 2147483647 for the maximum size of each log file (units: bytes).	Specify the value using an integer from 65536 to 2147483647.	65536	05-05
<code>adminagent.log.level</code>	<p>Specify an integer from -1 to 1000 for the level of log output.</p> <ul style="list-style-type: none"> • -1: No log will be output. • 0: Normal operation: Normal operation. 	Specify the value using an integer from -1 to 1000.	0	05-05

Key name	Contents	Specifiable value	Default value	VR
	<ul style="list-style-type: none"> • 10: Normal operation (verbose): same as normal operation, waiting for recurrence. • 20: Recurrence test: Acquires debug level information used in the system environment setup or test phases. • 30: Error investigation: Suitable for acquiring detailed error information for errors that are difficult to investigate. 			
adminagent.lsinfo_dir	<p>Specify the directory where the logical server information file will be output. If the specified directory does not exist, create it.</p> <p>When you restart the Administration Agent, the Administration Agent will use this information to once again manage the logical servers being managed before the Administration Agent stops and make them operable. This directory is created when starting the logical server and is deleted after the logical server has stopped.</p>	Directory name (absolute path)	<i>Manager-installation-directory/spool/lsinfo</i>	06-50
adminagent.maintenance.log.filenum	Specify an integer from 1 to 16 for the number of maintenance log files.	Specify the value using an integer from 1 to 16.	4	06-70
adminagent.maintenance.log.filesize	Specify an integer from 65536 to 2147483647 for the maximum size of each maintenance log file (units: bytes).	Specify the value using an integer from 65536 to 2147483647.	16777216	06-70
adminagent.prfttrace_dir	<p>Specify a character string for the path name of the directory to which the trace based performance analysis file is temporarily output. If no directory is specified, the specified directory is created.</p> <p>Note:</p> <p>The trace based performance analysis file is temporarily output in the following cases:</p> <ul style="list-style-type: none"> • When the system error detection command is executed due to the abnormal termination of the logical server • When the snapshot log is collected by specifying the sub-command <code>collect</code> of the Management Server management command (<code>mngsvrutil</code>) • When the snapshot log is collected with the management portal <p>Therefore, allocate free space at the output destination based on the following formula: File size output at the specification destination (maximum value) = <i>PRF-trace-size</i> (value specified for <code>PrfTraceFileSize</code>) × <i>number-of-PRF-trace-files</i> (value specified for <code>PrfTraceCount</code>)</p> <p>Note that if multiple PRFs exist on the same host, the sum of size of all the PRF trace files is used.</p>	Directory name (Absolute path)	<i>Application-Server-installation-directory/manager/tmp/</i>	09-50
adminagent.process.consolelog.enabled	<p>Specify whether to acquire the console output information for the processes invoked by the Administration Agent. However, when using the Eclipse Plug-in that uses Management Server, you must specify true as the value for this key.</p> <p>If you specify <code>true</code>:</p> <p>The console output information will be acquired.</p> <p>If you specify <code>false</code>:</p> <p>The console output information will not be acquired.</p>	Specify one of the following values: <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	07-00
adminagent.process.consolelog.event.	Specify the event queue size for the event notification to the Management Server from the console output information for the processes invoked by the Administration Agent.	Specify the value using an integer from 1024 to 2147483647.	1024	07-00

Key name	Contents	Specifiable value	Default value	VR
queue_size	If the queue becomes full, the events are destroyed from the oldest event in the queue. Hitachi recommends that you specify a default value for this property; and therefore, do not change the settings.			
adminagent.process.consolelog.filename	Specify an integer from 1 to 16 as the number of log files output for the console output information of the processes invoked by the Administration Agent. If the shift mode is specified in the <code>sinaviagent.log.style</code> key, this number becomes the number of backup files.	Specify the value using an integer from 1 to 16.	4	07-00
adminagent.process.consolelog.filesize	Specify an integer from 65536 to 2147483647 as the maximum size (unit: bytes) of each log file output for the console output information of the processes invoked by the Administration Agent.	Specify the value using an integer from 65536 to 2147483647.	65536	07-00
adminagent.process.consolelog.time	Specifies the time for rotating the log files used to output the console output information of the processes started by the Administration Agent in HHMMSS format as a value from 000000 to 235959. However, if the log file size reaches the upper limit before the time set in this property is reached, the log file will be rotated at that point. If no time is specified, the files will be rotated based only on the log size.	Specify a value from 000000 to 235959 in the HHMMSS format.	None	09-00
adminagent.process.consolelog.style	Specifies the method of rotating the log files that output the console output information of the processes started by the Administration Agent. If you specify <code>SHIFT</code> : The log file will be rotated in the shift mode. If you specify <code>WRAP</code> : The log file will be rotated in the wraparound mode.	Specify one of the following values: • <code>SHIFT</code> • <code>WRAP</code>	WRAP	09-00
adminagent.rmi.log.filename	Specify a numeric value for the number of maintenance log files in the RMI processing performed by the Administration Agent.	Specify the value using an integer from 1 to 16.	8	07-60
adminagent.rmi.log.filesize	Specify a numeric value for the maximum size of each maintenance log file in the RMI processing performed by the Administration Agent.	Specify the value using an integer from 65536 to 2147483647.	16777216	07-60
adminagent.rmi.log.level	Specify a character string for the output level of the maintenance log in the RMI processing performed by the Administration Agent. <OFF> The output level will not be output. <SEVERE>, <WARNING>, <INFO>, <CONFIG>, <FINE>, <FINER>, <FINEST> SEVERE only outputs severe problems. The order described here results in more detailed log output.	Specify one of the following values: • <code>OFF</code> • <code>SEVERE</code> • <code>WARNING</code> • <code>INFO</code> • <code>CONFIG</code> • <code>FINE</code> • <code>FINER</code> • <code>FINEST</code>	FINER	07-60
adminagent.snapshotlog.listfile.2.num	Specify a numeric value from -2147483648 to 2147483647 as the number of snapshot log files that will be acquired as the secondary data for each logical server. If exceeds the specified file count, the log files with the oldest creation time are deleted sequentially. Also, if you specify a value not more than 0, the log files are not deleted.	Specify the value using an integer from -2147483648	10	06-50

Key name	Contents	Specifiable value	Default value	VR
m_snapshots		to 2147483647.		
adminagent.snapshotlog.log_dir	Specify a character string for the directory to output the snapshot log. If the specified directory does not exist, the directory will be created.	Directory name (absolute path)	com.cosminexus.manager.log.dir-of-manager.cfg/snapshot/	06-00
adminagent.snapshotlog.num_snapshots	Specify a numeric value from -2147483648 to 2147483647 as the number of snapshot log files that will be acquired as the primary data for each logical server. If exceeds the specified file count, the log files with the oldest creation time are deleted sequentially. Also, if you specify a value not more than 0, the log files are not deleted.	Specify the value using an integer from -2147483648 to 2147483647.	10	06-00
adminagent.sys_cmd.abnormal_end.prft_race	Specify whether to collect the performance analysis trace files when executing the command for error detection. If you specify true: The performance analysis trace files will be collected. If you specify false: The performance analysis trace files will not be collected.	Specify one of the following values: • true • false	true	06-50
adminagent.userserver.process.console_event_enabled	Specify whether to display the console output information of the user server with the Eclipse Plug-in using Management Server. If you specify true: The console output information will be output to the Eclipse Plug-in using Management Server. If you specify false: The console output information will not be output to the Eclipse Plug-in using Management Server. The key adminagent.process.consolelog.enabled must be set to true. Since this consumes resources, Hitachi recommends that the key be set to false in operations that do not use Eclipse Plug-ins using Management Server.	Specify one of the following values: • true • false	false	07-10
adminagent.userserver.process.console_log_enabled	Specify whether the console output information for the user-defined server will be output to the console log. If you specify true: The console output information will be output to the console log. If you specify false: The console output information will not be output to the console log. The key adminagent.process.consolelog.enabled must be set to true.	Specify one of the following values: • true • false	false	07-10
adminagent.watch.retry_timeout_enabled	Specify whether retry is performed for the occurrence of a timeout during the confirmation of the logical server operations. If you specify true: Retry performed for occurrence of the timeout. If you specify false: Retry is not performed for occurrence of the timeout.	Specify one of the following values: • true • false	• Default : false • Initial value: true	06-70

Key name	Contents	Specifiable value	Default value	VR
adminagent.server-type#6.usr_cmd.abnormal_end	<p>Specify the command for error detection using the absolute path. Use "/" as a file separator. You can change the command according to the type of the logical server where the error has occurred. If you specify the value that cannot be specified in <i>server-type#6</i>, the value will be ignored.</p> <p>In Windows:</p> <p>When you create a command for error detection using a batch file, you must add "%{ComSpec} /C" before the command name. "%{ComSpec}" is replaced with the absolute path of cmd.exe. If "%{ComSpec} /C" is not specified, the command might not execute normally. Also, when you include one-byte spaces in the command path, make sure that you enclose the absolute path of the command in double quotations ("").</p> <p>Example: If executing <code>d:/my bat/j2eeabnormalend.bat</code>, when an error occurs in the J2EE server</p> <pre>adminagent.j2ee.usr_cmd.abnormal_end=% {ComSpec} /c "d:/my bat/j2eeabnormalend.bat"</pre> <p>In UNIX:</p> <p>When you create a command for error detection using a shell script, you must add "/bin/sh" before the command name. If "/bin/sh" is not specified, the command might not execute normally.</p> <p>Example: If executing <code>/home/user1/j2eeabnormalend.sh</code>, when an error occurs in the J2EE server</p> <pre>adminagent.j2ee.usr_cmd.abnormal_end=/bin/sh/ home/user1/j2eeabnormalend.sh</pre>	Command name (absolute path)	None	06-50
adminagent.server-type#6.watch_interval	<p>Specify an integer from 1 to 86400 as the interval (unit: seconds) for confirming the operations of the logical server.</p> <p>If you specify an invalid value, the default value will be set.</p> <p>Note that when the server type is user server, the <code>watch-interval</code> value specified in the Logical user server definition file or Easy Setup definition file becomes valid. If you use the logical server termination functionality and specify the time to wait for before terminating or forcibly terminating the logical server, specify a value larger than the value specified for this property. If you specify a value smaller than the value specified for this property, termination or forced termination might fail.</p>	Specify the value using an integer from 1 to 86400.	10	06-00
adminagent.server-type#6.watch_level	<p>Specify the logical server operation confirmation level. You can specify 1 or 2 as the value.</p> <p>If you specify 1:</p> <p>The logical server operations will be confirmed by checking whether the process exists.</p> <p>If you specify 2:</p> <p>The logical server operations will be confirmed by checking whether the process exists and the access to the logical server. The logical servers on which operations can be checked are naming services, J2EE servers, and Web servers. You cannot specify the operations of logical user servers. For other logical servers, even if you specify 2, what you can perform is only checking whether the process exists.</p>	Specify 1 or 2.	<ul style="list-style-type: none"> For Naming service, J2EE server, and Web server: 2 For logical servers other than above: 1 	06-00
adminagent.server-type#6.watch_retry_count	<p>Specify an integer from 0 to 86400 as the retry count when the operation confirmation processing fails during the confirmation of logical server operations. By specifying the retry count, you can permit temporary operation confirmation failure.</p>	Specify the value using an integer from 0 to 86400.	1	06-70

Key name	Contents	Specifiable value	Default value	VR
	<p>Specify the retry interval using <code>adminagent.server-type.watch.interval</code>. If you specify 0, an error is assumed without retrying when the operation confirmation processing fails.</p> <p>When the operation confirmation processing fails and when tried retrying, KEOS21033-W or KEOS21034-W is output to the Administration Agent log.</p> <p>When the operation confirmation processing fails and when retry is not executed or if the retry count exceeds the specified count, KEOS20511-E or KEOS21035-E will be output to the Administration Agent log and the error will be notified to the Management Server.</p>			
<code>adminagent.server-type#6.watch.start_time</code>	<p>When starting the logical server, specify an integer from 0 to 86400 for the time (unit: seconds) starting from the execution of the start command up to starting the operation confirmation.</p> <p>By acquiring the time required for actual startup from the logical server log for logical server startup (KDJE30028-I of <code>cjmessage?.log</code> for the J2EE server) and by specifying the value for this property which is few seconds shorter than this time, you can reduce the unnecessary log that is output before the logical server starts and report the complete startup of the logical server to the Management Server promptly.</p> <p>Specify the value greater than the value specified in this property as the start monitoring time set up in the logical server start and stop functionality. If you specify the value lesser than the specified value, the logical server will fail to start.</p>	Specify the value using an integer from 0 to 86400.	Depending on the <code>server-type#6</code> , the default value differs as follows: <ul style="list-style-type: none"> • prf: 0 • smartagent: 3 • naming: 10 • ctmdm: 0 • ctm: 0 • ots: 0 • tcs: 3 • sfo: 45 • j2ee: 45 • hws: 0 • userserver: 0 	06-70
<code>adminagent.server-type#6.watch.timeout</code>	Specify an integer from 1 to 9223372036854775 (unit: seconds) for the time until timeout occurs during the confirmation of the logical server operations.	Specify the value using an integer from 1 to 9223372036854775.	60	06-50

#1

If the IP address subnet used in the communication with the Administration Agent in the management domain is fixed, and if the IP address to be specified is coded as `192\\.168\\.0\\. .+`, the IP address matches with the IP address starting with `192.168.0.` (for example, `192.168.0.32` or `192.168.0.128`), so the setup file can be distributed to all the hosts and can be used without modifications. For details on the regular expressions, check the specifications for the `java.util.regex.Pattern` class in Java.

However, as `"\"` is replaced with the single character `"\"`, when specifying `"\"`, specify two characters in succession. If multiple IP addresses matching with the specified regular expression are detected, the IP address with the smallest value is used. For example, if `192.168.0.32` and `192.168.0.128` are detected, `192.168.0.32` will be used. In this case, the used IP address is not always the intended IP address, therefore, make sure to code a regular expression such as `192\\.168\\.0\\.1..` to match with only one IP address.

#2

To output a thread dump, crash dump, or core during a forced termination, specify adequate time to output the thread dump, crash dump, or core for **Forced stop monitoring time** or the `adminagent.forcestop.threaddump.timeout` key. If the specified time is less than the time required to complete the thread dump, crash dump, or core output, the contents of the thread dump, crash dump, or core output might be incomplete.

#3

To set this property, perform settings for executing operations by a general user account. For details about the settings for executing operations by a general user account, see *Cosminexus HTTP Server*.

Note that a resource owner or group of Cosminexus HTTP Server must be changed after executing the `cmx_build_system` command or after executing setup from the management portal.

#4

If you specify a forward slash (/) as *path* in the `ProxyPass` directive, all URLs are redirected to the web container of the J2EE server. In this case, therefore, we recommend that you specify `OPTIONS` so that URL access does not occur.

#5

Although the default value is `HEAD`, the `adminagent.hws.watch.method=OPTIONS` line is defined as the initial value.

#6

server-type references to the type of the logical server and includes any one of the following:

- `smartagent`: Smart agent
- `j2ee`: J2EE server
- `naming`: Naming service and the global CORBA Naming Service of logical CTM
- `hws`: Web server (Cosminexus HTTP Server)
- `ctm`: CTM
- `ctmdm`: CTM domain manager
- `prf`: Performance tracer
- `userserver`: User server

8.2.2 AdminAgentrc (Setup file for automatic start of Administration Agent)

(1) Format

Specify as a shell script in `sh` format (in Linux, `bash` format).

(2) File storage location

`/opt/Cosminexus/manager/config/`

(3) Functionality

Specify the settings for automatic start of Administration Agent.

Settings of this file are inherited by the logical server starting from Administration Agent.

(4) Settings that can be included

Among the shell scripts in sh format (in Linux, bash format), you can include the following settings:

- Resource control settings (`ulimit`)
- Permissions for creating a file (`umask`)
- Environment variable

When other settings are coded, the operations are not guaranteed.

(5) Examples of coding

```
ulimit -c unlimited
```

(6) Precautions

- This file is executed as shell script, so if you change the coded contents, make sure that you sufficiently confirm the operation.
- When you execute the `ulimit -u` command, if you specify a value larger than the value of `nproc` in the `limits.conf` file, the number of processes and threads used by the logical server might exceed the `nproc` value. If the `nproc` value is exceeded, a problem might occur with other processes executed by the user who started the logical server. Therefore, if you use the `ulimit -u` command to increase the upper limit on the number of processes, increase also the value of `nproc` in the `limits.conf` file. For details about the settings of the `ulimit` command and the `limits.conf` file, see the applicable sections in the documentation for the OS.

8.2.3 adminagentuser.cfg (Option definition file for Administration Agent)

(1) Format

Specify the key as follows:

```
key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (`#`) is a comment.
- You can specify up to 65535 bytes in one line.
- If you define a line without a value, the line is ignored.
- Specify the key with ASCII characters.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`

- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

Specify the invocation options for the JavaVM that executes the Administration Agent.

The contents of this file become effective when this file exists and when this file can be read from the Administration Agent. If this file exists, but cannot be read from the Administration Agent, the startup of the Administration Agent fails.

If this file does not exist, the Administration Agent is started without specifying the options.

(4) Specifiable keys

The specifiable keys and default values are described below. If you specify invalid values in these keys, the startup of the Administration Agent fails.

Key name	Contents	Default value
add.class.path	Specify the values to be added in the class path. To specify multiple values, use the same key names and specify the class path. In the contents, you can specify the Cosminexus installation directory as <code>\${cosminexus.home}</code> . (Example of specification) add.class.path=C:/home/lib/mylib.jar	None
add.jvm.arg	Specify the option for starting up the JavaVM. You can specify the following JavaVM options: <ul style="list-style-type: none"> • <code>-Xmsize</code> • <code>-Xmxsize</code> • <code>-XX:MetaspaceSize=value</code> • <code>-XX:MaxMetaspaceSize=value</code> • <code>-XX:[+ -]HitachiOutOfMemoryAbort (08-50 or later)</code> To specify multiple options, use same key names and specify as follows: (Example of specification) add.jvm.arg=-Xms128m add.jvm.arg=-Xmx256m An attempt to start the Administration Agent fails when you specify a value that JavaVM cannot authenticate.	None
add.library.path	Specify the values to be added in the search library path. To specify multiple values, use the same key names and specify the search library path. In the contents, you can specify the Cosminexus installation directory as <code>\${cosminexus.home}</code> . (Example of specification) add.library.path=C:/home/bin	None
add.network.drive	Specify the name and directory path of the allocation destination of the drive allocated as the network drive. (Example of specification) X=\\host\dir Note that if the path ends with <code>\</code> , you might not be able to connect to the network drive. In UNIX, the KEOS21401-E message is output to <code>/opt/Cosminexus/manager/adminagent.err</code> and Administration Agent stops with end code 1.	None

(5) Precautions

If `java.lang.OutOfMemoryError` occurs in the Administration Agent, the maximum size of Java heap in this file will be extended as follows:

```
add.jvm.arg=-Xmx maximum-size-of-Java-heap
```

8.2.4 adminagent.xml (Administration Agent settings file)

(1) Format

You specify the facility name (indicating the types and start/stop operations of the logical server) and then specify the name and value of the environment variable.

Setting the facility name:

```
<facility>
  <name>Facility-name</name>  <class>com.cosminexus.mngsvr.adminagent.impl.
  CmdExecutor</class>
```

Setting the name and value of an environment variable:

Add the following coding after setting the facility name as mentioned above:

```
<init-param>
<param-name>adminagent.facility.CmdExecutor.env.Environment-variable-name<
/param-name>
  <param-value>Environment-variable-value</param-value>
</init-param>
```

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config/`

(3) Functionality

Specify the settings for starting up the logical server or updating the settings files on behalf of the system administrator.

Edit this settings file when it is necessary to change the initial values of environment variables in this file or when it is necessary to add or delete the environment variables.

(4) Logical server types that you can specify in the facility name

The following table describes the types of logical servers and the start or stop operations that you can specify in the facility name:

Logical server type	Start or stop type	Facility name	Remarks
Performance tracer	Start	prf-start	--

Logical server type	Start or stop type	Facility name	Remarks
	Stop	prf-stop	--
Smart agent (In Windows)	Start	osagent-start	--
	Stop	osagent-stop	--
Smart agent (In UNIX)	Start	osagent-start	--
Naming service	Start	naming-service-start	--
CTM domain manager	Start	ctm-dommng-start	--
	Stop	ctm-dommng-stop	--
CTM	Start	ctm-start	--
	Stop	ctm-stop	--
J2EE server	Start	j2ee-server-start	When the J2EE server uses a database, you need to provide the database specific settings in the J2EE server start up environment variables.
	Stop	j2ee-server-stop	
WEB server (In Windows)	Start	web-server-start	--
	Stop	web-server-stop	--
WEB server (In UNIX)	Start	web-server-start	--

Legend: --: None

(5) Precautions

- When you change the `adminagent.xml` file, you need to re-start the Administration Agent.
- When you start or stop any of the logical servers, the environment variables that are set at the startup of the Administration Agent are inherited. If you do not want to inherit the environment variables, set the corresponding environment variable to blank.
- The environment variables set in `adminagent.xml`, apply to the types of logical servers started from the Administration Agent of the corresponding host. You cannot set environment variables for each instance of the logical server.

(Example 1)

When `Japanese_japan.ja16sjis` is set in the environment variable `NLS_LANG` during J2EE server startup:

```
<facility>
<name>j2ee-server-start</name>
<class>com.cosminexus.mngsvr.adminagent.impl.CmdExecutor</class>
<init-param>
<param-name>adminagent.facility.CmdExecutor.env.NLS_LANG</param-name>
<param-value>Japanese_japan.ja16sjis</param-value>
</init-param>
...
...
```


(Example 2)

When the environment variable AIXTHREAD_SCOPE, set during invocation of the Administration Agent, is not inherited:

```
<facility>
...
...
<init-param>
<param-name>adminagent.facility.CmdExecutor.env.AIXTHREAD_SCOPE</param-
name>
<param-value></param-value>
</init-param>
...
...
```

- The values specified for *Environment-variable-name* and *Environment-variable-value* are not processed as in the case of command shells, hence environment variable replacements and processing using operators is not possible. Therefore, you cannot use system environment variables while specifying *Environment-variable-name* and *Environment-variable-value*.

8.2.5 mngagent.actual-server-name.properties (Management Agent property file)

(1) Format

The Management Agent property file has the J2SE property file format.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config/`

(3) Keys that you can use for setting the names of Management domain and Management Agent

The specifiable keys and default values are described below. The domain names and agent names set in these keys are used as the default value for log file name.

Key name	Contents	Default value
mngagent.domain_name	Specify a character string for the management domain name. You can use ASCII alphanumeric characters (A to Z, a to z, 0 to 9), under scores (_), and hyphens (-).	None
mngagent.agent_name	Specifies a character string as the logical server name of the applicable node. You can use ASCII alphanumeric characters (A to Z, a to z, 0 to 9), under scores (_), and hyphens (-).	None

(4) Keys that you can use in log or trace settings

The specifiable keys and default values are described below.

Key name	Contents	Default value
<code>mngagent.log.filename</code>	Specify the log file name. Logging will not happen if you specify a null character string or a whitespace for this property. The actual log file name will be the specified file name (where n is a number from 1 to 4) with '.n.log' added.	<ul style="list-style-type: none">In Windows <code>com.cosminexus.manager.log.dir-of-manager.cfg\mngagent-domain name-Agent name</code>In UNIX <code>com.cosminexus.manager.log.dir-of-manager.cfg/mngagent-domain name-Agent name</code>
<code>mngagent.log.filesize</code>	Specify a number from 4096 to 2147483647 for the upper size limit (in bytes) for each log file. If you specify a value outside the range, the value 65536 is used.	65536

(5) Keys that you can use when you perform operation setup by specifying communication ports and IP addresses

The specifiable keys and default values are described below.

Key name	Contents	Default value
<code>mngagent.connector.port</code>	Set an integer from 1 to 65535 for the Management Agent communication port. Make sure that the port number is not the same as that of any other program.	A value is allocated automatically from the available port numbers.
<code>mngagent.connector.host</code>	Specify any value to set the IP address for the Management Agent.	None

(6) Precautions

- The `mngagent.actual-server-name.properties` file is created in the following cases:
 - When the Smart Composer functionality is used for building a Web system
 - When preference information of the J2EE server is distributed by the management portal

When managing a J2EE server built without using these functions, create a setup file `mngagent.actual-server-name.properties` and specify the settings related to the Management Agent.

- Specify a different file name for each server instance.
- When multiple Management Agents having the values same as of `mngagent.domain_name` or `mngagent.agent_name` are invoked concurrently, the output is performed in the same log file by default, and hence, the log file contents might be destroyed. For invoking multiple J2EE servers on the same machine, specify a unique value for `mngagent.agent_name`.

8.2.6 mserver.properties (Management Server environment settings file)

(1) Format

The Management Agent property file has the J2SE property file format.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config/`

(3) Functionality

This file specifies the port number that will be used by the Management Server and the settings for error detection command operations. To change the port number of the Management Server without restarting it, you do so by editing this file.

(4) Specifiable keys

The following table describes the keys that you can specify, their contents, and the default values that are used when they are omitted:

Key name	Contents	Specifiable value	Default	VR
<code>adminagent.connector.comm.state.cache_max_time</code>	Specify a numeric value from 0 to 2147483 (units: seconds) for the maximum cache duration for the status of communication with the Administration Agent. When a value lesser than 0 is specified, the communication status is not cached.	Specify the value using an integer from 0 to 2147483.	60	06-50
<code>com.cosminexus.mngsvr.agent.read_timeout</code>	Specify an integer (units: seconds) from 1 to 2147483 for the Management Agent connection timeout period.	Specify the value using an integer from 1 to 2147483.	180	07-00
<code>com.cosminexus.mngsvr.jplevent.alert</code>	Specify whether to issue Alert level events. ^{#3} If you specify <code>true</code> : Alert level events will be issued. If you specify <code>false</code> : Alert level events will not be issued.	Specify one of the following values: <ul style="list-style-type: none">• <code>true</code>• <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mngsvr.jplevent.emergency</code>	Specify whether to issue Emergency level events. ^{#3} If you specify <code>true</code> : Emergency level events will be issued. If you specify <code>false</code> : Emergency level events will not be issued.	Specify one of the following values: <ul style="list-style-type: none">• <code>true</code>• <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mngsvr.jplevent.critical</code>	Specify whether to issue Critical level events. ^{#3} If you specify <code>true</code> : Critical level events will be issued.	Specify one of the following values: <ul style="list-style-type: none">• <code>true</code>• <code>false</code>	<code>false</code>	07-00

Key name	Contents	Specifiable value	Default	VR
	If you specify <code>false</code> : Critical level events will not be issued.			
<code>com.cosminexus.mnagsvr.jp1event.enabled</code>	Specify whether to enable the functionality for issuing system JP1 events. ^{#3} If you specify <code>true</code> : Enable the functionality for issuing system JP1 events. If you specify <code>false</code> : Disable the functionality for issuing JP1 events.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mnagsvr.jp1event.error</code>	Specify whether to issue Error level events. ^{#3} If you specify <code>true</code> : Error level events will be issued. If you specify <code>false</code> : Error level events will not be issued.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mnagsvr.jp1event.information</code>	Specify whether to issue Information level events. ^{#3} If you specify <code>true</code> : Information level events will be issued. If you specify <code>false</code> : Information level events will not be issued.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mnagsvr.jp1event.notice</code>	Specify whether to issue a Notice level event. ^{#3} If you specify <code>true</code> : Notice level events will be issued. If you specify <code>false</code> : Notice level events will not be issued.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mnagsvr.jp1event.warning</code>	Specify whether to issue Warning level events. ^{#3} If you specify <code>true</code> : Warning level events will be issued. If you specify <code>false</code> : Warning level events will not be issued.	Specify one of the following values: • <code>true</code> • <code>false</code>	<code>false</code>	07-00
<code>com.cosminexus.mnagsvr.log.display_number</code>	Specify any one of the following numbers as the maximum number of display items that the mnagsvr configuration function should display as log information in the log display screen ^{#3} : 20, 60, 100, 200, 400	Specify 20, 60, 100, 200, or 400.	100	07-00
<code>com.cosminexus.mnagsvr.log.level</code>	Specify the level of log output for the Management Server log. ^{#3} • 0: Normal operation. • 10: similar to normal operation, waiting for recurrence. • 20: Acquire debug level information suitable for use during system building or testing phases. • 30: Acquire detailed error information that is suitable for use, when cause investigation is difficult	Specify 0, 10, 20, or 30.	0	07-00
<code>com.cosminexus.mnagsvr.log.rotate</code>	Specify any of the following numbers, as the number of Management Server log files ^{#3} : 1, 2, 4, 8, 16	Specify 1, 2, 4, 8, or 16.	4	07-00

Key name	Contents	Specifiable value	Default	VR
com.cosminexus.mnags vr.log.size	Specify any one of the following sizes as the Management Server log file size ^{#3} : 4096 (4 kilobytes), 65536 (64 kilobytes), 262144 (256 kilobytes), 524288 (512 kilobytes), 1048576 (1 megabyte), 2097152 (2 megabytes), 4194304 (4 megabytes), 16777216 (16 megabytes), 67108864 (64 megabytes)	Specify one of the following values: <ul style="list-style-type: none"> • 4096 (4 kilobytes) • 65536 (64 kilobytes) • 262144 (256 kilobytes) • 524288 (512 kilobytes) • 1048576 (1 megabytes) • 2097152 (2 megabytes) • 4194304 (4 megabytes) • 16777216 (16 megabytes) • 67108864 (64 megabytes) 	65536	07-00
com.cosminexus.mnags vr.logical_server_abnormal_stop.exit	Specify the operation to be executed in case of abnormal stop status of operations of the logical server managed by Management Server (automatic restart frequency is exceeded or automatic restart frequency setting is 0). If you specify true: KEOS10038-I is output and Management Server stops. If you specify false: Management Server continues processing.	Specify one of the following values: <ul style="list-style-type: none"> • true • false 	false	08-50
com.cosminexus.mnags vr.maintenance.log.filename	Specify an integer from 1 to 16 for the number of Management Server maintenance log files.	Specify the value using an integer from 1 to 16.	2	06-70
com.cosminexus.mnags vr.maintenance.log.filesize	Specify an integer from 65536 to 2147483647 for the maximum file size (units: bytes) for the Management Server maintenance log file.	Specify the value using an integer from 65536 to 2147483647.	16777216	06-70
com.cosminexus.mnags vr.management.connector.enabled	Specify whether to enable an external connection to the Management Server remote management functionality. If you specify true: Enable an external connection to the Management Server remote management functionality. If you specify false: Disable an external connection to the Management Server remote management functionality.	Specify one of the following values: <ul style="list-style-type: none"> • true • false 	false	07-60
com.cosminexus.mnags vr.management.enabled	Specify whether to enable the Management Server remote management functionality.	Specify one of the following values: <ul style="list-style-type: none"> • true 	false	07-60

Key name	Contents	Specifiable value	Default	VR
	<p>If you specify <code>true</code>:</p> <p>Enable the Management Server remote management functionality.</p> <p>If you specify <code>false</code>:</p> <p>Disable the Management Server remote management functionality.</p>	<ul style="list-style-type: none"> <code>false</code> 		
<code>com.cosminexus.mngs</code> <code>vr.management.host</code>	<p>Specify the host name, or an IP address when the host for an external connection to Management Server remote management functionality is to be specified.</p> <p>You can specify the IP address as a regular expression using meta characters. When the IP address is specified as a regular expression, the available local IP address that matches the expression is used.^{#1}</p> <p>When the host is specified, add the <code>java.rmi.server.hostname</code> key in the <code>mserver.properties</code> file and specify the value similar to the <code>java.rmi.server.hostname</code> key. However, you cannot use the regular expression with meta characters in <code>java.rmi.server.hostname</code>.</p> <p>When you specify a value to <code>webserver.connector.http.bind_host</code>, specify the similar value to this property.</p>	Host name or IPv4 dotted notation	None	07-60
<code>com.cosminexus.mngs</code> <code>vr.management.listen.port</code>	<p>Specify an integer from 0 to 65535 for the port number for client connection created at the time of external connection to the Management Server remote management functionality. If 0 is specified, a blank port number is automatically allocated.</p>	Specify the value using an integer from 0 to 65535.	0	07-60
<code>com.cosminexus.mngs</code> <code>vr.management.port</code>	<p>Specify an integer from 1 to 65535 for the external connection port number of the Management Server remote management functionality.</p>	Specify the value using an integer from 1 to 65535.	28099	07-60
<code>com.cosminexus.mngs</code> <code>vr.management.read_timeout</code>	<p>Specify an integer from 1 to 2147483 for the read timeout period (unit: second) at the time of an external connection to the Management Server remote management functionality.</p>	Specify the value using an integer from 1 to 2147483.	180	07-60
<code>com.cosminexus.mngs</code> <code>vr.management_user_account.enabled</code>	<p>Specify whether to enable the account of the Management Server user.</p> <p>If you specify <code>true</code>:</p> <p>Execute the login authentication process of Management Server.</p> <p>If you specify <code>false</code>:</p> <p>Do not execute the login authentication process of Management Server. You can log in without entering the management user account in the Login screen of management portal. You can also omit specification of <code>-u</code> and <code>-p</code> that are common arguments in the commands used by Manager.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> <code>true</code> <code>false</code> 	<code>true</code>	08-50
<code>com.cosminexus.mngs</code> <code>vr.on_start</code>	<p>Specify whether to perform batch startup of the logical servers, when the Management Server starts.^{#3}</p> <p>If you specify <code>true</code>:</p> <p>Batch startup of logical servers is performed.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> <code>true</code> <code>false</code> 	<code>false</code>	07-00

Key name	Contents	Specifiable value	Default	VR
	If you specify <code>false</code> : Batch startup of logical servers is not performed.			
<code>com.cosminexus.mngsvr.snapshot.auto_collect.enabled</code>	Specify whether to collect a snapshot log when an error occurs or when a batch restart is performed. If you specify <code>true</code> : Snapshot log will be collected. If you specify <code>false</code> : Snapshot log will not be collected.	Specify one of the following values: <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	06-50
<code>com.cosminexus.mngsvr.snapshot.collect.point</code>	Specify the timing for snapshot log collection. If you specify <code>before_stop</code> : Snapshot log will be collected before stopping the logical server. If you specify <code>j2ee_restart</code> : Snapshot log will be collected before re-starting the J2EE server.	Specify one of the following values: Note that the value is not case sensitive. <ul style="list-style-type: none"> • <code>before_stop</code> • <code>j2ee_restart</code> 	<code>before_stop</code>	06-50
<code>com.cosminexus.mngsvr.sys_cmd.abnormal_end.enabled</code>	Specify whether to use the functionality for executing error detection command by the system. If you specify <code>true</code> : The functionality for executing error detection command is enabled. If you specify <code>false</code> : The functionality for executing error detection command is disabled.	Specify one of the following values: <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	06-50
<code>com.cosminexus.mngsvr.sys_cmd.abnormal_end.timeout</code>	Specify an integer from -1 to 2147483647 (in seconds) for the waiting time for completion of the following processings: <ul style="list-style-type: none"> • Commands executed during error detection by the system • Collection of performance analysis trace When the command or the collection of performance analysis trace does not complete even after the specified time has elapsed, the executed command or collection is ignored and the processing is continued. When you specify -1, the processing will wait for execution of the command or collection to complete. If a value outside the range of -1 to 2147483647 is specified, the default value is used.	Specify the value using an integer from -1 to 2147483647.	600	06-50
<code>com.cosminexus.mngsvr.trace</code>	If the management command (<code>mngsvrutil</code>) is used to collect performance analysis traces or CTM statistics, use this key to specify the maximum number of files to be held by Management Server. The maximum number of files is managed for each of the management domains, hosts, and logical servers. ^{#3} 1, 2, 4, 8, 16	Specify 1, 2, 4, 8, or 16.	4	07-00
<code>com.cosminexus.mngsvr.usr_cmd.abnormal_end.enabled</code>	Specify whether to use the functionality for executing user-created error detection command. If you specify <code>true</code> : The functionality for executing error detection command is enabled.	Specify one of the following values: <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>false</code>	06-50

Key name	Contents	Specifiable value	Default	VR
	<p>If you specify <code>false</code>:</p> <p>The functionality for executing error detection command is disabled.</p>			
<code>com.cosminexus.mnags</code> <code>vr.usr_cmd.abnormal_end.timeout</code>	<p>Specify an integer from -1 to 2147483647 (units: seconds) for the period of awaiting completion of execution of the user-created error detection command.</p> <p>When the command does not complete even after the specified time has elapsed, ignore the executed command, and continue the processing.</p> <p>When you specify 0, the processing will continue without waiting for the completion of the command.</p> <p>When you specify -1, the processing will wait for the command execution to complete.</p> <p>If a value outside the range of -1 to 2147483647 is specified, the default value is used.</p>	Specify the value using an integer from -1 to 2147483647.	60	06-50
<code>com.cosminexus.mnags</code> <code>vr.vmx.enabled</code>	<p>Specifies whether to operate the Management Server as a virtual server manager in the 08-50 mode.</p> <p>If you specify <code>true</code>:</p> <p>The Management Server operates as the virtual server manager in the 08-50 mode. Note that the logical server using Management Server must not be built or operated. If a function other than virtual server manager in the 08-50 mode is used when <code>true</code> is specified, the operation is not guaranteed.</p> <p>If you specify <code>false</code>:</p> <p>The Management Server does not operate as the virtual server manager in the 08-50 mode.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>false</code>	08-50
<code>com.cosminexus.mnags</code> <code>vr.vmi.enabled</code>	<p>Specify whether Management Server must function as a virtual server manager.</p> <p>If you specify <code>true</code>:</p> <p>Management Server functions as the virtual server manager. Note that the logical server using Management Server must not be built or operated. If a function other than virtual server manager is used when <code>true</code> is specified, the operation is not guaranteed.</p> <p>If you specify <code>false</code>:</p> <p>The Management Server operates as the Management Server.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>false</code>	08-53
<code>com.cosminexus.mnags</code> <code>vr.upload_app.enabled</code>	<p>Specifies whether to enable the functionality for uploading the application files from the management portal to the host on which the Management Server is running.</p> <p>If you specify <code>true</code>:</p> <p>Enables the functionality for uploading the application files from the management portal to the host on which the Management Server is running.</p> <p>If you specify <code>false</code>:</p> <p>Disables the functionality for uploading the application files from the management portal to the host on which the Management Server is running.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • <code>true</code> • <code>false</code> 	<code>true</code>	08-70

Key name	Contents	Specifiable value	Default	VR
<code>com.cosminexus.mnagsvr.upload_app.directory</code>	Specifies the directory for uploading the application files from the management portal to the host on which the Management Server is running.	You specify the directory name as an absolute path.	<i>Cosminexus-installation-directory/manager/apps</i>	08-70
<code>com.cosminexus.mnagsvr.upload_app.maxsize</code>	Specifies the maximum size (unit: bytes) of application files that can be uploaded from the management portal to the host on which the Management Server is running. Specify a size of 1024 bytes (1 KB) or more. If you specify 0, the size of files that can be uploaded is not restricted.	0 to 9223372036854775807	314572800 (300MB)	08-70
<code>com.cosminexus.mnagsvr.snapshot.auto_collect.timeout</code>	Specifies the timeout value (unit: seconds) until the primarily sent data and secondarily sent data of the snapshot log is completely collected when an error is detected in the logical server. If 0 is specified Timeout will not occur. If a value between 1 and 2147483 is specified If the collection of the snapshot log is not completed even after the elapse of specified number of seconds, the Management Server cancels snapshot log collection.	0 to 2147483	<ul style="list-style-type: none"> • Default: 0 • Initial value: 3600 	08-70
<code>ejbserver.naming.port</code>	Specifies the port number used for internal communication of the Management Server, when the Management Server is used from HCSC-Manager. The port number is enabled only when the Management Server is used from HCSC-Manager.	1 to 65535	28900	09-00
<code>ejbserver.server.edition.settingforce</code>	Specifies whether to use the Management Server from HCSC-Manager. When the Management Server is not used from HCSC-Manager, either specify <code>Smart</code> in this key or omit the specification of this key. When this key is omitted, it is assumed that <code>Smart</code> is specified. <ul style="list-style-type: none"> • When <code>Smart</code> is specified: The Management Server is not used from HCSC-Manager. Note that if you specify <code>Smart</code>, the <code>ejbserver.naming.port</code> key settings are ignored. • No value is specified: The Management Server is used from HCSC-Manager. Note When nothing is specified, it is assumed that only key is specified and value is not specified. Specification example: <code>ejbserver.server.edition.settingforce=</code>	<code>Smart</code>	<code>Smart</code>	09-00
<code>ejbserver.rmi.logger.filenum</code>	Specify an integer from 2 to 16 for the number of RMI communication log files of the Management Server. If you specify a non-numeric value, or a numeric value outside the range, or if you do not specify a string, a message is output and the default value will be set.	Specify an integer from 2 to 16.	4	09-00

Key name	Contents	Specifiable value	Default	VR
<code>ejbserver.rmi.logger.filesize</code>	Specify an integer from 8192 to 2147483647 (units: bytes) for the size of the RMI communication log files of the Management Server.	Specify an integer from 8192 to 2147483647.	1048576	09-00
<code>java.rmi.server.hostname</code>	Specify the host name or an IP address when the host for an external connection to Management Server remote management functionality is to be specified. For details about the settings for this property, see <code>com.cosminexus.mngsvr.management.host</code> . Also, in an environment in which the global IP address and local IP address are converted, such as the NAT (IP masquerade), specify the host name (not the IP address) regardless of whether <code>com.cosminexus.mngsvr.management.host</code> is specified. In this case, if the IP address is specified in <code>com.cosminexus.mngsvr.management.host</code> , you must specify the host name indicating that IP address.	Host name or IPv4 dotted notation	None	07-60
<code>mngsvr.jp1event.event_server_name</code>	Specify a value same as the address set for the ports key in the event server settings file (<code>conf</code>) of the JP1/Base event service that is being used. If multiple addresses are specified for the ports key, choose any one of the specified addresses. When using an event service that has the value '0.0.0.0' (default value) specified for the ports key address, either omit this key or specify the host name of the local machine or localhost.	Host name or IPv4 dotted notation	localhost	06-70
<code>mngsvr.myhost.name</code>	Specify the IP address accessible from the host to which the logical server is allocated, or specify the host name indicating that IP address in the name of the host to which the logical server is allocated. Specify this key when the host that operates Management Server has multiple IP addresses and the host name might not be converted to the intended IP address. When omitted or when null characters are specified, the loopback address gets converted into the local host name that can be acquired, and the local host name is used. If the local host name cannot be acquired, the loopback address is used. You can specify the IP address as a regular expression using meta characters. When the IP address is specified as a regular expression, the available local IP address that matches the expression is used. ^{#1} Precautions When you specify a value to <code>webserver.connector.http.bind_host</code> , specify the similar value to this property.	Host name or IPv4 dotted notation	None	06-50
<code>webserver.connector.ajp13.port</code>	Specify the port number used for Management Server internal communication. The value set during installation is 28009. If the port number is not specified, an attempt to start the Management Server fails.	Specify the value using an integer from 1 to 65535.	None	05-00

Key name	Contents	Specifiable value	Default	VR
<code>webserver.connector.http.bind_host</code>	<p>You can select an optional IP address when using the Management Server on a host having multiple physical network interfaces or a host that allocates multiple logical IP addresses to one physical network interface. However, you cannot specify the loopback address. If a value is not specified, connections are received for all the local addresses.</p> <p>You can specify the IP address as a regular expression using meta characters. When the IP address is specified as a regular expression, the available local IP address that matches the expression is used.^{#1}</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> IPv4 address Host name (String within 255 characters specified using single byte alphanumeric characters or symbols (._-)) 	None	07-10
<code>webserver.connector.http.permitted.hosts^{#2}</code>	<p>Specify the IP address or host name of the hosts that will be allowed access to the Management Server and the host that executes the Administration Agent. This property applies to the access from a management portal (Web browser), Management Server remote management function, or management command (<code>mngsvrutil</code>). Moreover, you must also specify the IP address or host name of the hosts that are to be managed by the Management Server. If you operate a logical server of a host that is not specified in this property, problems like a timeout or incomplete operations may occur.</p> <p>Note that when the key is omitted, there are no access restrictions. When omitting the values or when entered values are invalid, only local host can be accessed.</p> <p>When specifying multiple hosts, demarcate the IP addresses or the host names with a comma (,). If there are no access restrictions, specify only an asterisk (*). The single-byte space before and after the IP address or the host name is ignored.</p>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> IPv4 address or host name <p>If you want to specify multiple addresses or names, separate with a comma (,). Specify a string within 255 characters specified using alphanumeric characters or symbols (._-) for the host name.</p> <ul style="list-style-type: none"> * (asterisk) 	<ul style="list-style-type: none"> Default: * Initial value: localhost 	06-00
<code>webserver.connector.http.port</code>	<p>Specify the HTTP port number for connecting to the Management Server.</p> <p>The value set during installation is 28080.</p> <p>If the port number is not specified, an attempt to start the Management Server fails.</p>	Specify the value using an integer from 1 to 65535.	None	05-00
<code>webserver.shutdown.port</code>	<p>Specify the port number for receiving the Management Server termination request.</p> <p>The value set during installation is 28005.</p> <p>If the port number is not specified, an attempt to start the Management Server fails.</p>	Specify the value using an integer from 1 to 65535.	None	05-00
<code>com.cosminexus.mngsvr.compat.operation_app</code>	<p>Specify how the applications will be managed. Note that this item is for compatibility.</p> <p>If you specify <code>true</code>:</p> <p>Operation cannot be guaranteed.</p>	Specify <code>false</code> .	<ul style="list-style-type: none"> Default: <code>true</code> Initial value: <code>false</code> 	08-00

Key name	Contents	Specifiable value	Default	VR
	If you specify <code>false</code> : V8 mode Note: Do not edit this key manually.			

#1

If the IP address subnet used in the communication with the Administration Agent in the management domain is fixed, and if the IP address to be specified is coded as `192\\.168\\.0\\. .+`, the IP address matches with the IP address starting with `192.168.0.` (for example, `192.168.0.32` or `192.168.0.128`), so the setup file can be distributed to all the hosts and can be used without modifications. For details on the regular expressions, check the specifications for the `java.util.regex.Pattern` class in Java.

However, as `"\"` is replaced with the single character `"\"`, when specifying `"\"`, specify two characters in succession. If multiple IP addresses matching with the specified regular expression are detected, the IP address with the smallest value is used. For example, if `192.168.0.32` and `192.168.0.128` are detected, `192.168.0.32` will be used. In this case, the used IP address is not always the intended IP address, therefore, make sure to code a regular expression such as `192\\.168\\.0\\.1. .` to match with only one IP address.

#2

If the key is omitted, the system assumes that an asterisk (`*`) is specified. If the key is specified and the value is omitted, the system assumes that `localhost` is specified.

#3

If a value outside the range of specifiable values is entered, the value that was previously set takes effect again.

If no value is set for the key or the key is not defined, the value that was previously set takes effect again except when the system is started for the first time.

(5) Precautions

After starting Management Server, you can also change the port number from Network settings of Cosminexus Management Server settings in the management portal. However, when changing the port number, the comment written in the `mserver.properties` file is deleted.

8.2.7 mserver.cfg (Management Server option definition file)

(1) Format

Specify the key as follows:

```
key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (`#`) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) `key-name=value#comment`

(2) File storage location

- In Windows

Cosminexus-installation-directory\manager\config\

- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

This file specifies the startup options of the JavaVM that executes the Management Server.

Do not change the contents of this file while the Management Server is running. If you change the file contents, the operations may not produce the desired results.

(4) Specifiable keys

You can specify the keys shown in [2.2.2\(4\) Specifiable keys](#) (except the `ejb.public.directory` key) and the `web.add.class.path` key. If you specify the `web.add.class.path` key, it works as the `add.class.path` option key for J2EE servers.

(5) Notes

- Among the values specified in the `add.class.path` key, there are some values for which the `<cosminexus.home>` tag is used to specify the JAR files for the container extension library. These values indicate the installation destination of Application Server, so you do not need to change the contents coded for the `add.class.path` key. Note that when you add the container extension library to the `add.class.path` key, the installation and uninstallation operations might not be guaranteed; therefore, do not use the `<cosminexus.home>` tag.

8.2.8 mserverenv.cfg (Management Server environment variable definition file)

(1) Format

Specify the key as follows:

```
key-name=value
```

Specification method

- Use '=' as the separator between the key and value. Any spaces put before and after '=' are ignored.
- The string up to the linefeed is a value. The linefeed character is OS dependent.
- The maximum size of one line is considered as 65536 bytes.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config\

- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

This file specifies the environment variables required in the Management Server operations (starting, stopping, and setting up).

(4) Specifiable keys

The specifiable keys and default values are described below.

Key name	Contents	Default value
add.env	Set the environment variable in the following format: Environment variable name=Environment variable value You can specify multiple keys. You can also specify special variables# in the environment variable value. (Example) add.env=AAAHOME=C:\aaa add.env=BBBHOME=C:\bbb In the above example, the value of environment variable AAAHOME is set to C:\aaa and the value of BBBHOME is set to C:\bbb.	None

Note:

The following table describes the special variables that you can specify:

Special variables	Contents
\${cosminexus.home}	Cosminexus installation directory
%{XXX}	Environment variable XXX value

(5) Precautions

- The J2EE server overwrites the following environment variables when the Management Server starts up, and hence the specified values are considered invalid.
 - PATH
 - Shared library search path (Only for UNIX)
 - CLASSPATH
 - HVI_TRACEPATH
 - HVI_COMTFILECOUNT
 - HVI_COMTENTRYCOUNT
 - TPJDIR
- If the default value of LANG is changed (LANG=j a _ J P . u t f 8), the operations are not guaranteed. If the value is changed, errors such as garbled text might occur in the log output.

8.2.9 manager.cfg (Manager settings file)

(1) Format

Specify the key as follows:

```
key-name=value
```

Specification method

- Use '=' as the separator between the key and value. Any spaces put before and after '=' are ignored.
- The string up to the linefeed is a value. The linefeed character is OS dependent.
- The size of one line needs to be less than 1KB (1024 bytes).
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- Whitespaces at the beginning or end of the line and blank lines are ignored.
- When there is a multiple specification of the same key, the last key value is applicable.
- You can use only ASCII characters.
- Use '/' as the file separator.
- You cannot use "\" as a part of the key or the value.
- Path separators are OS dependent.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config\
- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

This file specifies settings that are common to Management Server, Administration Agent and components or commands operating on them.

The integrated message log, integrated trace log and command maintenance log of the Manager are available as integrated log.

(4) Specifiable keys

The specifiable keys and default values are described below.

Key name	Contents	Specifiable value	Default	VR
com.cosminexus.manager.log.dir	Specify the Manager log output directory. Use '/' as the file separator.	Directory name (absolute path)	<i>Cosminexus-installation-directory/manager/log</i>	07-00

Key name	Contents	Specifiable value	Default	VR
	<p>Do not specify a path containing characters other than single-byte alphanumeric characters, underscore (_), space (), and hyphen (-).</p> <p>In case the specified log output directory is invalid, Manager does not startup. Make sure that the specified log data output-destination directory is not shared with J2EE servers, batch servers, or Web container servers (compatibility functionality). If the directory is shared, operations are not guaranteed.</p>			
<code>com.cosminexus.manager.messagelog.size</code>	<p>Specify a value from 4096 to 16777216 for the upper size limit (in bytes) for each integrated message log file. If you specify a value outside the range, the value 262144 is used.</p> <p>If you change the value of this property after any of the following operations, the change in value will not be effective:</p> <ul style="list-style-type: none"> • Management Server startup • Administration Agent startup • Executing commands provided by the Manager <p>When changing the value of this property, delete the following directory after backup:</p> <ul style="list-style-type: none"> • <i>Log-output-directory-of-Manager/message</i> 	Specify the value using an integer from 4096 to 16777216.	262144	07-00
<code>com.cosminexus.manager.messagelog.fnum</code>	<p>Specify a value from 1 to 64 for the number of integrated message log files. If the shift mode is specified in the <code>sinaviagent.log.style</code> key, this number becomes the number of backup files.</p> <p>If you change the value of this property after any of the following operations, the change in value will not be effective:</p> <ul style="list-style-type: none"> • Management Server startup • Administration Agent startup • Executing commands provided by the Manager <p>When changing the value of this property, delete the following directory after backup:</p> <ul style="list-style-type: none"> • <i>Log-output-directory-of-Manager/message</i> 	Specify the value using an integer from 1 to 64.	4	07-00
<code>com.cosminexus.manager.messagelog.time</code>	<p>Specifies the time at which the integrated message log files for Manager will be rotated in HHMMSS format as a value from 000000 to 235959. However, if the log file size reaches the upper limit before the time set in this property is reached, the log file will be rotated at that point.</p> <p>If no time is specified, the files will be rotated based only on the log size.</p>	Specify a value from 000000 to 235959 in the HHMMSS format.	None	09-00
<code>com.cosminexus.manager.messagelog.style</code>	<p>Specifies the rotation method for the integrated message log file for Manager.</p> <p>If you specify <code>SHIFT</code>:</p> <p>The log file will be rotated in the shift mode.</p> <p>If you specify <code>WRAP</code>:</p> <p>The log file will be rotated in the wraparound mode.</p>	Specify one of the following values:	WRAP	09-00
<code>com.cosminexus.manager.tracelog.size</code>	<p>Specify a value from 4096 to 16777216 for the upper size limit (in bytes) for each integrated trace log file. If you specify a value outside the range, the value 1048576 is used.</p>	Specify the value using an integer from	1048576	07-00

Key name	Contents	Specifiable value	Default	VR
	<p>If you change the value of this property after any of the following operations, the change in value will not be effective:</p> <ul style="list-style-type: none"> • Management Server startup • Administration Agent startup • Executing commands provided by the Manager <p>When changing the value of this property, delete the following directory after backup:</p> <ul style="list-style-type: none"> • <i>Log-output-directory-of-Manager/trace</i> 	4096 to 16777216.		
com.cosminexus.manager.tracelog.fnum	<p>Specify a value from 1 to 64 for the number of integrated trace log files.</p> <p>If you change the value of this property after any of the following operations, the change in value will not be effective:</p> <ul style="list-style-type: none"> • Management Server startup • Administration Agent startup • Executing commands provided by the Manager <p>When changing the value of this property, delete the following directory after backup:</p> <ul style="list-style-type: none"> • <i>Log-output-directory-of-Manager/trace</i> 	Specify the value using an integer from 1 to 64.	4	07-00
com.cosminexus.manager.tracelog.time	<p>Specify the HHMMSS format for the time at which the integrated trace log files will be rotated. However, if the log file size reaches the upper limit before the time set in this property is reached, the log files are rotated at that point.</p> <p>If no value is specified, the log files are rotated based on the log size only.</p>	Specify a value from 000000 to 235959 in the HHMMSS format.	None	09-00
com.cosminexus.manager.tracelog.style	<p>Specify the rotation method of the integrated trace log files.</p> <p>If SHIFT is specified: The files are rotated using the shift mode.</p> <p>If WRAP is specified: The files are rotated using the wrap around mode.</p>	<p>Specify one of the following:</p> <ul style="list-style-type: none"> • SHIFT • WRAP 	WRAP	09-00
com.cosminexus.manager.cmdtracelog.size	<p>Specify a value from 4096 to 16777216 for the upper size limit (in bytes) for each command maintenance log file. If you specify a value outside the range, the value 16777216 is used.</p> <p>If you change the value of this property after any of the following operations, the change in value will not be effective:</p> <ul style="list-style-type: none"> • Executing commands provided by the Manager <p>When changing the value for this property, delete the following directories and log files after backup:</p> <ul style="list-style-type: none"> • <i>Log-output-directory-of-Manager / maintenance/mmap</i> • <i>Log-output-directory-of-Manager / maintenance/mngcmdn.log</i> 	Specify the value using an integer from 4096 to 16777216.	16777216	07-00
com.cosminexus.manager.cmdtracelog.fnum	<p>Specify a value from 1 to 64 for the number of command maintenance log files.</p> <p>If you change the value of this property after any of the following operations, the change in value will not be effective:</p>	Specify the value using an integer from 1 to 64.	4	07-00

Key name	Contents	Specifiable value	Default	VR
	<ul style="list-style-type: none"> Executing commands provided by the Manager When changing the value for this property, delete the following directories and log files after backup: <ul style="list-style-type: none"> <i>Log-output-directory-of-Manager</i> / maintenance/mmap <i>Log-output-directory-of-Manager</i> / maintenance/mngcmdn.log 			
com.cosminexus.manager.log.compatible	Specify the parent compatibility of the Manager log. If you specify true: Unnecessary files are output by the Manager integrated log. If you specify false: Unnecessary files are not output by the Manager integrated log.	Specify one of the following values: <ul style="list-style-type: none"> true false 	true	07-00

8.2.10 maction.properties (Property file for execution of Management actions)

(1) Format

This file is a Management Server property file and has the J2SE property file format.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config\
- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

Define the Management action corresponding to the message ID reported in the Management event.

(4) Specifiable keys

The following table describes the keys that you can specify, their contents, and the default values used when the specification is omitted:

Key name	Contents	Classification	Default value
maction.Management-action-ID.command	Specify the command to be executed as Management action, as an absolute path. ^{#1}	Management action definition	None
maction.Management-action-ID.timeout	Specify an integer from 0 to 86400 (units: seconds) for the timeout for the command process to be executed. If you specify 0, a timeout will not occur.	Management action definition	10

Key name	Contents	Classification	Default value
<code>maction.Management-action-ID.timeout.forced_stop</code>	Specify the operations to be performed for the executed command process, when a time out occurs. If you specify <code>true</code> : Command is terminated forcefully. If you specify <code>false</code> : No action occurs. In the case of forced termination, there is no guarantee for the sub processes created by the command process.	Management action definition	false
<code>maction.Management-action-ID.exclusive_time</code>	Specify an integer from 0 to 86400 for the time interval (units: seconds) of preventing execution of Management actions with the same Management action ID, after a Management action starts. If you specify 0, the execution is not prevented.	Management action definition	0
<code>maction.Management-action-ID.max_executable_actions</code>	Specify an integer from 0 to 1000 for the maximum number of concurrently executing Management actions with the same Management action ID. If you specify 0, there are no restrictions on the concurrently executing number of Management actions.	Management action definition	0
<code>maction.message.Message-ID.mactions</code>	Specify the Management action ID for the message ID reported in the Management event. You can use alphanumeric characters and a comma (,) as a delimiter. ^{#2} In the case of multiple specifications, demarcate using commas (,). When no command is set for the specified Management action, the Management action is not executed.	Mapping between message ID and Management action	None
<code>maction.server.logical-server-name.mactions</code>	Specify the Management action ID corresponding to the logical server. You can use alphanumeric characters and a comma (,) as a delimiter. ^{#2} In the case of multiple specifications, demarcate using commas (,). In the logical-server-name part of the key name, you can specify a J2EE server, a J2EE server cluster, and a member of the J2EE server cluster. When no command is set for the specified Management action, the Management action is not executed.	Mapping between logical server and Management action	None
<code>maction.tier.web-system-name.physical-tier-typename.mactions</code>	Specify the Management action ID corresponding to the physical tier. You can use alphanumeric characters and a comma (,) as a delimiter. ^{#2} To specify multiple values, specify them as a comma-separated list. When no command is set for the specified Management action, the Management action is not executed.	Mapping between logical server and Management action	None
<code>maction.unit.web-system-name.service-unit-name.mactions</code>	Specify the Management action ID corresponding to the service unit. You can use alphanumeric characters and a comma (,) as a delimiter. ^{#2} To specify multiple values, specify them as a comma-separated list. When no command is set for the specified Management action, the Management action is not executed.	Mapping between logical server and Management action	None
<code>maction.mevent.receiving_info.keep_size.max</code>	Specify an integer from 0 to 2147483647 for the maximum number of Management event receipt information to be maintained. If you specify 0, the Management event receipt	Settings when a Management event is received	100

Key name	Contents	Classification	Default value
	<p>information is not maintained. High network load or failure may cause duplicate execution of Management actions. You can prevent such duplicate execution of Management actions by maintaining the Management event receipt information. When the maximum number of Management event receipt information maintenance cases is exceeded, the information received earliest is deleted. Management event receipt information is destroyed in the following cases:</p> <ul style="list-style-type: none"> • On receiving a Management event, whose receipt information has exceeded the resend time limit. • All the information received is destroyed, when the Management Server terminates. 		

#1

The commands to be executed as Management action are executed by the Management Server. Note that the environment variables that are set in the Management Server are used.

For details on the command file sample, see *9.4.6 Settings of Management Action Execution Commands* in the manual *uCosminexus Application Server Operation, Monitoring, and Linkage Guide*.

#2

Any whitespaces specified before and after a comma (,), are ignored.

(5) Examples of settings

The contents of the `maction.properties` file are as follows:

- In Windows

```
# Management-action-definition
maction.restart.command=c\:\tmp\command1.bat
maction.restart.timeout=12
maction.restart.timeout.forced_stop=true
maction.restart.exclusive_time=60
maction.restart.max_executable_actions=1

# Mapping-between-message-ID-and-Management-action
maction.message.KDJE11111-E.mactions=restart
maction.message.KDJE22222-E.mactions=restart

# Mapping-between-Logical-server-and-Management-action
maction.server.j2ee1.mactions=restart
maction.server.j2ee2.mactions=restart
maction.server.j2eeClstr1.mactions=restart
```

- In UNIX

```
# Management-action-definition
maction.restart.command=/tmp/command1.sh
maction.restart.timeout=12
maction.restart.timeout.forced_stop=true
maction.restart.exclusive_time=60
maction.restart.max_executable_actions=1

# Mapping-between-message-ID-and-Management-action
maction.message.KDJE11111-E.mactions=restart
maction.message.KDJE22222-E.mactions=restart

# Mapping-between-Logical-server-and-Management-action
```

```
maction.server.j2ee1.mactions=restart
maction.server.j2ee2.mactions=restart
maction.server.j2eeClstr1.mactions=restart
```

(6) Precautions

- Priorities in the case of duplicate specifications of a Management action:

For the following property keys, the logical server, service unit, and physical tier have an inclusive relationship such as:

J2EE server < J2EE server cluster < service unit < physical tier.

- maction.server.*logical-server-name*.mactions
- maction.unit.*Web-system-name.service-unit-name*.mactions
- maction.tier.*Web-system-name.physical-tier-type-name*.mactions

Therefore, when different Management actions are specified for each logical server having an inclusive relationship (for example, J2EE cluster and a J2EE server that is an element of the J2EE cluster), only one of the specified Management actions is performed based on the following order of priority:

1. The J2EE server that issued the Management event
2. The J2EE server cluster that includes the J2EE server that issued the Management event
3. The service unit that includes the J2EE server that issued the Management event
4. The physical tier that includes the J2EE server that issued the Management event

Moreover, if the orders of the Management actions specified in the mapping between message ID and Management action and specified in the mapping between logical server and Management action, are different, priority is decided by the order of Management action ID specified in the mapping between message ID and Management action (maction.message.message-ID.mactions key).

Example: Example of prioritizing act1

```
maction.message.KDJE99999-E.mactions=act1,act2
maction.server.J2EE01.mactions=act3,act2,act1
```

Note that in this example, KDJE99999-E is the message ID and J2EE01 is the logical server.

- Standard output or standard error output

The Management Server does not collect the standard output or standard error output from the command that is executed as Management action. Therefore, when acquiring the standard output or standard error output information of the commands, you need to output that information to a file, as a part of the command.

8.2.11 Property file for issuing Management events

(1) Format

This file is a Management Server property file and has the J2SE property file format.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config\mevent.*Logical-server-name*.properties
- In UNIX

(3) Functionality

This file defines the logical server that sends the Management event, the Management Server to which the event is sent, and the file that contains the list of message IDs to be reported.

(4) Specifiable keys

The following table describes the keys that you can specify, their contents, and the default values used when the specification is omitted:

Key name	Contents	Default value
manager.mevent.send.host	Specify the host to which the event is to be sent. Specify the host name or IP address of the Management Server to which the Management event is to be sent. You can use alphanumeric characters and symbols. When this property is not specified, the Management event is not issued.	None
manager.mevent.send.port	Specify the port to which the event is to be sent. Specify an integer from 1 to 65535 for the HTTP port number of the Management Server to which the Management event is to be sent. When this property is not specified or when the specification is invalid, the Management event is not issued.	None
manager.mevent.logical_server_name	Specify the name of the logical server that issues the Management event. You can use alphanumeric characters and symbols. When this property is not specified, the Management event is not issued. If you specify a logical server name that does not exist, the Management event is ignored.	None
manager.mevent.send.timeout	Specify the send timeout. Specify an integer from 10 to 600 (units: seconds) for the time period of awaiting a response from the Management Server, when a Management event is issued. When there is no response within the specified time period, it is considered as Management event issue failure.	90
manager.mevent.retry.limit	Specify the resend time limit. Specify an integer from 0 to 86400 (units: seconds) for the time limit for resending the Management event in the case of failure in issuing a Management event. The issuing of the Management event is repeated at resend intervals specified in the manager.mevent.retry.interval key, until the issue of the event is successful, or until the time specified in this key lapses. If you specify 0, the Management event is not resent.	0
manager.mevent.retry.interval	Specify an integer from 1 to 86400 (units: seconds) for the interval after which the Management event will be resent.	10
manager.mevent.message_id.list	Specify the message ID list file (as an absolute path) to be used for issuing the Management events. When the specified file is invalid, Management events are not issued. When omitted, the message ID registered in the default message ID list file is sent as Management event. For more details on the message ID list file for issuing the Management events, see 8.2.12 Message ID list file for issuing Management events .	None
manager.mevent.send.max	Specify an integer from 1 to 1000 for the maximum number of Management events that can be concurrently issued.	10
manager.mevent.sender.bind.host	Specify the local address (host name or IP address) to be used when sending the Management event. You can use alphanumeric characters and symbols.	None

Key name	Contents	Default value
	When omitted, a local IP address is randomly allocated.	

To create this file, see the following sample of the property file for issuing Management events.

- In Windows
`Cosminexus-installation-directory\manager\config\templates\mevent.properties`
- In UNIX
`/opt/Cosminexus/manager/config/templates/mevent.properties`

(5) Precautions

- You need to specify a settings file for issuing Management events for each J2EE server instance. Do not specify the same file for multiple J2EE server instances running concurrently.
- Management events are issued in the order of their occurrence. However, Management events whose issue has failed are re-issued only after the planned Management events have been issued.

8.2.12 Message ID list file for issuing Management events

(1) Format

Specify the message ID list in the following format:

[Indicator]Message-ID

- Code one message ID in one line.
- An indicator wherein a hash mark (#) is specified is a comment.
- If you specify a plus (+) in the indicator or if you omit the indicator, the corresponding message ID is reported as the Management event.
- If you use a hyphen (-) in the indicator, the corresponding message ID is not reported as the Management event. You use this facility when the message ID mentioned in the default Management event issue message ID list is not to be sent as the Management event.
- Whitespaces at the beginning or end of the line and blank lines are ignored.
- When the same message ID is specified many times, the message ID coded in the end becomes valid.
- Always specify an indicator when the message ID starts with a plus (+) or a hyphen (-).

(2) File storage location

Any storage location and file name is possible. You can use the following characters in the file name:

Alphanumeric characters, periods (.), yen signs (¥), colons (:), plus signs (+), or hyphens (-)

(3) Functionality

Define the message IDs that are reported as Management events.

(4) Default

The following table describes the default message IDs that are reported as Management events:

Table 8–2: Message ID for Management issue (Default)

Functionality	Monitoring target	Message ID
Monitoring resource depletion	Memory usage status	KDJE34500-W
	Number of file descriptors	KDJE34520-W
	Number of threads	KDJE34540-W
	Number of thread dump files	KDJE34580-W KDJE34581-E
	HTTP request pending queue (pending queue of each Web application and the default pending queue)	KDJE34621-W
	Number of HTTP sessions	KDJE34640-W
	Connection pool utilization state	KDJE34660-W KDJE34661-W
Monitoring J2EE application execution time	J2EE application execution time	KDJE52702-W KDJE52703-W KDJE52705-W KDJE52713-E
Detecting connection failure	A timeout in connection failure detection	KDJE48602-W
	Connection managing threads	KDJE48603-W
Monitoring Full GC count	Full GC count	KDJE53850-W
Monitoring the number of pending requests for each URL group	Upper threshold limit for the number of requests pending for each URL group	KDJE53860-W
	Lower threshold limit for the number of requests pending for each URL group	KDJE53861-I
Cluster connection pool (compatibility functionality)	Connection pool status	KDJE49650-I KDJE49653-I KDJE49655-E KDJE49657-E KDJE49660-I KDJE49663-E KDJE49664-E KDJE49669-E
	Connection managing threads	KDJE49671-I
Monitoring the total number of pending requests for each web container	Total number of pending requests for each web container	KDJE53862-W KDJE53863-I KDJE53864-W KDJE53865-I KDJE53866-W KDJE53867-I KDJE53868-W KDJE53869-I

(5) Examples of coding

A sample is as follows:

When KDJE34580-W and KDJE34660-W are not reported as Management events:

```
# Monitoring of resources
# : Status of memory (Java Heap)
KDJE34500-W

# : Number of file descriptors
KDJE34520-W

# : Number of threads
KDJE34540-W

# : Number of thread dump files
-KDJE34580-W
KDJE34581-E

# : Number of HTTP requests in queue
KDJE34621-W

# : Number of HTTP sessions
KDJE34640-W

# : Status of connection pool
-KDJE34660-W
KDJE34661-W

# Monitoring of execution time of user program
KDJE52702-W
KDJE52703-W
KDJE52705-W
KDJE52713-E
```

To create this file, see the following sample of the message ID list file for issuing Management events:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\mevent.midlist.conf`
- In UNIX
`/opt/Cosminexus/manager/config/templates/mevent.midlist.conf`

(6) Notes

- Management events are not issued for the following message IDs. If you specify these message IDs, the specification is ignored.
 - KDJE90001-E
 - KDJE90002-E
 - KDJE90003-E
 - KDJE90005-W
 - KDJE90006-W

- KDJE90009-W
- The message IDs that you can specify include only the specific message IDs output by the J2EE server or batch server that are integrated with the functionality for issuing Management events. Even if you specify other system message IDs, message IDs output by J2EE applications or batch applications, the Management events are not issued.

8.2.13 Definition files to be saved for the Management Server management files

(1) Format

Specify the definition file in the following format:

File-name

- Specify the file name as an absolute path.
- A line beginning with a hash mark (#) is a comment.
- Use a forward slash (/) as a file separator.
- When the specified file does not exist in the specified path, the specification is ignored and the processing continues.
- You can use the following variables: (\$ indicates system property. Do not include \$ in the value that you specify).
`${cosminexus.home}`: Cosminexus installation directory
`${user.home}`: User home directory

(2) File storage location

Any storage location and file name is possible.

(3) Functionality

When node switching is done with the active nodes and the standby nodes in a 1-to-1 relationship, you use this file to define the files to be collected and saved as the Management Server management files of the Management Server of the active node. You use this file to specify files that are not collected by default.

(4) Default

The following table describes the directories of files collected by default as management files of the Management Server:

Types	Target directory
Definition file directory	<ul style="list-style-type: none"> • In Windows <i>Cosminexus-installation-directory</i>/manager/config/ • In UNIX /opt/Cosminexus/manager/config/
Application registration directory	<ul style="list-style-type: none"> • In Windows <i>Cosminexus-installation-directory</i>/manager/containers/m/j2eeapps/mngsvr/mportal/mapps/regapps/ • In UNIX /opt/Cosminexus/manager/containers/m/j2eeapps/mngsvr/mportal/mapps/regapps/

Types	Target directory
Resource adapter registration directory	<ul style="list-style-type: none"> In Windows <i>Cosminexus-installation-directory</i>/manager/containers/m/j2eeapps/mngsvr/mportal/mwebsites/regras/ In UNIX /opt/Cosminexus/manager/containers/m/j2eeapps/mngsvr/mportal/mwebsites/regras/
File for storing the results of configuration information definition for managing the repository	<ul style="list-style-type: none"> In Windows <i>Cosminexus-installation-directory</i>/manager/containers/m/j2eeapps/mngsvr/mportal/useradmin/config/data/editusersConfig.xml In UNIX /opt/Cosminexus/manager/containers/m/j2eeapps/mngsvr/mportal/useradmin/config/data/editusersConfig.xml

(5) Examples of coding

- When collecting /home/confdir/message1.conf

```
/home/confdir/message1.conf
```

- When collecting *Cosminexus-installation-directory*/manager/apps/MyApp.ear (in Windows) or /opt/Cosminexus/manager/apps/MyApp.ear (in UNIX)

```
${cosminexus.home}/manager/apps/MyApp.ear
```

8.2.14 .mngsvrutilrc (Client-side definition file of the mngsvrutil command)

(1) Format

J2SE property file format.

(2) File storage location

Home directory of each OS user

(3) Functionality

Specify the default values for the `mngsvrutil` command options.

(4) Application timing

After the settings file is changed, the updated information is applied during the next execution of the `mngsvrutil` command.

(5) Specifiable keys

The following table describes the keys that you can specify in the client-side definition file, their contents, and the default values used when the specification is omitted:

Key name	Contents	Specifiable value	Default	VR
<code>mngsvrutil.connect.host</code>	<p>Set the Management Server host name and port number to be specified in the <code>-m</code> option. (Example of settings) <code>mngsvrutil.connect.host=local host:28080</code></p> <ul style="list-style-type: none"> • Host name Specify an IP address with dot notation or a host name for which the name analysis can be performed. You can specify the IP address as a regular expression using meta characters. When the IP address is specified as a regular expression, the available local IP address that matches the expression is used.^{#1} • Port number Follow the Management Server settings. The default value is '28080'. <p>Precautions</p> <ul style="list-style-type: none"> • When performing the operations in the host unit management model, if a value is specified in <code>webserver.connector.http.bind_host</code> of <code>mserver.properties</code>, specify the same value in this key. • Do not specify a colon (:) in the regular expression indicating the IP address. If a colon (:) is specified, the string after the colon is considered as the port number. 	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> • Host name • IPv4 address 	None	06-00
<code>mngsvrutil.connect.password</code>	<p>Set the password to be specified in the <code>-p</code> option. Note that this key is not required if a password has not been set. (Example of settings) <code>mngsvrutil.connect.password=admin</code></p> <p>Specification of this property is ignored if the functionality to omit the management user account is enabled.</p>	Management user account password of Management Server	None	06-00
<code>mngsvrutil.connect.userid</code>	<p>Set the user ID to be specified in the <code>-u</code> option. (Example of settings) <code>mngsvrutil.connect.userid=admin</code></p> <p>Specification of this property is ignored if the functionality to omit the management user account is enabled.</p>	User ID of the management user account of the Management Server	None	06-00
<code>mngsvrutil.output.file</code>	<p>Set the output file name to be specified in the <code>-o</code> option. (Example of settings) In Windows <code>mngsvrutil.output.file=C:/tmp/output.txt</code> In UNIX</p>	File name (absolute path)	None	06-00

Key name	Contents	Specifiable value	Default	VR
	<code>mngsvrutil.output.file=/tmp/output.txt</code>			
<code>mngsvrutil.output.format</code>	<p>Set the output format to be specified in the <code>-f</code> option.</p> <p>To output in the CSV format, specify <code>csv</code> and to output in the SNMP integration format, specify <code>snmp</code>.</p> <p>(Example of settings)</p> <code>mngsvrutil.output.format=csv</code>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> <code>csv</code> <code>snmp</code> 	<code>csv</code>	06-00
<code>mngsvrutil.output.suppress_header</code>	<p>Set this property to true when specifying the <code>-h</code> option and set false when not specifying the option. Note that the value is not case sensitive.</p> <p>(Example of settings)</p> <code>mngsvrutil.output.suppress_header=true</code>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> <code>true</code> <code>false</code> 	<code>false</code>	06-00
<code>mngsvrutil.target_name#2</code>	<p>Specifies the logical server name or the host name to be specified in the <code>-t</code> option.</p> <p>(Example of settings)</p> <code>mngsvrutil.target_name=myServer</code>	<p>Specify one of the following values:</p> <ul style="list-style-type: none"> IPv4 address Host name logical-server-name 	None	06-00
	<p>Specify the target name (logical server name or host name) to be used by the sub-command.</p> <p>Follow the definition of Logical server configuration definition of the management portal.</p> <p>You can specify the IP address as a regular expression using meta characters. When the IP address is specified as a regular expression, the available local IP address that matches the expression is used.^{#1}</p> <p>Precautions</p> <p>When you want to specify host in the <code>-k</code> option or <code>mngsvrutil.target_kind</code>, specify the same value that is specified for <code>webserver.connector.http.bind_host</code> in <code>mserver.properties</code>.</p>			
<code>mngsvrutil.target_kind</code>	<p>Specify the target kind to be specified in the <code>-k</code> option.</p> <p>(Example of settings)</p> <code>mngsvrutil.target_kind=host</code>	<p>The following strings can be specified:</p> <ul style="list-style-type: none"> <code>logicalServer</code> <code>host</code> 	<code>logicalServer</code>	06-00
<code>mngsvrutil.target_server_name#2</code>	<p>Set the logical server name to be specified in the <code>-t</code> option. This key is provided for compatibility. Hitachi recommends using <code>mngsvrutil.target_name</code>. If you specify this property along with <code>mngsvrutil.target_name</code>, the value specified in <code>mngsvrutil.target_name</code> is used.</p>	<p>Specified in alphanumeric characters and symbols.</p>	None	06-00

Key name	Contents	Specifiable value	Default	VR
	(Example of settings) mngsvrutil.target_server_name =myServer			

Notes

If a key does not exist or if it is incorrectly specified, the default value is used.

As this file holds important information such as passwords, set appropriate access permissions for this file.

When you code characters other than the ASCII characters, match the character encoding of the setup file and that of the OS locale when the executing the `mngsvrutil` command. Moreover, when using Japanese, do not specify character strings that include escape sequences.

For SNMP integration using 'JP1/Cm2/ESA for Extension Mib Runtime' or 'JP1/Cm2/Extensible Agent for Extension Mib Runtime', create the settings file under the home directory of the executing user of 'JP1/Cm2/ESA for Extension Mib Runtime' or 'JP1/Cm2/Extensible Agent for Extension Mib Runtime'.

#1

If the IP address subnet used in the communication with the Administration Agent in the management domain is fixed, and if the IP address to be specified is coded as `192\\.168\\.0\\. +`, the IP address matches with the IP address starting with `192.168.0.` (for example, `192.168.0.32` or `192.168.0.128`), so the setup file can be distributed to all the hosts and can be used without modifications. For details on the regular expressions, check the specifications for the `java.util.regex.Pattern` class in Java.

However, as `"\"` is replaced with the single character `"\"`, when specifying `"\"`, specify two characters in succession. If multiple IP addresses matching with the specified regular expression are detected, the IP address with the smallest value is used. For example, if `192.168.0.32` and `192.168.0.128` are detected, `192.168.0.32` will be used. In this case, the used IP address is not always the intended IP address, therefore, make sure to code a regular expression such as `192\\.168\\.0\\.1..` to match with only one IP address.

#2

For information about the relation between the `mngsvrutil.target_name` key and the `mngsvrutil.target_server_name` key specification with the `-k` option and `-t` option of the `mngsvrutil` command, see *mngsvrutil (Management Server management command)* in the manual *uCosminexus Application Server Command Reference Guide*.

8.2.15 mngsvrutil.properties (Server-side definition file of the mngsvrutil command)

(1) Format

J2SE property file format.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config/`

(3) Functionality

Specify the settings for the execution environment of the `mngsvrutil` command.

(4) Application timing

If the settings file is updated while the Management Server is running, the updated information is not applied until the next time the Management Server is started.

(5) Specifiable keys

The following table describes the keys that you can specify in server-side definition file, their contents, and the default values when the specification is omitted:

Key name	Contents	Default value
<code>mngsvrutil.auth.failed_wait</code>	Specify the number of seconds to wait when the management user authentication fails. (Values that can be specified: 0 to 2147483647). (Example of settings) <code>mngsvrutil.auth.failed_wait=10</code>	5
<code>mngsvrutil.auth.log_challenged</code>	Specify whether to output instances of HTTP access to the log. ^{#1} If you specify <code>true</code> : The instances of HTTP access will be output to the log. If you specify <code>false</code> : The instances of HTTP access will not be output to the log. (Example of settings) <code>mngsvrutil.auth.log_challenged=false</code>	<code>true</code>
<code>mngsvrutil.auth.log_denied</code>	Specify whether to output instances of denied HTTP access to the log. ^{#1} If you specify <code>true</code> : The instances of denied HTTP access will be output to the log. If you specify <code>false</code> : The instances of denied HTTP access will not be output to the log. (Example of settings) <code>mngsvrutil.auth.log_denied=false</code>	<code>true</code>
<code>mngsvrutil.auth.log_failed</code>	Specify whether to output the failure of management user authentication to the log. ^{#1} If you specify <code>true</code> : The failure of management user authentication will be output to the log. If you specify <code>false</code> : The failure of management user authentication will not be output to the log. (Example of settings) <code>mngsvrutil.auth.log_failed=false</code>	<code>true</code>
<code>mngsvrutil.auth.log_succeeded</code>	Specify whether to output successful management user authentication in the log. ^{#1} If you specify <code>true</code> : The successful management user authentication will be output to the log. If you specify <code>false</code> : The successful management user authentication will not be output to the log. (Example of settings) <code>mngsvrutil.auth.log_succeeded=false</code>	<code>true</code>
<code>mngsvrutil.compat.monitoring_tree</code>	Specify whether the application information will be included in the contents acquired by the automatic generation of the JP1/IM monitoring tree, when the application management method is the V8 mode. ^{#1} If you specify <code>true</code> : The J2EE application information and the information about the relation between the J2EE server and J2EE application will be output. If you specify <code>false</code> : The J2EE application information and the information about the relationship between the J2EE server and J2EE application will not be output.	<code>false</code>

Key name	Contents	Default value
	(Example of settings) mngsvrutil.compat.monitoring_tree=true	
mngsvrutil.session.max_inactive_interval	Specify the maximum number of seconds until the session becomes invalid after the server has generated a session in the client and received the last request from the client. (Value that can be specified: -2147483648 to 2147483647). ^{#2} (Example of settings) mngsvrutil.session.max_inactive_interval=10	5

Notes

If a key does not exist or if it is incorrectly specified, the default value is used.

If the settings file is updated while the Management Server is running, the updated information is not applied until the next time the Management Server is started.

#1

The settings (`true` and `false`) are not case sensitive.

#2

When a negative value is specified, the session does not become invalid.

8.2.16 mngsvrutilcl.properties (Client-side shared definition file of the mngsvrutil command)

(1) Format

J2SE property file format.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config\
- In UNIX
/opt/Cosminexus/manager/config/

(3) Functionality

Specify the shared definition settings for the default values of the `mngsvrutil` command options.

You can also limit the users to whom this definition file will apply.

Note that when both the client-side definition file (`.mngsvrutilrc`) and `mngsvrutilcl.properties` (client-side shared definition file of the `mngsvrutil` command) have been set, the client-side definition file (`.mngsvrutilrc`) is applicable.

(4) Application timing

After the settings file is changed, the updated information is applied during the next execution of the `mngsvrutil` command.

(5) Specifiable keys

The following table describes the keys that you can specify in the client-side shared definition file, their contents, and the default values when the specification is omitted. Note that "Default" refers to the value or operation assumed when the key is not specified. "VR" refers to the Application Server version introduced or changed by the key.

Key name	Contents	Specifiable value	Default value	VR
<code>mngsvrutil.apply_user</code>	<p>Specify the OS users when the <code>mngsvrutil</code> command or adapter commands will be executed and the users applying the client-side shared definition file. Only when the OS users specified in this key execute the <code>mngsvrutil</code> command or adapter commands, the other specified keys are applied.</p> <p>To specify multiple users, use comma (,) for demarcation.</p> <ul style="list-style-type: none"> In Windows <p>Specify a user name not including the domain name. If the user name is matching, this parameter is enabled in both the login destinations, local and domain.</p> <p>The value is not case sensitive.</p> <p>Also, for applying this definition file when the <code>mngsvrutil</code> command is invoked from a Windows service, specify "<i>host-name</i>\$" (<i>host-name</i> is the host name of the host on which Management Server is running).</p> In UNIX <p>The values are case sensitive.</p> <p>Specify 'root' to apply this definition file in SNMP integration and JP1/IM integration (automatic generation of the monitoring tree and collection of the Web system configuration information).</p> <p>(Example of settings)</p> <p>In Windows <code>mngsvrutil.apply_user=SYSTEM, Administrator</code></p> <p>In UNIX <code>mngsvrutil.apply_user=root, user01</code></p>	User name registered for OS	None	06-70
Key for <code>mngsvrutilrc</code> (client-side definition file for <code>mngsvrutil</code> command)	For details on keys that can be specified, see 8.2.14 .mngsvrutilrc (Client-side definition file of the mngsvrutil command) .	--	--	--

Legend:

--: Not applicable.

(6) Precautions

When the client-side definition file (`.mngsvrutilrc`) does not exist, the client-side shared definition file (`mngsvrutilcl.properties`) is read for all OS users and if a particular user does not have sufficient permissions to access the file, a Warning occurs.

Hitachi recommends that you set access permissions so that the OS users who execute the `mngsvrutil` command and the adapter command can access the client-side shared definition file and then control the application of the client-side shared definition file by using the `mngsvrutil.apply_user` key.

8.2.17 .mngsvrmonitorrc (Settings file of the monitor startup command for JP1/IM integration)

(1) Format

J2SE property file format.

(2) File storage location

Home directory of OS user who operates JP1/IM - View

(3) Functionality

In the case of integrating with JP1/IM, specify the settings required for starting up the Management Server operation portal from the JP1/IM screen. Note that this file is for Windows.

(4) Application timing

After the settings file is changed, the updated information is applied during the next execution of the `mngsvrmonitor` command.

(5) Specifiable keys

The following table describes the keys that you can specify in the settings file of the monitor startup command, their contents, and the default values when the specification is omitted:

Key name	Contents	Default value
<code>mngsvrmonitor.browser</code>	Specify the commands of the Web browser to be started, in the full path. To specify a path that includes spaces, enclose the path in double quotation marks ("). When this key is omitted, the default browser set in the Windows registry is started (In case, default browser is not set, error occurs). (Example of settings) <code>mngsvrmonitor.browser = "C:/Program Files/Internet Explorer/iexplore.exe"</code>	Default browser of the registry
<code>mngsvrmonitor.connect.host</code>	Specify host name and port number of Cosminexus Management Server in the following format. Host name [:Port number] (Example of settings) <code>mngsvrmonitor.connect.host=h001:28080</code>	Port number: 28080
<code>mngsvrmonitor.connect.password</code>	Specify the management user password corresponding to the management user ID set in 'Setting management user accounts' of the management portal. Note that this key is not required if a password has not been set. (Example of settings) <code>mngsvrmonitor.connect.password=p43269</code> Specification of this property is ignored if the functionality to omit the management user account is enabled.	None
<code>mngsvrmonitor.connect.userid</code>	Specify the management user ID set in 'Setting management user accounts' of the management portal. If this key is omitted, the Login screen of the management portal appears. (Example of settings) <code>mngsvrmonitor.connect.userid=admin</code> Specification of this property is ignored if the functionality to omit the management user account is enabled.	None

8.2.18 setup.cfg (Setup file for the Setup Wizard)

(1) Format

Specify the key as follows:

key-name=value

Specification method

- A line beginning with # (hash mark) is a comment and is ignored.
- If no value is specified, the line is ignored.
- The whitespaces at the beginning and end of a line, and blank lines are ignored.
- Use '=' as the separator between the key and value. Any spaces put before and after '=' are ignored.
- The string up to the linefeed is a value.
- When there is a multiple specification of the same key, the last key value is applicable.
- One line is less than 64 KB.
- You can use only ASCII characters.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\setup\config
- In UNIX
/opt/Cosminexus/manager/setup/config

(3) Functionality

Specifies the output destination, maximum file size, and maximum number of Setup Wizard log files.

(4) Specifiable keys

The following table describes the keys that can be specified. Note that "Default" refers to the value or operation assumed when the key is not specified. "VR" refers to the Application Server version introduced or changed by the key.

Key name	Contents	Specifiable value	Default value	VR
setup.log.dir	Specify the output location directory of the log file. Use '/' as the file separator. If you specify a value outside the range, the default value will be set. In UNIX, the parent directory of the specified output destination directory must exist.	Directory name (absolute path)	<ul style="list-style-type: none">• In Windows <i>Cosminexus-installation-directory\manager\setup\log</i>• In UNIX <i>/opt/Cosminexus/manager/setup/log</i>	08-00

Key name	Contents	Specifiable value	Default value	VR
setup.log.filenum	Specify the number of files. If you specify a value outside the range, the default value will be set.	Specify the value using an integer from 1 to 16.	4	08-00
setup.log.filesize	Specifies the maximum size per log file (unit: bytes). If you specify a value outside the range, the default value will be set.	Specify an integer from 4096 to 2147483647.	262144	08-00
setup.maintenance.log.filenum	Specifies the number of maintenance log files. If you specify a value outside the range, the default value will be set.	Specify the value using an integer from 1 to 16.	4	08-00
setup.maintenance.log.filesize	Specifies the maximum size per maintenance log file (unit: bytes). If you specify a value outside the range, the default value will be set.	Specify the value using an integer from 4096 to 2147483647.	16777216	08-00

(5) Precautions

If an attempt to read the `setup.cfg` file fails during the execution of the Setup Wizard, the message KEOS28056-E is displayed and the Setup Wizard terminates.

8.2.19 Logical user server definition file

(1) Format

xml file format.

(2) File storage location

Any storage location and file name is possible.

(3) Functionality

You create this file when adding a logical user server by the `mngsvrutil` command.

(4) Contents that you can define

The following table describes the contents that you can code in the logical user server definition file:

Element name	Description	Default value
user-server-definition	Specify the following path as namespace: <code>http://www.cosminexus.com/mngsvr/schema/UserServerDefinition-1.1</code>	--
Service	--	--
Type	Specify whether to start directly or indirectly.	direct

Element name	Description	Default value
	<p>When you specify <code>direct</code>:</p> <p>Starts up directly.</p> <p>When you specify <code>indirect</code>:</p> <p>Starts up indirectly.</p>	
<code>startup-order</code>	Specify an integer from -1 to 999 for the startup order. When -1 is specified, the element is ignored.	900
<code>start-watch-time</code>	Choose a start watch time from the following numeric values (units: seconds). When 0 is specified, monitoring is not performed. 0, 60, 300, 600, 3600	60
<code>stop-watch-time</code>	Choose a stop watch time from the following numeric values (units: seconds). When 0 is specified, monitoring is not performed. 0, 60, 300, 600, 3600, 1800	60
<code>force-watch-time</code>	Choose a force stop watch time in the following numeric value (unit: seconds). When 0 is specified, monitoring is not performed. 0, 60, 300, 600, 1800	60
<code>retry-count</code>	Specify the auto restart frequency, choose one from the following numeric values: 0, 1, 5, 10, 1000	1
<code>retry-interval</code>	Specify the auto restart retry interval, choose one from the following numeric values (units: seconds). When 0 is specified, performs immediate retry. 0, 60, 300, 600, 3600, 1800	60
<code>watch-interval</code>	Specify an integer from 1 to 86400 (units: seconds) for the monitoring interval. Note that if you specify the monitoring interval along with the <code>adminagent.userserver.watch.interval</code> key of the Administration Agent property file, the value specified in this tag is valid.	1
<code>start-time-watch-interval</code>	Specify the start time monitoring interval, as an integer between 1 and 86400 (units: seconds).	1
<code>env</code>	Define the environment variable. You can specify multiple name-value pairs.	--
<code>name</code>	Specify an environment variable name. Specify this value without fail.	--
<code>value</code>	Specify an environment variable name. Specify this value without fail. If the string <code>\${cosminexus.home}</code> exists in the value specified for environment variables, that value is replaced with <i>Cosminexus-installation-directory</i> .	--
<code>working-dir</code>	Specify the working directory, as an absolute path.	<i>Cosminexus-installation-directory/manager/bin</i>
<code>user-id</code>	Specify the user ID at command runtime. This element is used for UNIX.	--
<code>group-id</code>	Specify the group ID at command runtime. This element is used for UNIX.	--

Element name	Description	Default value
command	Define the command. Specification is mandatory. You can specify multiple commands.	--
type	Specify the command type ^{#1} . You can specify the following values: <ul style="list-style-type: none"> Start: Command for starting the server Stop: Command for stopping the server ForceStop: Command for forced termination of the server GetProcessID: Command for acquiring process ID IsAlive: Command for service monitoring Specification is mandatory.	--
timeout	Specify an integer (units: bytes) from 1 to 86400 for the timeout time. It is valid only when the command type is getProcessID or isAlive.	180
arg	Specify the command arguments. ^{#2} Specification is mandatory. To add arguments and argument values for a command, specify multiple <arg> tags. An example of specifying the <arg> tag is as follows: <arg>Command</arg> <arg>Argument-1</arg> <arg>Value-specified-in-Argument-1</arg> <arg>Argument-2-(No-value-is-specified)</arg> <arg>Argument-3</arg> <arg>Value-specified-in-Argument-3</arg>	--
server	Define the logical user server. Specification is mandatory. You can specify multiple servers.	--
logical-server-name	Specify logical server name in less than 128 characters. You can use single byte alphanumeric characters (A to Z, a to z, 0 to 9), under scores (_), and hyphens (-). Specification is mandatory.	--
display-name	Specifies the display name of the logical server within 128 characters.	--
description	Specify the explanation about the logical server in less than 1024 characters.	--
host-ref	Specify the host name defined beforehand in less than 255 characters. You can use single byte alphanumeric characters (A to Z, a to z, 0 to 9), under scores (_), hyphens (-), and periods(.). Specification is mandatory.	--

#1

Depending on the type of startup, the various command types have different conditions of specification. The following table describes the specification conditions and command type requirements based on the type of startup:

Startup type	Command type	Specification condition	Requirements	Remarks
Direct start	start	Required	Server startup commands are included in the scope of monitoring.	--
	stop	Optional	The monitored process is already stopped when the server stop command terminates normally.	When you do not specify a stop type of command, the following operations are performed: <ul style="list-style-type: none"> In Windows

Startup type	Command type	Specification condition	Requirements	Remarks
				<p>A Ctrl-C event is issued to the corresponding process. If the process does not stop, <code>TerminateProcess ()</code> is executed.</p> <ul style="list-style-type: none"> In UNIX A SIGTERM signal is sent to the corresponding process. If the process does not terminate within 1 second after that, a SIGKILL signal is sent.
	forceStop	Optional	<ul style="list-style-type: none"> The monitored process is already stopped when the forceStop type of command terminates. After issuing a forceStop type of command, the server startup commands are in an executable status. 	<p>When you do not specify a stop type of command, the following operations are performed:</p> <ul style="list-style-type: none"> In Windows A Ctrl-C event is issued to the corresponding process. If the process does not stop, <code>TerminateProcess ()</code> is executed. In UNIX A SIGTERM signal is sent to the corresponding process. If the process does not terminate within 1 second after that, a SIGKILL signal is sent.
	getProcessID	Cannot be specified	--	If specified, it results in error.
	isAlive	Optional	The command should return a termination code of 0 if the service is running and a termination code other than 0, if the service is not running.	When specified, the service is monitored.
Indirect start	start	Required	<ul style="list-style-type: none"> All the monitored processes are started when the process startup command terminates normally. When the process startup command terminates normally, the process stop commands are in an executable state. The command returns the termination code as 0 in case of normal termination, and 1 in case of abnormal termination. 	--
	stop	Optional	The monitored process is already stopped when the server stop command terminates normally.	<p>When you do not specify a stop type of command, the following operations are performed:</p> <ul style="list-style-type: none"> In Windows A Ctrl-C event is issued to the corresponding process. If the process does not stop, <code>TerminateProcess ()</code> is executed. In UNIX A SIGTERM signal is sent to the corresponding process. If the process does not terminate within 1 second after that, a SIGKILL signal is sent.
	forceStop	Optional	<ul style="list-style-type: none"> The monitored process is already stopped when the forceStop type of command terminates. 	<p>When you do not specify a stop type of command, the following operations are performed:</p> <ul style="list-style-type: none"> In Windows

Startup type	Command type	Specification condition	Requirements	Remarks
			<ul style="list-style-type: none"> After issuing a forceStop type of command, the server startup commands are in an executable status. 	<ul style="list-style-type: none"> A Ctrl-C event is issued to the corresponding process. If the process does not stop, TerminateProcess () is executed. In UNIX A SIGTERM signal is sent to the corresponding process. If the process does not terminate within 1 second after that, a SIGKILL signal is sent.
	getProcessID	Required	<ul style="list-style-type: none"> The command outputs the process ID of the process started by the server startup command, to the standard output. When multiple processes are started, the command outputs the process IDs of all the processes. The command returns the termination code as 0 in case of normal termination, and 1 in case of abnormal termination. The output format is as follows: 9 9 9 6 \n 1 0 0 2 3 \n 1 0 2 5 7 \n 	--
	isAlive	Optional	The command should return a termination code of 0 if the service is running and a termination code other than 0, if the service is not running.	When specified, the service is monitored.

#2

If you use any of the following character strings when specifying the value of a command argument, it is replaced with the corresponding value of that string:

Character string before replacement	Character string after replacement	Remarks
\${cosminexus.home}	<i>Cosminexus-installation-directory</i>	--
%{XXX}	Environment variable XXX value	When the environment variable XXX does not exist, it is replaced with a null character string.
\${server.name}	<i>logical-server-name</i>	--

(5) Sample definition

```
<?xml version="1.0" encoding="UTF-8" ?>
<user-server-definition xmlns="http://www.cosminexus.com/mngsvr/schema/UserServerDefinition-1.1">

<!--Service definition -->
  <service>
    <!--Start type -->
    <type>direct</type>
    <!--Startup order -->
    <startup-order>900</startup-order>
    <!--Start monitoring time -->
    <start-watch-time>60</start-watch-time>
```



```

<!--Stop monitoring time -->
<stop-watch-time>60</stop-watch-time>
<!--Forced stop monitoring time -->
<force-watch-time>60</force-watch-time>
<!--Retry count -->
<retry-count>1</retry-count>
<!--Retry interval -->
<retry-interval>60</retry-interval>
<!--Monitoring interval -->
<watch-interval>1</watch-interval>
<!--Start time monitoring interval -->
<start-time-watch-interval>1</start-time-watch-interval>
<!--Environment variable -->
<env name="USERSERVER_HOME" value="C:\UserServer"/>
<!--Working directory -->
<working-dir>C:\UserServer</working-dir>
<!--User ID -->
<!--
<user-id>userserver</user-id>
-->
<!--Group ID -->
<!--
<group-id>userserver</group-id>
-->
<!--Server startup command -->
<command type="start">
<arg>C:\UserServer\start.exe</arg>
</command>
<!--Server stop command -->
<command type="stop">
<arg>C:\UserServer\stop.exe</arg>
</command>
<!--Command for forced termination of server -->
<command type="forceStop">
<arg>C:\UserServer\forceStop.exe</arg>
</command>
<!--Command to get process ID -->
<!--
<command type="getProcessID" timeout="180">
<arg>C:\UserServer\getProcessID.exe</arg>
</command>
-->
<!--Command for service monitoring -->
<command type="isAlive" timeout="180">
<arg>C:\UserServer\isAlive.exe</arg>
</command>
</service>

<!--Logical user server definition -->
<server>
<logical-server-name>UserServer01</logical-server-name>
<display-name>Logical user server</display-name>
<description>This is a logical user server</description>
<host-ref>192.168.1.1</host-ref>
</server>
</user-server-definition>

```

(6) Precautions

- When the `stop` and `forceStop` commands are not specified, do not specify batch files or the shell scripts that invoke other processes in the `start` command. If you specify the batch files or shell scripts, after restarting the Administration Agent, you cannot stop the processes invoked by the batch files or shell scripts by extending the stop operation or forced stop operation.
- When you specify batch files or shell scripts that invoke other processes, in the `start` command during direct start, specify the `stop` command and the `forceStop` command also.
- When you specify batch files or shell scripts that invoke other processes, in the `start` command during indirect start, follow the below steps:
 - Specify the `stop` command and the `forceStop` command.
 - Specify the `getProcessID` command to fetch the process ID of all the processes invoked by the batch files or shell scripts.
- Specify settings for the `isAlive` command used with the start processing of the logical user server such that instead of waiting until the starting of the logical user server can be confirmed, the command must terminate with a non-zero exit code as soon as the confirmation fails.

If the `isAlive` command does not terminate immediately and if the logical user server hangs up during the start processing, the auto-stop processing of the logical user server might not be executed when the exceeding of the start monitoring time of the logical user server is detected.

Also, implement the `isAlive` and `getProcessID` commands with confirmation methods that are as simple as possible, so that a response is returned immediately even if the machine load is high.

8.3 System log message mapping file for JP1/IM integration

The system log message mapping file for JP1/IM integration includes the files that are listed below. In these files, you define the mapping between the Cosminexus system messages, and the criticality of JP1 events.

- `mserver.jp1event.system.mapping.properties` (Message mapping file for Management Server)
- `manager.jp1event.system.mapping.properties` (J2EE server shared message mapping file)
- `manager.logical-server-name.jp1event.system.mapping.properties` (Message mapping file for individual J2EE servers)

Note that you cannot define the messages related to the Web services and Web resources in the system log message mapping file for JP1/IM integration.

8.3.1 `mserver.jp1event.system.mapping.properties` (Message mapping file for Management Server)

(1) Format

J2SE property file format.

```
mserver.jp1event.system.mapping.severity.Message-ID = Criticality-of-JP1-event
```

Message-ID

Specifies the message ID described in the following manual:

- Manual *uCosminexus Application Server Messages*

Criticality-of-JP1-event

Specify any one of the values from Information, Notice, Warning, Error, Critical, Alert, or Emergency.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config\`
- In UNIX
`/opt/Cosminexus/manager/config`

(3) Functionality

You use this message mapping file for converting the log messages output by Management Server into JP1 event.

(4) Examples of coding

```
mserver.jp1event.system.mapping.severity.KEOS10001-E=Error  
mserver.jp1event.system.mapping.severity.KEOS10010-I=Information
```

8.3.2 manager.jp1event.system.mapping.properties (Message mapping file for J2EE server sharing)

(1) Format

J2SE property file format.

```
mserver.jp1event.system.mapping.severity.Message-ID = Criticality-of-JP1-event
```

Message-ID

Specifies the message ID described in the following manual:

- Manual *uCosminexus Application Server Messages*

Criticality-of-JP1-event

Specify any one of the values from Information, Notice, Warning, Error, Critical, Alert, or Emergency.

(2) File storage location

- In Windows
Cosminexus-installation-directory\manager\config
- In UNIX
/opt/Cosminexus/manager/config

(3) Functionality

You use this message mapping file for sharing the J2EE servers in a server machine, and during conversion of log messages output by a J2EE server into JP1 events.

(4) Examples of coding

```
manager.jp1event.system.mapping.severity.KDJE42019-E=Error  
manager.jp1event.system.mapping.severity.KDJE42040-I=Information
```

8.3.3 manager.Logical-server-name.jp1event.system.mapping.properties (Message mapping file for individual J2EE servers)

(1) Format

J2SE property file format.

```
mserver.jp1event.system.mapping.severity.Message-ID = Criticality-of-JP1-event
```

Message-ID

Specifies the message ID described in the following manual:

- Manual *uCosminexus Application Server Messages*

Criticality-of-JP1-event

Specify any one of the values from Information, Notice, Warning, Error, Critical, Alert, or Emergency.

(2) File storage location

- In Windows
`Cosminexus-installation-directory\manager\config`
- In UNIX
`/opt/Cosminexus/manager/config`

(3) Functionality

You create this file when you want to define the mapping rules for each J2EE server. When this file is defined, Cosminexus uses only the individual file for the corresponding J2EE server and converts the log messages output by the J2EE server into JP1 events.

(4) Examples of coding

```
manager.jplevent.system.mapping.severity.KDJE42020-E=Error
manager.jplevent.system.mapping.severity.KDJE42041-I=Information
```

8.3.4 Conversion to JP1 events

The message-mapping file is used to convert the log messages output with the Management Server, J2EE server, and user log functionality into JP1 events.

(1) JP1 events for Management Server

There are following two types of JP1 events for the Management Server:

- JP1 events defined in Cosminexus
- JP1 events specified in the message mapping file for the Management Server

(a) JP1 events defined in Cosminexus

Cosminexus issues JP1 events when the messages with the following message IDs are output:

Table 8–3: JP1 events for Management Server defined in Cosminexus

Event ID	Trigger	Message ID
0x00012050	Management Server startup	KEOS10101-I
0x00012051	Stopping the Management Server	KEOS10102-I
0x00012060	Addition of a Web system to the domain	KEOS23301-I
0x00012061	Deletion of a Web system from the domain	KEOS23302-I
0x0001206A	Unit addition or deletion to the Web system and deployment or undeployment of a J2EE application (changing the Web system)	KEOS23303-I

Event ID	Trigger	Message ID
0x00012070	Administration Agent startup	KEOS21100-I
0x00012071	Stopping the Administration Agent	KEOS21101-I

(b) JP1 events specified in the message mapping file for the Management Server

JP1 events are issued for the messages specified in the template file (`mserver.jp1event.system.mapping.properties`) of the message-mapping file for the Management Server.

The storage destination for the template file is as follows:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\`
- In UNIX
`/opt/Cosminexus/manager/config/templates`

The following table describes the JP1 events for the Management Server that are issued based on specification of the message-mapping file:

Table 8–4: JP1 events for Management Server based on the specification of the message-mapping file

Event ID	Trigger	Criticality of JP1 events specified by mapping
0x00012000	Emergency-level failure of the logical server detected in the Management Server	Emergency
0x00012001	Alert-level failure of the logical server detected in the Management Server	Alert
0x00012002	Critical-level failure of the logical server detected in the Management Server	Critical
0x00012003	Error-level failure of the logical server detected in the Management Server	Error
0x00012004	Warning-level failure of the logical server detected in the Management Server	Warning
0x00012005	Notice-level failure of the logical server detected in the Management Server	Notice
0x00012006	Information-level failure of the logical server detected in the Management Server	Information
0x00012020	Emergency-level failure in the Management Server	Emergency
0x00012021	Alert-level failure in the Management Server	Alert
0x00012022	Critical-level failure in the Management Server	Critical
0x00012023	Error-level failure in the Management Server	Error
0x00012024	Warning-level failure in the Management Server	Warning
0x00012025	Notice-level failure in the Management Server	Notice
0x00012026	Information-level failure in the Management Server	Information

(2) JP1 events for J2EE server

JP1 events for the J2EE server are issued for the messages specified in the following template files:

- Message mapping file for the shared J2EE servers (`manager.jp1event.system.mapping.properties`)

- Message mapping file for the individual J2EE server (`manager.logical-server-name.jplevent.system.mapping.properties`)

The storage destination for the template file is as follows:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\`
- In UNIX
`/opt/Cosminexus/manager/config/templates`

The following table describes the JP1 events for the J2EE server based on the specification of the message-mapping file:

Table 8–5: JP1 events for J2EE server

Event ID	Trigger	Criticality of JP1 events specified by mapping
0x00012080	Emergency-level failure of J2EE server	Emergency
0x00012081	Alert-level failure of J2EE server	Alert
0x00012082	Critical-level failure of J2EE server	Critical
0x00012083	Error-level failure of J2EE server	Error
0x00012084	Warning-level failure of J2EE server	Warning
0x00012085	Notice-level failure of J2EE server	Notice
0x00012086	Information-level failure of J2EE server	Information
0x00012090	Emergency-level failure of application detected in J2EE server	Emergency
0x00012091	Alert-level failure of application detected in J2EE server	Alert
0x00012092	Critical-level failure of application detected in J2EE server	Critical
0x00012093	Error-level failure of application detected in J2EE server	Error
0x00012094	Warning-level failure of application detected in J2EE server	Warning
0x00012095	Notice-level failure of application detected in J2EE server	Notice
0x00012096	Information-level failure of application detected in J2EE server	Information

(3) JP1 events for J2EE users

JP1 events for J2EE users are issued for messages output with the user log functionality. For details about the settings of JP1 events for user logs, see *Chapter 13* in manual *uCosminexus Application Server Operation, Monitoring, and Linkage Guide*.

Table 8–6: JP1 events for J2EE users

Event ID	Trigger	Criticality of JP1 events
0x000120D0	Emergency-level failure of application	Emergency
0x000120D1	Alert-level failure of application	Alert
0x000120D2	Critical-level failure of application	Critical
0x000120D3	Error-level failure of application	Error

Event ID	Trigger	Criticality of JP1 events
0x000120D4	Warning-level failure of application	Warning
0x000120D5	Notice-level reporting of application	Notice
0x000120D6	Information-level reporting of application	Information

9

Files Used in Virtual Systems (INTENTIONALLY DELETED)

(INTENTIONALLY DELETED)

9.1 (INTENTIONALLY DELETED)

(INTENTIONALLY DELETED)

10

Files Used in Log Operations

This chapter describes the format of the files, storage locations, and variables that you can use in log operations.

10.1 List of files used in log operations

The following table lists the files used in log operations:

Table 10–1: List of files used in log operations

File name	Classification	Overview	Reference
(Optional)	Definition file for snapshot log collection	Define the target files for the primarily sent data, secondarily sent data, and definition sending data to be collected as the snapshot log.	10.2.1

10.2 Details of files used for log operations

10.2.1 Definition file for snapshot log collection

The snapshot log collects information required to maintain the system and the applications.

In the definition file for the snapshot log collection, specify the target files for the primarily sent data, secondarily sent data, and definition sending data to be collected as the snapshot log. The specified file will be collected as the snapshot log. You can edit this file to change the path of the definition file for snapshot log collection.

(1) Format

Specify the definition file in the following format:

- Specify the collection path as a full path.
- The line beginning with a hash mark (#) is a comment.
- Use "/" as a file separator.
- Use a regular expression[#] for path elements classified by the file separator.
- If the format includes an invalid regular expression[#], the specification will be ignored.
- If a file does not exist in the specified path, the specification will be ignored.

#

For details on regular expressions, see the definition of `java.util.regex.Pattern`.

(2) Storage locations and file names

When editing the default installation setup file

Edit the following files:

- In Windows
 - `Cosminexus-installation-directory\manager\config\snapshotlog.conf`
 - `Cosminexus-installation-directory\manager\config\snapshotlog.2.conf`
 - `Cosminexus-installation-directory\manager\config\snapshotlog.param.conf`
- In UNIX
 - `/opt/Cosminexus/manager/config/snapshotlog.conf`
 - `/opt/Cosminexus/manager/config/snapshotlog.2.conf`
 - `/opt/Cosminexus/manager/config/snapshotlog.param.conf`

Specify the files to be collected as primary delivery material in `snapshotlog.conf` and the files to be collected as secondary delivery material in `snapshotlog.2.conf`. In `snapshotlog.param.conf`, specify the data to be collected as the definition sending data.

For details about the files collected by snapshot log, see 2.3.3 *Collecting the Snapshot Log* in the manual *uCosminexus Application Server Maintenance and Migration Guide*.

When specifying any file

Any storage location and filename is possible.

Copy and use the available template in the following locations:

- In Windows
`Cosminexus-installation-directory\manager\config\templates\`
- In UNIX
`/opt/Cosminexus/manager/config/templates/`

(3) Variables that you can use

You can use the following variables when you specify a path:

Table 10–2: Variables that you can use in the definition file for snapshot log collection

Variables	Contents
<code>\${cosminexus.home}</code>	Installation directory of the Cosminexus server
<code>\${user.home}</code>	Home directory of a user
<code>\${hws.home}</code>	Cosminexus HTTP Server installation directory
<code>\${com.cosminexus.manager.log.dir}</code>	Log output directory of the Cosminexus Manager
<code>&{prfspool}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Settings tab of the Performance Tracer, go to Performance tracer settings and specify the value in the pool directory.
<code>&{ctmspool}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Basic settings tab of the CTM domain manager, go to Basic settings of CTM domain manager and specify the value in the pool directory.
<code>&{ejb.public.directory}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Container-J2EE tab of the J2EE server, go to J2EE Container settings and specify the value in the definition of the working directory.
<code>&{webserver.work.directory}</code>	The value is as follows: In the environment settings of the logical server, choose the Container-Web tab of the J2EE server and specify the value in the temporary directory for JSP.
<code>&{ejb.server.log.directory}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Service-Log tab of the J2EE server and specify the value in the log output directory.
<code>&{webserver.logger.access_log.inprocess_http.filename}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Service-Transaction tab of the J2EE server; go to Access log settings and specify the value in the output file name.
<code>&{ejbserver.distributedtx.ots.status.directory1}</code>	The value is specified as follows: In the environment settings of the logical server, choose the HTTP Server-Log tab of the J2EE server and specify the value in the location for saving the status file of the in-process OTS.
<code>&{ejbserver.distributedtx.ots.status.directory2}</code>	The value is specified as follows: In the environment settings of the logical server, choose the HTTP Server-Log tab of the J2EE server and specify the

Variables	Contents
	value in the location for saving the status file (spare) of the in-process OTS.
<code>&{core.dump.directory}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Settings tab of the Web server; go to Web server basic settings and specify the value in the directory where the core dump is to be output.
<code>&{hws.logfile.dir}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Settings tab of the Web server; go to Web server log output settings and specify the value in the directory where the log is to be output.
<code>&{jklogfiledir}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Redirector tab of the Web server and specify the value in the directory where the log is to be output.
<code>&{jktracelogfiledir}</code>	The value is specified as follows: In the environment settings of the logical server, choose the Redirector tab of the Web server and specify the value in the directory where the maintenance trace log is to be output.
<code>&{ctm.RegOption}</code>	Setup file for the CTM regulator.
<code>&{ctm.TSCGwOption}</code>	Setup file for the OTM gateway.
<code>#{adminagent.prftrace_dir}</code>	Output destination directory for the temporary PRF trace file.

Note:

- The dollar sign (\$) indicates the system properties and the ampersand (&) indicates the internal variables of the Management Server.
- You cannot use variables that include the dollar sign (\$) in the value.
- When you collect log using the snapshot log collection command, you cannot use the internal variables of Management Server that contain the ampersand sign. However, `&{ejb.public.directory}` can also be used with the snapshot log collection command.

(4) Examples of coding

When collecting `/home/logdir/message1.log`

```
/home/logdir/message1\#.log
```

When collecting all the files in the `/opt/Cosminexus/manager/log` directory

```
#{cosminexus.home}/manager/log/.+#
```

When collecting the JavaVM thread dump of the J2EE server (Working directory=`/home/workdir`, J2EE server name=`Server1`)

```
/home/workdir/ejb/Server1/javacore.+ \#.txt
```

#

The backslash (\) is a character that negates the period (.).

The period (.) sign indicates any character.

The plus sign (+) indicates one or more times.

11

Files Used for Setting Audit Log (INTENTIONALLY DELETED)

(INTENTIONALLY DELETED)

11.1 (INTENTIONALLY DELETED)

(INTENTIONALLY DELETED)

12

Files Used in Java Applications

This chapter describes the functionality, storage locations, and the format of the files used in the Java applications and the keys that you can specify in the files.

12.1 List of files used in the Java applications

The following table lists the files used in the Java applications:

Table 12–1: List of files used in the Java applications

File name	Classification	Overview	Reference
<code>usrconf.cfg</code>	Option definition file for Java applications	Specify the start option of the JavaVM that executes the Java application. Use this file when starting a Java application with the <code>cjclstartap</code> command.	12.2.1
<code>usrconf.properties</code>	User property file for Java applications	Specify the system properties of the JavaVM that executes the Java application. Use this file when starting a Java application with the <code>cjclstartap</code> command.	12.2.2
(Optional)#	System properties specified in the Java application	Specify the system properties of the JavaVM that executes the Java application. When you use the <code>vbj</code> command to start the Java application, specify the system properties as command arguments in the batch file or shell script.	12.2.3
(Optional)	Property setup file for the user log of Java applications	Use this file for the user log of Java applications. Use this file to start the Java application with the <code>vbj</code> command.	12.2.4

#

Specify the required system properties for each command (`vbj` command) to be used for starting the Java application. When invoking the Enterprise Beans from a Java application, you need to specify the system properties.

Use one of the following commands to start a Java application:

- **`cjclstartap` command**

You normally use the `cjclstartap` command. The storage location of the command is as follows:

- In Windows
`Cosminexus-installation-directory\CC\client\bin\cjclstartap`
- In UNIX
`/opt/Cosminexus/CC/client/bin/cjclstartap`

- **`vbj` command**

The `vbj` command is a command for compatibility provided to users who are already using this command. The storage location of the command is as follows:

- In Windows
`Cosminexus-installation-directory\TPB\bin\vbj`
- In UNIX
`/opt/Cosminexus/TPB/bin/vbj`

12.2 Details of files used by Java applications

12.2.1 usrconf.cfg (Option definition file for Java applications)

(1) Format

Specify the key as follows:

```
key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) *key-name=value#comment*

- If you specify a path containing a space in the value, you need not enclose the path in double quotation marks (").
- You cannot code with a character encoding that is different from the runtime character encoding.

(2) File storage location

- In Windows

```
user-definition-file-storage-directory#\usrconf.cfg
```

- In UNIX

```
user-definition-file-storage-directory#/usrconf.cfg
```

#

This is the directory specified in the user definition file storage location environment variable (CJCLUSRCONFDIR). If this environment variable is not set, the system references the current directory. For details on the environment variable settings required to execute EJB client applications, see *3.3.4 Environment variable settings required to execute EJB client applications* in the manual *uCosminexus Application Server EJB Container Functionality Guide*.

(3) Functionality

This file specifies the invocation options of the JavaVM that executes the Java application when you use the `cjclstartap` command.

If you change the contents of this file while the Java application is running, the changes are applied only when the Java application is started next.

(4) Specifiable keys

The specifiable keys and default values are described below. When an invalid value is specified for this key, operation is not guaranteed.

Tip

The following contents are explained:

- **Overview of the keys that you can specify in the `usrconf.cfg` file for Java applications**

Of the keys that can be specified, those that are common with `usrconf.cfg` for J2EE servers are not explained in detail here.

For details on the common keys, see [2.2.2 `usrconf.cfg` \(Option definition file for J2EE servers\)](#). When referencing, substitute J2EE server for Java application.

This subsection also explains the details of keys, if the specification contents and the keys for J2EE server differ greatly.

- **Differences with the keys for J2EE server (when the keys and specification contents of the `usrconf.cfg` file for J2EE server are different)**

This subsection explains the details about the keys when specifications for the Java application keys and the J2EE server keys are different. Note the differences in the *Difference* column.

Table 12–2: Keys and default values that you can specify in `usrconf.cfg` (Java application)

Key name	Difference	Contents	Default value
<code>add.jvm.arg</code>	None	This key invokes JavaVM by using the specified option. For details about the Java VM options that can be specified by using <code>add.jvm.arg</code> keys, see 14.1 List of JavaVM extension options and 14.5 Java HotSpot VM options that can be specified in Cosminexus .	For details about default values, see 12.2.1(6) Default values of the JavaVM options specified in the option definition file for Java applications .
<code>add.class.path</code>	Exists	Specify a class path necessary for executing Java applications. Specify the class path (<code>stubs.jar</code> , <code>numeric.jar</code> , <code>user class.jar</code>) necessary for the execution of each EJB application. If a path containing space is specified in the value, the path need not be enclosed with double quotation mark ("). Also, values specified in double quotations are not valid.	--
<code>add.library.path[#]</code>	None	Specify the shared library for JNI	--
<code>cpp.library.version</code>	None	Specify the version of <code>libstdc++</code> library used in the process. Note that this key is used in Linux. The following string can be specified: 6: The <code>libstdc++.so.6</code> library will be used. This key is invalid when specified on platforms other than Red Hat Enterprise Linux. Only 6 can be specified with version 09-00 or later.	6
<code>ejb.client.director.y.shareable</code>	Unique	Specify whether to simultaneously start multiple <code>cjclstartap</code> commands that use the same current directory or the same log output destination directory. If you specify <code>true</code> : Multiple commands are started at the same time. If you specify <code>false</code> : Multiple commands are not started at the same time.	<code>true</code>

Key name	Difference	Contents	Default value
<code>ejb.client.ejb.log</code>	Unique	<p>Specify a value from 1 to 16 bytes for the name of the log output destination directory of the messages output by the Java application under the directory specified in the <code>ejb.client.log.directory</code> key.</p> <p>You can specify single-byte alphanumeric characters, underscores (<code>_</code>), and hyphens (<code>-</code>).</p> <p>If you specify a string that exceeds 16 bytes, the KDJE40051-W message is output.</p> <p>If there are no access permissions for the directory and if you specify the file name, the KDJE40052-E message is output and the Java application terminates.</p> <p>If you specify <code>ejbserver.client.ejb.log</code> in the user property file (<code>usrconf.properties</code>), the specification of the user property file is given priority at the following log file output destinations:</p> <ul style="list-style-type: none"> • Operation log • Exception information in the case of failure • Maintenance information 	system
<code>ejb.client.log.appid</code>	Unique	<p>Specify a value from 1 to 16 bytes for the name of the log output destination subdirectory of the messages output by the Java application.</p> <p>You can specify single-byte alphanumeric characters, underscores (<code>_</code>), and hyphens (<code>-</code>).</p> <p>If you specify a string that exceeds 16 bytes, the KDJE40051-W message is output.</p> <p>If there are no access permissions for the directory and if you specify the file name, the KDJE40052-E message is output and the Java application terminates.</p> <p>If you specify <code>ejbserver.client.log.appid</code> in the user property file (<code>usrconf.properties</code>), the specification of the user property file is given priority at the following log file output destinations:</p> <ul style="list-style-type: none"> • Operation log • Exception information in the case of failure • Maintenance information 	ejbcl
<code>ejb.client.log.directory</code>	Unique	<p>Specify the log output destination path for the Java application in the range of 1 to 180 bytes.</p> <p>Specify the path as an absolute path or as a relative path from the current directory.</p> <p>You can specify single-byte alphanumeric characters, underscores (<code>_</code>), hyphens (<code>-</code>), and path separation characters.</p> <p>If you specify a path exceeding 180 bytes (when the relative path is specified, the total of absolute path and relative path up to the current directory), the KDJE40059-W message is output and the default value is used. When the default value exceeds 180 bytes, log initialization fails and terminates abnormally.</p> <p>In Windows, you cannot specify a path that includes a UNC name. In UNIX, you cannot specify a path of an nfs-mounted disk.</p> <p>If there are no access permissions for the directory and if you specify the file name, the KDJE40052-E message is output and the Java application terminates.</p> <p>If you specify <code>ejbserver.client.log.directory</code> in the user property file (<code>usrconf.properties</code>), the specification of the user property file is given priority at the following log file output destinations:</p> <ul style="list-style-type: none"> • Operation log • Log operation log • Exception information in the case of failure • Maintenance information 	<i>Current-directory/logs</i>

Key name	Difference	Contents	Default value
<code>ejb.client.log.lockInterval</code>	Unique	<p>Specify a parameter that acts on the exclusive processing for the following log files:</p> <ul style="list-style-type: none"> • Operation log for the <code>cjclstartap</code> command • Start process information sent to the standard output • Start process information sent to the standard error output <p>The function of the parameter that acts on exclusive processing differs depending on whether the OS is UNIX or Windows.</p> <p>In UNIX only:</p> <p>This key specifies the interval (in milliseconds) at which to try again if acquisition of exclusive processing for a log file fails. You can specify an integer in the range from 1 to 2147483647.</p> <p>In Windows only:</p> <p>You can specify an integer in the range from 1 to 2147483647. The value resulting from multiplying the values specified for <code>ejb.client.log.lockRetryCount</code> and <code>ejb.client.log.lockInterval</code> becomes the time (in milliseconds) to wait for before acquisition of exclusive processing times out. If the resulting value exceeds 2147483647, the value obtained by multiplying the default values of <code>ejb.client.log.lockRetryCount</code> and <code>ejb.client.log.lockInterval</code> becomes the timeout for acquisition of exclusive processing.</p> <p>In both UNIX and Windows:</p> <p>If you specify a value that is outside the range of specifiable values or a non-integer value (value that cannot be converted into an integer), the default value is applied.</p> <p>For example, this key is used in the following case: Multiple instances of the <code>cjclstartap</code> command that started concurrently in the subdirectory common mode failed in exclusive processing for a log file, outputting the KDJE40016-E (with <code>errno</code> 22), KDJE30043-E, or KDJE40052-E message to the standard error output.</p>	30
<code>ejb.client.log.lockRetryCount</code>	Unique	<p>Specify a parameter that acts on the exclusive processing for the following log files:</p> <ul style="list-style-type: none"> • Operation log for the <code>cjclstartap</code> command • Start process information sent to the standard output • Start process information sent to the standard error output <p>The function of the parameter that acts on exclusive processing differs depending on whether the OS is UNIX or Windows.</p> <p>In UNIX only:</p> <p>This key specifies the maximum number of times the system can try again if acquisition of exclusive processing for a log file fails. You can specify an integer in the range from 1 to 2147483647.</p> <p>In Windows only:</p> <p>You can specify an integer in the range from 1 to 2147483647. The value resulting from multiplying the values specified for <code>ejb.client.log.lockRetryCount</code> and <code>ejb.client.log.lockInterval</code> becomes the time (in milliseconds) to wait for before acquisition of exclusive processing times out. If the resulting value exceeds 2147483647, the value obtained by multiplying the default values of <code>ejb.client.log.lockRetryCount</code> and <code>ejb.client.log.lockInterval</code> becomes the timeout for acquisition of exclusive processing.</p>	100

Key name	Difference	Contents	Default value
		<p>In both UNIX and Windows:</p> <p>If you specify a value that is outside the range of specifiable values or a non-integer value (value that cannot be converted into an integer), the default value is applied.</p> <p>For example, this key is used in the following case: Multiple instances of the <code>cjclstartap</code> command that started concurrently in the subdirectory common mode failed in exclusive processing for a log file, outputting the KDJE40016-E (with <code>errno 22</code>), KDJE30043-E, or KDJE40052-E message to the standard error output.</p>	
<code>ejb.client.log.stdout.enabled</code>	Unique	<p>Specify whether to output messages in the standard output.</p> <p><code>true</code>:</p> <p>Messages are output in the standard output.</p> <p><code>false</code>:</p> <p>Messages are not output in the standard output.</p> <p>Following are the logs in which messages output in the standard output can be controlled:</p> <ul style="list-style-type: none"> • Operation log • <code>cjclstartap</code> command log • Standard output information of the invocation process 	true
<code>jvm.type</code>	Unique	<p>Specify type of the JavaVM to be used. You can specify one of the following values:</p> <ul style="list-style-type: none"> • <code>client</code> Java HotSpot Client VM is used. • <code>server</code> Java HotSpot Server VM is used. <p>If the specified value is wrong, JavaVM is searched in the "client" and "server" order. At this time, a message KDJE40020-W is output.</p>	client

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

None:

This is a common key or default value in the `usrconf.cfg` file for Java applications and the `usrconf.cfg` file for J2EE servers. For details about keys, see [2.2.2 `usrconf.cfg` \(Option definition file for J2EE servers\)](#).

Unique:

This is a key specific to `usrconf.cfg` file for Java applications. For details about keys, see the *Contents* column.

--:

This is a common default value in the `usrconf.cfg` file for Java applications and the `usrconf.cfg` file for J2EE servers. For details about the default value, see [2.2.2 `usrconf.cfg` \(Option definition file for J2EE servers\)](#).

#

If both the `add.library.path` and OS environment variables (such as `LIBPATH`) are set up when executing the `cjclstartap` command, the `add.library.path` settings have a higher priority.

(5) Examples of coding

```
# EJB client application classpath
# RMI-IIOP Stubs jar file
add.class.path=Java-application-storage-path\stubs.jar
```



```
# RMI-IIOP interface jar file
add.class.path=Java-application-storage-path\1.jar

# User class
add.class.path=Java-application-storage-path\Java-application-jar
#add.class.path=user-classpath

# java vm options
add.jvm.arg=-Xms256m
add.jvm.arg=-Xmx512m
```

(6) Default values of the JavaVM options specified in the option definition file for Java applications

The following are the default values of the Java VM options specified in the option definition file for Java applications:

- `-XX:HitachiJavaLog:ejb.client.log.directory\ejb.client.ejb.log\ejb.client.log.appid`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:-HitachiThreadDumpToStdout`
- `-XX:+HitachiOutOfMemoryAbort`
- `-XX:+HitachiJavaClassLibTrace`
- `-XX:+HitachiLocalsInStackTrace`
- `-XX:HitachiJavaClassLibTraceLineSize=1024`
- `-XX:+HitachiLocalsSimpleFormat`
- `-XX:+HitachiTrueTypeInLocals`
- `-XX:+HitachiLocalsInStackTrace`
- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiVerboseGCPrintCause`
- `-XX:+HitachiOutputMilliTime`

(7) Notes

- Do not use a character encoding that is different from the OS locale. If UTF-8 is used in the OS locale, do not use UTF-8 with BOM.
- If you specify the same key in the `usrconf.properties` file and in `-D` of `add.jvm.arg` of the `usrconf.cfg` file, the value specified in `usrconf.properties` is given priority.
- Among the values specified in the `add.class.path` key, there are some values for which the `<cosminexus.home>` tag is used to specify the JAR files for the container extension library. These values indicate the installation destination of Application Server, so you do not need to change the contents coded for the `add.class.path` key. Note that when you add the container extension library to the `add.class.path` key, the installation and uninstallation operations might not be guaranteed; therefore, do not use the `<cosminexus.home>` tag.
- The following properties cannot be specified for the `-D` option:
 - `java.endorsed.dirs`
 - `java.security.policy`

```
java.class.path
java.library.path
```

- For Java applications that use the Java EE functionality, do not specify the `--add-modules` and `--module-path` options for the `add.jvm.arg` key. If you do so, operations are not guaranteed.
- For Java applications that do not use the Java EE functionality, you can use a modularized library by specifying the `--add-modules` and `--module-path` options for the `add.jvm.arg` key.

12.2.2 usrconf.properties (User property file for Java applications)

(1) Format

J2SE property file format.

Specify the key as follows:

```
key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) `key-name=value#comment`

- Use the ISO 8859-1 character encoding according to the Java specifications for the characters to be encoded.
- If the format does not conform to Java specifications, the Java application might fail to start.

(Example) When the format contains an invalid Unicode escape sequence (the string after `"\u"` is not an appropriate Unicode hexadecimal value).

(2) File storage location

- In Windows

```
user-definition-file-storage-directory#/usrconf.properties
```

- In UNIX

```
user-definition-file-storage-directory#/usrconf.properties
```

#

This is the directory specified in the user definition file storage location environment variable (`CJCLUSRCONFDIR`). If this environment variable is not set, the system references the current directory. For details on the environment variable settings required to execute EJB client applications, see [3.3.4 Environment variable settings required to execute EJB client applications](#) in the manual *uCosminexus Application Server EJB Container Functionality Guide*.

(3) Functionality

This file specifies the system properties of the JavaVM that executes the Java application when you use the `cdstartap` command.

If you specify the same key in the `usrconf.properties` file and in `-D` of `add.jvm.arg` of the `usrconf.cfg` file, the value specified in `usrconf.properties` is given priority.

If you change the contents of this file while the Java application is running, the changes are applied only when the Java application is started next.

(4) Keys for customizing the Java applications

You can customize the operations of the Java applications by setting values for the following system property keys in the `start` command of the Java application:

The keys are classified and explained as follows:

- *Keys beginning with `ejbserver.application`*
- *Keys beginning with `ejbserver.client`*
- *Keys beginning with `ejbserver.container`*
- *Keys beginning with `ejbserver.distributedtx`*
- *Keys beginning with `ejbserver.jndi`*
- *Keys beginning with `ejbserver.jta`*
- *Keys beginning with `ejbserver.logger`*
- *Keys beginning with `ejbserver.rmi`*
- *Keys beginning with `ejbserver.security`*
- *Keys beginning with `ejbserver.server`*
- *Keys beginning with `ejbserver.stdoutlog`*
- *Keys beginning with `https`*
- *Keys beginning with `java`*
- *Keys beginning with `org`*
- *Keys beginning with `vbroker`*

The following table lists the keys that you can specify in the `usrconf.properties` file for the Java applications:

Important note

The following contents are explained:

- **Overview of the keys that you can specify in the `usrconf.properties` file for the Java applications**

Of the keys that can be specified, those that are common with the `usrconf.properties` file for the J2EE server are not explained in detail here.

For details on the common keys, see [2.2.3 `usrconf.properties` \(User property file for J2EE servers\)](#). In the case of Java applications, read 'Java application' in place of 'J2EE server'.

This subsection also explains the details of keys, if the specification contents and the keys for J2EE server differ greatly.

- **Differences with the keys for J2EE server (when the keys and the specification contents of the `usrconf.properties` file for J2EE server are different)**

This subsection explains the details about the keys when specifications for the Java application keys and the J2EE server keys are different. If differences are not specifically coded, specify the same contents as the keys of the `usrconf.properties` file for the J2EE server. Note the differences in the Difference column.

- **Details of the `usrconf.properties` file-specific keys for the Java application**

This subsection explains the details of the `usrconf.properties` file-specific keys for the Java applications.

(a) Keys beginning with `ejbserver.application`

The keys that begin with `ejbserver.application` and can be specified in the `usrconf.properties` file for Java applications are listed below. For details on the keys that are common with the `usrconf.properties` file for the J2EE server, see [2.2.3\(5\)\(a\) Keys beginning with `ejbserver.application`](#).

Key name	Difference	Contents	Default value
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.appname</code>	None	Specify the default application name that is output to the <code>AppName</code> field.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.autoFlush.enabled</code>	Unique	Specify whether flush is to be carried out after the message is output. If you specify <code>true</code> : The <code>flush</code> command will be executed for every message. If you specify <code>false</code> : The <code>flush</code> command will not be executed. This specification is not necessary when you do not use <code>CJMPMessageFileHandler</code> . Do not specify <code>true</code> when <code>java.util.logging.Handler.flush()</code> is explicitly invoked in the application program.	false
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.count</code>	None	Specify the number of log files.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.encoding</code>	None	Specify encoding of the character strings to be output.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.filter</code>	None	Specify the filter to be used with its full name, including the package name.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.formatter</code>	None	Specify the formatter that you will use along with its full name, including the package name.	--

Key name	Difference	Contents	Default value
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.level</code>	None	Specify an upper-limit of a log collection level.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.limit</code>	None	Specify the capacity of a log file.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.msgid</code>	None	Specify the default message ID that is output to the MsgID field.	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.path</code>	Exists	<p>Specify a value from 1 to 255 bytes for the prefix of a log file name. Specify the path as a relative path. Do not specify a single-byte numeric value at the end of the path name.</p> <p>The value obtained by adding "xx (an integer between 1 to 16).log" to the prefix specified in this key forms the name of the trace information file.</p> <p>The single-byte alphanumeric characters specified in the path are not case-sensitive. Specify the length of the path value, such that the total of the following A + B + C values is within the range of the value:</p> <ul style="list-style-type: none"> • A (in Windows): <i>log-output-destination-root</i> (value of <code>ejbserver.client.log.directory</code>) \user\ (by default, <i>Cosminexus-installation-directory</i>\CC\client\logs\user\) • A (in UNIX): <i>log-output-destination-root</i> (value of <code>ejbserver.client.log.directory</code>) /user/ (by default, /opt/Cosminexus/CC/client/logs/user/) • B: Length of the prefix specified by the user • C: Six characters of "xx.log" <p>Apart from the above, note the following when specifying the path:</p> <ul style="list-style-type: none"> • Double-byte codes of native cannot be used in the Properties file, therefore, acquire and specify the Unicode strings by using native2ascii. • Do not specify as an absolute path. Do not use "..\" ("../" in Unix) of a relative path. • If the path includes Japanese characters, JavaVM needs to be running in an environment where the locale settings enable the processing of Japanese characters. <p>You cannot set the same path as another handler. If you set the same path, the handler is not created.</p>	--
<code>ejbserver.application.userlog.CJLogHandler.handler-name#1.separator</code>	None	Use the CJSimpleFormatter and specify a separator to output a message in one sentence.	--
<code>ejbserver.application.userlog.loggers</code>	None	Declare the names of the loggers to be used.	--
<code>ejbserver.application.userlog.Logger.logger-name#2.filter</code>	None	Specify the full name including the package name of the filter used in the logger.	--
<code>ejbserver.application.userlog.Logger.logger-name#2.handlers</code>	None	Specify the handler class for the specified logger name.	--

Key name	Difference	Contents	Default value
<code>ejbserver.application.userlog.Logger.logger-name#2.level</code>	None	Specify the log output level of the logger.	--
<code>ejbserver.application.userlog.Logger.logger-name#2.useParentHandlers</code>	None	Specify whether the log record is to be transmitted from the logger that received the log record to the handler connected to the parent logger.	--

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(a\) Keys beginning with *ejbserver.application*](#).

Unique:

This is a key specific to the `usrconf.properties` file for Java applications. For details about keys, see the *Contents* column.

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(a\) Keys beginning with *ejbserver.application*](#).

#1

Use the handler name to differentiate between the property values. Specify a class character set from 1 to 1024 bytes beginning with a single-byte alphanumeric character for the handler name. If you specify `default`, handler name indicates a property that is recognized as the common default value by all `CJLogHandler`.

#2

Logger name has "." that is specified for getting the instances of logger by `Logger.getLogger(logger-name)`. Logger name must be declared beforehand in the `ejbserver.application.userlog.loggers` property. For details on the logger name, follow the specifications of `java.util.logging.Logger`.

Specify a class character set from 1 to 1024 bytes beginning with a single-byte alphanumeric character for the handler name. If you specify `default`, handler name indicates a property that is recognized as the common default value by all `CJLogHandler`.

The properties identified by the logger names are used for initializing the logger class of the user log functionality.

If a logger name ends with `.handlers`, there may be confusion when the properties of `ejbserver.application.userlog.Logger.logger-name.handlers` are specified, and therefore, Hitachi recommends that you do not end a logger name with `.handlers`.

(b) Keys beginning with `ejbserver.client`

The keys that begin with `ejbserver.client` and can be specified in the `usrconf.properties` file for the Java application are listed below. For details on the keys that are common with the `usrconf.properties` file for the J2EE server, see [2.2.3\(5\)\(c\) Keys beginning with *ejbserver.client*](#).

When using uCosminexus Client, read the storage directory `Cosminexus-installation-directory\CC` as `Cosminexus-installation-directory\CCL`.

Key name	Difference	Contents	Default value
<code>ejbserver.client.ctm.RequestPriority</code>	None	Specify the priority (priority order) for extracting the request accumulated in the queues within CTM.	--
<code>ejbserver.client.ejb.log</code>	Unique	Specify a value from 1 to 16 bytes for the name of the log output directory of the messages output by the Java application under the directory specified	None

Key name	Difference	Contents	Default value
		<p>in the <code>ejbserver.client.log.directory</code> key. You can specify only single byte alphanumeric characters, underscore (<code>_</code>), and hyphen (<code>-</code>). You use a forward slash (<code>/</code>) as the directory path delimiter. When using multiple Java applications, specify the log output destinations for every EJB application.</p> <p>When the specified directory name or file name does not have access permission, the message KDJE51003-E is output in standard output and <code>cjlogger.log</code> file and the Java application is terminated.</p> <p>The output destination for some logs cannot be changed with this key. To change the log output destination, specify the <code>ejb.client.ejb.log</code> key in the option definition file for Java applications (<code>usrconf.cfg</code>).</p>	
<code>ejbserver.client.log.appid</code>	Unique	<p>Specify a value from 1 to 16 bytes for the log output subdirectory of the Java application.</p> <p>You can specify only single byte alphanumeric characters, underscore (<code>_</code>), and hyphen (<code>-</code>). When this key is specified, the same subdirectory is used every time and therefore, the subdirectory is not deleted. If you use this key in the cases where you do not invoke one Java application many times, then you can manage the log file in an exclusive subdirectory. Do not specify this key when concurrently invoking multiple applications.</p> <p>If the specified string exceeds 16 bytes, the message KDJE51002-W is output to the <code>cjlogger.log</code> file and normal value is used.</p> <p>The output destination for some logs cannot be changed with this key. To change the log output destination, specify the <code>ejb.client.log.appid</code> key in the option definition file for Java applications (<code>usrconf.cfg</code>).</p>	None
<code>ejbserver.client.log.directory</code>	Unique	<p>Specify a value from 1 to 200 bytes for the absolute path of the log output destination of the Java application.</p> <p>You can specify only single byte alphanumeric characters, underscore (<code>_</code>), hyphen (<code>-</code>), and space (<code> </code>). You can specify space only in Windows. To specify a directory containing whitespace[#], enclose the path with double quotation marks (<code>"</code>). For example, when setting <code>C:\logs\ejb client</code>, specify the path as follows:</p> <pre>ejbserver.client.log.directory="C:\logs\ejb client"</pre> <p>When the specified path exceeds 200 bytes, the message KDJE51001-W is output to the <code>cjlogger.log</code> file and the normal value is used. When a path is not specified, the message KDJE51002-W is output to the <code>cjlogger.log</code> file and the normal value is used.</p> <p>When there is no access permission to the directory or when the file name is specified, the message KDJE51003-E is output to standard output and <code>cjlogger.log</code> file and the Java application is terminated.</p> <p>In the case of using normal value, if you invoke the Java application by using Java other than the Cosminexus Developer's Kit for Java, the message KDJE51004-W is output to the <code>cjlogger.log</code> file and Java application execution directory is used.</p> <p>In Windows, you cannot specify a path that includes a UNC name. In UNIX, you cannot specify a path of an nfs-mounted disk.</p> <p>The output destination for some logs cannot be changed with this key. To change the log output destination, specify the <code>ejb.client.log.directory</code> key in the option definition file for Java applications (<code>usrconf.cfg</code>).</p>	None
<code>ejbserver.client.log.lockInterval</code>	Unique	<p>Specify the retry interval (unit: milliseconds) as integers from 0 to 2147483647 for failure in an attempt of exclusive processing of log files. If the specified value is out of the range or is not an integer, the message KDJE51002-W is output to the <code>cjlogger.log</code> file and the default value is used. This key is used when the Java application operating in the subdirectory common mode terminates after the output of the message KDJE90002-E to the <code>cjlogger.log</code> file.</p>	10

Key name	Difference	Contents	Default value
<code>ejbserver.client.log.lockRetryCount</code>	Unique	If the exclusive process of the log file fails, specify the retry frequency (unit: times) in integers from 0 to 2147483647. If the specified value is out of the range and is not an integer, the message KDJE51002-W is output to the <code>cjlogger.log</code> file and the default value is used. This key is used when the Java application operating in the subdirectory common mode terminates after the output of the message KDJE90002-E to the <code>cjlogger.log</code> file.	1000
<code>ejbserver.client.transaction.clientName</code>	Unique	Specify a string from 1 to 128 characters for the client name used by the transaction service. You can specify single byte alphanumeric characters, (0-9, A-Z, a-z), underscore () and hyphen (-). You need to specify a client name that is different for each process of the Java application. Moreover, you need to specify a client name that is different from the name of the J2EE server operating on the same machine.	None
<code>ejbserver.client.transaction.enabled</code>	Unique	Specify whether transaction is to be used in the Java application. If you specify <code>true</code> : The transaction can be used. If you specify <code>false</code> : The transaction cannot be used.	false

Legend:

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(c\) Keys beginning with `ejbserver.client`](#).

Unique:

This is a key specific to the `usrconf.properties` file for Java applications. For details about keys, see the *Contents* column.

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(c\) Keys beginning with `ejbserver.client`](#).

#

Whitespace imply single-byte spaces, tabs, LF (0x0a), CR (0x0d) or FF (0x0c).

(c) Keys beginning with `ejbserver.container`

The keys that begin with `ejbserver.container` and can be specified in the `usrconf.properties` file for the Java application are listed below. For details about the `usrconf.properties` file for J2EE servers and the common keys, see [2.2.3\(5\)\(h\) Keys beginning with `ejbserver.container`](#).

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Difference	Contents	Default value	Related information
<code>ejbserver.container.rebindpolicy</code>	None	Specify re-connection and re-sending of requests in the EJB client, in the case of a communication failure when invoking the EJB method.	--	2.13 Invoking the EJB remote interface in EJB Container Functionality Guide

Legend:

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(h\) Keys beginning with ejbserver.container](#).

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(h\) Keys beginning with ejbserver.container](#).

(d) Keys beginning with `ejbserver.distributedtx`

The keys that begin with `ejbserver.distributedtx` and can be specified in the `usrconf.properties` file for the Java application are described below. For details about the keys that are common with the `usrconf.properties` file of J2EE servers, see [2.2.3\(5\)\(k\) Keys beginning with ejbserver.distributedtx](#).

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Key name	Difference	Contents	Default value	Related information
<code>ejbserver.distributedtx.ots.status.directory1</code>	Exists	<p>Specify the directory for storing the status file of the in-process transaction service and the backup of the status file as maintenance data. You use a forward slash (/) as the path delimiter.</p> <p>When an absolute path is specified in the application server, the path begins from the following directory:</p> <ul style="list-style-type: none">In Windows <code>Cosminexus-working-directory\ejb\server-name</code>In UNIX <code>Cosminexus-working-directory/ebj/server-name</code> <p>When an absolute path is specified in the Java, the path begins from the execution directory of the Java.</p> <p>You need to specify a different directory so that the path does not overlap with the path of other J2EE servers or other Java application processes running on the same machine.</p>	None	3.4 Managing transactions in Common Container Functionality Guide
<code>ejbserver.distributedtx.ots.status.directory2</code>	None	<p>When replicating the status file of in-process transaction service, specify a directory that stores the backup of spare status files and the spare status files used as maintenance data.</p>	--	3.4 Managing transactions in Common Container Functionality Guide
<code>ejbserver.distributedtx.recovery.port</code>	Exists	<p>Specify an integer from 1 to 65535 for the fixed port number that is used for transaction recovery. If an invalid value is specified and when the specified port is already being used, an error occurs in the initialization process.</p>	None	

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(k\) Keys beginning with ejbserver.distributedtx](#).

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(k\) Keys beginning with `ejbserver.distributedtx`](#).

Blank column:

Related information does not exist.

(e) Keys beginning with `ejbserver.jndi`

The keys that begin with `ejbserver.jndi` and can be specified in the `usrconf.properties` file for the Java application are listed below. For details on the keys that are common with the `usrconf.properties` file for the J2EE server, see [2.2.3\(5\)\(s\) Keys beginning with `ejbserver.jndi`](#).

Key name	Difference	Contents	Default value
<code>ejbserver.jndi.cache</code>	Exists	Specify whether to implement the caching of distributed objects. For caching: Specify <code>on</code> . For not caching: Specify <code>off</code> . You need to specify <code>com.hitachi.software.ejb.rmi.PortableRemoteObject</code> in the <code>javax.rmi.CORBA.PortableRemoteObjectClass</code> key and <code>com.hitachi.software.ejb.rmi.Util</code> in the <code>javax.rmi.CORBA.UtilClass</code> key.	<code>off</code>
<code>ejbserver.jndi.cache.interval</code>	Exists	In the case of caching of distributed objects, specify an integer from 0 to 2147483647 (units: seconds) as the interval for clearing the cache. If you specify a value other than a number from 1 to 2147483647, the cache is not cleared. You need to specify <code>com.hitachi.software.ejb.rmi.PortableRemoteObject</code> in the <code>javax.rmi.CORBA.PortableRemoteObjectClass</code> key and <code>com.hitachi.software.ejb.rmi.Util</code> in the <code>javax.rmi.CORBA.UtilClass</code> key. When using the failure detection functionality of the Naming Service, Hitachi recommends you to specify a short interval value (60 seconds).	--
<code>ejbserver.jndi.cache.interval.clear.operation</code>	None	Decide the operations to be performed in the cache area of naming, after the lapse of the interval.	--
<code>ejbserver.jndi.naming.service.group.list</code>	None	Define the group of logical naming service that is to be searched during the round-robin search.	--
<code>ejbserver.jndi.naming.service.group.specify-group-name.providerurls</code>	None	Specify the root location of the Naming Service of each group.	--
<code>ejbserver.jndi.request.timeout</code>	None	Specify the timeout period of communication with the Naming Service.	--

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(s\) Keys beginning with `ejbserver.jndi`](#).

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(s\) Keys beginning with ejbserver:jndi](#).

(f) Keys beginning with ejbserver.jta

The keys that begin with `ejbserver.jta` and can be specified in the `usrconf.properties` file for the Java application are listed below:

Key name	Difference	Contents	Default value
<code>ejbserver.jta.TransactionManager.defaultTimeout</code>	Exists	Specify the transaction timeout default value (units: seconds) of the transaction that has been started in the Java application in the following range: 1 to 2147483647	--

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(t\) Keys beginning with ejbserver:jta](#).

(g) Keys beginning with ejbserver.logger

The keys that begin with `ejbserver.logger` and can be specified in the `usrconf.properties` file for the Java application are listed below:

Key name	Difference	Contents	Default value
<code>ejbserver.logger.channels.define.channel-name#.filenum</code>	Exists	Specify the number of log files of the Java application. Specify integers from 1 to 64. To change the number, stop all the processes that are generating output to the corresponding log file and either move the log file and the log management file under the <code>mmap</code> directory to a different directory or delete the files.	2
<code>ejbserver.logger.channels.define.channel-name#.filesize</code>	Exists	Specify integers from 4096 to 16777216. To change the size, stop all the processes that are generating output to the corresponding log file and either move the log file and the log management file under the <code>mmap</code> directory to a different directory or delete the files.	1048576
<code>ejbserver.logger.enabled.*</code>	Exists	Specify the log level. Specify either one or more from among Error, Warning, Information and Debug. If you specify only one log level, only the log of the applicable log level is output. When specifying more than one log levels, demarcate each level-name string with a comma (.). Note that you cannot specify this key when you set the system properties using shell script.	Error

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

#

You can set the following names as channel name:

`ClientMessageLogFile`, `ClientExceptionLogFile`, `ClientMaintenanceLogFile`, `EJBContainerLogFile`, `UserOutLogFile`, or `UserErrLogFile`.

For details on obtaining materials, see 2.3 *Acquiring the Data* in the manual *uCosminexus Application Server Maintenance and Migration Guide*.

(h) Keys beginning with `ejbserver.rmi`

The keys that begin with `ejbserver.rmi` and can be specified in the `usrconf.properties` file for the Java application are listed below. For details about the keys that are common in the `usrconf.properties` file for J2EE servers, see 2.2.3(5)(y) *Keys beginning with `ejbserver.rmi`*.

Key name	Difference	Contents	Default value
<code>ejbserver.rmi.request.timeout</code>	None	Specify timeout period (unit: seconds) when communicating between clients and the server.	--

Legend:

None:
This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see 2.2.3(5)(y) *Keys beginning with `ejbserver.rmi`*.

--:
This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see 2.2.3(5)(y) *Keys beginning with `ejbserver.rmi`*.

(i) Keys beginning with `ejbserver.security`

The keys that begin with `ejbserver.security` and can be specified in the `usrconf.properties` file for the Java application are listed below:

Key name	Difference	Contents	Default value
<code>ejbserver.security.service.url</code>	Unique	Specify the CORBA naming service that is connected to the J2EE server that performs the security authentication processing. Specify this key in the case of performing the authentication processing with the J2EE server that is connected to a naming service other than the naming service specified in <code>java.naming.provider.url</code> . Note that you need to specify the name of the J2EE server to be connected beforehand in the <code>ejbserver.serverName</code> key. Specify the name using the <code>corbaname</code> format. When the name is not specified, the naming service specified in <code>java.naming.provider.url</code> is used. (Specified format) <code>corbaname::host-name-of-the-naming-service:port-number-of-the-naming-service</code>	None

Legend:

Unique:
This is a key specific to the `usrconf.properties` file for Java applications. For details about keys, see the *Contents* column.

(j) Keys beginning with `ejbserver.server`

The keys that begin with `ejbserver.server` and can be specified in the `usrconf.properties` file for the Java application are listed below. For details about the keys that are common in the `usrconf.properties` file for J2EE servers, see 2.2.3(5)(aa) *Keys beginning with `ejbserver.server`*.

Key name	Difference	Contents	Default value
<code>ejbserver.serverName</code>	Unique	Specify the name of the J2EE server that connects to the Java application.	None
<code>ejbserver.server.profile.PRFLID</code>	None	Specify the PRF identifier.	--

Legend:

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(aa\) Keys beginning with `ejbserver.server`](#).

Unique:

This is a key specific to the `usrconf.properties` file for Java applications. For details about keys, see the *Contents* column.

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default values, see [2.2.3\(5\)\(aa\) Keys beginning with `ejbserver.server`](#).

(k) Keys beginning with `ejbserver.stdoutlog`

The keys that begin with `ejbserver.stdoutlog` and can be specified in the `usrconf.properties` file for Java applications are as follows. For details about the keys that are common with the `usrconf.properties` file of J2EE servers, see [2.2.3\(5\)\(ac\) Keys beginning with `ejbserver.stdoutlog`](#).

Key name	Difference	Contents	Default value
<code>ejbserver.stdoutlog.autoflush</code>	None	Specify whether to enable the automatic flush functionality of the user output log and user error log.	--

Legend:

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about keys, see [2.2.3\(5\)\(ac\) Keys beginning with `ejbserver.stdoutlog`](#).

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about default values, see [2.2.3\(5\)\(ac\) Keys beginning with `ejbserver.stdoutlog`](#).

(l) Keys beginning with `https`

The keys that begin with `https` and can be specified in the `usrconf.properties` file for Java applications are as follows. For details on the keys that are common with the `usrconf.properties` file for J2EE servers, see [2.2.3\(5\)\(af\) Keys beginning with `https`](#).

Key name	Difference	Contents	Default value
<code>https.cipherSuites</code>	None	Specify the recommended cipher suite to be used with <code>HttpsURLConnection</code> .	--
<code>https.protocols</code>	None	Set up the protocol to be used with <code>HttpsURLConnection</code> .	--

Legend:

None:

This key is common to the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details on the keys, see [2.2.3\(5\)\(af\) Keys beginning with `https`](#).

--:

This is a default value common to the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details on the default values, see [2.2.3\(5\)\(af\) Keys beginning with https](#).

(m) Keys beginning with java

The keys that begin with `java` and that can be specified in the `usrconf.properties` file for the Java application are listed below. For details about the `usrconf.properties` file for J2EE servers and the common keys, see [2.2.3\(5\)\(ag\) Keys beginning with java](#).

Key name	Difference	Contents	Default value
<code>java.naming.factory.initial</code>	Exists	Specify the factory class for the implementation class of the context delegated by InitialContext of JNDI. The operation for each set value is as follows: <code>com.hitachi.software.ejb.jndi.InsContextFactory:</code> Specify this context when normal search functionality is used instead of the JNDI round-robin search functionality. <code>com.hitachi.software.ejb.jndi.GroupContextFactory:</code> Specify this context when the JNDI round-robin search functionality is used during execution of applications (EJB) in the J2EE server. The key is compatible with the values used in the earlier versions (<code>com.hitachi.software.ejb.jndi.spi.cosnaming.CNContextFactory</code>).	--
<code>java.naming.provider.url</code>	Unique	Specify the host name and the port number of the CORBA naming service used by the Java application. The CORBA naming service used here is the one that is used by the J2EE server invoked from the corresponding Java application. Furthermore, this key is compatible with the protocol (<code>iioploc</code> or <code>iiopname</code>) used in the old versions. (Specified format) <code>corbaname:: [host-name] : [port-number]</code>	<code>corbaname::localhost:900</code>
<code>javax.xml.datatype.DatatypeFactory</code>	Unique	Specify the implementation class name of <code>javax.xml.datatype.DatatypeFactory</code> .	<code>com.cosminexus.jaxp.impl.parsers.jaxp.datatype.DatatypeFactoryImpl</code>
<code>javax.xml.parsers.DocumentBuilderFactory</code>	Unique	Specify the implementation class name of <code>javax.xml.parsers.DocumentBuilderFactory</code> .	<code>com.cosminexus.jaxp.impl.parsers.jaxp.DocumentBuilderFactoryImpl</code>
<code>javax.xml.parsers.SAXParserFactory</code>	Unique	Specify the implementation class name of <code>javax.xml.parsers.SAXParserFactory</code> .	<code>com.cosminexus.jaxp.impl.parsers.jaxp.SAXParserFactoryImpl</code>
<code>javax.xml.transform.TransformerFactory</code>	Unique	Specify the implementation class name of <code>javax.xml.transform.TransformerFactory</code> .	<code>com.cosminexus.jaxp.impl.transform.processor.TransformerFactoryImpl</code>
<code>javax.xml.xpath.XPathFactory\ :http://java.sun.com/jaxp/xpath/dom</code>	Unique	Specify the implementation class name of <code>javax.xml.xpath.XPathFactory</code> .	<code>com.cosminexus.jaxp.impl.xpath.jaxp.XPathFactoryImpl</code>

Key name	Difference	Contents	Default value
<code>javax.xml.validation.SchemaFactory\;http://www.w3.org/2001/XMLSchema</code>	Unique	Specify the implementation class name of <code>javax.xml.validation.SchemaFactory</code> .	<code>com.cosminexus.jaxp.impl.parsers.validation.XMLSchemaFactory</code>

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

Unique:

This is a key specific to the `usrconf.properties` file for Java applications. For details about keys, see the *Contents* column.

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about keys, see [2.2.3\(5\)\(ag\) Keys beginning with java](#).

(n) Keys beginning with org

The keys that begin with `org` and can be specified in the `usrconf.properties` file for the Java application are listed below:

Key name	Difference	Contents	Default value
<code>org.w3c.dom.DOMImplementationSourceList</code>	Unique	Specify the implementation class name of <code>org.w3c.dom.DOMImplementationSourceList</code> .	<code>com.cosminexus.jaxp.impl.parsers.dom.DOMXSImplementationSourceImpl</code>
<code>org.xml.sax.driver</code>	Unique	Specify the implementation class name of <code>org.xml.sax.driver</code> .	<code>com.cosminexus.jaxp.impl.parsers.parsers.SAXParser</code>
<code>org.xml.sax.parser</code>	Unique	Specify the implementation class name of <code>org.xml.sax.parser</code> .	<code>org.xml.sax.helpers.XMLReaderAdapter</code>

Legend:

Unique:

This is a key specific to the `usrconf.properties` file for Java applications. For details about keys, see the *Contents* column.

(o) Keys beginning with vbroker

The keys that begin with `vbroker` and can be specified in the `usrconf.properties` file for the Java application are described below. For details about the keys that are common in the `usrconf.properties` file for J2EE servers, see [2.2.3\(5\)\(ai\) Keys beginning with vbroker](#).

Key name	Difference	Contents	Default value
<code>vbroker.agent.enableLocator</code>	Exists	For a Java application that invokes only a J2EE server, specify <code>false</code> . TPBroker naming services that implement the communication processing of a J2EE server include the CORBA Naming Service and Smart Agent. For the communication between a Java application and a J2EE server, only the CORBA Naming Service is used as a naming service. Therefore, it is	<code>true</code>

Key name	Difference	Contents	Default value
		<p>necessary to start only the CORBA Naming Service between the J2EE server and Java application. This is the reason you specify <code>false</code> for this key in this case.</p> <p>On the other hand, for a Java application that invokes a TPBroker server application by using the Smart Agent in addition to invoking a J2EE server, you need to start both the CORBA Naming Service and Smart Agent. In this case, specify <code>true</code> for this key.</p>	
<code>vbroker.ce.iiop.ccm.htc.readerPerConnection</code>	None	<p>Specify whether to control the closing of the connections when a timeout occurs during the invocation of the EJB method defined as the remote interface.</p> <p>If <code>true</code> is specified The closing of the connection will be controlled when the timeout occurs.</p> <p>If <code>false</code> is specified The closing of the connection will not be controlled when the timeout occurs.</p>	<code>false</code>
<code>vbroker.orb.htc.comt.entryCount</code>	Exists	Specify an upper limit of the entry count for one communication trace file of the Cosminexus TPBroker.	20000
<code>vbroker.orb.htc.comt.fileCount</code>	None	Specify an upper limit value of the communication trace file count for Cosminexus TPBroker.	15
<code>vbroker.orb.htc.mtr.trace</code>	Exists	<p>Specify whether to collect module traces.</p> <p>If <code>true</code> is specified Module traces are collected.</p> <p>If <code>false</code> is specified Module traces are not collected.</p>	<code>true</code>
<code>vbroker.orb.htc.tracePath</code>	Exists	<p>Specify a range of 1 to 210 bytes for the path of the output destination of Cosminexus TPBroker trace files. Specify a unique path for each Java application. You need to create <code>comtrc</code> and <code>mdltrc</code> as the subdirectories of the specified path beforehand. In the case of default output destination, the subdirectories <code>comtrc</code> and <code>mdltrc</code> are created automatically when the Java application is invoked for the first time.</p> <p>Use a forward slash (/) as the delimiter in the directory path. For example, specify as follows to set up <code>/temp/work</code> as the work directory: <code>vbroker.orb.htc.tracePath=/temp/work</code></p>	<ul style="list-style-type: none"> • In Windows <i>value-of-ejbserver.client.ejb.log-directory</i>\TPB\logj • In UNIX <i>value-of-ejbserver.client.ejb.log-directory</i>/TPB/logj

Legend:

Exists:

There is a difference in the keys of the `usrconf.properties` file for Java applications and the keys of the `usrconf.properties` file for J2EE servers. For details about keys, see the *Contents* column.

None:

This key is common in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the default value, see [2.2.3\(5\)\(ai\) Keys beginning with vbroker](#).

--:

This is a common default value in the `usrconf.properties` file for Java applications and the `usrconf.properties` file for J2EE servers. For details about the keys, see [2.2.3\(5\)\(ai\) Keys beginning with vbroker](#).

(5) Examples of coding

```
java.naming.provider.url=corbaname::localhost:900
ejbserver.serverName=MyServer
```

12.2.3 System properties specified in the Java application

(1) Format

Specify the system properties in a file with a Win32 batch file format (in Windows) or shell script file format (in UNIX).

(2) Functionality

When you use the `vbj` command, specify the system properties of the JavaVM that executes the Java application.

When using `java.lang.System.setProperty()` to define the system properties, you need to define the properties before the corresponding functionality is used for the first time.

If you change the contents of this file while the Java application is running, the changes are applied only when the Java application is started next.

(3) Specifiable keys

The following table lists the keys that can be specified for the `vbj` command:

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Table 12–3: System properties specified in the Java applications

Classification	Key name	Types	Specifiable/ Not-specifiable	Related information
Common keys	<code>ejbserver.client.ctm.RequestPriority</code>	Select variable	Y	
	<code>ejbserver.client.ejb.log</code>	Select variable	Y	
	<code>ejbserver.client.log.appid</code>	Select variable	Y	
	<code>ejbserver.client.log.directory</code>	Select variable	Y	
	<code>ejbserver.client.log.lockInterval</code>	Select variable	Y	
	<code>ejbserver.client.log.lockRetryCount</code>	Select variable	Y	
	<code>ejbserver.container.rebindpolicy</code>	Select variable	Y	<i>2.13 Invoking the EJB remote</i>

Classification	Key name	Types	Specifiable/ Not-specifiable	Related information
				<i>interface in EJB Container Functionality Guide</i>
	<code>ejbserver.jndi.cache</code>	Select variable	Y	
	<code>ejbserver.jndi.cache.interval</code>	Select variable	Y	
	<code>ejbserver.jndi.cache.interval.clear.option</code>	Select variable	Y	
	<code>ejbserver.jndi.namingservice.group.list</code>	Select variable	Y	
	<code>ejbserver.jndi.namingservice.group.specify-group-name.providerurls</code>	Select variable	Y	
	<code>ejbserver.jndi.request.timeout</code>	Select variable	Y	
	<code>ejbserver.logger.channels.define.channel-name#.filenum</code>	Select variable	Y	
	<code>ejbserver.logger.channels.define.channel-name#.filesize</code>	Select variable	Y	
	<code>ejbserver.logger.enabled.*</code>	Select variable	Y	
	<code>ejbserver.rmi.request.timeout</code>	Select variable	Y	
	<code>ejbserver.security.service.url</code>	Select variable	Y	
	<code>ejbserver.serverName</code>	Variable	Y	
	<code>ejbserver.server.prf.PRIFID</code>	Select variable	Y	
	<code>java.naming.factory.initial</code>	Variable	Y	
	<code>java.naming.provider.url</code>	Variable	Y	
	<code>vbroker.agent.enableLocator</code>	Select variable	Y	
	<code>vbroker.orb.htc.comt.entryCount</code>	Select variable	Y	
	<code>vbroker.orb.htc.comt.fileCount</code>	Select variable	Y	
	<code>vbroker.orb.htc.tracePath</code>	Select variable	Y	
Unique keys	<code>ejbserver.jndi.log.message.verbosemode</code>	Select	Y	

Classification	Key name	Types	Specifiable/ Not-specifiable	Related information
		variable		
	<i>ejbserver.server.prf.processName</i>	Select variable	Y	
	<i>java.endorsed.dirs</i>	Variable	N	
	<i>java.naming.factory.object</i>	Fixed	Y	
	<i>java.naming.factory.state</i>	Fixed	Y	
	<i>javax.rmi.CORBA.UtilClass</i>	Fixed	Y	
	<i>javax.rmi.CORBA.StubClass</i>	Fixed	N	
	<i>javax.rmi.CORBA.PortableRemoteObjectClass</i>	Fixed	Y	
	<i>org.omg.PortableInterceptor.ORBInitializerClass.com.hitachi.software.ejb.security.std.interceptor.SecurityClientInterceptorInit</i>	Fixed	Y	
	<i>java.security.policy</i>	Fixed	Y	
	<i>org.omg.CORBA.ORBClass</i>	Fixed	N	
	<i>org.omg.CORBA.ORBSingletonClass</i>	Fixed	N	

Legend:

- Y: You need to specify the key in the command.
- N: You need not specify the key in the command.
- Blank column: Related information does not exist.

Types

In the case of `fixed` type, the value for the corresponding key is fixed and must always be specified. In the case of `variable` type, you need to specify the value according to the system execution environment. In the case of `Select variable` type, either specify the value according to the system execution environment or do not specify anything.

#

You can set the following names as channel name:
 ClientMessageLogFile, ClientExceptionLogFile, or ClientMaintenanceLogFile.
 For details on acquiring data, see 2.3 *Acquiring the Data* in the manual *uCosminexus Application Server Maintenance and Migration Guide*.

(a) Common keys

The system property keys are common with the `usrconf.properties` file for the Java applications.

For details on the common keys, see 12.2.2 *usrconf.properties (User property file for Java applications)*. You can also see 2.2.3 *usrconf.properties (User property file for J2EE servers)*, if required.

(b) Unique keys

The unique keys refer to the system property-specific keys.

The details of the unique keys are as follows:

- **ejbserver.jndi.log.message.verbosemode**
 Type: Select variable
 Value: on or off
 Default value: off

Contents:

Specify message log output in the standard output.

- **ejbserver.server.prf.processName**

Type: Select variable

Value: Optional client identifier

Normal value: EJBClient

Contents:

Specify the name that you want to display as the process name in the edit result of the performance analysis trace file. The normal value is used when null is specified or when this key is not specified.

- **java.endorsed.dirs**

Type: Variable

Value: Directory path

Normal value: *Cosminexus-installation-directory*\TPB\lib\endorsed (in Windows) or /opt/*Cosminexus*/TPB/lib/endorsed (in UNIX)

Contents:

Specify the directory path containing the class to be replaced by using the Endorsed Standards Override Mechanism.

- **java.naming.factory.object**

Type: Fixed

Value: `com.hitachi.software.ejb.jndi.InsNamingFactory`

Contents:

Specify the implementation class of ObjectFactory that acts as the SPI of JNDI.

ObjectFactory converts the object during object search.

This key is compatible with the value

(`com.hitachi.software.ejb.jndi.nameserver.spi.cos.wrappers.vbj.WrapperObjectFactory`) used in the earlier versions.

- **java.naming.factory.state**

Type: Fixed

Value: `com.hitachi.software.ejb.jndi.InsNamingFactory`

Contents:

Specify the implementation class of the StateFactory that acts as the SPI of JNDI.

StateFactory converts the object during object registration.

This key is compatible with the value

(`com.hitachi.software.ejb.jndi.nameserver.spi.cos.wrappers.vbj.WrapperStateFactory`) used in the earlier versions.

- **javax.rmi.CORBA.UtilClass**

Type: Fixed

Value: `com.hitachi.software.ejb.rmi.Util`

Contents:

Specify the implementation class name of `javax.rmi.CORBA.Util`.

This key is compatible with the value (`com.inprise.vbroker.rmi.CORBA.UtilImpl`) used in the earlier versions.

- **javax.rmi.CORBA.StubClass**

Type: Fixed

Value: `com.inprise.vbroker.rmi.CORBA.StubImpl`

Contents:

Specify the implementation class name of `javax.rmi.CORBA.Stub`.

- **javax.rmi.CORBA.PortableRemoteObjectClass**

Type: Fixed

Value: `com.hitachi.software.ejb.rmi.PortableRemoteObject`

Contents:

Specify the implementation class name of `javax.rmi.PortableRemoteObject`.

This key is compatible with the value

(`com.inprise.vbroker.rmi.CORBA.PortableRemoteObjectImpl`) used in the earlier versions.

- **org.omg.PortableInterceptor.ORBInitializerClass.com.hitachi.software.ejb.security.std.interceptor.SecurityClientInterceptorInit**

Type: Fixed

Value: 1

Contents:

Specify the initialization class of the client interceptor for the security functionality.

Specify the initialization class only when the Java application uses the EJB security interface to log on to the J2EE server and invoke an EJB.

- **java.security.policy**

Type: Fixed

Value: *absolute-path-of-the-security-policy-file*

Contents:

Copy the *Cosminexus-installation-directory*\CC\client\cli.policy (in Windows) or /opt/Cosminexus/CC/client/cli.policy (in UNIX) to any directory in the client and specify the file name as an absolute path. Do not change the contents of the file.

- **org.omg.CORBA.ORBClass**

Type: Fixed

Value: `com.inprise.vbroker.orb.ORB`

Contents:

Specify the implementation class name of ORB.

- **org.omg.CORBA.ORBSingletonClass**

Type: Fixed

Value: `com.inprise.vbroker.orb.ORBSingleton`

Contents:

Specify the implementation class name for the singleton of ORB.

(4) Examples of coding

The examples of coding for the system properties are explained below for each operating system:

(a) In Windows

The following is a coding example of a `bat` file that starts a Java application. In this example, the `vbj` command is used to start a Java application. For details on the `CLASS_PATH` to be specified in the JAR file, see [3.7.4 Setting JAR file to class path of EJB client application](#) in the manual *uCosminexus Application Server EJB Container Functionality Guide*.

For details on environment variables, see [Appendix H System Environment Variables](#) in the *uCosminexus Application Server Command Reference Guide*.

```
setlocal

rem --- set environment ---
set COSMI_HOME=C:\Program Files\Hitachi\Cosminexus
set SERVERNAME=MyServer
set PRF_HOME=%COSMI_HOME%\PRF
set TPB_HOME=%COSMI_HOME%\TPB
set JAVA_HOME=%COSMI_HOME%\jdk
set VBJ="%TPB_HOME%\bin\vbj"
set VBROKER_ADM=%TPB_HOME%\adm
set PATH=%PRF_HOME%\bin;%TPB_HOME%\bin;%JAVA_HOME%\bin;%PATH%

rem --- set class path ---
set CLASS_PATH=%COSMI_HOME%\TPB\lib\vbjorb.jar
set CLASS_PATH=%CLASS_PATH%;%COSMI_HOME%\TPB\lib\vbsec.jar
set CLASS_PATH=%CLASS_PATH%;%COSMI_HOME%\PRF\lib\cprf.jar
set CLASS_PATH=%CLASS_PATH%;%ProgramFiles%\Hitachi\HNTRLib2\classes\hntrlibM
j.jar
set CLASS_PATH=%CLASS_PATH%;%COSMI_HOME%\CC\lib\hitj2ee.jar
set CLASS_PATH=%CLASS_PATH%;%COSMI_HOME%\CC\client\lib\HiEJBClientStatic.jar
set CLASS_PATH=%CLASS_PATH%;stubs.jar
set CLASS_PATH="%CLASS_PATH%;1.jar"

rem --- set properties ---
set PROPS=-Djavax.rmi.CORBA.UtilClass=com.hitachi.software.ejb.rmi.Util
set PROPS=%PROPS% -Djavax.rmi.CORBA.PortableRemoteObjectClass=com.hitachi.so
ftware.ejb.rmi.PortableRemoteObject
set PROPS=%PROPS% -Djava.naming.factory.initial=com.hitachi.software.ejb.jnd
i.InsContextFactory
set PROPS=%PROPS% -Djava.naming.factory.object=com.hitachi.software.ejb.jndi
.InsNamingFactory
set PROPS=%PROPS% -Djava.naming.factory.state=com.hitachi.software.ejb.jndi.
InsNamingFactory
set PROPS=%PROPS% -Djava.naming.provider.url=corbaname::localhost:900
set PROPS=%PROPS% -Dejbserver.jndi.cache=on
set PROPS=%PROPS% -Dejbserver.jndi.cache.interval=0
set PROPS=%PROPS% -Dejbserver.jndi.cache.interval.clear.option=refresh
set PROPS=%PROPS% -Dejbserver.jndi.request.timeout=0
set PROPS=%PROPS% -Dejbserver.rmi.request.timeout=0
set PROPS=%PROPS% -Dejbserver.serverName=%SERVERNAME%
set PROPS=%PROPS% -Dvbroker.agent.enableLocator=false
set PROPS=%PROPS% -Dorg.omg.PortableInterceptor.ORBInitializerClass.com.hita
chi.software.ejb.security.std.interceptor.SecurityClientInterceptorInit=1
set PROPS=%PROPS% "-Djava.security.policy==%COSMI_HOME%\CC\client\cli.polic
y"
set PROPS=%PROPS% -Dejbserver.server.prf.processName=EJBClient
set PROPS=%PROPS% "-Dejbserver.client.log.directory=%COSMI_HOME%\CC\client\l
ogs"
```

```

set PROPS=%PROPS% -Dejbserver.logger.enabled.*=Error

rem --- execute client ---
%VBJ% -VBJclasspath %CLASS_PATH% %PROPS% ConverterClient

endlocal

```

(b) In UNIX

The following is a coding example of a shell script that starts a Java application. In this example, the `vbj` command is used to start a Java application.

For details on the environment variables to be specified in `CLASS_PATH`, see *Appendix H System Environment Variables in the uCosminexus Application Server Command Reference Guide*.

```

#!/bin/csh -f

# --- environment ---
set COSMI_HOME=/opt/Cosminexus
set SERVERNAME="MyServer"
set PRF_HOME="{COSMI_HOME}/PRF"
set TPB_HOME="{COSMI_HOME}/TPB"
set JAVA_HOME="{COSMI_HOME}/jdk"
set VBJ="{TPB_HOME}/bin/vbj"
setenv PSALLOC early
setenv NODISCLAIM true
setenv AIXTHREAD_SCOPE S
setenv AIXTHREAD_MUTEX_DEBUG OFF
setenv AIXTHREAD_RWLOCK_DEBUG OFF
setenv AIXTHREAD_COND_DEBUG OFF
setenv EXTSHM ON
setenv LDR_CNTRL MAXDATA=0x40000000
setenv VBROKER_ADM "{TPB_HOME}/adm"
setenv PATH "{JAVA_HOME}/bin:{PATH}"
set LPATH="{TPB_HOME}/lib:{PRF_HOME}/lib"
if ($?LIBPATH) then
    setenv LIBPATH "{LPATH}:{LIBPATH}"
else
    setenv LIBPATH "{LPATH}"
endif

# --- class path ---
set CLASS_PATH="{COSMI_HOME}/TPB/lib/vbjorb.jar"
set CLASS_PATH="{CLASS_PATH}:{COSMI_HOME}/TPB/lib/vbsec.jar"
set CLASS_PATH="{CLASS_PATH}:{COSMI_HOME}/PRF/lib/cprf.jar"
set CLASS_PATH="{CLASS_PATH}:/opt/hitachi/HNTRLib2/classes/hntrlibMj.jar"
set CLASS_PATH="{CLASS_PATH}:{COSMI_HOME}/CC/lib/hitj2ee.jar"
set CLASS_PATH="{CLASS_PATH}:{COSMI_HOME}/CC/client/lib/HiEJBClientStatic.jar"
set CLASS_PATH="{CLASS_PATH}:stubs.jar"
set CLASS_PATH="{CLASS_PATH}:1.jar"

# --- properties ---
set PROPS="-Djavax.rmi.CORBA.UtilClass=com.hitachi.software.ejb.rmi.Util"
set PROPS="{PROPS} -Djavax.rmi.CORBA.PortableRemoteObjectClass=com.hitachi.software.ejb.rmi.PortableRemoteObject"
set PROPS="{PROPS} -Djava.naming.factory.initial=com.hitachi.software.ejb.j

```

```

ndi.InsContextFactory"
set PROPS="${PROPS} -Djava.naming.factory.object=com.hitachi.software.ejb.jn
di.InsNamingFactory"
set PROPS="${PROPS} -Djava.naming.factory.state=com.hitachi.software.ejb.jnd
i.InsNamingFactory"
set PROPS="${PROPS} -Djava.naming.provider.url=corbaname::localhost:900"
set PROPS="${PROPS} -Dejbserver.jndi.cache=on"
set PROPS="${PROPS} -Dejbserver.jndi.cache.interval=0"
set PROPS="${PROPS} -Dejbserver.jndi.cache.interval.clear.option=refresh"
set PROPS="${PROPS} -Dejbserver.jndi.request.timeout=0"
set PROPS="${PROPS} -Dejbserver.rmi.request.timeout=0"
set PROPS="${PROPS} -Dejbserver.serverName=${SERVERNAME}"
set PROPS="${PROPS} -Dvbroker.agent.enableLocator=false"
set PROPS="${PROPS} -Dorg.omg.PortableInterceptor.ORBInitializerClass.com.hi
tachi.software.ejb.security.std.interceptor.SecurityClientInterceptorInit=1"
set PROPS="${PROPS} -Djava.security.policy==${COSMI_HOME}/CC/client/cli.poli
cy"
set PROPS="${PROPS} -Dejbserver.server.prf.processName=EJBClient"
set PROPS="${PROPS} -Dejbserver.client.log.directory=${COSMI_HOME}/CC/client
/logs"

# --- execute client ---
${VBJ} -VBJclasspath ${CLASS_PATH} ${PROPS} ConverterClient

```

- The underlined text indicates an AIX-specific description.
- *Italic text* is used to indicate that the variable name differs based on the operating system. Substitute the variable and use as follows:
In AIX: LIBPATH
In Linux: LD_LIBRARY_PATH

12.2.4 Property setup file for the user log of Java applications

(1) Format

J2SE property file format.

Specify the key as follows:

```
key-name=value
```

Specification method

- The string up to the linefeed is a value.
- The line beginning with a hash mark (#) is a comment.
- If you define a line without a value, the line is ignored.
- You cannot add alphanumeric strings such as spaces and comments after the value. If you add such values, they will be considered as invalid.

(Example) *key-name=value#comment*

(2) Functionality

This file specifies the system properties for the user log in the Java application when using the `vbj` command.

The properties set up in this file are read by the Java application and hence, you need to set the properties in the system properties. For details on the implementation of user log output in Java applications, see *8.11 Implementing and setting the user log output of EJB client applications (When using the vbj command)* in the manual *uCosminexus Application Server Expansion Guide*.

(3) File name

Any storage location and file name is possible.

(4) Specifiable keys

The following table lists the keys that can be specified. For details on the keys, see *12.2.2(4)(a) Keys beginning with ejbserver.application*. Also, if required, see *2.2.3(5)(a) Keys beginning with ejbserver.application*.

Table 12–4: Keys that can be specified in the property setup file for the user log of the Java application

Key name	Contents
<code>ejbserver.application.userlog.CJLogHandler.handler-name.appname</code>	Specify the default application name that is output to the AppName field.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.autoFlush.enabled</code>	Specify whether flush is to be carried out after the message is output.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.count</code>	Specify the number of log files.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.encoding</code>	Specify encoding of the character strings to be output.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.filter</code>	Specify the filter to be used with its full name, including the package name.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.formatter</code>	Specify the formatter that you will use along with its full name, including the package name.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.level</code>	Specify an upper-limit of a log collection level.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.limit</code>	Specify the capacity of a log file.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.msgid</code>	Specify the default message ID that is output to the MsgID field.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.path</code>	Specify the prefix of log file name.
<code>ejbserver.application.userlog.CJLogHandler.handler-name.separator</code>	Use the CJSimpleFormatter and specify a separator to output a message in one sentence.
<code>ejbserver.application.userlog.loggers</code>	Declare the names of the loggers to be used.
<code>ejbserver.application.userlog.Logger.logger-name.filter</code>	Specify the full name including the package name of the filter used in the logger.

Key name	Contents
<code>ejbserver.application.userlog.Logger.<i>logger-name</i>.handlers</code>	Specify the handler class for the specified logger name.
<code>ejbserver.application.userlog.Logger.<i>logger-name</i>.level</code>	Specify the output level of the logger.
<code>ejbserver.application.userlog.Logger.<i>logger-name</i>.useParentHandlers</code>	Specify whether the log record is to be transmitted from the logger that received the log record to the handler connected to the parent logger.

(5) Examples of coding

The storage location is as follows:

- In Windows
`Cosminexus-installation-directory\CC\examples\userlog\sample.properties`
- In UNIX
`/opt/Cosminexus/CC/examples/userlog/sample.properties`

A sample is as follows:

```
# user-log handler function
ejbserver.application.userlog.CJLogHandler.conf1.appname=my_app1
ejbserver.application.userlog.CJLogHandler.conf1.path=application1/logfileA
ejbserver.application.userlog.CJLogHandler.conf1.limit=10485760
ejbserver.application.userlog.CJLogHandler.conf1.count=2
ejbserver.application.userlog.CJLogHandler.conf1.level=SEVERE

# user-log logger function
ejbserver.application.userlog.Logger.com.example.userlogger1.handlers=com.hi
tachi.software.ejb.application.userlog.CJMPMessageFileHandler;conf1
ejbserver.application.userlog.Logger.com.example.userlogger1.useParentHandle
rs=true
ejbserver.application.userlog.Logger.com.example.userlogger1.level=INFO
ejbserver.application.userlog.loggers=com.example.userlogger1
```

13

Files Used in Web Applications

This chapter describes the compilation exclusion list files and the execution result list files to be used in Web applications.

13.1 List of files used in Web applications

The following table lists the files used in Web applications:

Table 13–1: List of files used in Web applications

File name	Classification	Overview	Reference
(Optional) [#]	Compilation exclusion list file	This file defines the JSP files to be excluded from command-executed JSP pre-compilation.	13.2.1
(Optional) [#]	Execution result list file	This file is used to collect the compiled results.	13.2.2

#

You can use single byte alphanumeric characters, periods (.), and underscores (_).

13.2 Details of files used by web applications

13.2.1 Compilation exclusion list file

(1) Format

Specify the compilation exclusion list file as shown below:

```
# comment
path-of-JSP-file-to-be-excluded-from-compilation1
path-of-JSP-file-to-be-excluded-from-compilation2
...
```

Specification method

- The line beginning with a hash mark (#) is a comment.
- Specify the path of one JSP file to be excluded from compilation on each line.

(2) Storage locations and file names

Any storage location and filename is possible. You can use the following characters in the file name:

Alphanumeric characters, underscore (_), or period (.)

(3) Functionality

This file specifies the paths of the JSP files to be excluded from compilation when you use a command to execute JSP pre-compilation.

By using the `-excludelist` option of the `cjjspc` command to specify the compilation exclusion list file, you can exclude the compilation of the JSP files coded in the compilation exclusion list file. For details about the `cjjspc` command, see *cjjspc (pre-compile JSP)* in the manual *uCosminexus Application Server Command Reference Guide*.

(4) Examples of coding

- To specify single JSP files:

```
/jsp/title.jsp
/jsp/pieces/pageA.jsp
```

- To specify all the files contained in a directory:

```
/jsp/pieces/*
```

- To specify the extension of files to be excluded from compilation:

```
/jsp/pieces/*.jsp
```

- To write a comment:

```
# JSP Fragment
/jsp/pieces/pageA.jsp
```

13.2.2 Execution result list file

(1) Format

The output format of the execution result list file is as follows:

```
# Excluded JSP files.  
list-of-JSP-files-to-be-excluded-from-compilation  
# Compiled JSP files.  
JSP-files-that-succeeded-in-compilation  
# JSP-files-that-failed-from-compilation  
...
```

(2) Storage locations and file names

Any storage location and filename is possible. You can use the following characters in the file name:

Alphanumeric characters, underscore (`_`), or period (`.`)

(3) Functionality

When you use a command to execute JSP pre-compilation, you can specify the `-resultlist` option of the `cjjspc` command to output the following information in an execution result list file: List of JSP file paths excluded from compilation, JSP files whose compilation was successful, and list of JSP file paths whose compilation failed.

The compiled results are output in the execution result list file in the following order:

1. List of JSP file paths to be excluded from compilation
2. JSP file paths whose compilation was successful or whose compilation failed

The JSP files paths whose compilation failed are output as comments.

(4) Examples of output

```
# Excluded JSP files.  
/jsp/title.jsp  
/jsp/pieces/*.jsp  
# Compiled JSP files.  
/jsp/confirm.jsp  
#/jsp/discorrect.jsp  
#/jsp/fail.jsp  
/jsp/index.jsp  
/jsp/order.jsp  
#/jsp/uncomfortable.jsp
```

14

Options for Invoking JavaVM

This chapter describes the options for invoking JavaVM.

In Cosminexus, apart from the `Java HotSpot VM` options, you can specify JavaVM extension options as the options for invoking JavaVM.

This chapter describes the details of the JavaVM extension options. This chapter also describes Java HotSpot VM options that you can specify in Cosminexus, and describes default values.

14.1 List of JavaVM extension options

The following table describes the list of the JavaVM extension options.

Important note

Specifiable options

The options that can be specified for Application Server only include the options displayed when the `java` command is invoked without specifying options, and the options displayed when the `-X`, `-XX`, or `-XX:+Hitachi` options are specified for the `java` command. If other options are specified, the operations might not function properly.

You can specify the following options in the option definition file. *VR* is the version of Application Server on which parameters are introduced or changed.

Related information is the reference location for information related to the specified key. *uCosminexus Application Server* is omitted from the manual names.

Table 14–1: List of JavaVM extension options

Classification	Option name	Overview	VR	Related information
List display option	<code>-XX:+Hitachi</code>	Display the list of JavaVM extension options.	05-02	
Extended thread dump functionality option	<code>-XX:[+ ~]HitachiThreadDump</code>	Specify whether to output the extended thread dump information.	Windows version: 05-05 Others: version 05-00	
	<code>-XX:[+ ~]HitachiThreadDumpToStdout</code>	Specify whether to output the thread dump as the standard output.	06-50	
	<code>-XX:[+ ~]HitachiThreadDumpWithHashCode</code>	Specify whether to output the hash code in the thread information.	07-00	
	<code>-XX:[+ ~]HitachiThreadDumpWithCpuTime</code>	Specify whether to output the user CPU time and the kernel CPU time in the thread information.	07-00	
	<code>-XX:[+ ~]HitachiThreadDumpWithBlockCount</code>	Specify whether to output the number of times the process is blocked and the number of times the process is in the waiting status, in the thread information.	07-00	
JavaVM log file option	<code>-XX:HitachiJavaLog^{#1}</code>	Specify the prefix of log file name.	05-02	
	<code>-XX:HitachiJavaLogFileSize^{#1}</code>	Specify the maximum file size of one file.	05-02	

Classification	Option name	Overview	VR	Related information
	<i>-XX:[+ -]HitachiJavaLogNoMoreOutput#1</i>	Specify the operation when the input/ output error occurs while creating a log file.	05-02	
	<i>-XX:HitachiJavaLogNumberOfFile#1</i>	Specify the maximum number of log files to be created.	05-02	
	<i>-XX:[+ -]JavaLogAsynchronous</i>	Specifies whether to enable the asynchronous log file output functionality.	09-60	
Detailed time output option	<i>-XX:[+ -]HitachiOutputMilliTime</i>	Specify whether to output the time up to milliseconds.	06-00	
Extended verbosegc functionality option	<i>-XX:[+ -]HitachiVerboseGC#2</i>	Specifies whether to output extended verbosegc information when GC occurs.	05-02	
	<i>-XX:[+ -]HitachiCommaVerboseGC</i>	Specify whether to output the extended verbosegc information in CSV format.	05-02	
	<i>-XX:HitachiVerboseGCIntervalTime</i>	Specify the time interval in which the extended verbosegc information is to be output.	05-02	
	<i>-XX:[+ -]HitachiVerboseGCPrintCause</i>	Specifies whether to output the cause of GC occurrence.	05-02	
	<i>-XX:[+ -]HitachiVerboseGCPrintDate</i>	Specify whether to output the date in the extended verbosegc information.	05-02	
	<i>-XX:[+ -]HitachiVerboseGCCpuTime</i>	Specifies whether to output the processor time for GC.	07-00	
	<i>-XX:[+ -]HitachiVerboseGCPrintTenuringDistribution</i>	Specifies whether to output the tenuring distribution information for objects in the Survivor area to a Java VM log file when GC occurs.	08-00	
	<i>-XX:[+ -]HitachiVerboseGCPrintJVMInternalMemory</i>	Specifies whether to output the heap information being managed in JavaVM to the JavaVM log file.	08-53	
	<i>-XX:[+ -]HitachiVerboseGCPrintThreadCount</i>	Specifies whether to output the number of Java threads to the JavaVM log file in order to monitor the number of Java threads.	Linux version (x86/ AMD64 & Intel EM64T): 08-53 Windows version x86: 08-53 Windows version x64: 08-53	

Classification	Option name	Overview	VR	Related information
			Windows version x86 (for JDK 6 base): 08-70 AIX version: 09-00	
	<i>-XX: [+ -]HitachiVerboseGCPrintDeleteOnExit</i>	Specifies whether to output the cumulative heap size that JavaVM allocates by invoking the <code>java.io.File.deleteOnExit()</code> method and the method invocation count to the JavaVM log file.	Linux version (x86/AMD64 & Intel EM64T): 08-53 Windows version x86: 08-53 Windows version x64: 08-53 Windows version x86 (for JDK 6 base): 08-70 AIX version: 09-00	
Options of the functionality to output the code cache area information	<i>-XX:[+ -]PrintCodeCacheInfo</i>	Specify whether to output the amount of code cache area used, and whether to output a message informing the user that the usage has reached the threshold value.	09-50	<i>5.7.3 Contents of the code cache area-related log in the Maintenance and Migration Guide</i>
	<i>-XX:CodeCacheInfoPrintRatio</i>	Specify the usage rate of the code cache area that will trigger the output of a message informing the user that the usage of the code cache area has reached the threshold value.	09-50	
	<i>-XX:[+ -]PrintCodeCacheFullMessage</i>	Specify whether to output a message if the code cache area is depleted when the Java method is subject to JIT compilation.	09-50	<i>5.7.3 Contents of the code cache area-related log in the Maintenance and Migration Guide</i>
Extended functionality option when	<i>-XX:[+ -]HitachiOutOfMemoryCause#2</i>	Specify whether to output the types of	05-02	

Classification	Option name	Overview	VR	Related information
OutOfMemoryError occurs		causes for the occurrence of OutOfMemoryError.		
	<i>-XX:[+ -]HitachiOutOfMemoryStackTrace#2</i>	Specify whether to output the stack trace when OutOfMemoryError occurs.	05-02	
	<i>-XX:HitachiOutOfMemoryStackTraceLineSize</i>	Specify the number of characters in one line of stack trace that is output when OutOfMemoryError occurs.	05-02	
	<i>-XX:[+ -]HitachiOutOfMemorySize#2</i>	Output the requested memory size when OutOfMemoryError occurs.	06-50	
	<i>-XX:[+ -]HitachiOutOfMemoryAbort</i>	Specify whether to output the message and memory dump and perform the forced termination when OutOfMemoryError occurs.	06-50	
	<i>-XX:[+ -]HitachiOutOfMemoryAbortThreadDump</i>	Specify whether to output the thread dump when OutOfMemoryError occurs.	06-50	
	<i>-XX:[+ -]HitachiOutOfMemoryAbortThreadDumpWithJHeapProf</i>	Outputs class-wise statistical information to the thread dump log file output by <code>-XX:+HitachiOutOfMemoryAbortThreadDump</code> .	08-00	
	<i>-XX:[+ -]HitachiOutOfMemoryHandling</i>	Specifies whether to enable the OutOfMemory handling functionality.	08-53	
	<i>-XX:HitachiOutOfMemoryHandlingMaxThrowCount</i>	Specifies the upper limit on the total number of OutOfMemory errors that can occur per hour due to insufficiency of the Java heap area, metaspace area, or compressed class space if the OutOfMemory handling functionality is enabled.	08-53	
Class library trace functionality option	<i>-XX:[+ -]HitachiJavaClassLibTrace#2</i>	Specify whether to output stack trace of the class library.	06-50	
	<i>-XX:HitachiJavaClassLibTraceLineSize</i>	Specify the number of characters in one line of stack trace of the class library.	06-50	
Local variable information output functionality option	<i>-XX:[+ -]HitachiLocalsInThrowable</i>	Specify whether to output the local variable information in the stack trace when exception occurs.	06-50	
	<i>-XX:[+ -]HitachiLocalsInStackTrace</i>	Specify whether to output the local variable information in the stack	06-50	<i>5.10 JVM stack trace information in</i>

Classification	Option name	Overview	VR	Related information
		trace when the thread dump is output.		the <i>Maintenance and Migration Guide</i>
	<code>-XX:[+ -]HitachiLocalsSimpleFormat</code>	Specify whether to output the local variable information in simple format.	06-50	5.10 <i>JavaVM stack trace information</i> in the <i>Maintenance and Migration Guide</i>
	<code>-XX:[+ -]HitachiTrueTypeInLocals</code>	Specify a character string for whether you need to output the true type name of the local variable object when the local variable information is output.	06-50	5.10 <i>JavaVM stack trace information</i> in the <i>Maintenance and Migration Guide</i>
	<code>-XX:HitachiCallToString</code>	Specify a character string for whether you need to output the variable value of the local variable object when the local variable information is output.	06-50	5.10 <i>JavaVM stack trace information</i> in the <i>Maintenance and Migration Guide</i>
Release system resource option	<code>-XX:[+ -]HitachiFullCore</code>	Specify whether to change the settings of the system resource RLIMIT_CORE. This option is for UNIX.	05-02	
Options specified in the explicit memory management	<code>-XX:[+ -]HitachiUseExplicitMemory</code>	Specify whether to enable or disable the Explicit Memory Management function.	08-00	7. <i>Suppression of Full GC by Using the Explicit Memory Management Functionality</i> in the <i>Expansion Guide</i>
	<code>-XX:HitachiExplicitHeapMaxSize</code>	Specify the maximum size of the entire Explicit heap.	08-00	
	<code>-XX:HitachiExplicitMemoryLogLevel</code>	Specify the event log level of the Explicit Memory Management functionality.	08-00	
	<code>-XX:HitachiExplicitMemoryJavaLog</code>	Specify the file name (path name can be included) or directory name in which the log will be output using this functionality.	08-00	
	<code>-XX:HitachiExplicitMemoryJavaLogFileSize</code>	Set up the maximum file size of one file in bytes.	08-00	

Classification	Option name	Overview	VR	Related information
	- <i>-XX:HitachiExplicitMemoryJavaLogNumberOfFile</i>	Specify the maximum number of files to be created. If the maximum number of files is exceeded, the log is output again to the file that was created first (wrap around).	08-00	
	-XX: <i>[+ -]HitachiExplicitMemoryMoveToTenuredFirst</i>	Specify the transition destination of the objects of the release process of Explicit memory block.	08-50	7. Suppression of Full GC by Using the Explicit Memory Management Functionality in the Expansion Guide
	-XX: <i>[+ -]HitachiExplicitMemoryAutoReclaim</i>	Specify whether to enable the automatic release function of the Explicit Memory Management functionality.	08-50	7.7 Releasing Explicit memory blocks when the automatic release functionality is enabled in the Expansion Guide
Version compatibility option of the Explicit Memory Management function	-XX: <i>[+ -]HitachiExplicitMemoryCompatibleToV8</i>	Specify whether to use the same method as in 08-00 for securing the Explicit memory block.	08-50	
Options in the Explicit Memory Management automatic allocation setup file	-XX: <i>[+ -]HitachiAutoExplicitMemory</i>	Specify whether to enable the automatic allocation function for the Explicit memory block.	08-50	7.13.2 Using the Explicit Memory Management functionality by using the automatic placement configuration file in the Expansion Guide
	-XX: <i>HitachiAutoExplicitMemoryFile</i>	Specify the path of the automatic allocation setup file to be used by the automatic allocation function of the Explicit memory block.	08-50	7.13.2 Using the Explicit Memory Management functionality by using the automatic placement configuration file in the Expansion Guide
Option for controlling the transfer of objects to the	-XX: <i>ExplicitMemoryFullGCPolicy</i>	Specifies whether to control movement of objects from	09-50	7. Suppression of Full GC by

Classification	Option name	Overview	VR	Related information
Explicit memory block of the Explicit Memory Management functionality		the Java heap area to explicit memory blocks based on the reference relationship when Full GC occurs.		<i>Using the Explicit Memory Management Functionality in the Expansion Guide</i>
Option for the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality	<i>-XX:[+ -]ExplicitMemoryUseExcludeClass</i>	Specify whether to enable the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality.	09-50	
	<i>-XX:ExplicitMemoryExcludeClassListFile</i>	Specify the path of the Explicit Memory Management functionality exclusion setup file to be used with the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality.	09-50	
	<i>-XX:ExplicitMemoryNotExcludeClassListFile</i>	Specify the path of the Explicit Memory Management functionality non-exclusion setup file to be used with the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality.	09-50	
Memory usage reduction option for the Explicit heap used in an HTTP session	<i>-XX:[+ -]HitachiExplicitMemoryAutoRefReclaim</i>	Specifies whether to enable the memory usage reduction function for the Explicit heap used in an HTTP session.	08-70	<i>7. Suppression of Full GC by Using the Explicit Memory Management Functionality in the Expansion Guide</i>
Option for specifying the maximum resources	<i>-XX:HitachiJITCompileMaxMemorySize</i>	Specifies the upper limit of the memory to be secured for the JIT compilation.	08-53	
	<i>-XX:HitachiThreadLimit</i>	Specifies the upper limit for the number of threads.	08-53	
Option for the JIT compiler continuation functionality	<i>-XX:[+ -]JITCompilerContinuation</i>	Specify whether to enable the JIT compiler continuation functionality.	09-50	
Java option used for the compressed object pointer functionality	<i>-XX:[+ -]UseCompressedOops</i>	Specifies whether to enable the compressed object pointer functionality.	09-60	<i>9.18 Object-pointer compression function in the Maintenance</i>

Classification	Option name	Overview	VR	Related information
				<i>and Migration Guide</i>

Legend:

Blank column: Related information does not exist.

#1

Settings for the JavaVM log file.

#2

When the following options are specified, the JavaVM log file is output:

-XX:+HitachiOutOfMemoryStackTrace

-XX:+HitachiOutOfMemoryCause

-XX:+HitachiOutOfMemorySize

-XX:+HitachiVerboseGC

-XX:+HitachiJavaClassLibTrace

Tip

The references for the default values of JavaVM extension options differ for each server. The following table describes the references for the default values of JavaVM extension options for each server and application:

Table 14–2: References for the default values of JavaVM extension options for each server and application

Server and application used	Reference
J2EE server	<i>2.2.2 usrconf.cfg (Option definition file for J2EE servers)</i>
Batch server	<i>3.2.1 usrconf.cfg (Option definition file for batch servers)</i>
Java applications started with the <code>cjclstartap</code> command	<i>12.2.1 usrconf.cfg (Option definition file for Java applications)</i>
Other Java applications	<i>14.4 Default values of the Java HotSpot VM options that can be specified in Cosminexus</i>

To specify JavaVM extension options in the Easy Setup definition file, you specify JavaVM extension options in 'Contents specified in param-value' that can be specified when `add.jvm.arg` is set in 'Value specified in param-name'.

14.2 Details of JavaVM extension options

This section explains the details of the JavaVM extension options.

The following Java programs are used as examples in this document:

Java Program example 1

```
class Example1 {
    public static void main(String[] args) {
        Example1 e1 = new Example1();
        Object obj = new Object();
        e1.method(1, 'Q', obj); // 5th line
    }

    void method(int l1, char l2, Object l3) {
        float l4 = 4.0f;
        boolean l5 = true;
        double l6 = Double.MAX_VALUE; // double type maximum value
        Object[] l7 = new Object[10];

        try {
            exception-occurred // 15th line
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

Java Program example 2

```
class Example2 {
    public static void main(String[] args) {
        Example2 e2 = new Example2();
        e2.method(); // 4th line
    }

    synchronized void method() {
        int l1 = 1;
        float l2 = 2.0f;
        String l3 = "local 3";
        Character l4 = new Character('X');
        Object l5 = new Thread();
        Object[] l6 = new Thread[10];

        thread-dump-is-output // 15th line
    }
}
```

Java Program example 3

```
class Example3 {
    public static void main(String[] args) {
        Example3 e3 = new Example3();
        e3.method(); // 4th line
    }

    void method() {
```



```

String l1 = "local 1";
StringBuffer l2 = new StringBuffer(l1);
l2.append(" + local 2");
Boolean l3 = new Boolean(false);
Character l4 = new Character('X');
Long l5 = new Long(Long.MIN_VALUE); // long type minimum value
Object l6 = new Thread();
Object[] l7 = new Thread[10];

try {
    exception-occurred // 18th line
} catch (Exception e) {
    e.printStackTrace();
}
}

public String toString() {
    return "I am an Example3 instance.";
}
}

```

-XX:+Hitachi (List display option)

Format

-XX:+Hitachi

Description

This option displays a list of JavaVM extension options.

This option does not run the Java program. If you specify this option for starting the J2EE server, the J2EE server will not be started.

-XX:[+|-]HitachiThreadDump (Option to output the extended thread dump information)

Format

-XX:+HitachiThreadDump

If the `-Xrs` option is not specified, this option outputs the extended thread dump information during thread dump output.

-XX:-HitachiThreadDump

This option outputs the standard thread dump information during thread dump output.

Description

Specify whether to output the extended thread dump information.

The thread dump is output as the standard output to the following files:

Default value

- `-XX:+HitachiThreadDump`

Thread dump output destination

By default, the output destination is the current directory when executing JavaVM. You can specify the environment variable `JAVACOREDIR` and change the output destination.

Thread dump output file name

```
javacore process-number.YYMMDDhhmmss#.txt
```


YY: Year (last 2 digits), *MM*: Month (2 digits), *DD*: Date (2 digits)
hh: Hours (represented in 24-hours), *mm*: Minutes (2 digits), *ss*: Seconds (2 digits)

The following table describes the configuration of thread dump information:

Table 14–3: Configuration of the thread dump information

Output information	Contents
Header	Outputs the date and time when the thread dump is started, the JavaVM version information, and the start command line.
System settings	Outputs the following information: <ul style="list-style-type: none">• The installation directory of the JDK execution environment.• The installation directory of a library configuring JDK• System class path• Java command option
Operation environment	Outputs the following information: <ul style="list-style-type: none">• Host name• OS version• CPU information• Resource information (only for UNIX)
Memory information	Outputs the following information for Windows: <ul style="list-style-type: none">• Memory usage status• Physical memory usage status• Virtual memory usage status• Paging usage
Java heap information	Outputs the memory usage status of each Java heap generation.
Internal memory map information for JavaVM	Outputs the information of memory area secured by JavaVM.
Internal memory size information for JavaVM	Outputs the information of memory size secured by JavaVM.
Application information	Outputs the following information: <ul style="list-style-type: none">• Signal handler• Environment variable• Current directory information
Library information	Outputs the information about a loaded library.
Thread information Thread-1 : Thread-n	Outputs the thread information for each thread. Outputs the stack traces of all the existing threads.

Output information	Contents
Java monitor dump [#]	Displays the list of Java monitor objects. You can check the exclusion wait status between threads.
JNI global reference information	Outputs the number of global references of JNI maintaining JavaVM. JNI global reference is created in the following cases: <ul style="list-style-type: none"> • When Java VM itself is required for startup or execution. • When you issue the <code>NewGlobalRef</code> function that is supported by JNI.
Explicit heap information	The usage status in the entire Explicit heap is output to the Explicit heap information. Regardless of whether the Explicit heap is used, the information will always output when <code>-XX:+HitachiUseExplicitMemory</code> is enabled.
Explicit memory block information	The following information is output with the Explicit memory block information. However, if the Explicit memory block does not exist, nothing is output. <ul style="list-style-type: none"> • Usage status for each Explicit memory block • Object statistics information (output when the <code>eheapprof</code> command is executed) • Object release ratio information (output when the <code>eheapprof</code> command is executed with the <code>-freeratio</code> option specified)
Footer	Outputs the date and time when the thread dump ends.

#

In UNIX, the `notify` pending list might not be displayed.

Output format

Header

```

EEE MMM dd hh:mm:ss yyyy#

Full thread dump Java HotSpot(TM) VM-type (25.20-b23-CDK0970-build-date mixed mode)
invoke-command-line
...

```

#

EEE represents a day, *MMM* a month, and *dd* a date. *hh* represents hours, *mm* minutes, *ss* seconds, and *yyyy* represents a year.

For *VM-type*, Client VM, Server VM, or 64-Bit Server VM is output.

System settings

```

System Properties
-----
Java Home Dir : installation-directory-of-JDK-execution-environment
Java DLL Dir  : installation-directory-of-library-configuring-JDK
Sys Classpath : system-class-path
User Args    :
Java-command-option-1
Java-command-option-2
...

```

Operating environment (In Windows)

```

Operating Environment
-----
Host : host-name:IP-address

```

```
OS      : OS-version
CPU     : CPU-type, number-of-available-CPU/ number-of-CPU-of-all-systems
```

Operating environment (In UNIX)

```
Operating Environment
-----
Host    : host-name:IP-address
OS      : OS-version
CPU     : CPU-type, number-of-available-CPU/ number-of-CPU-of-all-systems

Resource Limits -
RLIMIT_CPU      :number-of-seconds-available-for-the-process
RLIMIT_FSIZE    :maximum-file-size-(-unit:-byte-)
RLIMIT_DATA     :mallocable-size-(-unit:-byte-)
RLIMIT_STACK    :maximum-stack-size-(-unit:-byte-)
RLIMIT_CORE     :maximum-core-size-(-unit:-byte-)
RLIMIT_RSS      :process-residence-size-(-unit:-byte-)
RLIMIT_AS       :available-memory-for-total-processes-(-unit:-byte-)
RLIMIT_NOFILE   :maximum-file-descriptor-value
```

Memory information (In Windows)

```
Memory Status
-----
Memory in use   : memory-usage-status-(-unit:-percent-)
Physical memory : physical-memory-usage# free
Virtual memory  : virtual-memory-usage# free
Paging file    : paging-usage# free
```

#

Displayed in the format of *available-size/total-size* (Units: Bytes).

Java heap information (if serial GC is used)

```
Heap Status
-----
def new generation max maximum-capacity, total current-capacity, used memor
y-in-use (rate-of-usage-to-maximum-capacity% used/max, rate-of-usage-to-curr
ent-capacity% used/total)
    [first-address-of-the-area, last-address-of-the-committed-area, l
ast-address-of-the-reserved-area)
eden space current-capacity, usage% used [first-address-of-the-area, first
-address-of-the-area-in-use, last-address-of-the-reserved-area)
from space current-capacity, usage% used [first-address-of-the-area, first
-address-of-the-area-in-use, last-address-of-the-reserved-area)
to space current-capacity, usage% used [first-address-of-the-area, first
-address-of-the-area-in-use, last-address-of-the-reserved-area)
tenured generation max maximum-capacity, total current-capacity, used memor
y-in-use (rate-of-usage-to-maximum-capacity% used/max, rate-of-usage-to-curr
ent-capacity% used/total)
    [first-address-of-the-area, last-address-of-the-committed-area, l
ast-address-of-the-reserved-area)
the space current-capacity, usage% used [first-address-of-the-area, first
-address-of-the-area-in-use, first-address-of-the-next-blank-block, last-add
ress-of-the-reserved-area)
Metaspace      max maximum-capacity, capacity size-of-committed-memory-area
```

```

-excluding-free-area, committed size-of-committed-memory-area, reserved size
-of-reserved-memory-area, used memory-in-use (ratio-of-usage-to-maximum-capacity%
used/max, ratio-of-usage-to-current-capacity% used/total)
class space max maximum-capacity, capacity size-of-committed-memory-area
a-excluding-free-area, committed size-of-committed-memory-area, reserved size
e-of-reserved-memory-area, used memory-in-use (ratio-of-usage-to-maximum-capacity%
used/max, ratio-of-usage-to-current-capacity% used/committed)
[first-address-of-the-area, first-address-of-the-area-in-use, last-address-of-the-committed-area, last-address-of-the-reserved-area)

```

Note:

The unit of capacity and memory size is kilobytes.

Java heap information (if G1 GC is used)

```

Heap Status
-----
garbage-first heap total current-capacity, used memory-in-use [first-address-of-the-area, last-address-of-the-committed-area, address-of-the-reserved-area)
region size size-of-one-region, number-of-regions-used-in-the-new-area young (memory-in-use-in-the-new-area), number-of-regions-used-in-the-Survivor-area survivors (memory-in-use-in-the-Survivor-area)
Metaspace max maximum-capacity, capacity size-of-committed-memory-area a-excluding-free-area, committed size-of-committed-memory-area, reserved size e-of-reserved-memory-area, used memory-in-use (ratio-of-usage-to-maximum-capacity% used/max, ratio-of-usage-to-current-capacity% used/committed)
class space max maximum-capacity, capacity size-of-committed-memory-area a-excluding-free-area, committed size-of-committed-memory-area, reserved size e-of-reserved-memory-area, used memory-in-use (ratio-of-usage-to-maximum-capacity% used/max, ratio-of-usage-to-current-capacity% used/committed)
[first-address-of-the-area, first-address-of-the-area-in-use, last-address-of-the-committed-area, last-address-of-the-reserved-area)

```

Internal memory map information for JavaVM

```

JVM Internal Memory Map
-----
memory-secure-function:address = start-address - end-address (size:size)

```

Note:

- memory-secure-function*: Either `mmap()` or `malloc()` is output.
- start-address*: Start address of the memory area is output as hexadecimal.
- end-address*: End address of the memory area is output as hexadecimal.
- size*: Size of the secured memory area is output (Units: Bytes).

Internal memory size information for JavaVM

```

JVM Internal Memory Status
-----
Heap Size :secured-memory-size#

```

```
Alloc Size      :used-memory-size#  
Free Size      :free-memory-size#
```

#

Unit: Bytes

Application information (in Windows)

```
Application Environment  
-----  
Signal Handlers -  
SIGINT          :signal-handler-information  
SIGILL          :signal-handler-information  
...  
SIGBREAK       :signal-handler-information  
SIGABRT        :signal-handler-information  
  
Environment Variables -  
environment-variable=value  
...  
Cueevent Directory -  
C:\Program Files\Hitachi\Cosminexus\CC\...
```

Application environment (in UNIX)

```
Application Environment  
-----  
Signal Handlers -#1  
SIGHUP         :signal-handler-information  
SIGINT         :signal-handler-information  
...  
SIGSOUND       :signal-handler-information  
SIGSAK        :signal-handler-information  
  
Signal Handlers -  
signal-type: [signal-handler-address], sa_mask[0]= signal-mask, sa_flags= sp  
ecific-flag  
...  
  
Environment Variables -#2  
environment-variable=value  
...  
Current Directory -  
/opt/Cosminexus/CC/server/...
```

#1

The following information is displayed:

- If the signal handler is installed, its address is displayed.
- In the case of SIG_DFL, default is displayed.
- In the case of SIG_IGN, ignored is displayed.

#2

The following information is displayed:

- The signal name defined in `/usr/include/sys/signal.h` is displayed in signal type.
- The address of the signal handler is output as hexadecimal in the "signal handler address". The address may be displayed in the form of "Library name + Offset."
- The `sa_mask` field value of the structure fetched by `sigaction()` is output as hexadecimal in the "signal mask".
- The `sa_flags` field value of the structure fetched by `sigaction()` is output as hexadecimal in the "specific flag".

Library information (in Windows and Linux)

```
Loaded Libraries
-----
Dynamic libraries :
start-address-end-address  command
start-address-end-address  library
...
```

Library information (in AIX)

```
Loaded Libraries
-----
command
  text  :start-address-end-address (size)
  data  :start-address-end-address (size)
library
  text  :start-address-end-address (size)
  data  :start-address-end-address (size)
...
```

Thread information

```
-----
"thread-name" daemon prio= priority jid=hash-value tid= thread-ID nid= nat
iveID status [start-address...end-address]
java.lang.Thread.State: current-status-of-thread#
  stack=[stack-start-address..YellowPage-address..RedPage-address..stack-en
d-address]
  [user cpu time=user-time ms, kernel cpu time=kernel-time ms] [blocked cou
nt=block-count, waited count=standby-count]
  at class-name.method-name(method-information)
...
```

#

Information of *current-status-of-thread* is output only if JDK 6 is the base and the version is 08-10 or later.

The output contents are as follows:

thread-name

The thread name specified in the constructor of the Thread class is output.

- *daemon*: In the case of the daemon thread, thread name is output as "daemon".
- *priority*: The priority set in the `Thread#setPriority` is output.
- *hash-value*: The value same as the one obtained by invoking `System.identityHashCode()` is output as 8-digit hexadecimal.
- *thread-ID*: Memory address of thread object.
- *nativeID*: Thread ID of the OS level.
- *status*: Thread state.

`runnable`: Running or executable thread

in `Object.wait()`, waiting for monitor entry or waiting on condition:
Thread waiting for monitor lock

`sleeping`: Thread in the suspended state

- *start-address*: The top-level stack address of the Java frame is output as hexadecimal.
- *end-address*: The top-level stack address with `JavaLock` is output as hexadecimal.
- *user-time*: The user time since the thread is started is output in milliseconds.
- *kernel-time*: The kernel time since the thread is started is output in milliseconds.
- *block-count*: The number of times the process is blocked since the thread is started is output.
- *standby-count*: The number of times the process is pending since the thread is started is output.

current-status-of-thread

The message indicating the current status of thread is output. The contents of the message correspond to the `java.lang.Thread.State` enumerated type.

stack-start-address

The stack start address is output in hexadecimals.

YellowPage-address

The first address of the stack Yellow guard page is output in hexadecimals.

RedPage-address

The first address of the stack Red guard page is output in hexadecimals.

stack-end-address

The stack end address is output in hexadecimals.

class-name

The class name is output.

method-name

The method name is output.

method-information

The following method information is output:

- Native Method
The information is output in the case of the native method.
- File name: Line number
The information is output when the Java method is compiled with the line number.
- Unknown Source
The information is output when the Java method is compiled without the line number.

Java monitor dump

```
Java monitor
-----
lock-object@hash-code owner-information
standby-state:standby-thread-count
standby-thread-information
```

The output contents are explained below:

lock-object

The class name of the object to be locked is output.

hash-code

The hash code to be obtained with `Object.hashCode` is output.

owner-information

- owner "*thread-name*"*thread-ID*
When the monitor has an owner, owner "*thread-name*"*thread-ID* is output.
- no owner
When the monitor does not have an owner, "no owner" is output.

standby-state

- ... waiting to enter
This state is displayed when the monitor is waiting for method execution.
- ... waiting to be notified
This state is displayed when the monitor is waiting for notification.

standby-thread-count

The thread count is output.

standby-thread-information

The information is output in the form of "*thread-name*" *thread-ID*.

Information on the number of JNI global references

```
JNI Information
-----
JNI global references: JNI-global-reference-count
```

The output contents are explained below:

JNI global reference count

The number of global references maintained by JavaVM are output.

Note:

Since the JNI global reference is reused even in JavaVM, the numeric value does not reduce even after issuing the `DeleteGlobalRef` function supported by JNI to delete the JNI global reference. Even if the `NewGlobalRef` function is issued to create a new JNI global reference, the numeric value does not increase if the JNI global reference reused by JavaVM is allocated.

Explicit heap information and Explicit memory block information

```
Explicit Heap Status
-----
max EH_MAX, total EH_TOTAL, used EH_USED, garbage EH_GARB (EH_PER1 used/max
, EH_PER2 \
used/total, EH_PER3 garbage/used), EM_NUMS spaces exist

Explicit Memories(EM_MGR_PTR)

"EM_NAME" eid=EID(EM_PTR)/EM_TYPE, total EM_TOTAL, used EM_USED, garbage EM_GARB \
(EM_PER1 used/total, EM_PER2 garbage/used, FL_BLOCKS blocks) EM_STAT
deployed objects
_____Size__Instances__FreeRatio__Class_____
```

```

        ISIZE      INUM    FRATIO CNAME
        ...
        AISIZE    AINUM total
        ...

```

Note the following:

- A blank line exists between the Explicit heap information and Explicit memory block information.
- The output order for the Explicit memory block information (which Explicit memory block will output) is not defined.
- Two one-byte character spaces exist before "EM_NAME".
- Four one-byte character spaces exist before `deployed` objects.
- *ISIZE* is aligned at the end of "e" of `_____Size_`.
- *INUM* is aligned at the end of the final "s" of `__Instances`.
- *FRATIO* is aligned at the end of "o" of `__FreeRatio__`.
- *CNAME* is aligned at the end of the second "_" which is at the beginning of `__Class_____`.
- Four one-byte character spaces exist before `memory map`.
- A blank line exist as the last line. As a result, a blank line exist between the output of each Explicit memory block.

Footer

```

Full thread dump completed.  EEE MMM dd hh:mm:ss yyyy#

```


EEE represents a day, *MMM* a month, and *dd* a date. *hh* represents hours, *mm* minutes, *ss* seconds, and *yyyy* represents a year.

The following table describes the comparison of the extended thread dump information:

Table 14–4: Comparison between the output information of the standard thread dump and the extended thread dump

Output information	Standard thread dump	Extended thread dump
Header	N	Y
System settings	N	Y
Operation environment	N	Y
Memory information (in Windows only)	N	Y
Java heap information	N	Y
Internal memory map information for JavaVM	N	Y
Internal memory size information for JavaVM	N	Y
Application environment	N	Y
Library information	N	Y
Thread information	Y	Y#1
Java monitor dump	N	Y

Output information	Standard thread dump	Extended thread dump
Information on the number of JNI global references	Y	Y
Explicit heap information	N	Y
Explicit memory block information	N	Y
Footer	N	Y
Thread dump output destination	Standard output	Standard output ^{#2} JavaVM log file

Legend:

Y: Information is output.

N: Information is not output.

#1

Information such as the start and end address of stack is output.

#2

The information is output when the `-XX:+HitachiThreadDumpToStdout` option is specified.

Precautions

- When the output to the directory specified in the environment variable `JAVACOREDIR` fails, the information is output in current directory.
- When the output to the current directory fails, the information is output as standard error output. In this case, the thread dump is not output as the standard output.
- When `[+|-]` in the following options is specified as "-", part of the thread information is not output:

Option name	Information not to be output
<code>-XX:[+ -]HitachiThreadDumpWithHashCode</code>	<i>hash-value</i>
<code>-XX:[+ -]HitachiThreadDumpWithCpuTime</code>	<i>user-time, kernel-time</i>
<code>-XX:[+ -]HitachiThreadDumpWithBlockCount</code>	<i>block-count, standby-count</i>

-XX:[+|-]HitachiThreadDumpToStdout (Option for preventing the standard output of extended thread dump)

Format

`-XX:+HitachiThreadDumpToStdout`

This option outputs the extended thread dump to the standard output as well as to the thread dump output file.

`-XX:-HitachiThreadDumpToStdout`

This option does not output the extended thread dump to the standard output. This option outputs the extended thread dump to the thread dump output file only.

Description

Specify whether to output the extended thread dump to the standard output.

The following message is output regardless of the specification of this option. The extended thread dump is output to the JavaVM log file.

```
Writing Java core to file-name-(full-path)... OK
```

Default value

- `-XX:+HitachiThreadDumpToStdout`

Prerequisite options

- `-XX:+HitachiThreadDump`

-XX:[+|-]HitachiThreadDumpWithHashCode (Hash code output option of the extended thread dump)

Format

`-XX:+HitachiThreadDumpWithHashCode`

This option outputs the hash code to the thread information of extended thread dump.

`-XX:-HitachiThreadDumpWithHashCode`

This option does not output the hash code to the thread information of the extended thread dump.

Description

Specify whether to output the hash code to the thread information of the extended thread dump.

Note that hash code is output for the thread that is running the Java program. The hash code is not output for the thread used for the internal operations of JavaVM.

Default value

- `-XX:+HitachiThreadDumpWithHashCode`

Prerequisite options

- `-XX:+HitachiThreadDump`

-XX:[+|-]HitachiThreadDumpWithCpuTime (CPU usage time output option of the extended thread dump)

Format

`-XX:+HitachiThreadDumpWithCpuTime`

In the thread information of the extended thread dump, this option outputs the user CPU time and the kernel CPU time since the thread was started.

`-XX:-HitachiThreadDumpWithCpuTime`

In the thread information of the extended thread dump, this option does not output the user CPU time and the kernel CPU time since the thread was started.

Description

Specify whether to output the user CPU time and the kernel CPU time in the thread information of the extended thread dump.

The user CPU time and the kernel CPU time are output for the thread that is running the Java program. The user CPU time and the kernel CPU time are not output for the thread used for the internal operations of JavaVM.

Default value

- `-XX:+HitachiThreadDumpWithCpuTime`

Prerequisite options

- `-XX:+HitachiThreadDump`

-XX:[+|-]HitachiThreadDumpWithBlockCount (Block count output option of the extended thread dump)

Format

`-XX:+HitachiThreadDumpWithBlockCount`

In the thread information of the extended thread dump, this option outputs the number of times the thread has blocked the process and the number of times the process is in the waiting status.

`-XX:-HitachiThreadDumpWithBlockCount`

In the thread information of the extended thread dump, this option does not output the number of times the thread has blocked the process and the number of times the process is in the waiting status.

Description

In the thread information of the extended thread dump, specify whether to output the number of times the thread has blocked the process and the number of times the process is in the waiting status.

Note that hash code is output for the thread that is running the Java program. The hash code is not output for the thread used for the internal operations of JavaVM.

Default value

- `-XX:+HitachiThreadDumpWithBlockCount`

Prerequisite options

- `-XX:+HitachiThreadDump`

-XX:HitachiJavaLog (Option for specifying the prefix of log file name)

Format

```
-XX:HitachiJavaLog:character-string
```

Description

Specify the prefix and the output destination directory of JavaVM log files.

Default value

- `-XX:HitachiJavaLog:javalog`

Prerequisite options

Specify one of the following values:

- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:+HitachiOutOfMemoryCause`
- `-XX:+HitachiOutOfMemorySize`
- `-XX:+HitachiJavaClassLibTrace`
- `-XX:+JITCompilerContinuation`

Argument

character-string

Specify the prefix and path. The following 3 types can be specified:

To specify the prefix

The log file name is created as *character-string*?? .log (?? is a serial number from 01 to 99). For example, if you specify "Samp" in *character-string*, the log file name is Samp01.log. If you do not specify this option, then "javalog" will be set in the *character-string* and. The log file is output to the current directory.

To specify the path

If the directory is specified in *character-string*, the file is created in the specified directory. The log file name is generated as *character-string*javalog?? .log (?? is the serial number from 01 to 99).

To specify the path and prefix concurrently

When the directory and prefix are specified in *character-string*, the file is created in the specified directory. The log file name is created as *character-string*?? .log (?? is a serial number from 01 to 99). For example, if you specify `d:\temp\Samp` in *character-string*, Samp01.log is created in the `d:\temp` directory.

-XX:HitachiJavaLogFileSize (Option for specifying the maximum log file size)

Format

```
-XX:HitachiJavaLogFileSize=integer-value
```

Description

To avoid the increase in the size of a log file, specify the maximum file size of a log file. When the file size exceeds the maximum limit, log is not output to that file. When this option is not specified, '256 kilobytes' is specified by default.

Default value

- `-XX:HitachiJavaLogFileSize=256k`

Prerequisite options

Specify one of the following values:

- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:+HitachiOutOfMemoryCause`
- `-XX:+HitachiOutOfMemorySize`
- `-XX:+HitachiJavaClassLibTrace`
- `-XX:+JITCompilerContinuation`

Argument

integer-value

Specify the integer value from 1024 to 2147483647 (unit: byte). However, if a value out of range is specified, 1024 is set. When negative value is specified, an error will occur.

-XX:[+|-]HitachiJavaLogNoMoreOutput (Option specified when the log file input/ output error occurs)

Format

`-XX:+HitachiJavaLogNoMoreOutput`

When the file input/ output error occurs during the log file output, this option outputs the following message to the standard error output and stops the output of log information:

```
Java logfile output failed.(errno=input-/-output-function-name-where -an-error-occurs:error-number)
```

`-XX:-HitachiJavaLogNoMoreOutput`

When the file input/ output error occurs during the log file output, this option outputs the following message as the standard error output, changes the output destination of the log information to the standard error output, and continues the output:

```
Java logfile output failed.(errno=input-/-output-function-name-where-an-error-occurs:error-number) Changing output to stderr
```

Description

When input/ output error occurs during log file creation, specify how to output the log information. Note that the processing of JavaVM will continue even if you specify `-XX:+HitachiJavaLogNoMoreOutput` or `-XX:-HitachiJavaLogNoMoreOutput` option.

Default value

- `-XX:+HitachiJavaLogNoMoreOutput`

Prerequisite options

Specify one of the following values:

- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:+HitachiOutOfMemoryCause`
- `-XX:+HitachiOutOfMemorySize`
- `-XX:+HitachiJavaClassLibTrace`
- Other than `-XX:HitachiExplicitMemoryLogLevel:none`
- `-XX:+JITCompilerContinuation`

-XX:HitachiJavaLogNumberOfFile (Option for specifying the maximum number of log files)

Format

```
-XX:HitachiJavaLogNumberOfFile=integer-value
```

Description

For preventing the increase in the number of log files, specify the maximum number of files to be created. When the number of files exceeds the maximum value, the output to the file created in the beginning is re-started. When this option is not specified, '4' is specified by default.

Default value

- `-XX:HitachiJavaLogNumberOfFile=4`

Prerequisite options

Specify one of the following values:

- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:+HitachiOutOfMemoryCause`
- `-XX:+HitachiOutOfMemorySize`
- `-XX:+HitachiJavaClassLibTrace`

Argument

integer-value

Specify a value in the range of 1 to 99. If a value of 100 or more is specified, 99 will be set and if 0 or less is specified, then 1 will be set. When negative value is specified, an error will occur.

-XX:[+|-]JavaLogAsynchronous

Format

`-XX:+JavaLogAsynchronous`

This option enables the asynchronous log file output functionality.

`-XX:-JavaLogAsynchronous`

This option disables the asynchronous log file output functionality.

Description

This option can be used to specify whether to enable the asynchronous log file output functionality.

If you enable the asynchronous log file output functionality and specify the line length of stack traces to be output by using the `-XX:HitachiOutOfMemoryStackTraceLineSize` or `-XX:HitachiJavaClassLibTraceLineSize` option, the maximum length that can be set is 4096 bytes. You cannot set a line length longer than 4096 bytes even if you specify a length longer than 4096 bytes.

If the specified number of bytes cannot be secured, the functionality outputs a warning message without outputting a stack trace. If the data to be output on one line is longer than the specified length, the first half portion of the character string from `at` onwards is deleted and the specified number of characters is output.

Default value

- `-XX:-JavaLogAsynchronous`

-XX:[+|-]HitachiOutputMilliTime (Detailed time output option)

Format

`-XX:+HitachiOutputMilliTime`

This option outputs the time up to milliseconds in the JavaVM log file.

`-XX:-HitachiOutputMilliTime`

This option outputs the time up to seconds in the JavaVM log file.

Description

Specify whether to output the time up to milliseconds.

Default value

- `-XX:-HitachiOutputMilliTime`

Prerequisite options

Specify one of the following values:

- `-XX:+HitachiVerboseGC`
- `-XX:+HitachiOutOfMemoryStackTrace`
- `-XX:+HitachiOutOfMemoryCause`
- `-XX:+HitachiOutOfMemorySize`

- `-XX:+HitachiJavaClassLibTrace`
- Other than `-XX:HitachiExplicitMemoryLogLevel:none`
- `-XX:+JITCompilerContinuation`

Examples of output

- Output of the extended `verbosegc` information

```
[VGC]Wed Mar 17 00:45:55.068 2004(Skip Full:0, Copy:0) [Full GC 149K->149K(
1984K), 0.0786038 secs] [DefNew::Eden: 264K->0K(512K)] [DefNew::Survivor: 0K
->63K(64K)] [Tenured: 85K->149K(1408K)] [Metaspace: 3634K(4492K, 4492K)->363
4K(4492K, 4492K)] [class space: 356K(388K, 388K)->356K(388K, 388K)]
```

- Output when `OutOfMemoryError` occurs

```
[OOM] [Thread: 0x00957820] <Wed Mar 17 00:47:00.662 2004> [java.lang.OutOfMem
ory Error : (C Heap) :340]
```

- Output of the class library trace

```
[CLT] [Thread: 0x00286348] <Wed Mar 17 00:47:00.662 2004>
[CLT] [Thread: 0x00286348] at java.lang.Shutdown.halt0(Native Method)
[CLT] [Thread: 0x00286348] at java.lang.Shutdown.halt(Shutdown.java:145)
```

- JIT compiler continuation functionality (information on JIT compile failure)

```
[JCC] [Thread: 0x05432c00] <Thu Nov 15 17:10:40.347 2012> [Method: chosa_cmp.
func(Ljava/lang/String;)V] [Fail: 3] [JITCT: 1]
```

`-XX:[+|-]HitachiVerboseGC` (Option for extended `verbosegc` information output)

Format

`-XX:+HitachiVerboseGC`

When GC occurs, this option outputs the extended `verbosegc` information to the JavaVM log file.

This option outputs the information of Eden, Survivor, Tenured, and Metaspace kinds that form the internal areas of GC, as the extended `verbosegc` information.

`-XX:-HitachiVerboseGC`

When GC occurs, this option does not output the extended `verbosegc` information to the JavaVM log file.

Description

Specify whether to output the extended `verbosegc` information when GC occurs.

Default value

- `-XX:-HitachiVerboseGC`

Output format (if serial GC is used)

```
[id] date (Skip Full:full_count, Copy:copy_count) [gc_kind gc_info, gc_time
secs][Eden: eden_info][Survivor: survivor_info][Tenured: tenured_info][Metas
pace: metaspace_info][class space: class_space_info][cause:cause_info] [User
: user_cpu secs] [Sys: system_cpu secs] [IM: jvm_alloc_size, mmap_total_size
, malloc_total_size] [TC: thread_count] [DOE: doe_alloc_size, called_count]
[CCI: cc_used_sizeK, cc_max_sizeK, cc_infoK]
```

The following is a description of the output contents:

id

VGC (Identifier of the JavaVM log file)

date

Indicates the date and time for starting GC.

When the `-XX:-HitachiVerboseGCPrintDate` option is specified, the date is not output.

full_count

Indicates the number of times the output of full GC information is skipped.

This is output when the `-XX:HitachiVerboseGCIntervalTime` option is specified.

copy_count

Indicates the number of times the output of copy GC information is skipped.

This is output when the `-XX:HitachiVerboseGCIntervalTime` option is specified.

gc_kind

Indicates the GC type. "FullGC" or "GC" is output.

gc_info

Indicates the GC information. The information is output in the following format:

```
area-length-before-the-GC -> area-length-after-the-GC (area-size)
```

gc_time

Indicates the elapsed time for GC.

Eden

Indicates the type of eden. "DefNew::Eden" or "ParNew::Eden" is output.

eden_info

Indicates the Eden information. The information is output in the following format:

```
area-length-before-the-GC -> area-length-after-the-GC (area-size)
```

Survivor

Indicates the survivor type. "DefNew::Survivor" or "ParNew::Survivor" is output.

survivor_info

Indicates the Survivor information. The information is output in the following format:

```
area-length-before-the-GC -> area-length-after-the-GC (area-size)
```

Tenured

Indicates the type of Tenured. "Tenured" is output.

tenured_info

Indicates the Tenured information. The information is output in the following format:

```
area-length-before-the-GC -> area-length-after-the-GC (area-size)
```

metaspace_info

Indicates the information about the metaspace area. The information is output in the following format:

```
size-of-used-area-before-GC (size-of-capacity-before-GC, size-of-committed-area-before-GC) -> size-of-used-area-after-GC (size-of-capacity-after-GC, size-of-committed-area-after-GC)
```

class_space_info

Indicates the information about the compressed class space. The information is output in the following format:

```
size-of-used-space-before-GC (size-of-capacity-before-GC, size-of-committed-space-before-GC) -> size-of-used-space-after-GC (size-of-capacity-after-GC, size-of-committed-space-after-GC)
```

When the `-XX:-UseCompressedOops` option is specified, this information is not output.

cause_info

Indicates the cause of GC.

When the `-XX:-HitachiVerboseGCPrintCause` option is specified, this information is not output.

user_cpu

Indicates the CPU time that the GC thread has consumed in the user mode. The unit is in seconds.

If an attempt to obtain the CPU time fails, unknown is displayed as in the case of `[User: unknown]`.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

system_cpu

Indicates the CPU time that the GC thread has consumed in the kernel mode. The unit is in seconds.

If an attempt to obtain the CPU time, unknown is displayed as in the case of `[Sys: unknown]`.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

jvm_alloc_size

Specifies the size of the area currently in use, from the areas being managed in JavaVM (size of the area currently in use, from the total size of `mmap_total_size` and `malloc_total_size`).

When the `-XX:HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

mmap_total_size

Specifies the total C heap size allocated for `mmap` (`VirtualAlloc` in Windows), from the areas being managed in JavaVM.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

malloc_total_size

Specifies the total C heap size allocated for `malloc`, from the areas being managed in JavaVM.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

thread_count

Specifies the number of Java threads.

When the `-XX:-HitachiVerboseGCPrintThreadCount` option is specified, this information is not output.

doe_alloc_size

Specifies the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

called_count

Specifies the invocation count of the `java.io.File.deleteOnExit()` method.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

cc_used_size

Specifies the size of the code cache area used when the GC occurs. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_max_size

Specifies the maximum size of the code cache area. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_info

Specifies the maintenance information.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

Output format (if G1 GC is used)

- VG1 log

```
[id]date[gc_kind gc_info, gc_time secs][Status: gc_status][G1GC:Eden: eden_info][G1GC:Survivor: survivor_info][G1GC:Tenured: tenured_info][G1GC:Humongous: humongous_info][G1GC:Free: free_info][Metaspace: metaspace_info][class space: class_space_info][cause: cause_info][RegionSize: region_size][Target: target_time secs][Predicted: predicted_time secs][TargetTenured: target_size][Reclaimable: reclaimable_info][User: user_cpu secs][Sys: system_cpu secs][IM: jvm_alloc_size, mmap_total_size, malloc_total_size][TC: thread_count][DOE: doe_alloc_size, called_count][CCI: cc_used_sizeK, cc_max_sizeK, cc_infoK]
```

The following is a description of the output contents:

id

VG1 (Identifier of the JavaVM log file)

date

Indicates the date and time for starting GC.

When the `-XX:-HitachiVerboseGCPrintDate` option is specified, the date is not output.

gc_kind

Indicates the GC type. One of the following strings is output: Full GC, Mixed GC, Young GC, Young GC (initial-mark), CM Remark, or CM Cleanup.

gc_info

Indicates the GC information. The information is output in the following format:

```
size-of-used-area-before-GC / region-conversion-as-area-size-before-GC (area-size-before-GC) -> area-size-after-GC / region-conversion-as-area-size-after-GC (area-size-after-GC)
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

gc_time

Indicates the elapsed time for GC.

gc_status

Indicates the status of GC. Either - or to exhausted is output.

eden_info

Indicates the Eden information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC(region-conversion-as-maximum-area-size-before-GC) -> region-conversion-as-area-size-after-GC(region-conversion-as-maximum-area-size-after-GC)
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

survivor_info

Indicates the Survivor information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC -> region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

tenured_info

Indicates the Tenured information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC -> region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

humongous_info

Indicates the Humongous information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC -> region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

free_info

Indicates the Free information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC -> region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

metaspace_info

Indicates the information about the metaspace area. The information is output in the following format:

```
size-of-used-area-before-GC (size-of-capacity-before-GC, size-of-committed-area-before-GC) -> size-of-used-area-after-GC (size-of-capacity-after-GC, size-of-committed-area-after-GC)
```

class_space_info

Indicates the information about the compressed class space. The information is output in the following format:

```
size-of-used-area-before-GC (size-of-capacity-before-GC, size-of-committed-area-before-GC) -> size-of-used-area-after-GC (size-of-capacity-after-GC, size-of-committed-area-after-GC)
```

When the `-XX:-UseCompressedOops` option is specified, this information is not output.

cause_info

Indicates the cause of GC.

When the `-XX:-HitachiVerboseGCPrintCause` option is specified, this information is not output.

region_size

Indicates the size of one region.

A value in KB is output.

target_time

Indicates the target value of the time for which the application will stop during GC.

A value in seconds is output.

predicted_time

Indicates the time for which the application will stop during GC predicted by Java VM.

A value in seconds is output.

Note that if the GC type is Full GC, CM Remark, or CM Cleanup, 0 is output because no prediction is performed.

target_size

Indicates the size of the tenured area subject to mixed GC.

A value in KB is output.

Note that if the GC type is not Mixed GC, 0 is output.

reclaimable_info

Indicates the predicted information about the size of the tenured area that will be reclaimed by mixed GC. The information is output in the following format:

```
predicted-size-of-reclaimable-area (predicted-ratio-of-reclaimable-area)
```

Note that predicted information is output only for young GC or mixed GC that immediately follows completion of concurrent marking (CM). In other cases, 0 is output because no prediction is performed.

user_cpu

Indicates the CPU time that the GC thread has consumed in the user mode. The unit is in seconds.

If an attempt to obtain the CPU time fails, `unknown` is displayed as in the case of `[User: unknown]`.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

system_cpu

Indicates the CPU time that the GC thread has consumed in the kernel mode. The unit is in seconds.

If an attempt to obtain the CPU time fails, `unknown` is displayed as in the case of `[Sys: unknown]`.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

jvm_alloc_size

Indicates the size of the area currently in use, from the areas being managed in JavaVM (size of the area currently in use, from the total size of `mmap_total_size` and `malloc_total_size`).

When the `-XX:HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

mmap_total_size

Indicates the total C heap size allocated for `mmap` (`VirtualAlloc` in Windows), from the areas being managed in JavaVM.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

malloc_total_size

Indicates the total C heap size allocated for `malloc`, from the areas being managed in JavaVM.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

thread_count

Indicates the number of Java threads.

When the `-XX:-HitachiVerboseGCPrintThreadCount` option is specified, this information is not output.

doe_alloc_size

Indicates the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

called_count

Indicates the invocation count of the `java.io.File.deleteOnExit()` method.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

cc_used_size

Indicates the size of the code cache area used when the GC occurs. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_max_size

Indicates the maximum size of the code cache area. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_info

Indicates the maintenance information.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

- VCM

```
[id] date[cm_event] [User: user_cpu secs] [Sys: sys_cpu secs]
```

id

VGM (Identifier of the JavaVM log file)

date

Indicates the date and time for starting CM.

When the `-XX:-HitachiVerboseGCPrintDate` option is specified, the date is not output.

cm_event

Indicates the CM type. One of the following strings is output: Concurrent Root Region Scan Start, Concurrent Root Region Scan End, Concurrent Mark Start, Concurrent Mark End, Concurrent Mark Stop, Concurrent Cleanup Start, or Concurrent Cleanup End.

user_cpu

Indicates the CPU time that all CM threads consumed in the user mode. A value in seconds is output.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the date is not output.

If an attempt to obtain the CPU time fails, unknown is displayed as in the case of `[User: unknown]`.

If the status of CM is Start, 0 is output.

sys_cpu

Indicates the CPU time that all CM threads consumed in the kernel mode. A value in seconds is output.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the date is not output.

If an attempt to obtain the CPU time fails, unknown is displayed as in the case of `[Sys: unknown]`.

If the status of CM is Start, 0 is output.

Examples of output

If serial GC is used:

- When `-XX:HitachiVerboseGCIntervalTime` option is specified

```
[VGC]Wed Mar 17 00:42:30 2004(Skip Full:0, Copy:0)[Full GC 149K->149K(1984K), 0.0786038 secs][DefNew::Eden: 264K->0K(512K)][DefNew::Survivor: 0K->63K(64K)][Tenured: 85K->149K(1408K)][Metaspace: 3634K(4492K, 4492K)->3634K(4492K, 4492K)][class space: 356K(388K, 388K)->356K(388K, 388K)][cause:System.gc][User: 0.0156250 secs][Sys: 0.0312500 secs][IM: 729K, 928K, 0K][TC: 509][DOE: 16K, 170][CCI: 2301K, 49152K, 2304K]
```

If G1 GC is used:

- VG1 log

```
[VG1]Thu Oct 02 10:38:56.193 2014[Full GC 753K/2048K(8192K)->678K/1024K(8192K), 0.0097901 secs][Status:-][G1GC::Eden: 1024K(2048K)->0K(2048K)][G1GC::Survivor: 0K->0K][G1GC::Tenured: 1024K->1024K][G1GC::Humongous: 0K->0K][G1GC::Free: 6144K->7168K][Metaspace: 3634K(4492K, 4492K)->3634K(4492K, 4492K)][class space: 356K(388K, 388K)->356K(388K, 388K)][cause:System.gc][RegionSize: 1024K][Target: 0.2000000 secs][Predicted: 0.0000000 secs][Target Tenured: 0K][Reclaimable: 0K(0.00%)][User: 0.0000000 secs][Sys: 0.0000000 secs][IM: 20459K, 21920K, 0K][TC: 35][DOE: 0K, 0][CCI: 1172K, 245760K, 2496K]
```

- VCM log

```
[VCM]Wed Jul 24 11:45:20 2013[Concurrent Root Region Scan Start][User: 0.0000000 secs][Sys: 0.0000000 secs]
[VCM]<Wed Jul 24 11:45:20 2013>[Concurrent Root Region Scan End][User: 0.0126134 secs][Sys: 0.0146961 secs]
[VCM]Wed Jul 24 11:45:20 2013[Concurrent Mark Start][User: 0.0000000 secs][Sys: 0.0000000 secs]
```

-XX:[+|-]HitachiCommaVerboseGC (Option for CSV output)

Format

`-XX:+HitachiCommaVerboseGC`

This option outputs the extended `verbosegc` information in the comma format so that the output can be obtained in a CSV file.

Delete all brackets (parenthesis `()`, square brackets `[]`, angle brackets `<>`) and colons `:`, and output the comma-delimited numeric values or character strings `(,)`.

`-XX:-HitachiCommaVerboseGC`

This option outputs the extended `verbosegc` information in the normal format.

Description

Specify whether to output the extended `verbosegc` information in CSV format.

Default value

- `-XX:-HitachiCommaVerboseGC`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Output format (if serial GC is used)

The following are the output contents when the `-XX:-HitachiVerboseGCIntervalTime` option is specified:

```
id, date, full_count, copy_count, inc_count, gc_kind, gc_info, gc_time, eden  
_info, survivor_info, tenured_info, metaspace_info, classspace_info, cause_in  
fo, user_cpu, system_cpu, jvm_alloc_size, mmap_total_size, malloc_total_size  
, thread_count, doe_alloc_size, called_count, cc_used_size, cc_max_size, cc_  
info
```

id

Indicates the identifier for JavaVM log file.

date

Indicates the date and time for starting GC. When the `-XX:-HitachiVerboseGCPrintDate` option is specified, the date is not output.

full_count

Indicates the number of times the output of full GC information is skipped.

This is output when the `-XX:HitachiVerboseGCIntervalTime` option is specified.

copy_count

Indicates the number of times the output of copy GC information is skipped.

This is output when the `-XX:HitachiVerboseGCIntervalTime` option is specified.

inc_count

0 is displayed.

This is output when the `-XX:HitachiVerboseGCIntervalTime` option is specified.

gc_kind

Indicates the GC type. "FullGC" or "GC" is output.

gc_info

Indicates the GC information. The information is output in the following format. The unit is kilobyte.

```
area-length-before-the-GC, area-length-after-the-GC, area-size
```

gc_time

Indicates the elapsed time for GC. The unit is in seconds.

eden_info

Indicates the Eden information. The information is output in the following format: The unit is in kilobytes.

```
area-length-before-the-GC, area-length-after-the-GC, area-size
```

survivor_info

Indicates the Survivor information. The information is output in the following format: The unit is in kilobytes.

```
area-length-before-the-GC, area-length-after-the-GC, (area-size)
```

tenured_info

Indicates the Tenured information. The information is output in the following format: The unit is in kilobytes.

```
area-length-before-the-GC, area-length-after-the-GC, (area-size)
```

metaspace_info

Indicates the information about the metaspace area. The information is output in the following format: The unit is kilobytes.

```
size-of-used-area-before-GC, size-of-capacity-before-GC, size-of-committed-area-before-GC, size-of-used-area-after-GC, size-of-capacity-after-GC, size-of-committed-area-after-GC
```

classspace_info

Indicates the information about the compressed class space. The information is output in the following format: The unit is kilobytes.

```
size-of-used-area-before-GC, size-of-capacity-before-GC, size-of-committed-area-before-GC, size-of-used-area-after-GC, size-of-capacity-after-GC, size-of-committed-area-after-GC
```

cause_info

Indicates the cause number of GC.

When the `-XX:-HitachiVerboseGCPrintCause` option is specified, this information is not output.

For the GC cause number, see `-XX:[+|-]HitachiVerboseGCPrintCause` (Option to output the cause of GC).

user_cpu

Indicates the CPU time that the GC thread has consumed in the user mode. The unit is in seconds.

If fails to obtain the CPU time, unknown is displayed.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

system_cpu

Indicates the CPU time that the GC thread has consumed in the kernel mode. The unit is in seconds.

If fails to obtain the CPU time, unknown is displayed.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

jvm_alloc_size

Specifies the size of the area currently in use, from the areas being managed in JavaVM (size of the area currently in use, from the total size of `mmap_total_size` and `malloc_total_size`). The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

mmap_total_size

Specifies the total C heap size allocated for `mmap` (`VirtualAlloc` in Windows), from the areas being managed in JavaVM. The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

malloc_total_size

Specifies the total C heap size allocated for `malloc`, from the areas being managed in JavaVM. The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

thread_count

Specifies the number of Java threads.

When the `-XX:-HitachiVerboseGCPrintThreadCount` option is specified, this information is not output.

doe_alloc_size

Specifies the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method. The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

called_count

Specifies the invocation count of the `java.io.File.deleteOnExit()` method.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

cc_used_size

Specifies the size of the code cache area used when the GC occurs. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_max_size

Specifies the maximum size of the code cache area. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_info

Specifies the maintenance information.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

The following are the output contents when the `-XX:+HitachiVerboseGCPrintTenuringDistribution` option is specified:

```
id, date, size, value, max_value, total_age1, total_age2, total_agen
```

For output contents, see `-XX:[+|-]HitachiVerboseGCPrintTenuringDistribution` (Age distribution output option of Survivor area).

Output format (if G1 GC is used)

- VG1 log

```
id, date, gc_kind, gc_info, gc_time, gc_status, eden_info, survivor_info, t
enured_info, humongous_info, free_info, metaspace_info, classspace_info, c
ause_info, region_size, target_time, predicted_time, target_size, reclaima
ble_info, user_cpu, system_cpu, jvm_alloc_size, mmap_total_size, malloc_to
tal_size, thread_count, doe_alloc_size, called_count, cc_used_size, cc_max
_size, cc_info
```

id

Indicates the identifier for JavaVM log file.

date

Indicates the date and time for starting GC. When the `-XX:-HitachiVerboseGCPrintDate` option is specified, the date is not output.

gc_kind

Indicates the GC type. One of the following strings is output: Full GC, Mixed GC, Young GC, Young GC (initial-mark), CM Remark, or CM Cleanup.

gc_info

Indicates the GC information. The information is output in the following format. The unit is kilobyte.

```
area-size-before-GC, region-conversion-as-area-size-before-GC, area-size-b
efore-GC, area-size-after-GC, region-conversion-as-area-size-after-GC, are
a-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

gc_time

Indicates the elapsed time for GC.

gc_status

Indicates the status of GC. Either `-` or `to exhausted` is output.

eden_info

Indicates the Eden information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC, region-conversion-as-maximum-are
a-size-before-GC, region-conversion-as-area-size-after-GC, region-conversi
on-as-maximum-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

survivor_info

Indicates the Survivor information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC, region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

tenured_info

Indicates the Tenured information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC, region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

humongous_info

Indicates the Humongous information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC, region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

free_info

Indicates the Free information. The information is output in the following format:

```
region-conversion-as-area-size-before-GC, region-conversion-as-area-size-after-GC
```

In the preceding format, *region conversion* is a value that rounds up the area size to the size of one region and is expressed as a multiple of the size of one region.

metaspace_info

Indicates the information about the metaspace area. The information is output in the following format: The unit is kilobytes.

```
size-of-used-area-before-GC, size-of-capacity-before-GC, size-of-committed-area-before-GC, size-of-used-area-after-GC, size-of-capacity-after-GC, size-of-committed-area-after-GC
```

classspace_info

Indicates the information about the compressed class space. The information is output in the following format: The unit is kilobytes.

```
size-of-used-area-before-GC, size-of-capacity-before-GC, size-of-committed-area-before-GC, size-of-used-area-after-GC, size-of-capacity-after-GC, size-of-committed-area-after-GC
```

cause_info

Indicates the cause number of GC.

When the `-XX:-HitachiVerboseGCPrintCause` option is specified, this information is not output.

For the GC cause number, see `-XX:[+|-]HitachiVerboseGCPrintCause (Option to output the cause of GC)`.

region_size

Indicates the size of one region.

A value in KB is output.

target_time

Indicates the target value of the time for which the application will stop during GC.

A value in seconds is output.

predicted_time

Indicates the time for which the application will stop during GC predicted by Java VM.

A value in seconds is output.

Note that if the GC type is Full GC, CM Remark, or CM Cleanup, 0 is output because no prediction is performed.

target_size

Indicates the size of the tenured area subject to mixed GC.

A value in KB is output.

Note that if the GC type is not Mixed GC, 0 is output.

reclaimable_info

Indicates the predicted information about the size of the tenured area that will be reclaimed by mixed GC. The information is output in the following format:

```
predicted-size-of-reclaimable-area (predicted-ratio-of-reclaimable-area)
```

Note that information of predicted size of reclaimable area is output only for young GC or mixed GC that immediately follows completion of concurrent marking (CM). In other cases, 0 is output because no prediction is performed.

user_cpu

Indicates the CPU time that the GC thread has consumed in the user mode. The unit is in seconds.

If fails to obtain the CPU time, unknown is displayed.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

system_cpu

Indicates the CPU time that the GC thread has consumed in the kernel mode. The unit is in seconds.

If fails to obtain the CPU time, unknown is displayed.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

jvm_alloc_size

Indicates the size of the area currently in use, from the areas being managed in JavaVM (size of the area currently in use, from the total size of `mmap_total_size` and `malloc_total_size`). The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

mmap_total_size

Indicates the total C heap size allocated for `mmap` (`VirtualAlloc` in Windows), from the areas being managed in JavaVM. The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

malloc_total_size

Indicates the total C heap size allocated for `malloc`, from the areas being managed in JavaVM. The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintJVMInternalMemory` option is specified, this information is not output.

thread_count

Indicates the number of Java threads.

When the `-XX:-HitachiVerboseGCPrintThreadCount` option is specified, this information is not output.

doe_alloc_size

Indicates the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method. The unit is in kilobytes.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

called_count

Indicates the invocation count of the `java.io.File.deleteOnExit()` method.

When the `-XX:-HitachiVerboseGCPrintDeleteOnExit` option is specified, this information is not output.

cc_used_size

Indicates the size of the code cache area used when the GC occurs. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_max_size

Indicates the maximum size of the code cache area. The unit is kilobyte.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

cc_info

Indicates the maintenance information.

When the `-XX:-PrintCodeCacheInfo` option is specified, this information is not output.

The following are the output contents when the `-XX:+HitachiVerboseGCPrintTenuringDistribution` option is specified:

```
id, date, size, value, max_value, total_age1, total_age2, total_agen
```

For output contents, see `-XX:[+|-]HitachiVerboseGCPrintTenuringDistribution` (*Age distribution output option of Survivor area*).

- VCM log

```
id, date, cm_event, user_cpu, sys_spu
```

id

VGM (Identifier of the JavaVM log file)

date

Indicates the date and time for starting CM.

When the `-XX:-HitachiVerboseGCPrintDate` option is specified, the date is not output.

cm_event

Indicates the CM type. One of the following strings is output: Concurrent Root Region Scan Start, Concurrent Root Region Scan End, Concurrent Mark Start, Concurrent Mark End, Concurrent Mark Stop, Concurrent Cleanup Start, or Concurrent Cleanup End.

user_cpu

Indicates the CPU time that all CM threads consumed in the user mode. A value in seconds is output.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

If fails to obtain the CPU time, unknown is displayed.

If the status of CM is Start, 0 is output.

sys_cpu

Indicates the CPU time that all CM threads consumed in the kernel mode. A value in seconds is output.

When the `-XX:-HitachiVerboseGCCpuTime` option is specified, the information is not output.

If fails to obtain the CPU time, unknown is displayed.

If the status of CM is Start, 0 is output.

Examples of output

If serial GC is used:

- When `-XX:HitachiVerboseGCIntervalTime` option is specified

```
VGC, Fri Jan 23 21:37:50 2004, 11, 41, 0, GC, 16886, 16886, 65088, 0.0559806,
4094, 0, 4096, 447, 447, 448, 12345, 16439, 60544, 1116, 1116, 4096, 0, 0.0312500, 0.01
56250, 729, 928, 0, 509, 2167, 2054, 2301, 49152, 2304
VGC, Fri Jan 23 21:37:55 2004, 6, 24, 0, Full GC, 65082, 65082, 65088, 0.4294532,
4094, 4094, 4096, 447, 447, 448, 60541, 60541, 60544, 1116, 1116, 4096, 0, 0.0156250, 0
.0312500, 729, 928, 0, 509, 16, 170, 2301, 49152, 2304
...
```

- When `-XX:+HitachiVerboseGCPrintTenuringDistribution` option is specified

```
PTD, Wed May 28 11:45:23 2008, 5467547, 30, 31, 1357527, 1539661
```

If G1 GC is used:

- VG1 log

```
VG1, Thu Oct 02 10:38:54.920 2014, Full GC, 753, 2048, 8192, 678, 1024, 8192, 0.006
4767, -, 1024, 2048, 0, 2048, 0, 0, 1024, 1024, 0, 0, 6144, 7168, 3634, 3634, 4492, 3634, 36
34, 4492, 356, 356, 388, 356, 356, 388, 1, 1024, 0.2000000, 0.0000000, 0, 0, 0.00, 0.0000
000, 0.0000000, 20459, 21920, 0, 35, 0, 0, 1171, 245760, 2496
```

- VCM log

```
VCM, Fri Jul 26 21:35:50 2013, Concurrent Mark Start, 0.0000000, 0.0000000
VCM, Fri Jul 26 21:35:50 2013, Concurrent Mark End, 0.0124532, 0.0245698
```

-XX:HitachiVerboseGCIntervalTime (Option for specifying the output interval of extended verbosegc information)

Format

`-XX:HitachiVerboseGCIntervalTime = integer-value`

Description

Specify the time interval (second) to output the extended `verbosegc` information.

When option is specified

The extended `verbosegc` information is not output for each GC, but it is output for the following cases of GC that exceeds the specified time. In such cases, the number of times the following GC occurs between the previous output and the current output is also output. This option always outputs the number of times the GC occurs.

Table 14–5: List of the GC frequency

Character string	Meaning
Full	Number of times the Full GC is skipped.
Copy	Number of times the copy GC is skipped

When option is not specified

By default, 0 seconds is specified and the extended `verbosegc` information is output for each occurrence of GC.

Default value

- `-XX:HitachiVerboseGCIntervalTime=0`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Argument

integer-value

Specify the integer value from 0 to 2147483647 (unit: seconds). However, if a value out of range is specified, 0 is set. When negative value is specified, an error will occur.

-XX:[+|-]HitachiVerboseGCPrintCause (Option to output the cause of GC)

Format

`-XX:+HitachiVerboseGCPrintCause`

This option outputs the cause of GC to the end of extended `verbosegc` information.

`-XX:-HitachiVerboseGCPrintCause`

This option outputs the extended `verbosegc` information in the normal format.

Description

Specify whether to output the cause of the GC.

Default value

- `-XX:+HitachiVerboseGCPrintCause`

Prerequisite options

- `-XX:+HitachiVerboseGC`

When the `-XX:+HitachiCommaVerboseGC` option is specified, the following cause numbers are output:

Table 14–6: List of causes of GC

Cause number	Cause	Description	Applicable to serial GC?	Applicable to G1 GC?
0	ObjAllocFail	In a case where G1 GC is not used, GC occurred because object allocation failed. In a case where G1 GC is used, GC occurred because the object allocation area could not be secured even by performing evacuation.	Yes	Yes
1	System.gc	GC occurred due to the invocation of the <code>java.lang.System.gc</code> method.	Yes	Yes
3	DelayedGC	The reserved GC is invoked by the JNI and JVMTI.	Yes	Yes
4	JavaGC Command	GC occurred by the <code>JavaGC</code> command	Yes	Yes
6	JHeapProf Command	GC occurred due to the <code>jheapprof</code> command.	Yes	--
8	EMReclaimFail	There was a Java heap overflow because objects were moved to the Java heap due to the explicit release of the Explicit memory.	Yes	--
9	EMMigrateFail	There was a Java heap overflow because objects were moved to the Java heap due to the automatic release of the Explicit memory.	Yes	--
10	JVMTIForceGC	GC occurred due to the JVMTI function <code>ForceGarbageCollection()</code> .	Yes	Yes
11	PromotionFail	GC occurred due to promotion failure in copy GC.	Yes	--
12	EMJavaGC Command	GC occurred due to the release of the Explicit memory block by the <code>javagc</code> command.	Yes	Yes
13	EHeapProf Command	GC occurred due to the <code>eheapprof</code> command.	Yes	Yes
14	G1HumAllocFail	GC occurred due to failure in object allocation to the Humongous area.	--	Yes
15	G1EvacuationPause	GC occurred due to failure in object allocation.	--	Yes
16	Concurrent Marking	CM processing that requires the application to stop occurred.	--	Yes
17	EvacuationFail	GC occurred due to failure in evacuation.	--	Yes
18	MetaspaceAllocFail	GC occurred due to failure in securing the metaspace area.	Yes	Yes
19	LastMetaspaceGC	The last GC that occurs before generating <code>OutOfMemory</code> for the metaspace area occurred.	Yes	Yes

Examples of output

```
[VGC]Wed Mar 17 00:42:30 2004(Skip Full:0, Copy:0) [Full GC 149K->149K(1984K)
, 0.0786038 secs] [DefNew::Eden: 264K->0K(512K)] [DefNew::Survivor: 0K->63K(64
K)] [Tenured: 85K->149K(1408K)] [Metaspace: 3634K(4492K, 4492K)->3634K(4492K,
4492K)] [cause:System.gc]
```

-XX:[+|-]HitachiVerboseGCPrintDate (Option to output the date of extended verbosegc information)

Format

`-XX:+HitachiVerboseGCPrintDate`

This option outputs the date and time for starting GC at the beginning of each output line of the extended `verbosegc` information.

`-XX:-HitachiVerboseGCPrintDate`

This option does not output the date and time for starting GC at the beginning of each output line of the extended `verbosegc` information.

Description

Specify whether to output the date and time for starting GC in the extended `verbosegc` information.

Default value

- `-XX:+HitachiVerboseGCPrintDate`

Prerequisite options

- `-XX:+HitachiVerboseGC`

-XX:[+|-]HitachiVerboseGCCpuTime (Option to output the CPU usage time of the extended verbosegc information)

Format

`-XX:+HitachiVerboseGCCpuTime`

This option outputs the processor time that the GC executing thread has consumed in the user mode and kernel mode from the start to the end of the GC in the extended `verbosegc` information.

`-XX:-HitachiVerboseGCCpuTime`

This option does not output the processor time that the GC executing thread has consumed in the user mode and the kernel mode from the start to the end of the GC in the extended `verbosegc` information.

Description

Specify whether to output the CPU usage time in the extended `verbosegc` information.

Default value

- `-XX:+HitachiVerboseGCCpuTime`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Examples of output

```
[VGC]Thu Oct 02 10:38:53.658 2014(Skip Full:1,Copy:0) [Full GC 770K->682K(806
4K), 0.0050003 secs] [DefNew::Eden: 88K->0K(2304K)] [DefNew::Survivor: 0K->0K(
```

```
256K)][Tenured: 681K->682K(5504K)] [Metaspace: 3634K(4492K, 4492K)->3634K(4492K, 4492K)][class space: 356K(388K, 388K)->356K(388K, 388K)] [cause:System.gc][User: 0.0000000 secs][Sys: 0.0000000 secs]
```

-XX:[+|-]HitachiVerboseGCPrintTenuringDistribution (Age distribution output option of Survivor area)

Format

`-XX:+HitachiVerboseGCPrintTenuringDistribution`

This option specifies that the age distribution of the Survivor area is to be output to the JavaVM log file.

`-XX:-HitachiVerboseGCPrintTenuringDistribution`

This option specifies that the age distribution of the Survivor area is not to be output to the JavaVM log file.

Description

Specify whether to output the age distribution of the Survivor area to the JavaVM log file.

Default value

- `-XX:-HitachiVerboseGCPrintTenuringDistribution`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Related option

- `-XX:+HitachiVerboseGCPrintDate`
- `-XX:+HitachiCommaVerboseGC`

Output format

```
[id] date[Desired survivor:size bytes][New threshold:value][MaxTenuringThreshold: max_value][age1:total_age1][age2:total_age2]...[agen:total_agen]
```

The following is a description of the output contents:

id

PTD (JavaVM log file identifier).

date

Indicates the date and time for starting GC.

size

Indicates the object target size in Survivor area after GC.

value

Specifies the tenuring threshold value of the Java objects promoted to the Tenured area during the next copy GC.

This value is set up dynamically for each copy GC, based on the values specified in the

`-XX:MaxTenuringThreshold=value` option, the memory size of the Survivor area, and the `-XX:TargetSurvivorRatio=value` option.

The tenured Java objects more than the value in *value* are promoted to the Tenured area in the next copy GC.

max_value

Maximum (value specified in the `MaxTenuringThreshold` option) tenuring threshold value (value) of the Java objects promoted to the Tenured area during copy GC.

The *value* is set up dynamically for each copy GC; however, does not exceed the *max_value* value.

Also, the Java objects for which tenuring is greater than the *max_value* value are definitely promoted to the Tenured area during the next copy GC.

total_age1

Indicates total number of bytes of a 1 year old object.

total_age2

Indicates total number of bytes of a 1 to 2 year old object.

total_age_n

Indicates total number of bytes of a 1 to *n* year old object.

If *n* is close to *max_value*, it means that an object with a long life exists.

Examples of output

```
[PTD]Wed Jan 28 17:47:10 2009[Desired survivor:32768 bytes][New threshold:30
][MaxTenuringThreshold:30][age1:6872][age2:9632][age3:25632]
```

-XX:[+|-]HitachiVerboseGCPrintJVMSInternalMemory (Option to output the C heap information)

Format

`-XX:+HitachiVerboseGCPrintJVMSInternalMemory`

This option outputs the heap information being managed in JavaVM to the JavaVM log file.

`-XX:-HitachiVerboseGCPrintJVMSInternalMemory`

This option does not output the heap information being managed in JavaVM to the JavaVM log file.

Description

Specifies whether to output the heap information being managed in JavaVM to the JavaVM log file.

From the C heap areas, the heap area obtained using the following two methods is managed in JavaVM:

- C heap area obtained with `mmap`
- C heap area obtained with `malloc`

If you enable the `-XX:+HitachiVerboseGCPrintJVMSInternalMemory` option, you can output the total C heap size obtained with `mmap` (`mmap_total_size`) and the total C heap size obtained with `malloc` (`malloc_total_size`). You can also output the total size of the area in use from these allocated areas (`jvm_alloc_size`).

Default value

- `-XX:+HitachiVerboseGCPrintJVMSInternalMemory`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Output format

```
[id] date (Skip Full:full_count, Copy:copy_count, Inc:inc_count) [gc_kind gc_info, gc_time secs][Eden: eden_info][Survivor: survivor_info][Tenured: tenured_info][Metaspace: metaspace_info][class space: class_space_info][cause: cause_info] [User: user_cpu secs][Sys: system_cpu secs][IM: jvm_alloc_size, mmap_total_size, malloc_total_size][TC: thread_count][DOE: doe_alloc_size, called_count]
```

The output contents are explained below. Note that the following explains the items output by this option. For items other than explained below, see the output format described in the `-XX:[+|-]HitachiVerboseGC (Option for extended verbosegc information output)`.

`jvm_alloc_size`

Specifies the size of the area currently in use, from the areas being managed in JavaVM (size of the area currently in use, from the total size of `mmap_total_size` and `malloc_total_size`).

`mmap_total_size`

Specifies the total C heap size allocated for `mmap` (`VirtualAlloc` in Windows), from the areas being managed in JavaVM.

`malloc_total_size`

Specifies the total C heap size allocated for `malloc`, from the areas being managed in JavaVM.

Examples of output

```
[VGC]<Wed Jan 27 13:03:36 2010>(Skip Full:0, Copy:0) [GC 489K->152K(3520K), 0.0156080 secs][DefNew::Eden: 489K->0K(2048K)][DefNew::Survivor: 0K->63K(64K)][Tenured: 0K->88K(1408K)][Metaspace: 3634K(4492K, 4492K)->3634K(4492K, 4492K)][class space: 356K(388K, 388K)->356K(388K, 388K)][cause:ObjAllocFail][IM: 729K, 928K, 0K][TC: 509][DOE: 16K, 170]
```

`-XX:[+|-]HitachiVerboseGCPrintThreadCount (Option to output the number of threads)`

Format

`-XX:+HitachiVerboseGCPrintThreadCount`

This option outputs the number of Java threads.

`-XX:-HitachiVerboseGCPrintThreadCount`

This option does not output the number of Java threads.

Description

Specifies whether to output the number of Java threads to the JavaVM log file in order to monitor the number of Java threads.

A thread individually allocates the memory to be used for a stack as C heap. Therefore, if the number of threads increase, the allocated C heap amount also increases in proportion to the number of threads. By specifying the `-XX:+HitachiVerboseGCPrintThreadCount` option, you can monitor the number of Java threads as well as understand the amount of C heap that is allocated.

Default value

- `-XX:+HitachiVerboseGCPrintThreadCount`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Output format

```
[id] date Skip Full:full_count, Copy:copy_count, Inc:inc_count) [gc_kind gc_info, gc_time secs][Eden: eden_info][Survivor: survivor_info][Tenured: tenured_info][Metaspace: metaspace_info][class space: class_space_info][cause:cause_info] [User: user_cpu secs][Sys: system_cpu secs][IM: jvm_alloc_size, mma_p_total_size, malloc_total_size][TC: thread_count][DOE: doe_alloc_size, call_ed_count]
```

The output contents are explained below. Note that the following explains the items output by this option. For items other than explained below, see the output format described in `-XX:[+|-]HitachiVerboseGC (Option for extended verbosegc information output)`.

thread_count

Specifies the number of Java threads.

Examples of output

```
[VGC]<Wed Jan 27 13:03:36 2010>(Skip Full:0,Copy:0)[GC 489K->152K(3520K), 0.0156080 secs][DefNew::Eden: 489K->0K(2048K)][DefNew::Survivor: 0K->63K(64K)][Tenured: 0K->88K(1408K)][Metaspace: 3634K(4492K, 4492K)->3634K(4492K, 4492K)][class space: 356K(388K, 388K)->356K(388K, 388K)][cause:ObjAllocFail][IM: 729K, 928K, 0K][TC: 509]
```

-XX:[+|-]HitachiVerboseGCPrintDeleteOnExit (Heap size output option used by java.io.File.deleteOnExit())

Format

`-XX:+HitachiVerboseGCPrintDeleteOnExit`

This option outputs the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method and the method invocation count.

`-XX:-HitachiVerboseGCPrintDeleteOnExit`

This option does not output the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method and the method invocation count.

Description

Specifies whether to output the cumulative heap size that JavaVM allocates by invoking the `java.io.File.deleteOnExit()` method and the method invocation count, to the JavaVM log file.

The path information for a specified file is allocated to a heap each time the `java.io.File.deleteOnExit()` method is invoked; however, the allocated area is not released until the process ends; and therefore, might lead to compression of memory. If you specify the `-XX:+HitachiVerboseGCPrintDeleteOnExit` option, JavaVM can invoke the `java.io.File.deleteOnExit()` method, output the allocated heap size to a log, and monitor the size. The method invocation count can also be output concurrently as the supplementary information to understand the invocation status of `java.io.File.deleteOnExit()`.

The information that is output helps to understand the heap size allocated by invoking the `java.io.File.deleteOnExit()` and to investigate the cause of memory shortage when an error occurs. You can also use this information to check the changes in the increase of the heap size allocated by invoking the `java.io.File.deleteOnExit()` and to check for any signs of memory compression during operations, in the development and testing phase before the start of operations.

Note that an error message is displayed when an error occurs.

Default value

- `-XX:+HitachiVerboseGCPrintDeleteOnExit`

Prerequisite options

- `-XX:+HitachiVerboseGC`

Output format

The output format of the JavaVM log file is as follows:

```
[id] date (Skip Full:full_count, Copy:copy_count, Inc:inc_count) [gc_kind gc_info, gc_time secs][Eden: eden_info][Survivor: survivor_info][Tenured: tenured_info] [Metaspace: metaspace_info][class space: class_space_info][cause: cause_info] [User: user_cpu secs][Sys: system_cpu secs][IM: jvm_alloc_size, m_map_total_size, malloc_total_size][TC: thread_count][DOE: doe_alloc_size, called_count]
```

The output contents are explained below. Note that the following explains the items output by this option. For items other than explained below, see the output format described in `-XX:[+|-]HitachiVerboseGC (Option for extended verbosegc information output)`.

doe_alloc_size

Specifies the cumulative heap size allocated by invoking the `java.io.File.deleteOnExit()` method.

called_count

Specifies the invocation count of the `java.io.File.deleteOnExit()` method.

The output format of the error message displayed when an error occurs is as follows:

```
[DOE] date Error occurred during processing of java.io.File.deleteOnExit's heap size output function. (maintenance-information)
[DOE] java.io.File.deleteOnExit's heap size output function stopped.
```

The following is the contents of the error message:

DOE

Specifies an identifier indicating that an error occurred in the heap size output function of the `java.io.File.deleteOnExit()`.

date

Specifies the date when the error occurred.

Examples of output

- The following is an example of output of the JavaVM log file:

```
[VGC]<Wed Jan 27 13:03:36 2010>(Skip Full:0,Copy:0)[GC 489K->152K(3520K),
0.0156080 secs][DefNew::Eden: 489K->0K(2048K)][DefNew::Survivor: 0K->63K(
64K)][Tenured: 0K->88K(1408K)][Metaspace: 3634K(4492K, 4492K)->3634K(4492K
, 4492K)][class space: 356K(388K, 388K)->356K(388K, 388K)][cause:ObjAllocF
ail][IM: 729K, 928K, 0K] [TC: 509][DOE: 16K, 170]
```

- The following is an example of output of the error message:

```
[DOE]<Wed Jan 27 13:03:36 2010> Error occurred during processing of java.i
o.File.deleteOnExit's heap size output function. (FindClass:java.lang.Stri
ng)
[DOE]java.io.File.deleteOnExit's heap size output function stopped.
```

Precautions

- The cumulative heap size and method invocation count is not calculated in the following cases even when the `java.io.File.deleteOnExit()` is invoked:
 - If the `SecurityException` exception occurs when the `java.io.File.deleteOnExit()` is invoked (This exception occurs when the `SecurityManager.checkDelete()` method of the security manager is not allowed access to delete files. In this case, an exception is thrown at method entrance and no heap is allocated).
 - When `java.io.File.deleteOnExit()` is invoked from applications created using the batch application executing infrastructure of Application Server.
 - When `java.io.File.deleteOnExit()` is invoked by using the `File` instance created with the same path name string.
- Note the following points when you check the heap size output by this functionality:
 - The heap type allocated by `java.io.File.deleteOnExit()` is Java heap.
 - The heap size is output in kilobytes and a size of less than 1 KB is rounded down. The heap size allocated when the `java.io.File.deleteOnExit()` method is invoked once ranges from tens of bytes to 100 bytes, depending on the length of the file path; therefore, the output results of heap size might not increase with each invocation of the `java.io.File.deleteOnExit()` method. In this case, you can check the execution of the method from the method invocation count.

-XX:[+|-]PrintCodeCacheInfo (Option for the output of the code cache area information)

Format

`-XX:+PrintCodeCacheInfo`

This option outputs the amount of code cache area used.

This option also outputs a message informing the user that the usage of the code cache area has reached the threshold value.

`-XX:-PrintCodeCacheInfo`

This option does not output the amount of code cache area used.

Also, this option does not output the message informing the user that the usage of the code cache area has reached the threshold value.

Description

Specify whether to output the amount of code cache area used and the message informing the user that the usage has reached the threshold value, to the JavaVM log file.

For details about the code cache area, see *7.2.6 Configuration of memory space used by JavaVM when using serial GC and JavaVM options* in the *Application Server System Design Guide*.

If this option is enabled, the amount of code cache area used is output to the extended `verbosegc` information when a GC occurs. Also, a message is output when the amount of code cache area used reaches the threshold value.

The threshold value is *maximum-size-of-code-cache-area* \times *value-of--XX:CodeCacheInfoPrintRatio-option* / 100.

Even if the `-XX:-HitachiVerboseGC` option is specified, the amount of code cache area used is output to the extended `verbosegc` information output by the `-v` option and `-s` option of the `javagc` command.

Default value

- `-XX:+PrintCodeCacheInfo`

Prerequisite option

- `-XX:+HitachiVerboseGC`

Related options

- `-XX:+HitachiCommaVerboseGC`
- `-XX:CodeCacheInfoPrintRatio`

Output format

The output format of the amount of code cache area used is as follows:

```
[id] date (Skip Full:full_count, Copy:copy_count, Inc:inc_count) [gc_kind gc_info, gc_time secs][Eden: eden_info][Survivor: survivor_info][Tenured: tenured_info] [Metaspace: metaspace_info][class space: class_space_info][cause: cause_info] [User: user_cpu secs][Sys: system_cpu secs][IM: jvm_alloc_size, mmap_total_size, malloc_total_size][TC: thread_count][DOE: doe_alloc_size, called_count][CCI: cc_used_sizeK, cc_max_sizeK, cc_infoK]
```

The output contents are as follows. Note that the items output by this option are described here. For items other than those described here, see the output format in *-XX:[+|-]HitachiVerboseGC (Option for extended verbosegc information output)*.

cc_used_size

Specifies the size of the code cache area used when the GC occurs. The unit is kilobyte.

cc_max_size

Specifies the maximum size of the code cache area. The unit is kilobyte.

cc_info

Specifies the maintenance information.

The following is the output format of the message informing the user that the usage of the code cache area has reached the threshold value:

```
[cc_id]<cc_date>CodeCache usage has exceeded the threshold.[cc_used_sizeK, c
c_max_sizeK, cc_infoK]
```

The contents output in the message are as follows:

cc_id

Specifies the CCI (identifier of the JavaVM log file).

cc_date

Specifies the date and time when the JIT compilation was executed.

cc_used_size

Specifies the used size of the code cache area after the JIT compilation. The unit is kilobyte.

cc_max_size

Specifies the maximum size of the code cache area. The unit is kilobyte.

cc_info

Specifies the maintenance information.

Examples of output

- The following is an example of output of the amount of code cache area used:

```
[VGC]<Wed Mar 17 00:42:30 2004>(Skip Full:0, Copy:0) [Full GC 149K->149K(198
4K), 0.0786038 secs] [DefNew::Eden: 264K->0K(512K)] [DefNew::Survivor: 0K->6
3K(64K)] [Tenured: 85K->149K(1408K)] [Metaspace: 3634K(4492K, 4492K)->3634K(
4492K, 4492K)] [class space: 356K(388K, 388K)->356K(388K, 388K)] [cause: Syst
em.gc] [User: 0.0156250 secs] [Sys: 0.0312500 secs] [IM: 729K, 928K, 0K] [TC:
509] [DOE: 16K, 170] [CCI: 2301K, 49152K, 2304K]
```

- The following is an example of output of the message informing the user that the usage of the code cache area has reached the threshold value:

```
[CCI]<Wed Dec 26 14:27:53 2012>CodeCache usage has exceeded the threshold.
[39358K, 49152K, 39360K]
```

Notes

- If usage of the code cache area is changed when the threshold value is reached, no message is output even if the JIT compilation is executed for the Java method.

On the other hand, after the usage of the code cache area drops to less than the threshold value, the message is output when the usage of the code cache area again reaches the threshold value due to the JIT compilation of the Java method.

- The code cache area used by the system is a maximum of 2 megabyte. Therefore, depending on the usage of the code cache area of the system, the code cache area might deplete even if the maximum area is not used.

Also, if a large value is specified as the threshold value for the usage of the code cache area, the code cache area might deplete before the message is output. If you want the message to be output before the code cache area depletes, specify the value for `-XX:CodeCacheInfoPrintRatio` (*Option for specifying the usage rate of the code cache area*) in such a way that the value of "`maximum-size-of-code-cache-area - threshold-value`" is 4 megabyte or more.

-XX:CodeCacheInfoPrintRatio (Option for specifying the usage rate of the code cache area)

Format

`-XX:CodeCacheInfoPrintRatio=integer-value`

Description

Specify the usage rate of the code cache area that will trigger the output of a message informing the user that the usage of the code cache area has reached the threshold value.

The threshold value is calculated using the following formula based on the usage rate specified in this option:

$$\text{maximum-size-of-code-cache-area} \times \text{value-of--XX:CodeCacheInfoPrintRatio-option} / 100$$

For details about the code cache area, see *7.2.6 Configuration of memory space used by JavaVM when using serial GC and JavaVM options* in the *Application Server System Design Guide*.

Default value

- `-XX:CodeCacheInfoPrintRatio=80`

Prerequisite option

- `-XX:+PrintCodeCacheInfo`

Argument

Integer-value

Specify an integer from 0 to 100 (unit: %). If the specified value is outside the range, 80 is specified.

-XX:[+|-]PrintCodeCacheFullMessage (Option for the output of the code cache area depletion message)

Format

`-XX:+PrintCodeCacheFullMessage`

This option outputs a message if the code cache area is depleted when the Java method is subject to JIT compilation. The message is output once only.

`-XX:-PrintCodeCacheFullMessage`

This option does not output a message even if the code cache area is depleted when the Java method is subject to JIT compilation.

Description

Specify whether to output a message to the JavaVM log file if the code cache area is depleted when the Java method is subject to JIT compilation.

For details about the code cache area, see *7.2.6 Configuration of memory space used by JavaVM when using serial GC and JavaVM options* in the *Application Server System Design Guide*.

Default value

- `-XX:+PrintCodeCacheFullMessage`

Prerequisite option

- `-XX:+HitachiVerboseGC`

Output format

The output format of the message is as follows:

```
[cc_id]<cc_date>CodeCache is full. Compiler has been disabled.[cc_used_sizeK, cc_max_sizeK, cc_infoK]
```

The contents output in the message are as follows:

cc_id

Specifies the CCI (identifier of the JavaVM log file).

cc_date

Specifies the date and time when the Java method is subjected to the JIT compilation.

cc_used_size

Specifies the used size of the code cache area when the Java method is subjected to the JIT compilation. The unit is kilobyte.

cc_max_size

Specifies the maximum size of the code cache area. The unit is kilobyte.

cc_info

Specifies the maintenance information.

Examples of output

The following is an example of output of the message:

```
[CCI]<Wed Dec 26 14:38:29 2012>CodeCache is full. Compiler has been disabled
.[49151K, 49152K, 49152K]
```

Notes

The code cache area used by the system is a maximum of 2 megabyte. Therefore, depending on the usage of the code cache area of the system, the code cache area might deplete even if the maximum area is not used.

-XX:[+|-]HitachiOutOfMemoryCause (Option to output the causes of exception)

Format

`-XX:+HitachiOutOfMemoryCause`

When `OutOfMemoryError` occurs, this option outputs the types of causes for exceptions in the JavaVM log file. When the `-XX:+HitachiOutOfMemoryStackTrace` option is specified, the `-XX:+HitachiOutOfMemorySize` option is also specified.

The following table describes the types of the causes that are output:

When `OutOfMemoryError` is thrown because the functionality for setting up the maximum number of threads (`HitachiThreadLimit` option) is specified and the number of created threads exceeds the specified limit.

Table 14–7: List of types of exception causes

No.	Cause message	Description
1	C Heap	Exception thrown when securing the C heap
2	Java Heap	Exception thrown when securing the Java heap
3	Meta Space	Exception thrown when the metaspace area is secured
4	Compressed Class Space	Exception thrown when the compressed class space is secured
5	Unknown	Exception not identified as one of the above
6	Thread Limit	Exception thrown when the functionality for setting up the maximum number of threads (<code>-XX:HitachiThreadLimit</code> option) is specified and the number of created threads exceed the specified limit.

`-XX:-HitachiOutOfMemoryCause`

When `OutOfMemoryError` occurs, the `-XX:-HitachiOutOfMemoryCause` option does not output the types of causes for exceptions in the JavaVM log file.

Description

Specify whether to output the types of causes for the occurrence of `OutOfMemoryError`.

Default value

- `-XX:-HitachiOutOfMemoryCause`

Examples of output

```
[OOM] [Thread: 0x00062fd0]<Tue Dec 2 16:42:39 2003>[java.lang.OutOfMemoryError : (C Heap) : unable to create thread : 340 threads exist]
```

-XX:[+|-]HitachiOutOfMemoryStackTrace (Option for stack trace output)

Format

-XX:+HitachiOutOfMemoryStackTrace

When `OutOfMemoryError` occurs, this option outputs the exception information and the stack trace in the JavaVM log file.

The stack trace is stored in the buffer for each stack and is output after changing the code. The stack trace is output every time `OutOfMemoryError` is thrown. Therefore, when `OutOfMemoryError` is caught and thrown again, the stack trace is output multiple times. When `OutOfMemoryError` occurs during the creation of the thread, the stack trace is not output.

-XX:-HitachiOutOfMemoryStackTrace

When `OutOfMemoryError` occurs, this option does not output the stack trace to the JavaVM log file.

Description

Specify whether to output the exception information and the stack trace to the JavaVM log file when `OutOfMemoryError` occurs.

Default value

- -XX:-HitachiOutOfMemoryStackTrace

Output format

```
[id] [Thread:thread_id] date[java.lang.OutOfMemoryError : requested size byte  
s (cause) : reason : thread_count threads exist]  
[id] [Thread:thread_id] stack_trace
```

The following is a description of the output contents:

id

OOM (Identifier of the JavaVM log file).

thread_id

Thread ID (tid output to the thread dump).

date

Indicates the date and time when `OutOfMemory` exception occurs.

size

The size of the memory that you tried to secure is output (unit: Bytes). When the `-XX:-HitachiOutOfMemorySize` option is specified, the size is not output.

Note that in the following cases the requested memory size is not fetched. In such cases, "unknown" is output as the size.

- When `OutOfMemoryError` is explicitly thrown without using the memory secure functionality of Java

The errors thrown by the standard class library will also be included. For example, when an error is thrown by the processes, such as `throw new OutOfMemoryError();` the memory size cannot be output.

- When `OutOfMemoryError` is caused by the verifier in the case of class loading.

cause

Indicates the types of causes for the occurrence of exceptions. The cause, however, is not output when the `-XX:-HitachiOutOfMemoryCause` option is specified. For the types of causes for the occurrence of exceptions, see `-XX:[+|-]HitachiOutOfMemoryCause` (Option to output the causes of exception).

reason

Indicates the reason for the occurrence of the exception. The reason is output when the creation of the thread fails.

thread_count

Indicates the number of threads when `OutOfMemoryError` occurs. The count also includes the number of threads whose creation failed.

stack_trace

Stack trace.

Examples of output

```
[OOM] [Thread: 0x00062fd0] <Wed Mar 17 00:41:17 2004>[java.lang.OutOfMemoryError :requested 400000 bytes.(C Heap): unable to create thread : 1500 threads exist]
[OOM] [Thread: 0x00062fd0] at java.lang.Thread.start(Native Method)
[OOM] [Thread: 0x00062fd0] at sub1.<init>(Thread0012.java:22)
[OOM] [Thread: 0x00062fd0] at Thread0012.test01(Thread0012.java:73)
[OOM] [Thread: 0x00062fd0] at Thread0012.main(Thread0012.java:57)
```

Precautions

- When the thread creation in JavaVM fails due to insufficient memory, only the exception information is output and the stack trace is not output.

-XX:HitachiOutOfMemoryStackTraceLineSize (Option for specifying the line size of stack trace)

Format

`-XX:HitachiOutOfMemoryStackTraceLineSize=integer-value`

Description

When `OutOfMemoryError` occurs, specify the number of characters in one line of the output stack trace, in bytes. When the option is not specified, by default 1024 bytes is specified. When the specified number of bytes cannot be secured, a warning message is output and the stack trace is not output. When the number of characters in one line exceeds the number of specified characters, the first half portion of the character strings from `at` onwards is deleted and the specified number of characters is output.

Default value

- `-XX:HitachiOutOfMemoryStackTraceLineSize=1024`

Prerequisite options

- `-XX:+HitachiOutOfMemoryStackTrace`

Argument

integer-value

Specify the integer value from 1024 to 2147483647 (unit: byte). However, if a value out of range is specified, 1024 is set. When negative value is specified, an error will occur.

Precautions

If asynchronous log data output is enabled (`-XX:+JavaLogAsynchronous`), the maximum effective value of the `-XX:HitachiOutOfMemoryStackTraceLineSize` option is 4096 even when a value larger than 4096 is specified.

-XX:[+|-]HitachiOutOfMemorySize (Option to output the memory size)

Format

`-XX:+HitachiOutOfMemorySize`

When `OutOfMemoryError` occurs, this option outputs the requested memory size in bytes.

When the `-XX:+HitachiOutOfMemoryStackTrace` option is specified, the `-XX:+HitachiOutOfMemorySize` option is also specified.

`-XX:-HitachiOutOfMemorySize`

When `OutOfMemoryError` occurs, this option does not output the requested memory size.

Description

Output the requested memory size when `OutOfMemoryError` occurs.

Default value

- `-XX:-HitachiOutOfMemorySize`

Examples of output

```
[OOM] [Thread: 0x00062fd0]<Tue Dec 2 16:42:39 2003>[java.lang.OutOfMemoryError : requested 1024 bytes. (Java Heap) : 20 threads exist]
```

Precautions

In the following cases, the requested memory size is not fetched:

- When `OutOfMemoryError` is clearly thrown without using the memory secure functionality of Java (errors thrown by J2SE class library are also included).

```
Example: throw new OutOfMemoryError();
```

- When `OutOfMemoryError` is caused by verifier during class loading.

```
[OOM][Thread: 0x00062fd0]<Tue Dec 2 16:42:39 2003>[java.lang.OutOfMemoryError : requested size unknown. (Unknown) : 10 threads exist]
```

-XX:[+|-]HitachiOutOfMemoryAbort (Forced termination option)

Format

`-XX:+HitachiOutOfMemoryAbort`

When `OutOfMemoryError` occurs, this option outputs the memory dump and executes forced termination.

`-XX:-HitachiOutOfMemoryAbort`

When `OutOfMemoryError` occurs, this option does not execute forced termination.

Description

When `OutOfMemoryError` occurs due to the following reasons, a message is output to the standard output and memory dump or core dump to the current directory, and then forced termination is executed.

- When Java heap is insufficient
- When the metaspace area is insufficient
- When the compressed class space is insufficient
- When C heap is insufficient in the J2SE class library

Note that when C heap is insufficient during JavaVM processing, the process is forcefully terminated regardless of whether this option is specified.

Exit code for forced termination

The JavaVM exit code for forced termination is as follows:

In Windows

1

In UNIX

6

Note that when executed on UNIX shell (such as `sh` and `cs`h), 0x80 is added and the exit code becomes 0x86.

Default value

- `-XX:-HitachiOutOfMemoryAbort`

Examples of output

```
java.lang.OutOfMemoryError occurred.  
JavaVM aborted because of specified -XX:+HitachiOutOfMemoryAbort options.
```

Precautions

- When the `-XX:+HitachiOutOfMemoryStackTrace` option is specified, the stack trace is output to the JavaVM log file and then the process is aborted.

- When this option is specified, the processing of JavaVM termination that is registered in the `java.io.File.deleteOnExit` method and the `java.lang.Runtime.addShutdownHook` method is not executed and is forcefully terminated.

-XX:[+|-]HitachiOutOfMemoryAbortThreadDump (Option to output the thread dump)

Format

`-XX:+HitachiOutOfMemoryAbortThreadDump`

When `OutOfMemoryError` occurs, the thread dump is output.

When the `-XX:+HitachiOutOfMemoryAbort` option is specified, this option can be specified.

`-XX:-HitachiOutOfMemoryAbortThreadDump`

This option does not output the thread dump when `OutOfMemoryError` occurs.

Description

When `OutOfMemoryError` occurs, the thread dump is output. When C heap is insufficient in J2SE class library, this option does not output the thread dump to avoid the recurrence of C heap insufficiency due to the output of thread dump.

Specify the output destination of the thread dump in the environment variable `JAVACOREDIR` or the `-XX:+HitachiThreadDumpToStdout` option.

Default value

- `-XX:+HitachiOutOfMemoryAbortThreadDump`

Prerequisite options

- `-XX:+HitachiOutOfMemoryAbort`
- `-XX:+HitachiThreadDump`

-XX:[+|-]HitachiOutOfMemoryAbortThreadDumpWithJHeapProf(Class-wise statistical information output option)

Format

`-XX:+HitachiOutOfMemoryAbortThreadDumpWithJHeapProf`

The `-XX:+HitachiOutOfMemoryAbortThreadDumpWithJHeapProf` outputs class-wise statistical information to the thread dump log file output by `-XX:+HitachiOutOfMemoryAbortThreadDump`.

`-XX:-HitachiOutOfMemoryAbortThreadDumpWithJHeapProf`

The `-XX:-HitachiOutOfMemoryAbortThreadDumpWithJHeapProf` does not output class-wise statistical information to the thread dump log file output by `-XX:+HitachiOutOfMemoryAbortThreadDump`.

Description

Specify whether to output class-wise statistical information to the thread dump log file output by `-XX:+HitachiOutOfMemoryAbortThreadDump`.

Default value

`-XX:-HitachiOutOfMemoryAbortThreadDumpWithJHeapProf`

Prerequisite options

- `-XX:+HitachiOutOfMemoryAbort`
- `-XX:+HitachiOutOfMemoryAbortThreadDump`
- `-XX:+HitachiThreadDump`

Precautions

`-XX:+HitachiOutOfMemoryAbortThreadDumpWithJHeapProf` is an option for adding class-wise statistical information to a thread dump that is output when an `OutOfMemory` error occurs. If G1 GC is used, you cannot use this option because the class-wise statistics functionality cannot be used. If you specify this option when G1 GC is used, a thread dump that does not include class-wise statistical information is output.

-XX:[+|-]HitachiOutOfMemoryHandling (OutOfMemory handling option)

Format

`-XX:+HitachiOutOfMemoryHandling`

This option enables the `OutOfMemory` handling functionality.

`-XX:-HitachiOutOfMemoryHandling`

This option disables the `OutOfMemory` handling functionality.

Description

Specify whether to enable the `OutOfMemory` handling functionality. This option is valid only when the J2EE server is executed in J2EE server mode.

Use the `OutOfMemory` handling functionality in combination with the forced termination functionality for `OutOfMemory` (`-XX:+HitachiOutOfMemoryAbort`). If the forced termination functionality for `OutOfMemory` (`-XX:-HitachiOutOfMemoryAbort`) is disabled, the `OutOfMemory` handling functionality will be disabled.

If the `OutOfMemory` handling functionality is enabled, the `OutOfMemoryError` throwing condition is determined when `OutOfMemory` occurs. Specifically, the functionality determines whether to continue J2EE server execution if an `OutOfMemory` error occurs due to shortage of the Java heap, metaspace area, or compressed class space during one of the following types of processing:

- Request processing during the execution of Web applications (Servlets or JSPs) on the Web container
- Processing during the execution of the Enterprise Bean invoked from an EJB client application
- Processing during the execution of the Message-driven Bean
- Processing during the execution of the Enterprise Bean invoked from Timer Service

After determining, if the J2EE server continues execution, the `java.lang.OutOfMemoryError` is thrown and only the request processing where `OutOfMemory` occurred is cancelled.

JavaVM performs the following operations based on the determined results. However, if `java.lang.OutOfMemoryError` is caught by a Web application, that processing is followed.

- **If the `OutOfMemoryError` throwing conditions are satisfied**

The `java.lang.OutOfMemoryError` error is thrown and only the request processing where `OutOfMemory` occurred is cancelled.

- **If the `OutOfMemoryError` throwing conditions are not satisfied**

JavaVM is terminated forcibly by the forced termination functionality for `OutOfMemory`.

The `OutOfMemoryError` throwing condition is as follows. Note that when JavaVM does not conform to the `OutOfMemoryError` throwing conditions, JavaVM is terminated forcibly by the forced termination functionality for `OutOfMemory`.

OutOfMemoryError throwing conditions

When `OutOfMemory` occurs and if all the following conditions are applicable, JavaVM is said to satisfy the `OutOfMemoryError` throwing conditions and throws `java.lang.OutOfMemoryError` without terminating abnormally.

- The cause of the `OutOfMemory` error is shortage of the Java heap, metaspace area, or compressed class space.
- The `OutOfMemory` error occurred in the request processing during the execution of the Web applications (Servlets or JSPs) on the Web container, processing during the execution of the Enterprise Bean invoked from an EJB client application, processing during the execution of the Message-driven Bean, or processing during the execution of the Enterprise Bean invoked from Timer Service.
- The throw `OutOfMemoryError` exclusion condition is not applicable.

Throw `OutOfMemoryError` exclusion condition

The total number of the current `OutOfMemory` error and other `OutOfMemory` errors that occurred in the past hour due to shortage of the Java heap, metaspace area, or compressed class space exceeds the value specified for the `-XX:HitachiOutOfMemoryHandlingMaxThrowCount` option.

The following table describes the operations for the cause of `OutOfMemory` occurrence for the forced termination functionality for `OutOfMemory` and `OutOfMemory` handling functionality. Whether the `OutOfMemory` handling functionality is enabled affects the operation performed when the cause of the `OutOfMemory` error is shortage of the Java heap, metaspace area, or compressed class space.

Table 14–8: Operations for the cause of `OutOfMemory` occurrence of the forced termination functionality for `OutOfMemory` and `OutOfMemory` handling functionality

Causes of <code>OutOfMemory</code> occurrence	Is an operation performed for the forced termination functionality for <code>OutOfMemory</code> (Operations to be performed during <code>OutOfMemory</code> #1)	Is an operation performed for the <code>OutOfMemory</code> handling functionality (Operations to be performed during <code>OutOfMemory</code>)
Java heap shortage	An operation is performed (JavaVM is terminated forcibly).	An operation is performed (an operation is performed according to the determined results#2).
Metaspace area shortage	An operation is performed (JavaVM is terminated forcibly).	An operation is performed (an operation is performed according to the determined results#2).

Causes of OutOfMemory occurrence	Is an operation performed for the forced termination functionality for OutOfMemory (Operations to be performed during OutOfMemory #1)	Is an operation performed for the OutOfMemory handling functionality (Operations to be performed during OutOfMemory)
Compressed class space shortage	An operation is performed (JavaVM is terminated forcibly).	An operation is performed (an operation is performed according to the determined results#2).
C heap shortage	An operation is performed (JavaVM is terminated forcibly).	An operation is not performed (JavaVM is terminated forcibly#3).
Unknown	An operation is not performed (java.lang.OutOfMemoryError is thrown).	An operation is not performed (java.lang.OutOfMemoryError is thrown).
Thread Limit	An operation is not performed (java.lang.OutOfMemoryError is thrown).	An operation is not performed (java.lang.OutOfMemoryError is thrown).

#1

This operation is performed when the OutOfMemory handling functionality is disabled (-XX:-HitachiOutOfMemoryHandling).

#2

If the OutOfMemoryError throwing condition is satisfied, java.lang.OutOfMemoryError is thrown. If the OutOfMemoryError throwing condition is not satisfied, the processing shifts to the forced termination functionality for OutOfMemory and JavaVM is terminated forcibly.

#3

JavaVM is terminated forcibly by the forced termination functionality for OutOfMemory.

If the OutOfMemory handling functionality is enabled and an OutOfMemory error occurs due to shortage of the Java heap, metaspace area, or compressed class space, the OutOfMemory error occurrence frequency information is output to a Java VM log file.

Default value

- -XX:-HitachiOutOfMemoryHandling

Prerequisite options

- -XX:+HitachiOutOfMemoryAbort

Output format

```
[id] [Thread: thread_id] <date> [Handling: oom_count(max_oom_count) ]
```

The following is a description of the output contents:

id

OMH (Identifier of the Java VM log file).

thread_id

Thread ID (tid output to the thread dump).

date

Date when OutOfMemory was handled.

oom_count

The total number of the current OutOfMemory error and other OutOfMemory errors that occurred in the past hour due to shortage of the Java heap, metaspace area, or compressed class space.

However, including the current `OutOfMemory`, even if the total value of the occurrence count within an hour exceeds 3601, the maximum value of the output items is 3601.

max_oom_count

Value specified in the `-XX:HitachiOutOfMemoryHandlingMaxThrowCount` option.

Examples of output

```
[OMH] [Thread: 0x00927f48]<Tue Aug 24 19:02:19 2010>[Handling: 1(60)]
```

Precautions

- The `OutOfMemory` handling functionality does not resolve the root cause of the `OutOfMemory` error and does not prevent the termination of a J2EE server due to the `OutOfMemory` error. Also, this functionality does not guarantee that the J2EE server execution can be continued after the occurrence of the `OutOfMemory` error. This functionality is used to temporarily prevent the termination of a J2EE server when an `OutOfMemory` error occurs unexpectedly due to problems in user program processing.

The `java.lang.OutOfMemoryError` error occurs when a heap depletes, regardless of the `OutOfMemory` handling functionality settings. When the `java.lang.OutOfMemoryError` occurs, we recommend that you restart and recover the J2EE server as soon as possible, and then resolve the root cause of the `OutOfMemory` error.

Note that the resources might be leaked or locked by throwing the `java.lang.OutOfMemoryError`, and unexpected operations might occur in the J2EE server. Therefore, if the `OutOfMemory` error occurs when this functionality is enabled, perform operations so that the J2EE server is restarted at an appropriate time. Also, if you want to avoid unexpected operations in the J2EE server, disable this functionality. In this case, if the `OutOfMemory` error occurs unexpectedly, the J2EE server will be terminated.

If this functionality is enabled and if unexpected operations occur, restart the J2EE server. Also, disable this functionality in subsequent operations.

- When the `OutOfMemory` handling functionality is enabled, even if the forced termination functionality is enabled (`-XX:+HitachiOutOfMemoryAbort`) during the `OutOfMemory` error, if the `OutOfMemory` error occurs during the processing of jsps and Servlets, `java.lang.OutOfMemoryError` is thrown as per the Java SE specifications instead of a forced termination.

Therefore, for example, if the resources are not released properly by using the `finally` clause, the resources might not be released.

To avoid such problems and to implement forced termination as before, disable the `OutOfMemory` handling functionality.

-XX:HitachiOutOfMemoryHandlingMaxThrowCount (Option for setting up the maximum occurrence count)

Format

`-XX:HitachiOutOfMemoryHandlingMaxThrowCount=integer-value`

Description

This option specifies the upper limit on the total number of `OutOfMemory` errors that occur in the past hour due to shortage of the Java heap, metaspace area, or compressed class space if the `OutOfMemory` handling functionality is enabled.

The value specified in this option is used to determine the throw `OutOfMemoryError` exclusion condition.

The following explains the processing that is performed if `OutOfMemory` errors occur due to shortage of the Java heap, metaspace area, and compressed class space:

- `OutOfMemoryError` is not thrown if the following condition is met: The total number of the current `OutOfMemory` error and other `OutOfMemory` errors that occurred in the past hour due to shortage of the Java heap, metaspace area, or compressed class space exceeds the maximum value specified for this option. The processing shifts to the forced termination functionality for `OutOfMemory` (`-XX:+HitachiOutOfMemoryAbort`) and JavaVM is terminated forcibly.
- If you specify 0 as the value of this option and if the `OutOfMemory` error occurs, the processing necessarily shifts to the forced termination functionality for `OutOfMemory` and JavaVM is terminated forcibly.
- If you specify 3600 as the value of this option, the throw `OutOfMemoryError` exclusion condition is not determined. In this case, when the `OutOfMemory` error occurs, the `java.lang.OutOfMemoryError` is necessarily thrown if a `OutOfMemoryError` throwing condition other than the throw `OutOfMemoryError` exclusion condition is satisfied.

Default value

- `-XX:HitachiOutOfMemoryHandlingMaxThrowCount=60`

Prerequisite options

- `-XX:+HitachiOutOfMemoryHandling`

Argument

integer-value

Specify the upper limit on the total number of `OutOfMemory` errors that occur in the past hour due to shortage of the Java heap, metaspace area, or compressed class space.

0 to 3600 (3601 to $2^{63}-1$ is handled as 3600).

Precautions

If a value other than a natural number is specified, the operation will be the same as when an un-defined option is specified.

-XX:[+|-]HitachiJavaClassLibTrace (Option to output the stack trace of class library)

Format

`-XX:+HitachiJavaClassLibTrace`

This option outputs the stack trace of the class library.

`-XX:-HitachiJavaClassLibTrace`

This option does not output the stack trace of the class library.

Description

When a method that affects the entire system shown below is used, the stack traces of the API of these systems will be output to the JavaVM log file:

- `java.lang.System.gc`

- java.lang.System.exit
- java.lang.System.runFinalizersOnExit
- java.lang.Runtime.exit
- java.lang.Runtime.halt
- java.lang.Runtime.runFinalizersOnExit

Default value

- -XX:-HitachiJavaClassLibTrace

Output format

```
[id] [Thread:thread_id]<date>
[id] [Thread:thread_id] stack_trace
```

The following is a description of the output contents:

id

CLT (Identifier of the Java VM log file).

thread_id

Thread ID (tid output to the thread dump).

date

Indicates the date and time when class library was used.

stack_trace

Stack trace.

Example of output 1

```
[CLT] [Thread: 0x00062fd0]<Mon Sep 27 12:10:03 2004>
[CLT] [Thread: 0x00062fd0] at at java.lang.Shutdown.halt0(Native Method)
[CLT] [Thread: 0x00062fd0] at java.lang.Shutdown.halt(Shutdown.java:145)
[CLT] [Thread: 0x00062fd0] - locked <0x100101a0> (a java.lang.Shutdown$Lock)
[CLT] [Thread: 0x00062fd0] at java.lang.Shutdown.exit(Shutdown.java:222)
[CLT] [Thread: 0x00062fd0] - locked <0x1413c0a0> (a java.lang.Class)
[CLT] [Thread: 0x00062fd0] at java.lang.Terminator$1.handle(Terminator.java:35)
[CLT] [Thread: 0x00062fd0] at sun.misc.Signal$1.run(Signal.java:195)
[CLT] [Thread: 0x00062fd0] at java.lang.Thread.run(Thread.java:534)
```

Example of output 2

```
[CLT] [Thread: 0x009c4000]<Tue Oct 09 15:36:18 2012>
[CLT] [Thread: 0x009c4000] at java.lang.Runtime.outputJavaClassLibTrace(Native Method)
[CLT] [Thread: 0x009c4000] at java.lang.Runtime.runFinalizersOnExit(Runtime.java:378)
[CLT] [Thread: 0x009c4000] at java.lang.System.runFinalizersOnExit(System.java:978)
[CLT] [Thread: 0x009c4000] at Program.main(Program.java:8)
```

-XX:HitachiJavaClassLibTraceLineSize (Option to specify the line size of stack trace for the class library)

Format

`-XX:HitachiJavaClassLibTraceLineSize=integer-value`

Description

Specify in bytes, the number of characters in one line of class library stack trace output when `-XX:+HitachiJavaClassLibTrace` option is specified.

Default value

- `-XX:HitachiJavaClassLibTraceLineSize=1024`

Prerequisite options

- `-XX:+HitachiJavaClassLibTrace`

Argument

integer-value

Specify the integer value from 1024 to 2147483647 (unit: byte). However, if a value out of range is specified, 1024 is set.

Examples of output

```
[CLT] [Thread: 0x00286c58]<Thu Oct 21 14:56:24 2004>
[CLT] [Thread: 0x00286c58] at java.lang.Runtime.gc (Native Method)
[CLT] [Thread: 0x00286c58] at java.lang.System.gc (System.java:737)
[CLT] [Thread: 0x00286c58] at mple.func_012345678 (omitted) xyz (Sample.java:
9)
[CLT] [Thread: 0x00286c58] at Sample.main (Sample.java:5)
```

When number of characters in one line exceeds the number of specified bytes, the first half portion of the character string from "at" onwards is deleted. In the case of the example of output, in the fourth line, the first half of "Sample" will be deleted and will become "mple".

-XX:[+|-]HitachiLocalsInThrowable (Option for collecting the local variable information when an exception occurs)

Format

`-XX:+HitachiLocalsInThrowable`

This option outputs the local variable information of the methods in the stack trace.

The `-XX:+HitachiLocalsInThrowable` option is ignored when `java.lang.StackOverflowError` occurs.

`-XX:-HitachiLocalsInThrowable`

This option does not output the local variable information of the methods in the stack trace.

Description

When the `java.lang.Throwable.fillInStackTrace` method is executed, the local variable information of the method in the stack trace is collected.

Default value

- `-XX:-HitachiLocalsInThrowable`

Output format

```
locals:
  name: <name>
  type: <type>
  value: <value>
...
```

The output contents are explained below:

- In the first line, "locals:" header is output.
- From second line onwards, the following information is output line by line for each local variable that can be collected:
 1. Variable name
 2. Type name (basic type name, class name, or array type name)
 3. Character string that represents variable value

Note that the output contents of each local variable are demarcated with a blank line.

name

Local variable name.

For the argument passed to the method, `[arg***]`(*** is the argument number) will be displayed in continuation to the variable name.

type

Type name of the local variable (the basic type name, class name, or the array type name)

value

Character string representing the value of local variable

- Basic type:
Value converted as it is into a character string
- Class or array type:
When variable type is null: (null)
Other than the above-mentioned: *existing-address-of-the-object*

Maximum length of the character string representing a value is 64. When the character string exceeds the maximum length, the characters up to 64th character are output and after that "..." character string is output. In the case of the class or array type, you can add detailed expressions by specifying the following add options:

- `-XX:+HitachiLocalsSimpleFormat`
- `-XX:+HitachiTrueTypeInLocals`
- `-XX:HitachiCallToString`

Examples of output

The following is an example of output using Java program example 1:

When all the local variable information is output

```
at Example1.method(Example1.java:15)
  locals:
    name: this
    type: Example1
    value: <0x922f42d0>

    name: l1 [arg1]
    type: int
    value: 1

    name: l2 [arg2]
    type: char
    value: 'Q'

    name: l3 [arg3]
    type: java.lang.Object
    value: <0xaf112f08>

    name: l4
    type: float
    value: 4.000000

    name: l5
    type: boolean
    value: true

    name: l6
    type: double
    value: 1.79769E+308

    name: l7
    type: java.lang.Object[]
    value: <0x922f42d8>

at Example1.main(Example1.java:5)
  locals:
  ...
```

When the local variable information does not exist

- For a class file generated without adding the `-g` option or the `-g:vars` option
- For the native method of a class file generated by adding the `-g` option or the `-g:vars` option

```
at Example1.method(Example1.java:15)
  locals:
    name: this
    type: Example1
    value: <0x922f42d0>

    name: [arg1]
    type: int
```

```

value: 1

name: [arg2]
type: char
value: 'Q'

name: [arg3]
type: java.lang.Object
value: <0xaf112f08>

at Example1.main(Example1.java:5)
locals:
...

```

Precautions

- To collect complete local variable information, while you are creating the class file in `javac`, you need to add the `-g` option or the `-g:vars` option and fill the local variable information in the class file. For the class file created without adding the `-g` option or the `-g:vars` option, the local variable information is output in the collectable range.
- The local variable information does not exist for the native method even if the class file is generated by adding the `-g` option or the `-g:vars` option.
- When the JIT compiler compiles a method, as a part of optimization, the local variables determined as unnecessary, are removed.

(Example) Consider a declaration and local variable that is not used after initialization as `"int not_used = 12345"`:

In this case, the following value is output in the local variable information when an exception occurs:

Type name	Output information
boolean type	false
char type	'\0'
byte type Short type int type long type float type double type	0
class type array type	(null)

- When the local variable information of the method containing complicated control structure and multiple lines is to be output, analysis takes time, and hence, when an exception occurs the process for generating the exception object may take longer time.
- To output the local variable information to the stack trace of the current thread obtained by using the `getStackTrace` method of the `java.lang.Thread` class, you must set up the option for collecting the local variable information for an exception (`-XX:+HitachiLocalsInThrowable`), which outputs the local variable information to the stack trace used for an exception.

-XX:[+|-]HitachiLocalsInStackTrace (Option to output the local variable when the thread dump is output)

Format

`-XX:+HitachiLocalsInStackTrace`

This option outputs the local variable information to the stack trace when thread dump is output.

`-XX:-HitachiLocalsInStackTrace`

This option does not output the local variable information to the stack trace when thread dump is output.

Description

Add the local variable information of each method and output to the stack trace when the thread dump was output. For details on output content of the local variable information, see [-XX:\[+|-\]HitachiLocalsInThrowable \(Option for collecting the local variable information when an exception occurs\)](#).

Default value

- `-XX:-HitachiLocalsInStackTrace`

Examples of output

The following is an example of output using Java program example 2:

- When the `-XX:+HitachiLocalsSimpleFormat` option and the `-XX:+HitachiTrueTypeInLocals` option are specified:

```
"main" prio=1 tid=0xb6e88d20 nid=0xb7492080 runnable [bffff000..bffff474]
  at Example2.method(Example2.java:15)
  - locked <0xab040550> (a Example2)
  locals:
    (Example2) this = <0xab040550> (Example2)
    (int) l1 = 1
    (float) l2 = 2.000000
    (java.lang.String) l3 = <0xaf112cc0> (java.lang.String)
    (java.lang.Character) l4 = <0xab040698> (java.lang.Character)
    (java.lang.Object) l5 = <0xab0407c8> (java.lang.Thread)
    (java.lang.Object[]) l6 = <0xab0408b8> (java.lang.Thread[])
  at Example2.main(Example2.java:4)
  locals:
    (java.lang.String[]) args [arg1] = <0xab040540> (java.lang.String[])
    (Example2) e2 = <0xab040550> (Example2)
```

Precautions

- To collect complete local variable information, while you are creating the class file in javac, you need to add the `-g` option or the `-g:vars` option and fill the local variable information in the class file. For the class file created without adding the `-g` option or the `-g:vars` option, the local variable information is output in the collectable range.
- The threads collecting the stack trace information and the threads that are to be collected, generally do not match. As a result, to collect the information, you need to terminate the target threads and you cannot invoke the `toString` method. Consequently, the specification of `-XX:HitachiCallToString` option becomes invalid.

- When the local variable information of the method containing complicated control structure and multiple lines is to be output, analysis takes time, and hence, it may take time to output the extended thread dump and to obtain the thread stack trace.

-XX:[+|-]HitachiLocalsSimpleFormat (Option for changing the output format of the local variable information)

Format

`-XX:+HitachiLocalsSimpleFormat`

This option outputs the local variable information in a simple format.

`-XX:-HitachiLocalsSimpleFormat`

This option outputs the local variable information in a normal format.

Description

Change the output format of the local variable information to the simple output format, in which one variable is output in one line.

Default value

- `-XX:-HitachiLocalsSimpleFormat`

Prerequisite options

- `-XX:+HitachiLocalsInThrowable`
- `-XX:+HitachiLocalsInStackTrace`

Output format

```
locals:  
  (type) name = value  
  (type) name = value  
  ...
```

For the details on output contents for the *type*, *name*, and *value*, see `-XX:[+|-]HitachiLocalsInThrowable` (*Option for collecting the local variable information when an exception occurs*).

Examples of output

The following is an example of output using Java program example 1:

```
at Example1.method(Example1.java:15)  
  locals:  
    (Example1) this = <0x922f42d0>  
    (int) 11 [arg1] = 1  
    (char) 12 [arg2] = 'Q'  
    (java.lang.Object) 13 [arg3] = <0xaf112f08>  
    (float) 14 = 4.000000  
    (boolean) 15 = true  
    (double) 16 = 1.79769E+308  
    (java.lang.Object[]) 17 = <0x922f42d8>
```



```
at Example1.main(Example1.java:5)
  locals:
  ...
```

-XX:[+|-]HitachiTrueTypeInLocals (Option to output the true type name of the local variable information)

Format

`-XX:+HitachiTrueTypeInLocals`

This option outputs the actual object type name in the local variable information.

`-XX:-HitachiTrueTypeInLocals`

This option does not output the actual object type name in the local variable information.

Description

When collecting the local variable information, the object type name that is actually substituted is output for the local variable of the class or the array type. The type name is displayed in the round bracket after the character string that represents the variable value.

Note that if the class or array type object stored in the local variable is a JavaVM internal object, "internal type" is output.

Default value

- `-XX:-HitachiTrueTypeInLocals`

Prerequisite options

- `-XX:+HitachiLocalsInThrowable`
- `-XX:+HitachiLocalsInStackTrace`

Examples of output

The following is an example of output using Java program example 3:

- When the `-XX:+HitachiLocalsSimpleFormat` option and `-XX:HitachiCallToString=full` are specified:

```
at Example3.method(Example3.java:18)
  locals:
  (Example3) this = <0xaa07db58> "I am an Example3 instance." (Example3)
  (java.lang.String) l1 = <0xae173a28> "local 1" (java.lang.String)
  (java.lang.StringBuffer) l2 = <0xaa07dca0> "local 1 + local 2" (java.lang.StringBuffer)
  (java.lang.Boolean) l3 = <0xaa07de18> "false" (java.lang.Boolean)
  (java.lang.Character) l4 = <0xaa07df68> "X" (java.lang.Character)
  (java.lang.Long) l5 = <0xaa07e078> "-9223372036854775808" (java.lang.Long)
  (java.lang.Object) l6 = <0xaa07e1a8> "Thread[Thread-0,5,main]" (java.lang.Thread)
  (java.lang.Object[]) l7 = <0xaa07e298> "[Ljava.lang.Thread;@26e431" (java.lang.Thread[])
  at Example3.main(Example3.java:4)
```

```
locals:  
...
```

-XX:HitachiCallToString (Option to output the local variable information)

Format

`-XX:HitachiCallToString=applicable-range`

Description

The character string of a String object obtained for the local variable object from the class corresponding to the *applicable-range* is output as a character string that represents the variable value.

Note that if no objects are stored in the local variable, or if the object is a JavaVM internal object, the local variable information is not output.

Default value

- `-XX:HitachiCallToString=minimal`

Prerequisite options

- `-XX:+HitachiLocalsInThrowable`

Argument

applicable-range

Specify minimal or full.

minimal

The following classes in the java.lang package are applicable:

- String
- StringBuffer
- Boolean
- Byte
- Character
- Short
- Integer
- Long
- Float
- Double

Note that, even when null character ("") is specified, the applicable range will be same as "minimal".

full

All the classes and array types are applicable.

Examples of output

The following is an example of output (simple output format) using the Java program example 3:

For `-XX:HitachiCallToString=minimal`

```
at Example3.method(Example3.java:18)
  locals:
    (Example3) this = <0xaa07db58>
    (java.lang.String) l1 = <0xae173a28> "local 1"
    (java.lang.StringBuffer) l2 = <0xaa07dca0> "local 1 + local 2"
    (java.lang.Boolean) l3 = <0xaa07de18> "false"
    (java.lang.Character) l4 = <0xaa07df68> "X"
    (java.lang.Long) l5 = <0xaa07e078> "-9223372036854775808"
    (java.lang.Object) l6 = <0xaa07e1a8>
    (java.lang.Object[]) l7 = <0xaa07e298>
at Example3.main(Example3.java:4)
  locals:
...
```

For `-XX:HitachiCallToString=full`

```
at Example3.method(Example3.java:18)
  locals:
    (Example3) this = <0xaa07db58> "I am an Example3 instance."
    (java.lang.String) l1 = <0xae173a28> "local 1"
    (java.lang.StringBuffer) l2 = <0xaa07dca0> "local 1 + local 2"
    (java.lang.Boolean) l3 = <0xaa07de18> "false"
    (java.lang.Character) l4 = <0xaa07df68> "X"
    (java.lang.Long) l5 = <0xaa07e078> "-9223372036854775808"
    (java.lang.Object) l6 = <0xaa07e1a8> "Thread[Thread-0,5,main]"
    (java.lang.Object[]) l7 = <0xaa07e298> "[Ljava.lang.Thread;@26e431"
at Example3.main(Example3.java:4)
  locals:
...
```

Precautions

- To collect complete local variable information, while you are creating the class file in `javac`, you need to add the `-g` option or the `-g:vars` option and fill the local variable information in the class file. For the class file created without adding the `-g` option or the `-g:vars` option, the local variable information is output in the collectable range.
- When you specify this option and execute a Java program using AWT or Swing, specify `minimal` (default) in *applicable-range*. If you specify `full` in *applicable-range*, the program might not operate correctly.
- Specify `full` in *applicable-range* only when you investigate the cause of an exception that occurred in a user program. If `full` is specified, the `toString()` method for a local variable object is invoked when an exception object is generated. When the `toString()` method is invoked, information useful for cause investigation can be obtained. However, because the method is invoked at an irregular timing, the product or user program might not be able to operate correctly.

-XX:[+|-]HitachiFullCore (Release system resource option)

This option is used for UNIX.

Format

`-XX:+HitachiFullCore`

This option forcefully increases the system resource `RLIMIT_CORE` to the maximum value and creates a core file by ignoring the user limit when failure occurs.

`-XX:-HitachiFullCore`

This option does not change the system resource `RLIMIT_CORE`.

Description

Specify whether to change the settings of the system resource `RLIMIT_CORE`.

Default value

- `-XX:-HitachiFullCore`

-XX:[+|-]HitachiUseExplicitMemory (Explicit Memory Management functionality option)

Format

`-XX:+HitachiUseExplicitMemory`

This option enables the Explicit Memory Management functionality.

`-XX:-HitachiUseExplicitMemory`

This option disables the Explicit Memory Management functionality.

Description

Specify whether to enable or disable the Explicit Memory Management function. Note that to enable the Explicit Memory Management function, Hitachi recommends that you specify the same value for `-Xms` and `-Xmx`.

Default value

- `-XX:-HitachiUseExplicitMemory`

Related option

- `-Xms`
- `-Xmx`

Precautions

If the `-XX:+UseParNewGC` option is specified, you cannot specify this option. If specified concurrently with the `-XX:+UseParNewGC` option, a message is output to standard output and JavaVM terminates with the return code 1.

-XX:HitachiExplicitHeapMaxSize (Option for specifying the maximum size of the Explicit memory block)

Format

`-XX:HitachiExplicitHeapMaxSize=applicable-range`

Description

Specify the maximum size of the entire Explicit heap.

Default value

- `-XX:HitachiExplicitHeapMaxSize=64m`

Prerequisite options

- `-XX:+HitachiUseExplicitMemory`

Argument

applicable-range

1 to $2^{63}-1$ (9223372036854775807)

Precautions

- Specify the scope in bytes.
- If the set value is not included in the range of valid values, the following message is output in standard output and the JavaVM is terminated with return code 1:

```
Invalid maximum explicit heap size: -XX:HitachiExplicitHeapMaxSize=[specified-value]Could not create the Java virtual machine.
```

-XX:HitachiExplicitMemoryLogLevel (Option for specifying the log output level of the Explicit Memory Management functionality)

Format

`-XX:HitachiExplicitMemoryLogLevel:applicable-range`

Description

Specify the event log level of the Explicit Memory Management functionality.

Default value

- `-XX:HitachiExplicitMemoryLogLevel:none`

Prerequisite options

- `-XX:+HitachiUseExplicitMemory`

Argument

applicable-range

none

The event log of the Explicit Memory Management functionality is not output.

normal

Specified during normal operations. Outputs the status of Explicit heap at regular intervals (for each GC). Also, outputs the status when there are events where status of Explicit heap has large variations.

verbose

In addition to the contents for `normal`, the log is output for events when the Explicit heap status changes. The amount of log is more than that for `normal`.

debug

In addition to the contents for `verbose`, detailed information for the occurrence of some events is output. Since the amount of log is large, the performance deteriorates remarkably.

Precautions

If you specify the value other than `none`, `normal`, `verbose`, or `debug`, the following message is output in the standard output and the JavaVM is terminated with return code 1:

```
Invalid explicit heap log level: -XX:HitachiExplicitMemoryLogLevel:applicable-range Could not create the Java virtual machine. (log levels: none normal verbose debug)
```

-XX:HitachiExplicitMemoryJavaLog (Option for specifying the log file output location of the Explicit Memory Management functionality)

Format

`-XX:HitachiExplicitMemoryJavaLog`: *character-string*

Description

Specify the prefix and the output destination directory of the log file of the Explicit Memory Management function.

Default value

- `-XX:HitachiExplicitMemoryJavaLog:ehjavalog`

Related option

- `-XX:HitachiJavaLog`

Argument

character-string

Specify the prefix and path. The following 3 types can be specified:

To specify the prefix

The log file name is created as *character-string*?? .log (?? is a serial number from 01 to 99). For example, if you specify "Samp" in *character-string*, the log file name is Samp01.log. If you do not specify this option, "ehjavalog" is set in *character-string*. The log file is output to the current directory.

To specify the path

If the directory is specified in *character-string*, the file is created in the specified directory. The log file name is created as *character-string* ehjavalog?? .log (?? is a serial number from 01 to 99).

To specify the path and prefix concurrently

When the directory and prefix are specified in *character-string*, the file is created in the specified directory. The log file name is created as *character-string*?? .log (?? is a serial number from 01 to 99). For example, if you specify d:\temp\Samp in *character-string*, Samp01.log is created in the d:\temp directory.

-XX:HitachiExplicitMemoryJavaLogFileSize (Option for specifying the maximum log file size of the Explicit Memory Management functionality)

Format

-XX:HitachiExplicitMemoryJavaLogFileSize=*integer-value*

Description

Set up the maximum file size of one file in bytes. When the -XX:HitachiJavaLogFileSize option is not specified, '256 kilobytes' is specified by default.

Default value

- -XX:HitachiExplicitMemoryJavaLogFileSize=256k

Related option

- -XX:HitachiJavaLogFileSize

Argument

integer-value

Specify the integer value in the range of 1024 to 2147483647 (unit: bytes).

However, if a value out of range is specified, 1024 is set.

Precautions

If a value other than a natural number is specified, the operation will be the same as when an un-defined option is specified.

-XX:HitachiExplicitMemoryJavaLogNumberOfFile (Option for specifying the maximum number of log files of the Explicit Memory Management functionality)

Format

`-XX:HitachiExplicitMemoryJavaLogNumberOfFile=integer-value`

Description

Specify the maximum number of files to be created. If the maximum number of files is exceeded, the log is output again to the file that was created first (wrap around).

Default value

- `-XX:HitachiExplicitMemoryJavaLogNumberOfFile=4`

Related option

- `-XX:HitachiJavaLogNumberOfFile`

Argument

integer-value

Specify a value in the range of 1 to 99.

However, if 100 or more is specified, the value becomes 99 and if 0 is specified, the value becomes 1.

Precautions

If a value other than a natural number is specified, the operation will be the same as when an un-defined option is specified.

-XX:[+|-]HitachiExplicitMemoryMoveToTenuredFirst (Explicit release function option of Explicit Memory Management function)

Format

`-XX:+HitachiExplicitMemoryMoveToTenuredFirst`

The objects in the release process of Explicit memory block are moved to the Tenured area.

`-XX:-HitachiExplicitMemoryMoveToTenuredFirst`

The objects in the release process of Explicit memory block are moved to the New area.

Description

Specify the transition destination of the objects of the release process of Explicit memory block.

Default value

- `-XX:+HitachiExplicitMemoryMoveToTenuredFirst`

Prerequisite options

- `-XX:HitachiUseExplicitMemory`

Precautions

If this option is enabled, the reference object moves to the Tenured area when the release process is executed.

If the reference source object is a temporarily short-lived object, this option is disabled and the referenced object in the Explicit memory block is moved to the New area to enable concurrent collection with the reference source object during the next copy GC. This action prevents an increase in the used size of the Tenured area when this option is disabled.

You must note the following points:

- Increasing copy GC frequency

If the Explicit memory block is released, the referenced object moves to the New area and the moved object uses the New area. As a result, the interval until the next copy GC might reduce causing throughput decrease and speed up in the ageing process of the object.

- Among the objects moved to the Tenured area

If there is an object (For example, data definitions of common applications) referenced from objects of Explicit memory block repeatedly in New area and Explicit memory management area, then this is a long-lived object. If this option is enabled, the object is moved to the Explicit memory block, and when the release process of the Explicit memory block is executed, it moves to the Tenured area and continues to exist there for its rest of the life (such as application termination).

However, if this option is enabled, the object moves to the New area when executing the release process of the Explicit memory block, and here, if the copy GC is executed up to the threshold value, the object is moved to some other Explicit memory block. On repeating this process, the object is circulated between the New area and the Explicit memory management area, resulting in an increase in the overheads of the release process of the copy GC and the Explicit memory block.

-XX:[+|-]HitachiExplicitMemoryAutoReclaim (Automatic release function option of explicit memory management)

Format

`-XX:+HitachiExplicitMemoryAutoReclaim`

Enable the automatic release function of the Explicit Memory Management function.

`-XX:-HitachiExplicitMemoryAutoReclaim`

Disable the automatic release function of the Explicit Memory Management function.

Description

Specify whether to use the automatic release function of the Explicit Memory Management function.

Default value

- `-XX:+HitachiExplicitMemoryAutoReclaim`

Prerequisite options

- `-XX:-HitachiExplicitMemoryCompatibleToV8`

Related option

- `-XX:+HitachiAutoExplicitMemory`

-XX:[+|-]HitachiExplicitMemoryCompatibleToV8 (Version compatibility setting option of Explicit Memory Management function)

Format

`-XX:+HitachiExplicitMemoryCompatibleToV8`

Secure the Explicit memory block by the same method as 08-00.

`-XX:-HitachiExplicitMemoryCompatibleToV8`

Secure the Explicit memory block by a method other than the 08-00.

Description

Specify whether to use the same method as in 08-00 for securing the Explicit memory block. This option is enabled if the application operating in 08-00 operates as it is in 08-50 and the new functions of 08-50 are not used.

If you use this option, the automatic release function of the explicit memory management is disabled.

Default value

- `-XX:-HitachiExplicitMemoryCompatibleToV8`

Prerequisite options

- `-XX:+HitachiUseExplicitMemory`

Related option

- `-XX:+HitachiExplicitMemoryAutoReclaim`
- `-XX:+HitachiAutoExplicitMemory`

-XX:[+|-]HitachiAutoExplicitMemory (Automatic allocation function option of Explicit Memory Management function)

Format

`-XX:+HitachiAutoExplicitMemory`

Enable the automatic allocation function of the explicit memory management.

`-XX:-HitachiAutoExplicitMemory`

Disable the automatic allocation function of the explicit memory management.

Description

Specify whether to enable or disable the automatic allocation function of the Explicit memory block.

Note that if this option is enabled, the minimum size of the Explicit memory block is 16 kilobytes. If disabled, the minimum size of the Explicit memory block is 64 kilobytes.

Default value

- `-XX:-HitachiAutoExplicitMemory`

Prerequisite options

- `-XX:+HitachiUseExplicitMemory`
- `-XX:+HitachiExplicitMemoryAutoReclaim`
- `-XX:-HitachiExplicitMemoryCompatibleToV8`

Related option

- `-XX:HitachiAutoExplicitMemoryFile`

-XX:HitachiAutoExplicitMemoryFile (Option for specifying the file path of the automatic allocation function of the Explicit Memory Management function)

Format

`-XX:HitachiAutoExplicitMemoryFile: character-string`

Description

Specify the path of the automatic allocation setup file to be used by the automatic allocation function of the Explicit memory block.

Default value

- `-XX:HitachiAutoExplicitMemoryFile: null-character`

Prerequisite options

- `-XX:+HitachiAutoExplicitMemory`

Argument

character-string

Specify the relative path and absolute path from the current directory of the JavaVM process. You can specify a path that includes the directory name.

Note that you can specify only one automatic allocation setup file.

If a character string with more than 1 character is specified

The default settings of the automatic allocation setting for the explicit memory management and the file settings specified by this option are enabled.

-XX:ExplicitMemoryFullGCPolicy (Option for controlling the transfer of objects to the Explicit memory block of the Explicit Memory Management functionality)

Format

`-XX:ExplicitMemoryFullGCPolicy=numeric-value`

Description

Specify whether to control the transfer of the reference relationship-based objects from the Java heap to the Explicit memory block when a Full GC occurs. If you use this option, you can transfer the objects that were being moved to the Explicit heap during a Full GC to the Tenured area.

Default value

- `-XX:ExplicitMemoryFullGCPolicy=0`

Prerequisite option

- `-XX:+HitachiUseExplicitMemory`

Related options

- `-XX:+HitachiAutoExplicitMemory`
- `-XX:+ExplicitMemoryUseExcludeClass`

Argument

numeric-value

Specify 0 or 1. If the specified value is outside the range, 0 is set.

If you specify 0, the Java heap objects referenced from the objects in the Explicit memory block will be transferred to the Explicit memory block when a Full GC occurs.

If you specify 1, the Java heap objects referenced from the objects in the Explicit memory block will not be transferred to the Explicit memory block when a Full GC occurs. The objects in the New area will be transferred to the Tenured area.

-XX:[+|-]ExplicitMemoryUseExcludeClass (Option for the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality)

Format

`-XX:+ExplicitMemoryUseExcludeClass`

This option enables the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality.

`-XX:-ExplicitMemoryUseExcludeClass`

This option disables the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality.

Description

Enable or disable the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality. If you enable the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality, the Explicit Memory Management functionality is not applied to the classes coded in the following files. Therefore, the objects of the classes coded in the files will be transferred to the Tenured area instead of the Explicit heap.

In Windows

- `JDK-installation-directory\lib\explicitmemory\sysexmemexcludeclass.cfg`
- `JDK-installation-directory\usrconf\exmemexcludeclass.cfg`

In UNIX

- `/opt/Cosminexus/jdk/lib/explicitmemory/sysexmemexcludeclass.cfg`
- `/opt/Cosminexus/jdk/usrconf/exmemexcludeclass.cfg`

Default value

In compatibility mode:

- `-XX:-ExplicitMemoryUseExcludeClass`

In recommended mode:

- `-XX:+ExplicitMemoryUseExcludeClass`

Prerequisite option

- `-XX:+HitachiUseExplicitMemory`

Related options

- `-XX:+HitachiAutoExplicitMemory`
- `-XX:ExplicitMemoryFullGCPolicy`
- `-XX:ExplicitMemoryExcludeClassListFile`
- `-XX:ExplicitMemoryNotExcludeClassListFile`

Notes

- If you enable the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality, the functionality for controlling the transfer of objects to the Explicit memory block will also be enabled.
- You cannot specify the JavaVM classes (such as `java.lang` or `java.util`) as the classes to be excluded from the Explicit Memory Management functionality.

-XX:ExplicitMemoryExcludeClassListFile (Option for specifying the path of the Explicit Memory Management functionality exclusion setup file)

Format

`-XX:ExplicitMemoryExcludeClassListFile:character-string`

Description

Specify the file path of the Explicit Memory Management functionality exclusion setup file used with the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality. The Explicit Memory Management functionality is not applied to the classes coded in this file.

When JavaVM starts, the file in the file path specified in this option is read as the Explicit Memory Management functionality exclusion setup file. Note that if you omit this option or specify null character, the file in the default file path will be read as the Explicit Memory Management functionality exclusion setup file.

Default value

- `-XX:ExplicitMemoryExcludeClassListFile:` *null-character*

In Windows

`JDK-installation-directory\usrconf\exmemexcludeclass.cfg`

In UNIX

`/opt/Cosminexus/jdk/usrconf/exmemexcludeclass.cfg`

Prerequisite options

- `-XX:+HitachiUseExplicitMemory`
- `-XX:+ExplicitMemoryUseExcludeClass`

Related options

- `-XX:ExplicitMemoryFullGCPolicy`
- `-XX:+HitachiAutoExplicitMemory`
- `-XX:ExplicitMemoryNotExcludeClassListFile`

Argument

character-string

Specify the relative path from the current directory of the JavaVM process, or the absolute path. You can include the directory name in the path.

Note that you can only specify one Explicit Memory Management functionality exclusion setup file. Also, use the ASCII code for the character encoding in the file.

Notes

- If the specified file cannot be opened or read, a warning message will be output to the event log of the Explicit Memory Management functionality and the setup file in the default path will be read. If the file in the default path cannot be opened or read, the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality will not be enabled.
- If the coding format of the specified file is incorrect, a warning message will be output to the event log of the Explicit Memory Management functionality and the syntax analysis continues from the next line.
- If the same class names are coded in both the Explicit Memory Management functionality exclusion setup file and the Explicit Memory Management functionality non-exclusion setup file, the specification in the Explicit Memory Management functionality non-exclusion setup file is given priority. In this case, the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality will be disabled for those classes.

-XX:ExplicitMemoryNotExcludeClassListFile (Option for specifying the path of the Explicit Memory Management functionality non-exclusion setup file)

Format

`-XX:ExplicitMemoryNotExcludeClassListFile:` *character-string*

Description

Specify the file path of the Explicit Memory Management functionality non-exclusion setup file used with the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality. The functionality for specifying the classes to be excluded from the Explicit Memory Management functionality is not applied to the classes coded in this file even if the classes are also coded in the Explicit Memory Management functionality exclusion setup file.

When JavaVM starts, the file in the file path specified in this option is read as the Explicit Memory Management functionality non-exclusion setup file. Note that if you omit this option or specify null, the file in the default file path will be read as the Explicit Memory Management functionality non-exclusion setup file.

Default value

- `-XX:ExplicitMemoryNotExcludeClassListFile:Null`

In Windows

`JDK-installation-directory\usrconf\exmemnotexcludeclass.cfg`

In UNIX

`/opt/Cosminexus/jdk/usrconf/exmemnotexcludeclass.cfg`

Prerequisite options

- `-XX:+HitachiUseExplicitMemory`
- `-XX:+ExplicitMemoryUseExcludeClass`

Related options

- `-XX:ExplicitMemoryFullGCPolicy`
- `-XX:HitachiAutoExplicitMemory`
- `-XX:ExplicitMemoryExcludeClassListFile`

Argument

character-string

Specify the relative path from the current directory of the JavaVM process, or the absolute path. You can include the directory name in the path.

Note that you can only specify one Explicit Memory Management functionality exclusion setup file. Also, use the ASCII code for the character encoding in the file.

Notes

- If the specified file cannot be opened or read, a warning message will be output to the event log of the Explicit Memory Management functionality, and the setup file in the default path will be read. If the file in the default path cannot be opened or read, the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality will not be disabled.
- If the coding format of the specified file is incorrect, a warning message will be output to the event log of the Explicit Memory Management functionality and the syntax analysis continues from the next line.
- If the same class names are coded in both the Explicit Memory Management functionality exclusion setup file and the Explicit Memory Management functionality non-exclusion setup file, the specification in the Explicit Memory Management functionality non-exclusion setup file is given priority. In this case, the functionality for specifying the classes to be excluded from the Explicit Memory Management functionality will be disabled for those classes.

-XX:[+|-]HitachiExplicitMemoryAutoRefReclaim (Memory usage reduction option for Explicit heap used in an HTTP session)

Format

`-XX:+HitachiExplicitMemoryAutoRefReclaim`

Enables the memory usage reduction function of the Explicit heap used in an HTTP session.

`-XX:-HitachiExplicitMemoryAutoRefReclaim`

Disables the memory usage reduction function of the Explicit heap used in an HTTP session.

Description

Specifies the enabling or disabling of the memory usage reduction function of the Explicit heap used in an HTTP session.

If the function is disabled, the automatic release of the Explicit memory block created by the Application Server is not reserved automatically.

If the function is enabled, automatic release is automatically reserved for the Explicit memory block created by the Application Server to allocate the HTTP session objects in addition to the Explicit memory block created using the automatic allocation setup file. As a result, you can reduce the required Explicit heap size.

However, if the function is enabled, you must note the content output in the operation information. For details, see *7.11 Reducing memory usage of the Explicit heap that is used in an HTTP session* in the manual *uCosminexus Application Server Expansion Guide*.

Default value

- `-XX:-HitachiExplicitMemoryAutoRefReclaim`

Prerequisite options

- `-XX:+HitachiExplicitMemoryAutoReclaim`

-XX:HitachiJITCompileMaxMemorySize (Option for specifying the maximum memory allocated for JIT compilation)

Format

`-XX:HitachiJITCompileMaxMemorySize=integer-value`

Description

Specify the upper limit value for the C heap memory size secured for the JIT compilation. When the C heap memory secured for the JIT compilation exceeds the upper limit, this option outputs logs to the JavaVM log file and also controls the JIT compilation. Hereafter, the Java method, for which the JIT compilation is executed, will only be executed with an interpreter. Even when the JIT compilation is controlled, JavaVM is not terminated forcibly and continues processing.

If 0 is specified, the memory to be secured for the JIT compilation will not have an upper limit.

Note that the JIT compilation is executed using the JavaVM internal threads (JIT compiler threads). There are two JIT compiler threads and the value acquired by dividing the upper limit specified in this option by two will become the upper limit for one JIT compiler thread.

Also, even when the upper limit is set up in this option, if the actually usable C heap is less than the upper limit, a C heap shortage might occur before the upper limit is reached. In this case, JavaVM is terminated forcibly.

Default value

- `-XX:HitachiJITCompileMaxMemorySize=0`

Prerequisite options

- `-server`

Argument

integer-value

Specifies the upper limit of the memory to be secured for the JIT compilation. The unit is in seconds. You can also specify `k` for kilo, `m` for mega, and `g` for giga. The specifiable range is as follows. If a value outside the range is specified, 0 will be assumed.

- 0 to $2^{64}-1$ (18446744073709551615)

If 0 is specified, the memory to be secured for the JIT compilation will not have an upper limit. If C heap is insufficient during JIT compilation, JavaVM will terminate forcibly.

Output format

```
[id] [Thread: thread_id]<date>["thread_name" exceeded max memory size.]  
[current_sizeK->new_sizeK/limit_size_per_threadK/limit_sizeK]  
[compile_target] [byte_code_size]
```

The following is a description of the output contents:

id

JMS (JavaVM log file identifier)

thread_id

Thread ID of the JIT compiler thread that controls the JIT compilation.

date

A date on which the JIT compilation is controlled.

Outputs in the unit of milli seconds if `-XX:+HitachiOutputMilliTime` option is specified.

thread_name

A thread name of the JIT compiler thread that controls the JIT compilation.

current_size

Currently secured memory size of the JIT compiler thread that controls the JIT compilation (unit: kilobytes).

new_size

Total of the currently secured memory size and the size to be additionally secured for the JIT compiler thread that controls the JIT compilation (unit: kilobytes).

limit_size_per_thread

Upper limit for one JIT compiler thread (unit: Kilobyte).

limit_size

Upper limit of all the JIT compiler threads (unit: kilobytes).

compile_target

Java method for which the JIT compilation processing is performed.

byte_code_size

Byte code size of the Java method for which the JIT compilation processing is performed (unit: bytes).

Examples of output

The following is an example of output when the upper limit is reached when –

`XX:HitachiJITCompileMaxMemorySize=536870912` is specified as the option and C heap of 262145 kilobytes is allocated to one JIT compiler thread:

```
[JMS][Thread: 0x03bf1150]<Wed Feb 24 14:33:58 2010>["CompilerThread0" exceeded max memory size.][262143K->262145K/262144K/524288K][test1.func][213]
```

Precautions

- If the memory secured for the JIT compilation exceeds the upper limit specified in this option and the JIT compilation is controlled, the throughput of the application will decrease.
- If a value other than a natural number is specified, the operation will be the same as when an un-defined option is specified.

-XX:[+|-]JITCompilerContinuation (Option for the JIT compiler continuation functionality)

Format

`-XX:+JITCompilerContinuation`

This option enables the JIT compiler continuation functionality.

`-XX:-JITCompilerContinuation`

This option disables the JIT compiler continuation functionality.

Description

Specify whether to enable the JIT compiler continuation functionality.

Hitachi recommends that you enable this functionality to be able to continue an application normally even if the JIT compilation fails due to a logical inconsistency in a method configuring the application.

If you enable the JIT compiler continuation functionality, even if the JIT compilation fails due to a logical inconsistency in a method configuring the application, JavaVM outputs the log for this functionality to the JavaVM log file and continues the processing. In this case, the subsequent compilation with the method where the JIT compilation failed is executed using the interpreter method. From the methods configuring an application, the methods other than those where the JIT compilation failed are executed with the JIT compilation, so the application continues normally. However, if the JIT compilation fails six times or more, JavaVM outputs an error report file and a memory dump or core dump, and then terminates the processing forcefully.

If you disable the JIT compiler continuation functionality, and if the JIT compilation fails due to a logical inconsistency in a method configuring the application, JavaVM outputs an error report file and a memory dump or core dump, and then terminates the processing forcefully.

Default value

- -XX:+JITCompilerContinuation

Prerequisite option

- -server
- -XX:+HitachiVerboseGC

Output format

[*id*]

Note:

The log of the JIT compiler continuation functionality is output after [*id*].

A description of the output contents is as follows:

id:

This option specifies the JCC (identifier of the JavaVM log file).

Example of output

```
[JCC][Thread: 0x05432c00]<Thu Nov 15 17:10:40 2012>[Method: jit_sample.func(
)V][Fail: 3][JITCT: 1]
[JCC][Thread: 0x05432c00][PC: 0x083aff9a][Lib: D:\work\jdk\bin\server\jvm.dl
l+0x3aff9a][VM: Java HotSpot(TM) Server VM (20.8-b03-CDK0950-20121115 mixed
mode windows-x86 )]
[JCC][Thread: 0x05432c00][EAX=0x00000000, EBX=0x00618128, ECX=0x00000000, ED
X=0x05485340]
[JCC][Thread: 0x05432c00][ESP=0x0566d3c0, EBP=0x0566d3c4, ESI=0x00618278, ED
I=0x00000000]
[JCC][Thread: 0x05432c00][EIP=0x083aff9a, EFLAGS=0x00010202]
[JCC][Thread: 0x05432c00][siginfo: read 0x00000000]
[JCC][Thread: 0x05432c00][Unlock: MethodCompileQueue_lock]
[JCC][Thread: 0x05432c00][NewJITCT: 0x05438800][JITCT: 2]
[JCC][Thread: 0x05432c00][Free: "ResourceArea" 524288 bytes.]
[JCC][Thread: 0x05432c00][stop]
[JCC][Fail: 1][date: Thu Nov 15 10:10:40 2012][Method: jit_sample.func1(Ljav
a/lang/String;)V][PC: 0x083ff00a][Lib: D:\work\jdk\bin\server\jvm.dll+0x3ff0
0a]
[JCC][Fail: 2][date: Thu Nov 15 11:11:16 2012][Method: jit_sample.func2()V][
PC: 0x083afe3a][Lib: D:\work\jdk\bin\server\jvm.dll+0x3afe3a]
```

-XX:[+|-]UseCompressedOops (Java option used for the compressed object pointer functionality)

Format

-XX:+UseCompressedOops

This specification enables the compressed object pointer functionality.

`-XX:-UseCompressedOops`

This specification disables the compressed object pointer functionality.

Description

This option specifies whether to enable the compressed object pointer functionality. This functionality manages Java objects by compressing their size. By using this functionality, the usage of the Java heap area and Explicit heap area can be reduced during Java VM execution.

Note that the Explicit heap area is available only if the Explicit Memory Management functionality is enabled. This functionality can be enabled when the following condition is met:

- The total value of the sizes specified for the Java heap area, metaspace area, and Explicit heap area is less than 32 GB.

When a Java VM starts, if the total value of the sizes specified for the Java heap area, metaspace area, and Explicit heap area is 32 GB or more, the Java VM disables the compressed object pointer functionality and outputs the following message to the standard output:

```
Java HotSpot(TM) 64-Bit Server VM warning: Max heap size too large for
Compressed Oops
```

Default value

- `-XX:-UseCompressedOops`

-XX:HitachiThreadLimit (Option for specifying the maximum number of threads)

Format

`-XX:HitachiThreadLimit=integer-value`

Description

Specifies the upper limit for the number of threads. The `OutOfMemoryError` exception is thrown when the upper limit for the number of threads exceeds the specified value. However, if the upper limit exceeds before activating JavaVM, the exception will not be thrown. Also, threads that are created outside the management range of JavaVM by using application such as JNI will not be included in the number of threads. If 0 is specified, the upper limit is not set up.

Note that if this option is specified concurrently with the `-XX:+HitachiOutOfMemoryAbort` option, and if the `OutOfMemoryError` exception is thrown by the functionality of this option, JavaVM is not terminated forcibly.

Also, if this option is specified concurrently with the `-XX:+HitachiOutOfMemoryStackTrace` option, an exception message is output to the JavaVM log file.

Default value

- `-XX:HitachiThreadLimit=0`

Argument

integer-value

Specify the upper limit for the number of threads in an integer between 0 and 2147483647 (unit: number of threads). However, if a value out of range is specified, 0 is set. When negative value is specified, an error will occur.

Output format

```
Could not create "name" thread. Threadlimit Exceeded. num threads exist.
```

You can acquire this message with `java.lang.Throwable.getMessage()`. Also, if the entire message is 128 single-byte characters or more, the end of the message is omitted.

name

Name of the thread that could not be created

num

Current number of threads

If `-XX:+HitachiOutOfMemoryStackTrace` option is specified, exception information and stack traces can be output to the JavaVM log file. The type of the exception cause is "Thread Limit". For the types of causes for the occurrence of exceptions, see `-XX:[+|-]HitachiOutOfMemoryCause` (*Option to output the causes of exception*).

Examples of output

```
Could not create "Thread-1" thread. Threadlimit Exceeded. 9 threads exist.
```

This is an example of the message retrieved using `java.lang.Throwable.getMessage()` when the main thread invokes `java.lang.Thread.start` and this functionality throws an exception.

Precautions

If you set up a small value as an upper limit, an exception will be thrown before the startup. Do not set up a value that is smaller than the number of threads used by the J2EE server.

For the number of threads used by a J2EE server, see 5. *Estimating Resources to be Used (J2EE Application Execution Platform)* or 6. *Estimating Resources to be Used (Batch Application Execution Platform)* in the manual *uCosminexus Application Server System Design Guide*.

14.3 Properties used in JavaVM

The following table lists the properties used in JavaVM.

Table 14–9: List of properties used in JavaVM

Classification	Option name	Overview	VR	Related information
Property used in JavaVM	<i>jvm.userprf.Enable</i>	Specifies whether to enable the user-extended performance analysis trace.	09-00	
	<i>jvm.userprf.ExtendedSetting</i>	Specifies whether to enable the following methods in the coding format of the user-extended trace based performance analysis setup file: <ul style="list-style-type: none"> Method specifying the package name and class name Method specifying only the package name 	09-50	7. <i>Performance Analysis by Using Trace Based Performance Analysis</i> in the <i>Maintenance and Migration Guide</i>
	<i>jvm.userprf.File</i>	Specifies the path of the user-extended performance analysis trace setup file.	09-00	
	<i>jvm.userprf.Limit</i>	Specifies the maximum number of target methods of the user-extended performance analysis trace.	09-00	
	<i>jvm.userprf.Trace</i>	Specifies whether to output the log for successful rewriting of the class file specified in the user-extended performance analysis trace setup file.	09-00	
	<i>jvm.userprf.LineNumber</i>	Specifies whether to output the line number of the line executed at the end of the method to the trace information.	09-00	
	<i>jvm.userprf.ThrowableName</i>	Specifies whether to output the exception or error class name to the trace information.	09-00	
	<i>jvm.userprf.ThrowableName EditMethod</i>	Specifies how to edit a name when the exception or error class name exceeds the 32-character limit.	09-00	
	<i>jvm.userprf.LogLevel</i>	Specifies the trace output level of the user-extended performance analysis trace.	09-00	
	<i>JP.co.Hitachi.soft.jvm.autofi nalizer</i>	Specifies whether to enable the finalize-retention resolution function.	09-60	9.16 <i>Finalize-retention resolution function</i> in the <i>Maintenance and Migration Guide</i>
	<i>sun.nio.cs.map</i>	Specifies whether to equate the encoding names <code>shift_jis</code> , <code>csshiftjis</code> , <code>ms_kanji</code> , and <code>x-sjis</code> with MS932.	02-00	

jvm.userprf.Enable

Format

```
jvm.userprf.Enable={true|false}
```

Description

Specifies whether to enable the user-extended performance analysis trace.

Default value

```
jvm.userprf.Enable=false
```

Prerequisite property

None

Argument

`true`

Enables the user-extended performance analysis trace.

`false`

Disables the user-extended performance analysis trace.

If a value other than `true` or `false` is specified, the default value is used.

Precautions

If `true` is specified in this property, the user-extended performance analysis trace setup file is automatically read for the user-extended performance analysis trace. Set up the user-extended performance analysis trace setup file in advance. For specifying the name of the user-extended performance analysis trace setup file, see the `jvm.userprf.File` property.

Examples of specification

The following is an example of specifying the property:

```
add.jvm.arg= -Djvm.userprf.Enable=true
```

jvm.userprf.ExtendedSetting

Format

```
jvm.userprf.ExtendedSetting={true|false}
```

Description

Specify whether to enable the following methods in the coding format of the user-extended trace based performance analysis setup file:

- Method specifying the package name and class name
- Method specifying only the package name

Default value

`jvm.userprf.ExtendedSetting=false`

Prerequisite property

`jvm.userprf.Enable=true`

Argument

`true`

You can use the following methods for coding in the user-extended trace based performance analysis setup file:

- Method specifying the package name and class name
- Method specifying only the package name

`false`

You cannot code the following methods in the user-extended trace based performance analysis setup file:

- Method specifying the package name and class name
- Method specifying only the package name

If a value other than `true` or `false` is specified, the default value is used.

Notes

If you specify `false` in this property and use the methods that are enabled with `true` for coding in the user-extended trace based performance analysis setup file, a format error occurs for the user-extended trace based performance analysis setup file.

Example of specification

An example specification of the property is as follows:

```
add.jvm.arg= -Djvm.userprf.ExtendedSetting=true
```

jvm.userprf.File

Format

`jvm.userprf.File=character-string`

Description

Specifies the path of the user-extended performance analysis trace setup file.

The file in the path specified in this property is read as the user-extended performance analysis trace setup file for the user-extended performance trace. Note that if this property is not specified, the file in the default path is read as the user-extended performance analysis trace setup file.

Tip

The method coded in the user-extended performance analysis trace setup file becomes the trace target of the user-extended performance analysis trace.

Default value

In Windows

JDK-installation-directory\usrconf\userprf.cfg

In UNIX

/opt/Cosminexus/jdk/usrconf/userprf.cfg

Prerequisite property

jvm.userprf.Enable=true

Argument

character-string

Specifies the path of the user-extended performance analysis trace setup file.

Specify the path of the user-extended performance analysis trace setup file as follows:

- You can specify only one file path.
- The relative path and absolute path from the current directory are valid as path strings. An example of current directory is as follows:

(Example) Default current directory when the `cjstartsv` command is used for execution:

- In Windows

Cosminexus-installation-directory\CC\server\public\ejb*server-name*

- In UNIX

/opt/Cosminexus/CC/server/public/ejb/*server-name*

Precautions

- The character encoding used for reading the user-extended performance analysis trace setup file is the default encoding for the JDK operation platform. If the character encoding is not the default encoding, the encoding is processed as the default encoding.
- To specify different user-extended performance analysis trace settings for each server, prepare a user-extended performance analysis trace setup file for each server and specify the file path for each server in this property.
- If the file in the specified path cannot be read or if the read settings are not enabled, the log for reading of the user-extended performance analysis trace setup file is output to the JavaVM log file.

Examples of specification

The following is an example of specifying the property:

```
add.jvm.arg= -Djvm.userprf.File=/test/setting.txt
```

jvm.userprf.Limit

Format

`jvm.userprf.Limit=integer-value`

Description

Specifies the maximum number of target methods of the user-extended performance analysis trace.

Default value

2147483647

Prerequisite property

`jvm.userprf.Enable=true`

Argument

integer-value

Specify an integer between 0 and 2147483647. If a value out of range is specified, the default value is set.

Precautions

Among the methods specified in the user-extended performance analysis trace setup file, trace is collected for the number of methods specified in this property. When the specified method first exceeds the value specified in this property, a log message is output to the JavaVM log file.

Examples of specification

The following is an example of specifying the property:

```
add.jvm.arg= -Djvm.userprf.Limit=100
```

jvm.userprf.Trace

Format

`jvm.userprf.Trace={true|false}`

Description

Specifies whether to output the log for successful rewriting of the class file specified in the user-extended performance analysis trace setup file.

Default value

`jvm.userprf.Trace=false`

Prerequisite property

`jvm.userprf.Enable=true`

Argument

true

This argument outputs the log for successful rewriting of the target class of the user-extended performance analysis trace.

false

This argument does not output the log for successful rewriting of the target class of the user-extended performance analysis trace.

If a value other than `true` or `false` is specified, the default value is used.

Precautions

If an attempt to rewrite the target class of the user-extended performance analysis trace fails, a log message is output to the JavaVM log file, regardless of the specification of this property.

Examples of specification

The following is an example of specifying the property:

```
add.jvm.arg= -Djvm.userprf.Trace=true
```

jvm.userprf.LineNumber

Format

```
jvm.userprf.LineNumber={true|false}
```

Description

Specifies whether to output the line number of the line executed at the end of the method to the trace information, when a method terminates normally.

Default value

```
jvm.userprf.LineNumber=false
```

Prerequisite property

```
jvm.userprf.Enable=true
```

Argument

true

This argument outputs the line number of the line executed at the end of the method, to the operation information (OPR) in the trace information.

false

This argument does not output the line number of the line executed at the end of the method to the trace information.

If a value other than `true` or `false` is specified, the default value is used.

Precautions

When the debug information of the line number is not generated using the `-g` option of the `Javac` command, the line number is not output even when you specify `true` in this property.

Examples of specification

The following is an example of specifying the property:

```
add.jvm.arg= -Djvm.userprf.LineNumber=true
```

jvm.userprf.ThrowableName

Format

```
jvm.userprf.ThrowableName={true|false}
```

Description

Specifies whether to output the exception or error class name as the operation information (OPR) of the trace information, when a method terminates abnormally.

Default value

```
jvm.userprf.ThrowableName=false
```

Prerequisite property

```
jvm.userprf.Enable=true
```

Argument

`true`

This argument outputs the exception or error class name to the trace information.

`false`

This argument does not output the exception or error class name to the trace information.

If a value other than `true` or `false` is specified, the default value is used.

Precautions

If you specify `true` in this property, the class name is output with the editing method specified in the `jvm.userprf.ThrowableNameEditMethod` property.

Examples of specification

The following is an example of specifying the property:

```
add.jvm.arg= -Djvm.userprf.ThrowableName=true
```

jvm.userprf.ThrowableNameEditMethod

Format

```
jvm.userprf.ThrowableNameEditMethod={FRONT_CUT|BACK_CUT|CENTER_CUT}
```

Description

Specifies how to edit a class name when the exception or error class name exceeds 32 characters. If the exception or error class name is less than 32 characters, all the characters are output to the trace information regardless of the specification in this property.

Default value

```
jvm.userprf.ThrowableNameEditMethod=FRONT_CUT
```

Prerequisite property

- `jvm.userprf.Enable=true`
- `jvm.userprf.ThrowableName=true`

Argument

character-string

Specifies how to edit a class name when the exception or error class name exceeds 32 characters, using the following strings:

`FRONT_CUT`

The last 32 characters of the exception or error class name are output. Note that asterisk (*) indicating omission is added at the beginning of the characters.

`BACK_CUT`

The first 32 characters of the exception or error class name are output. Note that asterisk (*) indicating omission is added at the end of the characters.

`CENTER_CUT`

The first 16 characters and the last 16 characters of the exception or error class name are output. Note that asterisk (*) indicating omission is added between the first 16 and last 16 characters.

If strings other than those listed above are specified, the default value is used.

Examples of specification

The following is an example of specification when the first 32 characters of the exception class name or fully qualified class name are output to the operation information (OPR) in the trace information, when the processing terminates with an exception in which the package name is `com.sample` and the class name is `Class0123456789012345678901234567890`:

```
add.jvm.arg= -Djvm.userprf.ThrowableNameEditMethod=BACK_CUT
```

Depending on the value specified in the `jvm.userprf.LogLevel` property, the output in the operation information (OPR) of the trace information is as follows. For `jvm.userprf.LogLevel` properties, see [jvm.userprf.LogLevel](#).

If `class` is specified:

```
Class012345678901234567890123456*
```

If package or method or signature is specified:

```
com.sample.Class0123456789012345*
```

jvm.userprf.LogLevel

Format

```
jvm.userprf.LogLevel={class|package|method|signature}
```

Description

Specifies the output level of the user-extended performance analysis trace.

Default value

```
jvm.userprf.LogLevel=class
```

Prerequisite property

```
jvm.userprf.Enable=true
```

Argument

character-string

Specifies the following strings as the output level of the trace target methods to be output to the option information (OPT) in the trace information for the user-extended performance analysis trace.

`class`

Class name

`package`

Fully qualified class name

`method`

Fully qualified class name + method name

`signature`

Fully qualified class name + method name + method argument type

If strings other than those listed above are specified, the default value is used.

Note that if `true` is specified in the `jvm.userprf.ThrowableName` property, the operation information (OPR) is output as follows for the abnormal exit of the method due to the value specified in this property:

- If `class` is specified: Exception or error class name
- If `package` or `method` or `signature` is specified: Fully qualified class name of the exception or error

Examples of specification

The following is an example of specification when the trace information containing package name `com.sample`, class name `ClassA`, and method name `methodA` is output to the option information (OPT) in the trace information using fully qualified class name + method name:

```
add.jvm.arg= -Djvm.userprf.LogLevel=method
```

The trace information is output as follows:

- `com.sample.ClassA.methodA`

JP.co.Hitachi.soft.jvm.autofinalizer

Format

```
JP.co.Hitachi.soft.jvm.autofinalizer={true|false}
```

Description

This property specifies whether to enable the finalize-retention resolution function.

If you specify a value that is not `true` or `false`, the default value is applied.

Default value

```
JP.co.Hitachi.soft.jvm.autofinalizer=true
```

Examples of output

- When the function detects unfinished finalize processes and generates a new finalize processing monitoring thread

```
# FinalizerWatcherThread: Create: create secondary finalizer thread.  
[queue length = 128] <Mon May 26 18:00:36 JST 2008>
```

- When the generated finalize processing monitoring thread ends

```
# FinalizerWatcherThread: Finish: secondary finalizer thread is finished.  
<Mon May 26 20:12:26 JST 2008>
```

sun.nio.cs.map

Format

```
sun.nio.cs.map=Windows-31J/Shift_JIS
```

Description

This property specifies whether to equate the encoding names `shift_jis`, `csshiftjis`, `ms_kanji`, and `x-sjis` with MS932.

In JDK 1.4.0, the character encoding aliases `shift_jis`, `csshiftjis`, `ms_kanji`, and `x-sjis` were aliases of MS932. However, from JDK 1.4.2 onwards, they were changed to aliases of SJIS. If you have a program in which `shift_jis`, `csshiftjis`, `ms_kanji`, or `x-sjis` is used as an alias of MS932 and run it with JDK 1.4.2 or later, text might be garbled.

To handle `shift_jis`, `csshiftjis`, `ms_kanji`, and `x-sjis` as aliases of MS932 in the same way as with JDK 1.4.0, specify `Windows-31J/Shift_JIS` for the `sun.nio.cs.map` property.

Example:

```

import java.io.*;
class encode_Shift_JIS {
    public static void main( String arg[] ) {
        try {
            String string_data = " -Ⓣ~ ";
            byte[] data = string_data.getBytes();
            InputStreamReader isr =
                new InputStreamReader(
                    new ByteArrayInputStream( data ), "shift_jis");
            char[] read_data = new char[6];
            isr.read( read_data, 0, 6 );
            System.out.println(new String(read_data));
        }
        catch ( Exception e ) {
            e.printStackTrace();
        }
    }
}

```

When the preceding program is executed with JDK 1.4.0, text is not garbled because `shift_jis` is handled as an alias of MS932. However, if the program is executed with JDK 1.4.2, text is garbled as follows:

```

java encode_Shift_JIS
??@?

```

To avoid such garbled text, specify `Windows-31J/Shift_JIS` for the `sun.nio.cs.map` property when executing the program.

Examples of specification

If you set this property on a J2EE server, specify the following entry in the `usrconf.cfg` file:

```

add.jvm.arg=-Dsun.nio.cs.map=Windows-31J/Shift_JIS

```

For details about how to specify settings in the `usrconf.cfg` file in a specific environment such as a J2EE server, see [2.2.2 *usrconf.cfg* \(Option definition file for J2EE servers\)](#).

14.4 Default values of the Java HotSpot VM options that can be specified in Cosminexus

This section displays the default value of the Java HotSpot VM options. The default value differs for each OS.

Tip

The default values described in this section are the initial values defined in the Java HotSpot VM.

When a J2EE server, batch server, or Java application is started, for some keys, the default values specified by using `add.jvm.arg` keys in the respective option definition file might override the default values shown in this section.

For details about the default values in the respective option definition file, see [2.2.2 `usrconf.cfg` \(Option definition file for J2EE servers\)](#), [3.2.1 `usrconf.cfg` \(Option definition file for batch servers\)](#), or [12.2.1 `usrconf.cfg` \(Option definition file for Java applications\)](#).

The following table describes the default values of the Java HotSpot VM options for each OS: For details about the Java HotSpot VM options that can be specified in Application Server, see [14.5 Java HotSpot VM options that can be specified in Cosminexus](#).

Table 14–10: Default values of the Java HotSpot VM options

No.	Option name	Types of OS and JavaVM to be used		
		Windows	Linux	AIX
		[server]	[server]	[server]
1	<code>-Xmxsize#1</code>	83M	83M	83M
2	<code>-Xmssize#1</code>	7.8M	7.8M	7.8M
3	<code>-XX:MaxMetaspaceSize=size#1</code>	2 ⁶⁴ -1	2 ⁶⁴ -1	2 ⁶⁴ -1
4	<code>-XX:MetaspaceSize=size#1</code>	16M	16M	16M
5	<code>-XX:CompressedClassSpaceSize=size#1</code>	1G	1G	1G
6	<code>-Xmnsize</code>	#3	#3	#3
7	<code>-Xsssize</code>	1M	1M	1M
8	<code>-XX:NewRatio=value#1</code>	2	2	2
9	<code>-XX:SurvivorRatio=value#2</code>	8	32	8
10	<code>-XX:TargetSurvivorRatio=value</code>	50	50	50
11	<code>-XX:MaxTenuringThreshold=value</code>	14	14	14
12	<code>-XX:ReservedCodeCacheSize=size</code>	48M	48M	48M

Note:

Unit of *size* is bytes.

#1

For J2EE servers, the default value of the `add.jvm.arg` key in the option definition file for J2EE servers (`usrconf.cfg`) is enabled. The default value of the option that is not defined in the `add.jvm.arg` key is the value mentioned in this table.

#2

The default JavaVM values are overwritten on the J2EE server executed in the J2EE server mode. The default value after overwriting is `-XX:SurvivorRatio=8`. This is common in all platforms.

#3

Decided according to the Java heap and `-XX:NewRatio`.

14.5 Java HotSpot VM options that can be specified in Cosminexus

This section describes the Java HotSpot VM options that can be specified in `add.jvm.arg` and the precautions to be taken when you specify the options.

The following table describes the Java HotSpot VM options that can be specified in `add.jvm.arg`. Note that *VR* is the version of the Application Server in which parameters are introduced or changed.

Table 14–11: Java HotSpot VM options that can be specified when `add.jvm.arg` is specified

Option name	Contents	Specifiable value	VR
<code>-Dproperty</code>	Specifies the JavaVM system properties.	The input is not limited.	05-00
<code>-agentlib:libname [=options]</code>	Loads the native agent library <i>libname</i> .	The input is not limited.	08-00
<code>-verbose:information-type</code>	Outputs the information specified in <i>information-type</i> . The following values can be specified in <i>information-type</i> : class: Outputs the class-related information whenever a class is loaded. gc: Reports whenever a GC event occurs. jni: Reports the information related to usage of the native method and other Java Native Interface (JNI) activities.	The following strings can be specified: <ul style="list-style-type: none"> • class • gc • jni 	05-00
<code>-Xloggc:file</code>	Alike <code>-verbose:gc</code> , the GC event is reported whenever the event occurs; however, that data is recorded in the <i>file</i> . Apart from the information reported when <code>-verbose:gc</code> is specified, the time (unit: seconds) elapsed from the first GC event is added at the beginning of each reported event.	The input is not limited.	05-00
<code>-Xmssize</code>	Sets up the initial size of Java heap.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" • Tera "t" Note that the value is not case sensitive.	05-00
<code>-Xmxsize</code>	Sets up the maximum size of the Java heap.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" • Tera "t" Note that the value is not case sensitive.	05-00
<code>-Xmnsize</code>	Sets up the initial value and maximum value of the New area.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" 	05-00

Option name	Contents	Specifiable value	VR
		<ul style="list-style-type: none"> • Tera "t" Note that the value is not case sensitive.	
-Xsssize	Sets up the maximum size of one stack area.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" • Tera "t" Note that the value is not case sensitive.	05-00
-Xprof	When this option is specified, a profile of the running program is generated and the profiling data is output in standard output. This option is provided as the utility for developing programs. This option is not intended for use in a real system.	--	05-00
-Xrunhprof[:suboption=value, ...]	Enables the profiling of the CPU, heap, or monitor. Specify a colon ':' behind -Xrunhprof and code '<suboption>=<value>'. You can specify multiple '<suboption>=<value>' separated with comma ','. To acquire the list of sub options and their default values, execute the command <code>java-Xrunhprof:help</code> .	Specify any string. You cannot specify '=' and ',' in <suboption>. Also, you cannot specify ',' in <value>.	05-00
-XrunlibraryName	Specifies the library containing agents such as JVMPI and JVMDI, and the option strings passed at start up.	The input is not limited.	05-00
-Xdebug	When this option is specified, JVMDI support is enabled and started. Hitachi does not recommend JVMDI. Also, this option is not used for debugging in J2SE 5.0. Therefore, this option is not required for debugging in J2SE 5.0.	--	05-00
-XX:NewRatio=value	Specifies the ratio of Tenured area to New area. If <i>value</i> is 2, the ratio of the New area and the Tenured area is 1:2. If <i>size-of-New-area-being-used</i> \geq <i>size-of-Tenured-free-area</i> , the Full GC occurs. Note that the Full GC occurs frequently if 1 is specified for this option.	Specify a natural number value.	05-00
-XX:MetaspaceSize=size	Specifies the initial size of Metaspace area.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" • Tera "t" Note that the value is not case sensitive.	09-70
-XX:MaxMetaspaceSize=size	Specifies the maximum size for the Metaspace area.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" • Tera "t" Note that the value is not case sensitive.	09-70

Option name	Contents	Specifiable value	VR
- XX:CompressedClass SpaceSize	Specifies the maximum size of the compressed class space.	Specify a natural number using the following units: <ul style="list-style-type: none"> • Kilo "k" • Mega "m" • Giga "g" Note that the value is not case sensitive.	09-70
- XX:SurvivorRatio= <i>value</i>	Specifies the ratio of New: :Eden area to the From space and To space of New: :Survivor area. If 8 is set in <i>value</i> , the ratio of the New: :Eden area, From space and To space is 8:1:1.	Specify a natural number value.	05-00
- XX:TargetSurvivorRatio= <i>value</i>	Specifies the target value (0 to 100 (unit: %)) for the ratio occupied by the Java objects in New::Survivor area after GC is executed.	Specify a natural number value.	05-00
- XX:MaxTenuringThreshold= <i>value</i>	Specifies the threshold value for the number of times a Java object is replaced in the From space and To space when copy GC is executed. The Java objects to be replaced after the specified count is exceeded are moved to Tenured area. The valid range of this option is from 0 to the default value. If a value outside the range is specified, the function for moving to the Tenured area is disabled if exceeds the threshold value.	Specify a natural number value.	05-00
-Xrunhndlwrap	Specifies whether to continue an execution of JavaVM, if you log off the Windows in an environment earlier than the JDK version 5. If -XX:+EagerXrunInit is specified, specification of this option is invalid or -agentlib:hndlwrap2. If -agentlib:hndlwrap2 is set, do not set this option. This option cannot be used concurrently with another JVMTI version program. If you log off Windows when a Java program using this option is being executed at the command prompt, an error popup stating 'Program is not responding' appears and you cannot log off.	--	05-01
- agentlib:hndlwrap2	Specifies whether to continue an execution of JavaVM, if you log off the Windows is in an environment with JDK version 6. If -Xrunhndlwrap is set, do not set this option. This option cannot be used concurrently with other JVMTI version programs. If you log off Windows when a Java program using this option is being executed at the command prompt, an error popup stating 'Program is not responding' appears and you cannot log off.	--	08-50
-XX: [+ -]UseSerialGC#	-XX:+UseSerialGC Serial GC is executed. -XX:-UseSerialGC Serial GC is not executed.	The following characters can be specified: <ul style="list-style-type: none"> • Plus sign (+) • Minus sign (-) 	08-70
-XX: [+ -]UseG1GC	-XX:+UseG1GC G1 GC is executed. -XX:-UseG1GC G1 GC is not executed.	The following characters can be specified: <ul style="list-style-type: none"> • Plus sign (+) • Minus sign (-) 	09-60

Option name	Contents	Specifiable value	VR
	<p>This option cannot be specified concurrently with the <code>-XX:+HitachiUseExplicitMemory</code> option. If specified, a message is output to the standard output and JavaVM terminates with the return code 1.</p>		
<p><code>-XX:ParallelGCThreads</code></p>	<p>Specifies the number of threads with which to execute evacuation of G1 GC in parallel. This option is enabled when <code>-XX:+UseG1GC</code> is specified. Also, we recommend that you use the default value for this option. If you want to change the value, calculate the optimum value based on the value measured by actually operating JavaVM, and then change the value.</p> <p>When a Java VM starts, as many threads as the value specified for this option are created to perform evacuation processing.</p> <p>The default values used when this option is omitted are as follows:</p> <ul style="list-style-type: none"> • If the logical CPU count in the execution environment is 8 or less, the CPU count becomes the default value. • If the logical CPU count in the execution environment is 9 or more, the default value is "$8 + (CPU-count - 8) \times (5 \div 8)$" (rounded off after the decimal point). <p>For example, for 4 CPUs, the default value is 4 with <code>ParallelGCThreads=4</code>. Also, for 72 CPUs, the default value is 48 with <code>ParallelGCThreads=8 + (72-8) \times (5 \div 8)=48</code>. If 0 is specified for this option, the default value is applied.</p> <p>Note the following when you specify a value:</p> <ul style="list-style-type: none"> • Specifying a larger value for this option creates more evacuation processing threads, thus increasing the resources allocated to the processing. This might lead to a low throughput. If you change the value of this option, verify whether the performance requirement is met. • If you specify a value larger than the maximum number of threads that can be created in the execution environment, the Java VM cannot start because creation of evacuation processing threads fails. 	<p>Specify a natural number value.</p>	<p>08-70</p>
<p><code>-XX:ConcGCThreads</code></p>	<p>Specifies the number of threads that performs concurrent marking (CM) processing for G1 GC in parallel.</p> <p>This option takes effect if <code>-XX:+UseG1GC</code> is specified. We recommend that you use this option without changing the default value. When changing the value, calculate the optimal value based on measurement in actual Java VM operation.</p> <p>When a Java VM starts, as many threads as the value specified for this option are created to perform CM processing.</p> <p>The default value applied if this option is omitted is as follows:</p> <ul style="list-style-type: none"> • $\text{Max}((\text{ParallelGCThreads} + 2) \div 4, 1)$ <p>$\text{Max}(A,B)$ means whichever is larger, <i>A</i> or <i>B</i>. <i>ParallelGCThreads</i> indicates the value of <code>-XX:ParallelGCThreads</code>.</p> <p>If you specify 0 for this option, the default value is applied.</p> <p>When you specify this option, note the following points:</p> <ul style="list-style-type: none"> • If you specify a value larger than the maximum number of threads that can be created in the execution 	<p>Specify a natural number value.</p>	<p>09-60</p>

Option name	Contents	Specifiable value	VR
	<p>environment, the Java VM cannot start because creation of CM processing threads fails.</p> <ul style="list-style-type: none"> No more CM processing threads than the number of evacuation processing threads can be created. If you attempt to create more CM processing threads than the number of evacuation processing threads, a message is output to the standard output and the Java VM fails to start. 		
-XX:MaxGCPauseMillis	<p>Specifies the target value of the time for which the application will stop during G1 GC. You can specify the value in milliseconds.</p> <p>This option takes effect if -XX:+UseG1GC is specified.</p> <p>If you specify 0 for this option, a message is output to the standard output and the Java VM fails to start.</p> <p>If you specify 100 or a smaller value for this option, we recommend that you use the asynchronous log file output functionality (by specifying -XX:+JavaLogAsynchronous).</p>	Specify a natural number value.	09-60
-XX:ReservedCodeCacheSize	Specifies the maximum size of the code cache area.	<p>Specify a natural number using the following units:</p> <ul style="list-style-type: none"> Kilo "k" Mega "m" Giga "g" <p>Note that the value is not case sensitive.</p>	09-50

Legend:

--: Not applicable.

#

The processing performed differs depending on the combination of the specifications of the -XX:[+|-]UseSerialGC and -XX:[+|-]UseG1GC options, as shown in the following table.

Table 14–12: Processing performed for each combination of the specifications of the -XX:[+|-]UseSerialGC and -XX:[+|-]UseG1GC options

Specification of the -XX:[+ -]UseSerialGC option	Specification of the -XX:[+ -]UseG1GC option	Processing performed
Not specified	Not specified	Serial GC is performed.
-XX:+UseSerialGC	-XX:+UseG1GC	Process startup fails.
-XX:+UseSerialGC	-XX:-UseG1GC	Serial GC is performed. (Same as the default behavior.)
-XX:-UseSerialGC	-XX:-UseG1GC	
-XX:-UseSerialGC	-XX:+UseG1GC	G1 GC is performed.

Important note

- Debug or profiling option

The JVM options `-Xprof` and `-Xdebug`, and the JVMTI agents `hprof` and `jdwp` (specified using `-agentlib:<libname>`) are provided as the program development utilities. Do not specify these options with system operations.

- Specifying the GC

For the type of GC that can be performed on application servers, you can select serial GC (`UseSerialGC`) or G1 GC (`UseG1GC`). Do not specify both these types of GC. If you specify both types, no Java process can start.

Tip

The references for the default values of the Java HotSpot VM options differ for each server. The following table describes the references for the default values of the Java HotSpot VM options for each server and application:

Table 14–13: References for the default values of the Java HotSpot VM options for each server and application

Server and application used	Reference
J2EE server	<i>2.2.2 <code>usrconf.cfg</code> (Option definition file for J2EE servers)</i>
Batch server	<i>3.2.1 <code>usrconf.cfg</code> (Option definition file for batch servers)</i>
Java applications started with the <code>cjclstartap</code> command	<i>12.2.1 <code>usrconf.cfg</code> (Option definition file for Java applications)</i>
Other Java applications	<i>14.4 Default values of the Java HotSpot VM options that can be specified in <code>Cosminexus</code></i>

To specify Java HotSpot VM options in the Easy Setup definition file, you specify Java HotSpot VM options in 'Contents specified in param-value' that can be specified when `add.jvm.arg` is specified in 'Value specified in param-name'.

14.6 List of environment variables used in JavaVM

The following table lists the environment variables used in JavaVM:

VR is the version of Application Server on which environment variables are introduced or changed.

Table 14–14: List of environment variables used in JavaVM

Classification	Environment variable	Description	VR
Environment variables used in JavaVM	JAVACOREDIR	Specify the output destination directory of the thread dump file.	In Windows 05-05 On other OSs 05-00

14.7 Details of environment variables used in JavaVM

This section describes details on the environment variables used in JavaVM.

JAVACOREDIR

Format

In Windows (batch file)

```
set JAVACOREDIR=output-destination-directory-of-thread-dump-file
```

In UNIX (C shell)

```
setenv JAVACOREDIR output-destination-directory-of-thread-dump-file
```

Description

Specifies the output destination directory used to output the thread dump file.

Default value

By default, JAVACOREDIR is not setup.

Thread dump output destination

By default, the thread dump file is output to the current directory.

The current directory is as follows:

In Windows

```
working-directory\ejb\server-name
```

In UNIX

```
working-directory/ejb/server-name
```

Prerequisite options

-XX:+HitachiThreadDump

Examples of specification

In Windows (batch file)

The thread dump is output to C:.

```
set JAVACOREDIR=C:\home\user\threaddump
```

In UNIX (C shell)

The thread dump is output to /home/user/threaddump.

```
setenv JAVACOREDIR /home/user/threaddump
```

Precautions

- If an attempt to output the thread dump file to the directory specified in JAVACOREDIR fails, the thread dump file is output to the current directory.
- If the output to the current directory also fails, the thread dump is only output to the standard error output. In this case, the thread dump is not output to the standard output.

Appendixes

A. Extended MIB object definition file

The extended MIB object definition file is used to output information such as operation performance that the Management Server outputs, in the form of MIB objects. Use MIB objects when integrating with SNMP Manager products.

A.1 Tables in the extended MIB object definition file

This section describes the tables of the extended MIB object definition file.

The OIDs of each table are as follows:

```
.iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).hitachi(116).systemExMib(5).cosminexusMibs(33).manager(1)
```

(1) j2eeContainerTable

The following table describes j2eeContainerTable:

Table A–1: j2eeContainerTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
j2eeContainerTable (1)	j2eeContainerEntry (1)	j2eeContainerIndex (1)	INTEGER	RO	--	Sequence number [1,...]	None
		j2eeContainerFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name"</i>	
		j2eeContainerServerName (3)	DisplayString	RO	--	Name of the J2EE server	
		j2eeContainerNamingServiceHost (4)	DisplayString	RO	--	Host name of the Naming Service to which the J2EE server is to be connected.	
		j2eeContainerNamingServicePort (5)	INTEGER	RO	--	Port number of the Naming Service to which the J2EE server is to be connected.	
		j2eeContainerStartTime (6)	INTEGER	RO	Seconds	Startup time of the J2EE server [#]	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

#

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

(2) jvmTable

The following table describes jvmTable:

Table A–2: jvmTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
jvmTable (2)	jvmEntry (1)	jvmIndex (1)	INTEGER	RO	--	Sequence number [1,...]	None
		jvmFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name"</i>	
		jvmName (3)	DisplayString	RO	--	Implementation name of JavaVM	
		jvmVersion (4)	DisplayString	RO	--	Implementation version of JavaVM	
		jvmCurrentFreeMemory (5)	Gauge	RO	KB	Free memory requirement of JavaVM (current value)	
		jvmFreeMemoryHighWaterMark (6)	Gauge	RO	KB	Free memory requirement of JavaVM (maximum value)	
		jvmFreeMemoryLowWaterMark (7)	Gauge	RO	KB	Free memory requirement of JavaVM (minimum value)	
		jvmFreeMemoryAverage (8)	Gauge	RO	KB	Free memory requirement of JavaVM (average value ^{#1})	
		jvmFreeMemoryPeak (9)	Gauge	RO	KB	Free memory requirement of JavaVM (peak value ^{#2})	
		jvmCurrentTotalMemory (10)	Gauge	RO	KB	Current value of the total memory requirement of JavaVM (total of the used memory requirement and free memory requirement)	
		jvmTotalMemoryHighWaterMark (11)	Gauge	RO	KB	Maximum value of the total memory requirement of JavaVM (total of the used memory requirement and free memory requirement)	
		jvmTotalMemoryLowWaterMark (12)	Gauge	RO	KB	Minimum value of the total memory requirement of JavaVM (total of the used memory requirement and free memory requirement)	
		jvmTotalMemoryAverage	Gauge	RO	KB	Average value ^{#1} of the total memory requirement of	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(13)				JavaVM (total of the used memory requirement and free memory requirement)	
		jvmTotalMemoryPeak (14)	Gauge	RO	KB	Peak value ^{#2} of the total memory requirement of JavaVM (total of the used memory requirement and free memory requirement)	
		jvmMaxMemory (15)	INTEGER	RO	KB	If maximum used memory requirement of JavaVM is not specified, assume $(2^{63}-1)/2^{10}$	
		jvmStatisticsStartedTime (16)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		jvmSamplingTime (17)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Peak value at the point of value acquisition request

This peak value is the maximum value for the available period of the sampling time after recording.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(3) transactionTable

The following table describes transactionTable:

Table A–3: transactionTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
transactionTable (3)	transactionEntry (1)	transactionIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The transaction must be started

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		transactionFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance "logical-server-name"	
		transactionDefaultTransactionTimeout (3)	INTEGER	RO	Seconds	Default value of transaction timeout	
		transactionActiveTransactionCount (4)	Gauge	RO	--	Number of active transactions (current value)	
		transactionAverageTime (5)	Gauge	RO	Milliseconds	Transaction time (average value ^{#1})	
		transactionStatisticsStartTime (6)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		transactionSamplingTime (7)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(4) httpServerTable

The following table describes httpServerTable:

Table A-4: httpServerTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
httpServerTable (4)	httpServerEntry (1)	httpServerIndex (1)	INTEGER	RO	--	Sequence number [1,...]	None

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		httpServerFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name"</i>	
		httpServerPortNumber (3)	INTEGER	RO	--	Port number of the server for management	
		httpServerActiveThreadCountHighWaterMark (4)	Gauge	RO	--	Number of active threads (maximum value)	
		httpServerActiveThreadCountLowWaterMark (5)	Gauge	RO	--	Number of active threads (minimum value)	
		httpServerActiveThreadCountAverage (6)	Gauge	RO	--	Number of active threads (average value ^{#1})	
		httpServerActiveThreadCountPeak (7)	Gauge	RO	--	Number of active threads (peak value ^{#2})	
		httpServerStatisticsStartTime (8)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		httpServerSamplingTime (9)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Peak value at the point of value acquisition request

This peak value is the maximum value for the available period of the sampling time after recording.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(5) httpServerConnectorTable

The following table describes httpServerConnectorTable:

Table A–5: httpServerConnectorTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
httpServerConnectorTable (5)	httpServerConnectorEntry (1)	httpServerConnectorIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Web server integration functionality is used
		httpServerConnectorFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance "logical-server-name"	
		httpServerConnectorPortNumber (3)	INTEGER	RO	--	Port used for communication with the Web server	
		httpServerConnectorBackLogUpperBound (4)	INTEGER	RO	--	Backlog of the socket used for communication with the Web server	
		httpServerConnectorConnectionCount (5)	Gauge	RO	--	Number of connections between the Web server and Web container (current value)	
		httpServerConnectorConnectionCountHighWaterMark (6)	Gauge	RO	--	Number of connections between the Web server and Web container (maximum value)	
		httpServerConnectorConnectionCountLowWaterMark (7)	Gauge	RO	--	Number of connections between the Web server and Web container (minimum value)	
		httpServerConnectorActiveThreadCountUpperBound (8)	Gauge	RO	--	Number of active threads (upper-limit value)	
		httpServerConnectorActiveThreadCountHighWaterMark (9)	Gauge	RO	--	Number of active threads (maximum value)	
		httpServerConnectorActiveThreadCountLowWaterMark (10)	Gauge	RO	--	Number of active threads (minimum value)	
		httpServerConnectorActiveThreadCountAverage (11)	Gauge	RO	--	Number of active threads (average value ^{#1})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		httpServerConnectorActiveThreadCountPeak (12)	Gauge	RO	--	Number of active threads (peak value ^{#2})	
		httpServerConnectorWaitingRequestCountHighWaterMark (13)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (maximum value)	
		httpServerConnectorWaitingRequestCountLowWaterMark (14)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (minimum value)	
		httpServerConnectorWaitingRequestCountAverage (15)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (average value ^{#1})	
		httpServerConnectorWaitingRequestCountPeak (16)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (peak value ^{#2})	
		httpServerConnectorStatisticsStartTime (17)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		httpServerConnectorSamplingTime (18)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	
		httpServerConnectorActiveThreadCount (19)	Gauge	RO	--	Number of active threads	
		httpServerConnectorWaitingRequestCount (20)	Gauge	RO	--	Number of requests awaiting execution	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Peak value at the point of value acquisition request

This peak value is the maximum value for the available period of the sampling time after recording.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(6) dataSourceTable

The following table describes dataSourceTable:

Table A–6: dataSourceTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
dataSourceTable (6)	dataSourceEntry (1)	dataSourceIndex(1)	INTEGER	RO	--	Sequence number [1,...]	The data source must be imported
		dataSourceFullyQualifiedName(2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : data-source-name"</i>	
		dataSourceName(3)	DisplayString	RO	--	Data source name	
		dataSourceAuthenticationType(4)	INTEGER	RO	--	Authentication type 0: Authentication of each application 1: Authentication of each container	
		dataSourceLoginTimeout(5)	INTEGER	RO	Seconds	Login timeout value	
		dataSourceUserID(6)	DisplayString	RO	--	User ID	
		dataSourcePoolUpperBound(7)	INTEGER	RO	--	Number of connection pools (upper-limit value)	
		dataSourcePoolLowerBound(8)	INTEGER	RO	--	Number of connection pools (lower-limit value)	
		dataSourceCurrentPoolSize(9)	Gauge	RO	--	Number of connection pools (current value)	
		dataSourceActiveConnectionCount(10)	Gauge	RO	--	Number of active connections (current value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		dataSourceFreeConnectionCount (11)	Gauge	RO	--	Number of free connections (current value)	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

(7) j2eeApplicationTable

The following table describes j2eeApplicationTable:

Table A–7: j2eeApplicationTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
j2eeApplicationTable (7)	j2eeApplicationEntry (1)	j2eeApplicationIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The J2EE application (EAR) must be started
		j2eeApplicationFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name"</i> [#]	
		j2eeApplicationName (3)	DisplayString	RO	--	J2EE application name	
		j2eeApplicationDeployedTime (4)	INTEGER	RO	Seconds	Time of deployment	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

#

When you start an application in the test mode, the fully qualified name becomes *"logical-server-name:J2EE-application-name_TEST"*.

(8) ejbApplicationTable

The following table describes ejbApplicationTable:

Table A–8: `ejbApplicationTable`

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
ejbApplicationTable (8)	ejbApplicationEntry (1)	ejbApplicationIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The EJB application (EJB-JAR) must be started
		ejbApplicationFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name"</i>	
		ejbApplicationName (3)	DisplayString	RO	--	EJB application name (EJB-JAR name)	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

(9) `statelessSessionBeanTable`

The following table describes `statelessSessionBeanTable`:

Table A–9: `statelessSessionBeanTable`

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanTable (9)	statelessSessionBeanEntry (1)	statelessSessionBeanIndex (1)	INTEGER	RO	--	Sequence number [1,...]	A Stateless Session Bean is used
		statelessSessionBeanFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:Enterprise-Bean-name"</i>	
		statelessSessionBeanName (3)	DisplayString	RO	--	Enterprise Bean name	
		statelessSessionBeanHomeInterfaceName (4)	DisplayString	RO	--	RemoteHome interface class name ^{#1}	
		statelessSessionBeanRemoteInterfaceName	DisplayString	RO	--	RemoteComponent interface class name ^{#1}	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(5)					
		statelessSessionBeanLocalHomeInterfaceName (6)	DisplayString	RO	--	LocalHome interface class name (EJB2.0 compliant) ^{#2}	
		statelessSessionBeanLocalComponentInterfaceName (7)	DisplayString	RO	--	LocalComponent interface class name (EJB2.0 compliant) ^{#2}	
		statelessSessionBeanEjbClassName (8)	DisplayString	RO	--	EJB class name	
		statelessSessionBeanPoolUpperBound (9)	INTEGER	RO	--	Number of instance pools (upper-limit value)	
		statelessSessionBeanPoolLowerBound (10)	INTEGER	RO	--	Number of instance pools (lower-limit value)	
		statelessSessionBeanCurrentPoolSize (11)	Gauge	RO	--	Number of instance pools (current value)	
		statelessSessionBeanWaitingSessionCount (12)	Gauge	RO	--	Number of sessions waiting to be connected (current value)	
		statelessSessionBeanActiveSessionBeanCount (13)	Gauge	RO	--	Number of active Stateless Session Beans (current value)	
		statelessSessionBeanFreeSessionBeanCount (14)	Gauge	RO	--	Number of free Stateless Session Beans (current value)	
		statelessSessionBeanFreeSessionTransactionType (15)	DisplayString	RO	--	Transaction type "CMT" or "BMT"	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

#1

Displays "" (a null character) only in case of the Local interface.

#2

Displays "" (a null character) only in case of the Remote interface.

(10) statelessSessionBeanHomeTable

The following table describes statelessSessionBeanHomeTable:

Table A-10: statelessSessionBeanHomeTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanHomeTable (10)	statelessSessionBeanHomeEntry (1)	statelessSessionBeanHomeIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Remote Home Interface is used
		statelessSessionBeanHomeFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:Enterprise-Bean-name"</i>	
		statelessSessionBeanHomeName (3)	DisplayString	RO	--	RemoteHome interface class name	
		statelessSessionBeanHomeResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (maximum value)	
		statelessSessionBeanHomeResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (minimum value)	
		statelessSessionBeanHomeResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (average value ^{#1})	
		statelessSessionBeanHomeStatisticsStartedTime (7)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanHomeSamplingTime (8)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(11) statelessSessionBeanRemoteTable

The following table describes statelessSessionBeanRemoteTable:

Table A–11: statelessSessionBeanRemoteTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanRemoteTable (11)	statelessSessionBeanRemoteEntry (1)	statelessSessionBeanRemoteIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Remote Component Interface is used
		statelessSessionBeanRemoteFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name"</i>	
		statelessSessionBeanRemoteName (3)	DisplayString	RO	--	RemoteComponent interface class name	
		statelessSessionBeanRemoteResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (maximum value)	
		statelessSessionBeanRemoteResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (minimum value)	
		statelessSessionBeanRemoteResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (average value ^{#1})	
		statelessSessionBeanRemoteResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (maximum value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statelessSessionBeanRemoteResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (minimum value)	
		statelessSessionBeanRemoteResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (average value ^{#1})	
		statelessSessionBeanRemoteStatisticsStartedTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanRemoteSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(12) statefulSessionBeanTable

The following table describes statefulSessionBeanTable:

Table A–12: statefulSessionBeanTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanTable (12)	statefulSessionBeanEntry (1)	statefulSessionBeanIndex (1)	INTEGER	RO	--	Sequence number [1,...]	A Stateful Session Bean is used
		statefulSessionBeanFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-</i>	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
						<i>name : Enterprise-Bean-name"</i>	
		statefulSessionBeanName (3)	DisplayString	RO	--	Enterprise Bean name	
		statefulSessionBeanHomeInterfaceName (4)	DisplayString	RO	--	RemoteHome interface class name ^{#1}	
		statefulSessionBeanRemoteInterfaceName (5)	DisplayString	RO	--	RemoteComponent interface class name ^{#1}	
		statefulSessionBeanLocalHomeInterfaceName (6)	DisplayString	RO	--	LocalHome interface class name ^{#2}	
		statefulSessionBeanLocalComponentInterfaceName (7)	DisplayString	RO	--	LocalComponent interface class name ^{#2}	
		statefulSessionBeanEjbClassName (8)	DisplayString	RO	--	EJB class name	
		statefulSessionBeanSessionUpperBound (9)	INTEGER	RO	--	Number of concurrent connections (upper-limit value)	
		statefulSessionBeanActiveSessionUpperBound (10)	INTEGER	RO	--	Number of concurrent executions (upper-limit value)	
		statefulSessionBeanPassivateTimeout (11)	INTEGER	RO	Seconds	Timeout value of a passive session	
		statefulSessionBeanActiveTimeout (12)	INTEGER	RO	Seconds	Timeout value of an active session	
		statefulSessionBeanCurrentSessionCount (13)	Gauge	RO	--	Number of connected sessions (current value)	
		statefulSessionBeanWaitingSessionCount (14)	Gauge	RO	--	Number of sessions waiting to be connected (current value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statefulSessionBeanActiveSessionCount (15)	Gauge	RO	--	Number of active sessions (current value)	
		statefulSessionBeanPassiveSessionCount (16)	Gauge	RO	--	Number of passive sessions (current value)	
		statefulSessionBeanTransactionType (17)	DisplayString	RO	--	Transaction type "CMT" or "BMT"	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

#1

Displays "" (a null character) only in case of the Local interface.

#2

Displays "" (a null character) only in case of the Remote interface.

(13) statefulSessionBeanHomeTable

The following table describes statefulSessionBeanHomeTable:

Table A–13: statefulSessionBeanHomeTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanHomeTable (13)	statefulSessionBeanHomeEntry (1)	statefulSessionBeanHomeIndex (1)	INTEGER	RO	--	Sequence number [1,...]	Stateful Session Bean Remote Home Interface is used
		statefulSessionBeanHomeFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name: J2EE-application-name: EJB-application-name: Enterprise-Bean-name"</i>	
		statefulSessionBeanHomeName (3)	DisplayString	RO	--	RemoteHome interface class name	
		statefulSessionBeanHomeResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (maximum value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statefulSessionBeanHomeResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (minimum value)	
		statefulSessionBeanHomeResponseAverageTime (6)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (average value ^{#1})	
		statefulSessionBeanHomeResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteHome interface (maximum value)	
		statefulSessionBeanHomeResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteHome interface (minimum value)	
		statefulSessionBeanHomeResponseEjbAverageTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteHome interface (average value ^{#1})	
		statefulSessionBeanHomeStatisticsStartedTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanHomeSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(14) statefulSessionBeanRemoteTable

The following table describes statefulSessionBeanRemoteTable:

Table A–14: statefulSessionBeanRemoteTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanRemoteTable (14)	statefulSessionBeanRemoteEntry (1)	statefulSessionBeanRemoteIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Remote Component Interface is used
		statefulSessionBeanRemoteFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name"</i>	
		statefulSessionBeanRemoteName (3)	DisplayString	RO	--	RemoteComponent interface class name	
		statefulSessionBeanRemoteResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (maximum value)	
		statefulSessionBeanRemoteResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (minimum value)	
		statefulSessionBeanRemoteResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (average value ^{#1})	
		statefulSessionBeanRemoteResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteComponent interface (maximum value)	
		statefulSessionBeanRemoteResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteComponent interface (minimum value)	
		statefulSessionBeanRemoteResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteComponent interface (average value ^{#1})	
		statefulSessionBeanRemoteStatisticsStartTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statefulSessionBeanRemoteSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(15) entityBeanTable

The following table describes entityBeanTable:

Table A–15: entityBeanTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
entityBeanTable (15)	entityBeanEntry (1)	entityBeanIndex (1)	INTEGER	RO	--	Sequence number [1,...]	An Entity Bean is used
		entityBeanFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name"</i>	
		entityBeanName (3)	DisplayString	RO	--	Enterprise Bean name	
		entityBeanHomeInterfaceName (4)	DisplayString	RO	--	RemoteHome interface class name ^{#1}	
		entityBeanRemoteInterfaceName (5)	DisplayString	RO	--	RemoteComponent interface class name ^{#1}	
		entityBeanLocalHomeInterfaceName (6)	DisplayString	RO	--	LocalHome interface class name ^{#2}	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		entityBeanLocalComponentInterfaceName (7)	DisplayString	RO	--	LocalComponent interface class name#2	
		entityBeanEjbClassName (8)	DisplayString	RO	--	EJB class name	
		entityBeanPersistenceType (9)	DisplayString	RO	--	Persistence type CMP or BMP	
		entityBeanCacheOption (10)	DisplayString	RO	--	Cache model A: Full Cache B: Cache C: No Cache	
		entityBeanSessionUpperBound (11)	INTEGER	RO	--	Number of concurrent connections (upper-limit value)	
		entityBeanPoolUpperBound (12)	INTEGER	RO	--	Number of instance pools (upper-limit value)	
		entityBeanPoolLowerBound (13)	INTEGER	RO	--	Number of instance pools (lower-limit value)	
		entityBeanCurrentPoolSize (14)	Gauge	RO	--	Number of instance pools (current value)	
		entityBeanSessionTimeout (15)	INTEGER	RO	--	Connection timeout value	
		entityBeanCurrentSessionCount (16)	Gauge	RO	--	Number of connected sessions (current value)	
		entityBeanWaitingSessionCount (17)	Gauge	RO	--	Number of sessions waiting to be connected (current value)	
		entityBeanActiveEntityBeanCount (18)	Gauge	RO	--	Number of active Entity Beans (current value)	
		entityBeanFreeEntityBeanCount (19)	Gauge	RO	--	Number of free Entity Beans (current value)	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

#1

Displays "" (a null character) only in case of the Local interface.

#2

Displays "" (a null character) only in case of the Remote interface.

(16) entityBeanHomeTable

The following table describes entityBeanHomeTable:

Table A–16: entityBeanHomeTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
entityBeanHomeTable (16)	entityBeanHomeEntry (1)	entityBeanHomeIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Entity Bean Remote Interface is used
		entityBeanHomeFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name"</i>	
		entityBeanHomeName (3)	DisplayString	RO	--	RemoteHome interface class name	
		entityBeanHomeResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (maximum value)	
		entityBeanHomeResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (minimum value)	
		entityBeanHomeResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the RemoteHome interface (average value ^{#1})	
		entityBeanHomeResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteHome interface (maximum value)	
		entityBeanHomeResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteHome interface (minimum value)	
		entityBeanHomeResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteHome	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
						interface (average value ^{#1})	
		entityBeanHomeStatisticsStartTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		entityBeanHomeSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(17) entityBeanRemoteTable

The following table describes entityBeanRemoteTable:

Table A–17: entityBeanRemoteTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
entityBeanRemoteTable (17)	entityBeanRemoteEntry (1)	entityBeanRemoteIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Entity Bean Remote Component Interface is used
		entityBeanRemoteFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name"</i>	
		entityBeanRemoteName (3)	DisplayString	RO	--	RemoteComponent interface class name	
		entityBeanRemoteResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
						interface (maximum value)	
		entityBeanRemoteResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (minimum value)	
		entityBeanRemoteResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the RemoteComponent interface (average value ^{#1})	
		entityBeanRemoteResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteComponent interface (maximum value)	
		entityBeanRemoteResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteComponent interface (minimum value)	
		entityBeanRemoteResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the RemoteComponent interface (average value ^{#1})	
		entityBeanRemoteStatisticsStartedTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		entityBeanRemoteSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(18) webApplicationTable

The following table describes webApplicationTable:

Table A–18: webApplicationTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
webApplicationTable (18)	webApplicationEntry (1)	webApplicationIndex (1)	INTEGER	RO	--	Sequence number [1,...]	A Web application (WAR) is used
		webApplicationFullyQualified Name (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name: J2EE-application-name: Context-root"</i>	
		webApplicationContextRoot (3)	DisplayString	RO	--	Context root	
		webApplicationActiveSessionCount (4)	Gauge	RO	--	Number of active sessions (current value)	
		webApplicationTotalJSPServiceCount (5)	Counter	RO	--	Number of JSP executions (total value)	
		webApplicationTotalJSPServiceFailedCount (6)	Counter	RO	--	Number of failed JSP executions (total value)	
		webApplicationTotalJSPServiceMaxTime (7)	Gauge	RO	Milliseconds	JSP execution time (maximum value)	
		webApplicationTotalJSPServiceMinTime (8)	Gauge	RO	Milliseconds	JSP execution time (minimum value)	
		webApplicationTotalJSPServiceAveTime (9)	Gauge	RO	Milliseconds	JSP execution time (average value ^{#1})	
		webApplicationTotalJSPServicePeak (10)	Gauge	RO	Milliseconds	JSP execution time (peak value ^{#2})	
		webApplicationTotalJSPServiceOutputDataSizeMax (11)	Gauge	RO	KB	JSP output data size (maximum value)	
		webApplicationTotalJSPServiceOutputDataSizeMin	Gauge	RO	KB	JSP output data size (minimum value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(12)					
		webApplicationTotalJSPServiceOutputDataSizeAve (13)	Gauge	RO	KB	JSP output data size (average value ^{#1})	
		webApplicationTotalJSPServiceOutputDataSizePeak (14)	Gauge	RO	KB	JSP output data size (peak value ^{#2})	
		webApplicationTotalStaticFileServiceCount (15)	Counter	RO	--	Number of times of accessing static contents (total value)	
		webApplicationTotalStaticFileServiceFailedCount (16)	Counter	RO	--	Number of times of accessing failed static contents (total value)	
		webApplicationTotalStaticFileServiceMaxTime (17)	Gauge	RO	Milliseconds	Processing time for static contents acquisition (maximum value)	
		webApplicationTotalStaticFileServiceMinTime (18)	Gauge	RO	Milliseconds	Processing time for static contents acquisition (minimum value)	
		webApplicationTotalStaticFileServiceAveTime (19)	Gauge	RO	Milliseconds	Processing time for static contents acquisition (average value ^{#1})	
		webApplicationTotalStaticFileServicePeak (20)	Gauge	RO	Milliseconds	Processing time for static contents acquisition (peak value ^{#2})	
		webApplicationTotalStaticFileServiceOutputDataSizeMax (21)	Gauge	RO	KB	Static contents output data size (maximum value)	
		webApplicationTotalStaticFileServiceOutputDataSizeMin (22)	Gauge	RO	KB	Static contents output data size (minimum value)	
		webApplicationTotalStaticFile (23)	Gauge	RO	KB	Static contents output data size (average value ^{#1})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		eServiceOutputDataSizeAve (23)					
		webApplicationTotalStaticFileServiceOutputDataSizePeak (24)	Gauge	RO	KB	Static contents output data size (peak value ^{#2})	
		webApplicationStatisticsStartedTime (25)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		webApplicationSamplingTime (26)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	
		webApplicationExclusiveThreadCountUpperBound (27)	INTEGER	RO	--	Number of exclusive threads	<ul style="list-style-type: none"> • A Web application (WAR) is used • The control functionality for concurrently executing threads is used
		webApplicationActiveThreadCountUpperBound (28)	INTEGER	RO	--	Number of active threads (upper-limit value)	
		webApplicationCurrentThreadCountUpperBound (29)	Gauge	RO	--	Number of active threads (current upper-limit value ^{#5})	
		webApplicationActiveThreadCount (30)	Gauge	RO	--	Number of active threads (current value)	
		webApplicationActiveThreadCountHighWaterMark (31)	Gauge	RO	--	Number of active threads (maximum value)	
		webApplicationActiveThreadCountLowWaterMark (32)	Gauge	RO	--	Number of active threads (minimum value)	
		webApplicationActiveThreadCountAverage (33)	Gauge	RO	--	Number of active threads (average value ^{#1})	
		webApplicationActiveThreadCountPeak (34)	Gauge	RO	--	Number of active threads (peak value ^{#2})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		webApplicationWaitingRequestCountUpperBound (35)	INTEGER	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (upper-limit value)	
		webApplicationWaitingRequestCount (36)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (current value)	
		webApplicationWaitingRequestCountHighWaterMark (37)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (maximum value)	
		webApplicationWaitingRequestCountLowWaterMark (38)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (minimum value)	
		webApplicationWaitingRequestCountAverage (39)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (average value ^{#1})	
		webApplicationWaitingRequestCountPeak (40)	Gauge	RO	--	Number of requests awaiting execution based on the upper-limit value set for the running threads (peak value ^{#2})	
		webApplicationOverflowRequestCount (41)	Counter	RO	--	Number of requests for which an error is returned based on the upper limit value that is set up for pending requests of each URL group and Web application (total value)	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Peak value at the point of value acquisition request

This peak value is the maximum value for the available period of the sampling time after recording.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

Upper-limit value for the number of threads that can be concurrently executed at present

(19) servletTable

The following table describes `servletTable`:

Table A–19: `servletTable`

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
servletTable (19)	servletEntry (1)	servletIndex (1)	INTEGER	RO	--	Sequence number [1,...]	A servlet is used
		servletFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:context-root:Servlet-class-name"</i>	
		servletName (3)	DisplayString	RO	--	Servlet name coded in <code>web.xml</code> Null character if the servlet name is not set	
		servletServletClassName (4)	DisplayString	RO	--	Servlet class name	
		servletServiceCount (5)	Counter	RO	--	Number of executions of the servlet (total value)	
		servletServiceFailedCount (6)	Counter	RO	--	Number of failed executions of the servlet (total value)	
		servletServiceMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the servlet (maximum value)	
		servletServiceMinTime (8)	Gauge	RO	Milliseconds	Execution time of the servlet (minimum value)	
		servletServiceAverageTime (9)	Gauge	RO	Milliseconds	Execution time of the servlet (average value ^{#1})	
		servletServicePeak (10)	Gauge	RO	Milliseconds	Execution time of the servlet (peak value ^{#2})	
		servletServiceOutputDataSizeMax (11)	Gauge	RO	KB	Servlet output data size (maximum value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		servletServiceOutputDataSizeMin (12)	Gauge	RO	KB	Servlet output data size (minimum value)	
		servletServiceOutputDataSizeAve (13)	Gauge	RO	KB	Servlet output data size (average value ^{#1})	
		servletServiceOutputDataSizePeak (14)	Gauge	RO	KB	Servlet output data size (peak value ^{#2})	
		servletStatisticsStartTime (15)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		servletSamplingTime (16)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Peak value at the point of value acquisition request

This peak value is the maximum value for the available period of the sampling time after recording.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(20) requestUrlTable

The following table describes requestUrlTable:

Table A–20: requestUrlTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
requestUrlTable (20)	requestUrlEntry (1)	requestUrlIndex (1)	INTEGER	RO	--	Sequence number [1,...]	Statistics of the requestUrl must be started, and the URL for the corresponding Web application must be accessed
		requestUrlFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name: J2EE-application-</i>	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
						<i>name : context-root : request-URL"</i>	
		requestUrl (3)	DisplayString	RO	--	Request URL	
		requestUrlServiceCount (4)	Counter	RO	--	Number of request executions (total value)	
		requestUrlServiceFailedCount (5)	Counter	RO	--	Number of failed request executions (total value)	
		requestUrlServiceMaxTime (6)	Gauge	RO	Milliseconds	Request execution time (maximum value)	
		requestUrlServiceMinTime (7)	Gauge	RO	Milliseconds	Request execution time (minimum value)	
		requestUrlServiceAveTime (8)	Gauge	RO	Milliseconds	Request execution time (average value ^{#1})	
		requestUrlServicePeak (9)	Gauge	RO	Milliseconds	Request execution time (peak value ^{#2})	
		requestUrlServiceOutputDataSizeMax (10)	Gauge	RO	KB	Request output data size (maximum value)	
		requestUrlServiceOutputDataSizeMin (11)	Gauge	RO	KB	Request output data size (minimum value)	
		requestUrlServiceOutputDataSizeAve (12)	Gauge	RO	KB	Request output data size (average value ^{#1})	
		requestUrlServiceOutputDataSizePeak (13)	Gauge	RO	KB	Request output data size (peak value ^{#2})	
		requestUrlStatisticsStartedTime (14)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		requestUrlSamplingTime (15)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only
RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Peak value at the point of value acquisition request

This peak value is the maximum value for the available period of the sampling time after recording.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(21) dataSourceFullJTATable

The following table describes dataSourceFullJTATable:

Table A–21: dataSourceFullJTATable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
dataSourceFullJTATable (21)	dataSourceFullJTAE ntry (1)	dataSourceFullJTAIndex (1)	INTEGER	RO	--	Sequence number [1,...]	Data source (XA) is imported
		dataSourceFullJTAFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name: data-source-name"</i>	
		dataSourceFullJTAName (3)	DisplayString	RO	--	Data source name	
		dataSourceFullJTALoginTimeout (4)	INTEGER	RO	Seconds	Login timeout value	
		dataSourceFullJTANUserID (5)	DisplayString	RO	--	User ID	
		dataSourceFullJTAPoolUpperBound (6)	INTEGER	RO	--	Number of connection pools (upper-limit value)	
		dataSourceFullJTAPoolLowerBound (7)	INTEGER	RO	--	Number of connection pools (lower-limit value)	
		dataSourceFullJTACurrentPoolSize (8)	Gauge	RO	--	Number of connection pools (current value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		dataSourceFullJTAActiveConnectionCount (9)	Gauge	RO	--	Number of active connections (current value)	
		dataSourceFullJTAFreeConnectionCount (10)	Gauge	RO	--	Number of free connections (current value)	
		dataSourceFullJTAGetConnectionMaxTime (11)	Gauge	RO	Milliseconds	Execution time of the getConnection method (maximum value)	
		dataSourceFullJTAGetConnectionMinTime (12)	Gauge	RO	Milliseconds	Execution time of the getConnection method (minimum value)	
		dataSourceFullJTAGetConnectionAverageTime (13)	Gauge	RO	Milliseconds	Execution time of the getConnection method (average value ^{#1})	
		dataSourceFullJTACreateConnectionMaxTime (14)	Gauge	RO	Milliseconds	Execution time of the getXAConnection method (maximum value)	
		dataSourceFullJTACreateConnectionMinTime (15)	Gauge	RO	Milliseconds	Execution time of the getXAConnection method (minimum value)	
		dataSourceFullJTACreateConnectionAverageTime (16)	Gauge	RO	Milliseconds	Execution time of the getXAConnection method (average value ^{#1})	
		dataSourceFullJTAGetConnectionFailedCount (17)	Counter	RO	--	Number of failures of the getConnection method	
		dataSourceFullJTAConnectionErrorCount (18)	Counter	RO	--	Number of times a FATAL error occurred in the Connection. Number of times the connectionErrorOccurred method of ConnectionEventListener was invoked.	
		dataSourceFullJTASTatisticsStartTime (19)	INTEGER	RO	Seconds	Statistics start time ^{#2}	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		dataSourceFullJTA ASamplingTime (20)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(22) resourceAdapterTable

The following table describes resourceAdapterTable:

Table A–22: resourceAdapterTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
resourceAdapterTable (22)	resourceAdapterEntry (1)	resourceAdapterIndex (1)	INTEGER	RO	--	Sequence number [1,...]	A resource adapter is used
		resourceAdapterFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:resource-adapter-name":container</i> <i>"logical-server-name:J2EE-application-name:resource-adapter-name":application"</i>	
		resourceAdapterName (3)	DisplayString	RO	--	Resource adapter name	
		resourceAdapterVendorName (4)	DisplayString	RO	--	Name of the vendor providing the resource adapter	
		resourceAdapterSpecificVersion (5)	DisplayString	RO	--	Used version of the JCA-based resource adapter	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		resourceAdapterEISType (6)	DisplayString	RO	--	EIS type to which the resource adapter connects	
		resourceAdapterVersion (7)	DisplayString	RO	--	Version of the resource adapter	
		resourceAdapterConnectionFactoryInterfaceName (8)	DisplayString	RO	--	Interface class name of ConnectionFactory	
		resourceAdapterConnectionFactoryImplName (9)	DisplayString	RO	--	Implementation class name of ConnectionFactory	
		resourceAdapterManagedConnectionFactoryImplName (10)	DisplayString	RO	--	Implementation class name of ManagedConnectionFactory	
		resourceAdapterConnectionFactoryInterfaceName (11)	DisplayString	RO	--	Interface class name of Connection	
		resourceAdapterConnectionFactoryImplName (12)	DisplayString	RO	--	Implementation class name of Connection	
		resourceAdapterTransactionSupport (13)	DisplayString	RO	--	Supported transaction models NoTransaction: No transaction LocalTransaction: Local transaction XATransaction: XA transaction	
		resourceAdapterConfigProperties (14)	DisplayString	RO	--	ConfigurationProperty information ^{#1}	
		resourceAdapterManagedConnectionFactoryCreateCount (15)	Counter	RO	--	Number of executions of the createManagedConnectionFactory method of ManagedConnectionFactory	
		resourceAdapterConnectionFactoryCreateCount (16)	Counter	RO	--	Number of executions of the getConnection method of ManagedConnection	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		resourceAdapterMConCleanupCount (17)	Counter	RO	--	Number of executions of the cleanup method of ManagedConnection	
		resourceAdapterMConDestroyCount (18)	Counter	RO	--	Number of executions of the destroy method of ManagedConnection	
		resourceAdapterUserId (19)	DisplayString	RO	--	User ID	
		resourceAdapterPoolUpperBound (20)	INTEGER	RO	--	Number of connection pools (upper-limit value)	
		resourceAdapterPoolLowerBound (21)	INTEGER	RO	--	Number of connection pools (lower-limit value)	
		resourceAdapterCurrentPoolSize (22)	Gauge	RO	--	Number of connection pools (current value)	
		resourceAdapterActiveConnectionCount (23)	Gauge	RO	--	Number of active connections (current value)	
		resourceAdapterFreeConnectionCount (24)	Gauge	RO	--	Number of free connections (current value)	
		resourceAdapterGetConnectionMaxTime (25)	Gauge	RO	Milliseconds	Execution time of the allocateConnection method of ConnectionManager (maximum value)	
		resourceAdapterGetConnectionMinTime (26)	Gauge	RO	Milliseconds	Execution time of the allocateConnection method of ConnectionManager (minimum value)	
		resourceAdapterGetConnectionAveTime (27)	Gauge	RO	Milliseconds	Execution time of the allocateConnection method of ConnectionManager (average value ^{#2})	
		resourceAdapterCreateConnectionMaxTime (28)	Gauge	RO	Milliseconds	Execution time of the createManagedConnection method of ManagedConnectionFactory (maximum value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		resourceAdapterCreateConnectionMinTime (29)	Gauge	RO	Milliseconds	Execution time of the createManagedConnection method of ManagedConnectionFactory (minimum value)	
		resourceAdapterCreateConnectionAverageTime (30)	Gauge	RO	Milliseconds	Execution time of the createManagedConnection method of ManagedConnectionFactory (average value ^{#2})	
		resourceAdapterGetConnectionFailedCount (31)	Counter	RO	--	Number of failures of the allocateConnection method	
		resourceAdapterConnectionErrorCount (32)	Counter	RO	--	Number of times a FATAL error occurred in ManagedConnection Number of times the connectionErrorOccurred method of ConnectionEventListener was invoked	
		resourceAdapterStatisticsStartTime (33)	INTEGER	RO	Seconds	Statistics start time ^{#3}	
		resourceAdapterSamplingTime (34)	INTEGER	RW	Seconds	Statistics sampling time ^{#4}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

The output format is *property-name=property-value:property-name=property-value: . . .* If the property name or property value includes an equal sign (=), colon (:), and a yen sign (¥), these signs are displayed as \=, \: and \¥.

(Example) abc=ab\ :bc\=ef\ \gh for property name . . . "abc" and property value . . . "ab:bc=ef\gh"

#2

Average value of the past sampling time from the time of value acquisition request.

#3

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#4

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(23) statelessSessionBeanLocalHomeTable

The following table describes statelessSessionBeanLocalHomeTable:

Table A–23: statelessSessionBeanLocalHomeTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanLocalHomeTable (23)	statelessSessionBeanLocalHomeEntry (1)	statelessSessionBeanLocalHomeIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Local Home Interface is used
		statelessSessionBeanLocalHomeFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EB-application-name:Enterprise-Bean-name"</i>	
		statelessSessionBeanLocalHomeName (3)	DisplayString	RO	--	LocalHome interface class name	
		statelessSessionBeanLocalHomeResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (maximum value)	
		statelessSessionBeanLocalHomeResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (minimum value)	
		statelessSessionBeanLocalHomeResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (average value ^{#1})	
		statelessSessionBeanLocalHomeStatisticsStartTime (7)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanLocalHomeSamplingTime (8)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(24) statelessSessionBeanLocalComponentTable

The following table describes statelessSessionBeanLocalComponentTable:

Table A–24: statelessSessionBeanLocalComponentTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanLocalComponentTable (24)	statelessSessionBeanLocalComponentTable (1)	statelessSessionBeanLocalComponentIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Local Component Interface is used
		statelessSessionBeanLocalComponentFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name"</i>	
		statelessSessionBeanLocalComponentFullyQualifiedName (3)	DisplayString	RO	--	LocalComponent interface class name	
		statelessSessionBeanLocalComponentResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (maximum value)	
		statelessSessionBeanLocalComponentResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (minimum value)	
		statelessSessionBeanLocalComponentResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (average value ^{#1})	
		statelessSessionBeanLocalComponentResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (maximum value)	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statelessSessionBeanLocalComponentResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (minimum value)	
		statelessSessionBeanLocalComponentResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (average value ^{#1})	
		statelessSessionBeanLocalComponentStatisticsStartTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanLocalComponentSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(25) statefulSessionBeanLocalHomeTable

The following table describes statefulSessionBeanLocalHomeTable:

Table A–25: statefulSessionBeanLocalHomeTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanLocalHomeTable (25)	statefulSessionBeanLocalHomeEntry (1)	statefulSessionBeanLocalHomeIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Local Home Interface is used
		statefulSessionBeanLocalHomeFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-</i>	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
						<i>name : EJB-application-name : Enterprise-Bean-name"</i>	
		statefulSessionBeanLocalHomeName (3)	DisplayString	RO	--	LocalHome interface class name	
		statefulSessionBeanLocalHomeResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (maximum value)	
		statefulSessionBeanLocalHomeResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (minimum value)	
		statefulSessionBeanLocalHomeResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (average value ^{#1})	
		statefulSessionBeanLocalHomeResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (maximum value)	
		statefulSessionBeanLocalHomeResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (minimum value)	
		statefulSessionBeanLocalHomeResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (average value ^{#1})	
		statefulSessionBeanLocalHomeStatisticsStartedTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanLocalHomeSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(26) statefulSessionBeanLocalComponentTable

The following table describes statefulSessionBeanLocalComponentTable:

Table A–26: statefulSessionBeanLocalComponentTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanLocalComponentTable (26)	statefulSessionBeanLocalComponentEntry (1)	statefulSessionBeanLocalComponentIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Local Component Interface is used
		statefulSessionBeanLocalComponentFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name"</i>	
		statefulSessionBeanLocalComponentName (3)	DisplayString	RO	--	LocalComponent interface class name	
		statefulSessionBeanLocalComponentResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (maximum value)	
		statefulSessionBeanLocalComponentResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (minimum value)	
		statefulSessionBeanLocalComponentResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (average value ^{#1})	
		statefulSessionBeanLocalComponentResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (maximum value)	
		statefulSessionBeanLocalComponentResponseEjbMinTime	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(8)				interface (minimum value)	
		statefulSessionBeanLocalComponentResponseEjbAverageTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (average value ^{#1})	
		statefulSessionBeanLocalComponentStatisticsStartTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanLocalComponentSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(27) entityBeanLocalHomeTable

The following table describes entityBeanLocalHomeTable:

Table A-27: entityBeanLocalHomeTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
entityBeanLocalHomeTable (27)	entityBeanLocalHomeEntry (1)	entityBeanLocalHomeIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Entity Bean Local Home Interface is used
		entityBeanLocalHomeFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name: J2EE-application-name: EJB-application-name: Enterprise-Bean-name"</i>	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		entityBeanLocalHomeName (3)	DisplayString	RO	--	LocalHome interface class name	
		entityBeanLocalHomeResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (maximum value)	
		entityBeanLocalHomeResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (minimum value)	
		entityBeanLocalHomeResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (average value ^{#1})	
		entityBeanLocalHomeResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (maximum value)	
		entityBeanLocalHomeResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (minimum value)	
		entityBeanLocalHomeResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (average value ^{#1})	
		entityBeanLocalHomeStatisticsStartTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		entityBeanLocalHomeSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(28) entityBeanLocalComponentTable

The following table describes entityBeanLocalComponentTable:

Table A–28: entityBeanLocalComponentTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
entityBeanLocalComponentTable (28)	entityBeanLocalComponentEntry (1)	entityBeanLocalComponentIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Entity Bean Local Component Interface is used
		entityBeanLocalComponentFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name"</i>	
		entityBeanLocalComponentName (3)	DisplayString	RO	--	LocalComponent interface class name	
		entityBeanLocalComponentResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (maximum value)	
		entityBeanLocalComponentResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (minimum value)	
		entityBeanLocalComponentResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (average value ^{#1})	
		entityBeanLocalComponentResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (maximum value)	
		entityBeanLocalComponentResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (minimum value)	
		entityBeanLocalComponentResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (average value ^{#1})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		entityBeanLocalComponentStatisticsStartedTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		entityBeanLocalComponentSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(29) messageDrivenBeanTable

The following table describes messageDrivenBeanTable:

Table A–29: messageDrivenBeanTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
messageDrivenBeanTable (29)	messageDrivenBeanEntry (1)	messageDrivenBeanIndex (1)	INTEGER	RO	--	Sequence number [1,...]	A Message-driven Bean is used
		messageDrivenBeanFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name: J2EE-application-name: EJB-application-name: Enterprise-Bean-name"</i>	
		messageDrivenBeanName (3)	DisplayString	RO	--	Enterprise Bean name	
		messageDrivenBeanEjbClassName (4)	DisplayString	RO	--	EJB class name	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		messageDrivenBeanTransactionType (5)	DisplayString	RO	--	Transaction type CMT or BMT	
		messageDrivenBeanDestinationType (6)	DisplayString	RO	--	Destination types Queue: Destination of the Point-To-Point model Topic: Destination of the Publish-Subscribe model	
		messageDrivenBeanPoolUpperBound (7)	INTEGER	RO	--	Number of instance pools (upper-limit value)	
		messageDrivenBeanCurrentPoolSize (8)	Gauge	RO	--	Number of instance pools (current value)	
		messageDrivenBeanCurrentSessionCount (9)	Gauge	RO	--	Number of connected sessions (current value)	
		messageDrivenBeanResponseEjbMaxTime (10)	Gauge	RO	Milliseconds	Execution time of the EJB method (maximum value)	
		messageDrivenBeanResponseEjbMinTime (11)	Gauge	RO	Milliseconds	Execution time of the EJB method (minimum value)	
		messageDrivenBeanResponseEjbAveTime (12)	Gauge	RO	Milliseconds	Execution time of the EJB method (average value ^{#1})	
		messageDrivenBeanStatisticsStartTime (10)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		messageDrivenBeanSamplingTime (11)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(30) queueTable

The following table describes queueTable:

Table A–30: queueTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
queueTable (30)	queueEntry (1)	queueIndex (1)	INTEGER	RO	--	Sequence number [1,...]	None
		queueFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : queue-name"</i>	
		queueName (3)	DisplayString	RO	--	Queue name	
		queueStatus (4)	DisplayString	RO	--	Status scheduling:State in which scheduling is possible preparing:Preparation in progress stopping:Queue being terminated closing[in]:Locking the queue entry closing[out]:Locking the queue exit	
		queueSharedApplicationCount (5)	INTEGER	RO	--	Number of applications sharing the queue	
		queueStayedRequestCount (6)	Gauge	RO	--	Number of requests retained in the queue	
		queueStayedRequestMax (7)	Gauge	RO	--	Maximum number of requests retained in the queue	
		queueLength (8)	INTEGER	RO	--	Number of requests that can be registered concurrently	
		queueLookupName (9)	DisplayString	RO	--	Registered name information managed by the queue	
		queueInterfaceName (10)	DisplayString	RO	--	Interface information managed by the queue	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		queueParallelCount (11)	INTEGER	RO	--	Number of concurrent executions managed by the queue	
		queueTotalThreadCount (12)	INTEGER	RO	--	Total number of current resident threads managed by the queue	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

(31) statelessSessionBeanHomeMethodTable

The following table describes statelessSessionBeanHomeMethodTable:

Table A–31: statelessSessionBeanHomeMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanHomeMethodTable (31)	statelessSessionBeanHomeMethodEntry (1)	statelessSessionBeanHomeMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Remote Interface Method is used
		statelessSessionBeanHomeMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:Enterprise-Bean-name:Home-interface-class-name:method-name"</i>	
		statelessSessionBeanHomeMethodName (3)	DisplayString	RO	--	Method name	
		statelessSessionBeanHomeMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the Home interface (maximum value)	
		statelessSessionBeanHomeMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the Home interface (minimum value)	
		statelessSessionBeanHomeMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the Home interface (average value ^{#1})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statelessSessionBeanHomeMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Home interface (maximum value)	
		statelessSessionBeanHomeMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Home interface (minimum value)	
		statelessSessionBeanHomeMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Home interface (average value ^{#1})	
		statelessSessionBeanHomeMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
		statelessSessionBeanHomeMethodStatisticsStartTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanHomeMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(32) statelessSessionBeanRemoteMethodTable

The following table describes statelessSessionBeanRemoteMethodTable:

Table A-32: statelessSessionBeanRemoteMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBean	statelessSessionBean	statelessSessionBeanRemoteMethodIndex	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Remote

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
RemoteMethodTable (32)	RemoteMethodEntry (1)	(1)					Component Interface Method is used
		statelessSessionBeanRemoteMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name : Remote-interface-class-name : method-name"</i>	
		statelessSessionBeanRemoteMethodName (3)	DisplayString	RO	--	Method name	
		statelessSessionBeanRemoteMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the Remote interface (maximum value)	
		statelessSessionBeanRemoteMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the Remote interface (minimum value)	
		statelessSessionBeanRemoteMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the Remote interface (average value ^{#1})	
		statelessSessionBeanRemoteMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (maximum value)	
		statelessSessionBeanRemoteMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (minimum value)	
		statelessSessionBeanRemoteMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (average value ^{#1})	
		statelessSessionBeanRemoteMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
statelessSessionBeanRemoteMethod	INTEGER	RO	Seconds	Statistics start time ^{#2}			

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		StatisticsStartedTime (11)					
		statelessSessionBeanRemoteMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(33) statelessSessionBeanLocalHomeMethodTable

The following table describes statelessSessionBeanLocalHomeMethodTable:

Table A–33: statelessSessionBeanLocalHomeMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanLocalHomeMethodTable (33)	statelessSessionBeanLocalHomeMethodEntry (1)	statelessSessionBeanLocalHomeMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Local Home Interface Method is used
		statelessSessionBeanLocalHomeMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name : LocalHome-interface-class-name : method-name"</i>	
		statelessSessionBeanLocalHomeMethodName (3)	DisplayString	RO	--	Method name	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statelessSessionBeanLocalHomeMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (maximum value)	
		statelessSessionBeanLocalHomeMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (minimum value)	
		statelessSessionBeanLocalHomeMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (average value ^{#1})	
		statelessSessionBeanLocalHomeMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (maximum value)	
		statelessSessionBeanLocalHomeMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (minimum value)	
		statelessSessionBeanLocalHomeMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (average value ^{#1})	
		statelessSessionBeanLocalHomeMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
		statelessSessionBeanLocalHomeMethodStatisticsStartTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanLocalHomeMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(34) statelessSessionBeanLocalComponentMethodTable

The following table describes statelessSessionBeanLocalComponentMethodTable:

Table A–34: statelessSessionBeanLocalComponentMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statelessSessionBeanLocalComponentMethodTable (34)	statelessSessionBeanLocalComponentMethodEntry (1)	statelessSessionBeanLocalComponentMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateless Session Bean Local Component Interface Method is used
		statelessSessionBeanLocalComponentMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name : LocalComponent-interface-class-name : method-name"</i>	
		statelessSessionBeanLocalComponentMethodName (3)	DisplayString	RO	--	Method name	
		statelessSessionBeanLocalComponentMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (maximum value)	
		statelessSessionBeanLocalComponentMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (minimum value)	
		statelessSessionBeanLocalComponentMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (average value ^{#1})	
		statelessSessionBeanLocalComponentMethodResponseEjbMaxTime	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(7)				interface (maximum value)	
		statelessSessionBeanLocalComponentMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (minimum value)	
		statelessSessionBeanLocalComponentMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (average value ^{#1})	
		statelessSessionBeanLocalComponentMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
		statelessSessionBeanLocalComponentMethodStatisticsStartedTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statelessSessionBeanLocalComponentMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(35) statefulSessionBeanHomeMethodTable

The following table describes statefulSessionBeanHomeMethodTable:

Table A–35: statefulSessionBeanHomeMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanHomeMethodTable (35)	statefulSessionBeanHomeMethodEntry (1)	statefulSessionBeanHomeMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Remote Home Interface Method is used
		statefulSessionBeanHomeMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name:J2EE-application-name:EJB-application-name:Enterprise-Bean-name:Home-interface-class-name:method-name"</i>	
		statefulSessionBeanHomeMethodName (3)	DisplayString	RO	--	Method name	
		statefulSessionBeanHomeMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the Home interface (maximum value)	
		statefulSessionBeanHomeMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the Home interface (minimum value)	
		statefulSessionBeanHomeMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the Home interface (average value ^{#1})	
		statefulSessionBeanHomeMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Home interface (maximum value)	
		statefulSessionBeanHomeMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Home interface (minimum value)	
		statefulSessionBeanHomeMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Home interface (average value ^{#1})	
		statefulSessionBeanHomeMethodCallCount	Counter	RO	--	Number of executions of the method	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(10)					
		statefulSessionBeanHomeMethodStatisticsStartEndTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanHomeMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(36) statefulSessionBeanRemoteMethodTable

The following table describes statefulSessionBeanRemoteMethodTable:

Table A–36: statefulSessionBeanRemoteMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanRemoteMethodTable (36)	statefulSessionBeanRemoteMethodEntry (1)	statefulSessionBeanRemoteMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Remote Component Interface Method is used
		statefulSessionBeanRemoteMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name : Remote-interface-class-name : method-name"</i>	
		statefulSessionBeanRemoteMethodName	DisplayString	RO	--	Method name	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		(3)					
		statefulSessionBeanRemoteMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the Remote interface (maximum value)	
		statefulSessionBeanRemoteMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the Remote interface (minimum value)	
		statefulSessionBeanRemoteMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the Remote interface (average value ^{#1})	
		statefulSessionBeanRemoteMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (maximum value)	
		statefulSessionBeanRemoteMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (minimum value)	
		statefulSessionBeanRemoteMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the Remote interface (average value ^{#1})	
		statefulSessionBeanRemoteMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
		statefulSessionBeanRemoteMethodStatisticsStartedTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanRemoteMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(37) statefulSessionBeanLocalHomeMethodTable

The following table describes statefulSessionBeanLocalHomeMethodTable:

Table A-37: statefulSessionBeanLocalHomeMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanLocalHomeMethodTable (37)	statefulSessionBeanLocalHomeMethodEntry (1)	statefulSessionBeanLocalHomeMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Local Home Interface Method is used
		statefulSessionBeanLocalHomeMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name : LocalHome-interface-class-name : method-name"</i>	
		statefulSessionBeanLocalHomeMethodName (3)	DisplayString	RO	--	Method name	
		statefulSessionBeanLocalHomeMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (maximum value)	
		statefulSessionBeanLocalHomeMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (minimum value)	
		statefulSessionBeanLocalHomeMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalHome interface (average value ^{#1})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statefulSessionBeanLocalHomeMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (maximum value)	
		statefulSessionBeanLocalHomeMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (minimum value)	
		statefulSessionBeanLocalHomeMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalHome interface (average value ^{#1})	
		statefulSessionBeanLocalHomeMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
		statefulSessionBeanLocalHomeMethodStatisticsStartedTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanLocalHomeMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(38) statefulSessionBeanLocalComponentMethodTable

The following table describes statefulSessionBeanLocalComponentMethodTable:

Table A–38: statefulSessionBeanLocalComponentMethodTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
statefulSessionBeanLocalComponentMethodTable (38)	statefulSessionBeanLocalComponentMethodEntry (1)	statefulSessionBeanLocalComponentMethodIndex (1)	INTEGER	RO	--	Sequence number [1,...]	The Stateful Session Bean Local Component Interface Method is used
		statefulSessionBeanLocalComponentMethodFullyQualifiedName (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance <i>"logical-server-name : J2EE-application-name : EJB-application-name : Enterprise-Bean-name : LocalComponent-interface-class-name : method-name"</i>	
		statefulSessionBeanLocalComponentMethodName (3)	DisplayString	RO	--	Method name	
		statefulSessionBeanLocalComponentMethodResponseMaxTime (4)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (maximum value)	
		statefulSessionBeanLocalComponentMethodResponseMinTime (5)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (minimum value)	
		statefulSessionBeanLocalComponentMethodResponseAveTime (6)	Gauge	RO	Milliseconds	Response time of calls to the LocalComponent interface (average value ^{#1})	
		statefulSessionBeanLocalComponentMethodResponseEjbMaxTime (7)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (maximum value)	
		statefulSessionBeanLocalComponentMethodResponseEjbMinTime (8)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (minimum value)	
		statefulSessionBeanLocalComponentMethodResponseEjbAveTime (9)	Gauge	RO	Milliseconds	Execution time of the EJB method for the LocalComponent interface (average value ^{#1})	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		statefulSessionBeanLocalComponentMethodCallCount (10)	Counter	RO	--	Number of executions of the method	
		statefulSessionBeanLocalComponentMethodStatisticsStartedTime (11)	INTEGER	RO	Seconds	Statistics start time ^{#2}	
		statefulSessionBeanLocalComponentMethodSamplingTime (12)	INTEGER	RW	Seconds	Statistics sampling time ^{#3}	

Legend:

R/W: Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Average value of the past sampling time from the time of value acquisition request.

#2

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#3

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

(39) webContainerTable

The following table describes webContainerTable:

Table A-39: webContainerTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
webContainerTable (39)	webContainerEntry (1)	webContainerIndex (1)	INTEGER	RO	--	Sequence number [1,...]	None
		webContainerFullyQualifiedNames (2)	DisplayString	RO	--	Fully qualified name that uniquely identifies an instance "logical-server-name"	
		webContainerServerName (3)	DisplayString	RO	--	Server name of the Web container	
		webContainerStartTime (4)	INTEGER	RO	Seconds	Startup time of the Web container ^{#1}	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		webContainerStatisticsStartedTime (5)	INTEGER	RO	Seconds	Statistics start time ^{#1}	
		webContainerSamplingTime (6)	INTEGER	RW	Seconds	Statistics sampling time ^{#2}	
		webContainerActiveThreadCountUpperBound (7)	INTEGER	RO	--	Upper-limit value of the number of active threads	<ul style="list-style-type: none"> • A Web application (WAR) is used • The control functionality for concurrently executing threads is used • A Web application in which the number of concurrently executing threads is not set exists
		webContainerCurrentThreadCountUpperBound (8)	Gauge	RO	--	Current upper-limit value of the number of active threads ^{#3}	
		webContainerActiveThreadCount (9)	Gauge	RO	--	Current number of active threads	
		webContainerActiveThreadCountHighWaterMark (10)	Gauge	RO	--	Maximum number of active threads	
		webContainerActiveThreadCountLowWaterMark (11)	Gauge	RO	--	Minimum number of active threads	
		webContainerActiveThreadCountAverage (12)	Gauge	RO	--	Average value ^{#4} of the number of active threads	
		webContainerActiveThreadCountPeak (13)	Gauge	RO	--	Peak value ^{#5} of the number of active threads	
		webContainerWaitingRequestCountUpperBound (14)	INTEGER	RO	--	Upper-limit value of the number of requests awaiting execution based on the upper-limit value set for the running threads	
		webContainerWaitingRequestCount (15)	Gauge	RO	--	Current number of requests awaiting execution based on the upper-limit value set for the running threads	
		webContainerWaitingRequestCountHighWaterMark (16)	Gauge	RO	--	Maximum number of requests awaiting execution based on the upper-limit value set for the running threads	

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
		webContainerWaitingRequestCountLowWaterMark (17)	Gauge	RO	--	Minimum number of requests awaiting execution based on the upper-limit value set for the running threads	
		webContainerWaitingRequestCountAverage (18)	Gauge	RO	--	Average value ^{#4} of the number of requests awaiting execution based on the upper-limit value set for the running threads	
		webContainerWaitingRequestCountPeak (19)	Gauge	RO	--	Peak value ^{#5} of the number of requests awaiting execution based on the upper-limit value set for the running threads	
		webContainerOverflowRequestCount (20)	Counter	RO	--	Total number of requests in which an error is returned based on the upper limit value that is set up for the default pending request	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

RW: Read-Write

#1

Number of seconds elapsed since 00:00 Jan. 1, 1970 UTC

#2

Setting the sampling time

If you specify 0 or a lesser value, the statistics stops. If you specify a value from 1 to 9, the sampling time is set to the default value (10 seconds) and the statistics starts. If you specify 10 or a higher value, the statistics starts assuming the specified value as the sampling time.

#3

Upper-limit value for the number of threads that can be concurrently executed at present

#4

Average value of the past sampling time from the time of value acquisition request.

#5

Peak value at the point of value acquisition request (the maximum value involving the available period of the sampling time after recording).

(40) queueAppTable

The following table describes queueAppTable:

Table A–40: queueAppTable

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
queueAppTable	queueAppEntry	queueAppIndex (1)	INTEGER	RO	--	Sequence number [1,...]	None

Table name (OID)	Entry name (OID)	Metric name (OID)	TYPE	R/W	Unit	Description	Preconditions
(40)	(1)	queueAppFullyQualifiedName (2)	Display String	RO	--	Fully qualified name that uniquely identifies an instance " <i>logical-CTM-server-name:queue-name:logical-J2EE-server-name</i> "	
		queueAppQueueName (3)	Display String	RO	--	Queue name	
		queueAppJ2EENAME (4)	Display String	RO	--	Actual J2EE server name	
		queueAppStartParallelCount (5)	INTEGER	RO	--	Number of concurrent executions when the J2EE application is started	
		queueAppResidentThreadCount (6)	INTEGER	RO	--	Number of current resident threads for the J2EE application	

Legend:

R/W:Read-Only/ Read-Write type

--: Not applicable

RO: Read-Only

B. DD (web.xml) for Web applications

B.1 Relationship between extension and MIME type

Table B-1 describes the default values of the relationship between the extensions and MIME types specified in the mime-mapping tags in web.xml.

Table B–1: Relationship between extensions and MIME types

Extensions	MIME types
abs	audio/x-mpeg
ai	application/postscript
aif	audio/x-aiff
aifc	audio/x-aiff
aiff	audio/x-aiff
aim	application/x-aim
art	image/x-jg
asf	video/x-ms-asf
asx	video/x-ms-asf
au	audio/basic
avi	video/x-msvideo
avx	video/x-rad-screenplay
bcpio	application/x-bcpio
bin	application/octet-stream
bmp	image/bmp
body	text/html
cdf	application/x-cdf
cer	application/x-x509-ca-cert
class	application/java
cpio	application/x-cpio
csf	application/x-csh
css	text/css
dib	image/bmp
doc	application/msword
dtd	text/plain
dv	video/x-dv
dvi	application/x-dvi
eps	application/postscript

Extensions	MIME types
etx	text/x-setext
exe	application/octet-stream
gif	image/gif
gtar	application/x-gtar
gz	application/x-gzip
hdf	application/x-hdf
hqx	application/mac-binhex40
htc	text/x-component
htm	text/html
html	text/html
ief	image/ief
jad	text/vnd.sun.j2me.app-descriptor
jar	application/octet-stream
java	text/plain
jnlp	application/x-java-jnlp-file
jpe	image/jpeg
jpeg	image/jpeg
jpg	image/jpeg
js	text/javascript
kar	audio/x-midi
latex	application/x-latex
m3u	audio/x-mpegurl
mac	image/x-macpaint
man	application/x-troff-man
me	application/x-troff-me
mid	audio/x-midi
midi	audio/x-midi
mif	application/x-mif
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pbm	image/x-portable-bitmap
pct	image/pict
pdf	application/pdf
pgm	image/x-portable-graymap
pic	image/pict
pict	image/pict
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pnm	image/x-portable-anymap
pnt	image/x-macpaint
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ps	application/postscript
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ras	image/x-cmu-raster
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texi	application/x-texinfo
texinfo	application/x-texinfo
tif	image/tiff
tiff	image/tiff
tr	application/x-troff
tsv	text/tab-separated-values
txt	text/plain
ulw	audio/basic
ustar	application/x-ustar
xbm	image/x-xbitmap
xpm	image/x-xpixmap
xwd	image/x-xwindowdump
wav	audio/x-wav
wbmp	image/vnd.wap.wbmp
wml	text/vnd.wap.wml
wmlc	application/vnd.wap.wmlc
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