

**uCosminexus Application Server and BPM/ESB  
Platform Terminology Guide**

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See the *Release Notes*.

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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 (cjsp2java) 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

## Terminology Guide

## 1.1 Terminology guide for Application Server and BPM & ESB platform

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This section describes the terminology given in the manuals of Application Server and BPM & ESB platform.

### 1-to-1 node switching system

System with 1-to-1 mapping of Application Server on the executing node and Application Server on standby node. When an error occurs in the Application Server on the executing node, the Application Server on the standby node inherits the process.

### abstract parameter

A parameter that combines mutually related parameters as one parameter. The Smart Composer functionality uses this parameter. The Smart Composer functionality provides a command that expands an abstract parameter to the multiple effective parameters.

### action

A term that describes the operation during transition of Web windows.

### action definition file

A collective name for the common definition file and the process-wise definition file. This file is defined to specify JAX-WS engine or JAX-RS engine operations, such as log output and timeout.

### active node

A node initially operated as the executing node is called an *active node*. The invocation method does not change even when the executing node becomes a standby node due to node switching.

### activity

A component that defines the processing flow of business processes. Activities are classified into basic activities and structured activities. The user defines the processing flow of a business process by arranging multiple activities and connecting them using a window.

### address

This is a system that serves as the message sending destination.

### Administration Agent

An agent program that, by administrator proxy, starts logical servers on each host and updates configuration files.

### administration target object

An object (AdminObject) defined in the Connector 1.5 specifications that is used for transmitting the messages using a queue and a topic. The administration target object is used for the message conversion during the dispatch of messages, and also during the synchronous or asynchronous reception of messages.

The administration target object is provided as a unique object in each message provider. The administration target object used in a resource adapter is specified with the `<adminobject>` tag of the resource adapter DD (`ra.xml`).

## alias

Any name given to a J2EE resource and the EJB home object reference registered in the JNDI name space. An alias is added when the user-specified name space functionality is used. It is also called an *optional name*.

## annotation

A coding format for embedding the additional information of a class and method into a source code. By specifying an annotation, you can acquire a reference to a resource and other Enterprise Beans on which Enterprise Beans depend.

## applet

A Java program that is downloaded via the Web to the browser on the computer of the reader.

## Application Development Plug-in

A plug-in used when developing and testing an application.

## Application Server

Middleware used for building an application layer, to serve as an interface between the user requests (presentation layer) and the processing of a business system (data layer) such as the database, by setting the application server in the middle of information system.

Application Server is a middleware that is located at the center of a business system, and it not only serves as an interface for mutual requests and responses exchange, but also provides the functionality required for implementing, managing and controlling business processes. Application Server is the base of a business process located in the application layer, among three layers such as the presentation layer, application layer and data layer.

Application Server mainly indicates a server having functionality for executing a Java application conforming to the Java EE specifications and provides Application Server equipped with the operation functionality linked with the following functionality, based on the support to the Java EE specifications:

- EJB flow-volume and priority control by the scheduler
- Load balancing
- Batch application scheduling function
- Function for RPC connection reception from OpenTP1
- Virtual platform

## archive format

A J2EE application that assembles the programs and DDs constituting a J2EE application, and compiles them in a WAR file, EAR file, or ZIP file.

A program or DD that configures a J2EE application is packaged in the WAR file, EAR file or ZIP file.

## asynchronous parallel processing of threads

The functionality for implementing asynchronous parallel processing of threads, such as the asynchronous timer processing and asynchronous thread processing, in the Java EE environment. The Cosminexus Application Server provides APIs based on the specifications of Timer and Work Manager for Application Servers stipulated by `CommonJ`. As a result, you can execute asynchronous timer processing using `TimerManager` and asynchronous thread processing using `WorkManager`.

## audit log

File to output the log of operations and the behavior of programs as per the operations executed by the person setting up the system or by the system operator for the programs of Application Server. The auditor can know as to when, who has executed what by checking the audit log, and can verify whether the system operations are compliant to various standards, such as laws and regulations, security evaluation criteria, or business standards.

## audit trail

Audit trail is a task record that is output by database functionality, and is related to the database. The audit trail is used for checking that the authentication operation for the database was appropriately performed. The database audit trail integration functionality is provided by Application Server to output the information of the system that is configured by Application Server in the audit trail.

## auto-generated class

Java class generated when the `cjwsimport` command and `apt` command are executed.

## automatic node switching

One of the methods for node switching, in which cluster software automatically switches nodes.

## basic activity

An activity that defines basic processing in a business process, such as reception processing, response processing, and service component invocation.

## batch application

A Java application that implements batch processing. Use batch execution commands to execute batch applications on a batch server. Batch applications can be executed from JP1/AJS if batch execution commands are defined as JP1/AJS jobs in advance.

## Batch Job Execution Server

This is the product that provides a batch job execution platform for executing/operating the base job batch operations in the open environment. Use it by combining with JP1/AJS.

## batch server

A server used for executing a batch application. Apart from providing the functionality for executing a batch application, the batch server also provides the functionality for establishing a connection from a batch application to the database, and for accessing the EJB.

## Bean-Managed Persistence

A model that manages the persistence of data in a business method of an Enterprise Bean.

## Bean-Managed Transaction

A model that manages transactions by using Enterprise Beans. This model applies to Session Beans and Message-driven Beans, and does not apply to Entity Beans.

## binary format definition file

A message format definition file that is used to handle binary data (other than XML data). It is created as an XML schema file. It defines the storage format for binary data values, and the defined information is then added to the XML schema file (extension: `.fdx`).



## bind address specification functionality

Functionality to specify IP addresses to be bound on the NIO HTTP server. This functionality is used if you want to receive HTTP requests only at the specified IP address on a host that has multiple network interfaces.

## binding

Specifies the data correspondence performed by JAXB between the XML document defined in the schema document and the Java object.

## BJEX

This is an abbreviation of *Batch Job Execution Server*. For details, see [Batch Job Execution Server](#).

## BMP

This is an abbreviation of *Bean-Managed Persistence*. For details, see [Bean-Managed Persistence](#).

## BMP Entity Bean

The term *BMP* in *BMP Entity Bean* is an abbreviation for *Bean-Managed Persistence*, and implies that a Bean itself executes the persistence-related processing. All access codes to a resource need to be coded by an application developer. Implementation of BMP takes more time and effort as compared to CMP, BMP has a wider operation scope and higher level of freedom than CMP.

## BMT

This is an abbreviation of *Bean-Managed Transaction*. For details, see [Bean-Managed Transaction](#).

## BPEL

This is an abbreviation of *Business Process Execution Language*. For details, see [Business Process Execution Language](#).

## BPMN

This is an abbreviation of *Business Process Modeling Notation*. For details, see [Business Process Modeling Notation](#).

## business interface

Interface to define a business method to invoke Enterprise Beans.

## business IP address

An IP address used by a load balancer to send a request to a virtual server. You can specify the IP address of the NIC (network adapter) connected to the business LAN (a LAN that includes business servers).

## business LAN

A LAN that includes business servers.

## business-oriented tree

One of the monitoring trees displayed in the integrated scope when the system is integrated with JP1/IM. The business-oriented tree is configured mainly of the J2EE applications running on the system that is built using Application Server. The business-oriented tree enables the user to monitor which problem has occurred in which business, and monitor the trouble from the business point of view.

## business process

A business process defines the processing order and conditions of multiple service components as a business series. In the development environment of Cosminexus service platform, a business process deploys multiple activities in a window, connects and defines them.

## business process base

This is functionality that calls appropriate service components in accordance with the business process.

## Business Process Execution Language

This is workflow coding language based on XML. With service platform, you can define the business process in this format, by using a GUI.

## business-processing program

Enterprise Bean with business logic implemented.

## Business Process Modeling Notation

This is the notation in which the description rules for plotting and visualization of the business process in easily understandable format are consolidated. This is called *Business Process Modeling Notation* method.

## CA

This is an abbreviation of *Certificate Authority*. For details, see [Certificate Authority](#).

## cache file

A file that exists on a disk to save a disk cache.

## cache table

An internal table to save a memory cache. A cache table is created when a user starts a J2EE server.

## catalog file

The catalog file is scheduled when you use the *catalog* function. This file defines the mapping (association) information.

## catalog function

The catalog function executes mapping (association) based on the XML Catalogs 1.1 specifications. The mapping (association) has the following two types:

- Mapping of a namespace URI of an XML schema specified in the `namespace` property of the `xsd:import` element and the URI reference that indicates the location of the XML schema
- Mapping of a URI reference that indicates the location of a WSDL or XML schema and the URI reference that indicates the location of a different WSDL or XML schema

## Central console

A mechanism for integrated system management using JP1 events to centrally manage the events occurred system when the system is integrated with JP1/IM.

## Central scope

A mechanism for monitoring a target-oriented system by providing a window suitable to the administrator's purpose as the system monitoring window, when a system is integrated with JP1/IM.

## certificate

Electronic information for proving the identity of a party to communication when exchanging information between open enterprise information systems. Impersonation is prevented by using encryption technology. Certificates are issued by a Certificate Authority.

The Web Services security functionality supports X.509 certificates.

## Certificate Authority

This is function for issuing certificate for using SSL is also called as *authentication authority*.

This is entity in reliability that issues a valid certificate for other entity. The types of this certificate are:

- Root CA  
Correctness of self is certified by self, without receiving the certification of the upper-level CA.
- Intermediate CA  
Receives the certificate from the upper-level CA for certifying the correctness of self.

## character code conversion UOC

An external program for character code conversion. The character code conversion UOC is developed by using the jar files provided by Cosminexus service platform.

## CJMSP Broker

A process used by the Cosminexus JMS provider. CJMSP Broker manages the sending of messages.

## CJMSP resource adapter

A resource adapter used by Cosminexus JMS provider.

The CJMSP resource adapter is used for connecting J2EE server to CJMSP Broker. Complies with the Connector 1.5 specifications.

## client application information

Information output to the performance analysis trace. The following information is set in the unit that invokes the Enterprise Bean.

- Invoking the EJB container from the web container
- Invoking the EJB container from the EJB client
- Invoking the EJB container from the EJB container

## client authentication

The act of a server to verify the reliability of a client based on the client certificate sent from the client.

## client definition file

A file used in the SOAP Communication Infrastructure. The file is used for defining the operations of the SOAP Communication Infrastructure when sending a SOAP message.

## cluster

A cluster is a set of servers that provide common functions. You can perform operations and management by considering one entire set as one server.

## cluster software

A program for switching a system with the purpose of improving the reliability and operating state of a system.

If there is a failure in the running server system, you can automatically and immediately switch to the standby server system arranged beforehand. Therefore, even without the special attention of the operator, the reliability and operating state of the system can be improved.

In Application Server, you can implement a 1-to-1 node switching system, mutual node switching system, and node switching system for a host unit management model using cluster software.

If you are using AIX or Linux, you can use HA monitor as the cluster software. In Windows, you can use Windows Server Failover Cluster as the cluster software.

## CMP

This is an abbreviation of *Container-Managed Persistence*. For details, see [Container-Managed Persistence](#).

## CMP Entity Bean

The term *CMP* in *CMP Entity Bean* is an abbreviation for *Container-Managed Persistence*, and implies that an EJB container executes the persistence-related processing. In the case of *CMP*, a developer need not write the code for accessing a resource (such as a database), and the EJB container executes all transactions with the resource.

## CMT

This is an abbreviation of *Container-Managed Transaction*. For details, see [Container-Managed Transaction](#).

## command adapter

An adapter used to start an external command that runs on the operating system and acquire execution results.

## command line Java application

A Java application started from a command line.

## commit option

Option that specifies the cache method of a *CMP* field and the cache model of the Entity Bean status transition.

In the case of Full caching, an Entity Bean is started with the same status as that at the time of the last transaction commit.

In the case of Caching, an Entity Bean is started with the status same as the latest status of the database.

In the case of No caching, an Entity Bean is started with the status same as the latest status of the database and becomes passive at the time of transaction commit.

## common definition file

Definition file used to set up operations common to the system.

### common folder

A folder created on the HCSC server to store files that can be accessed from multiple business processes.

### common key

A secret key used in common key encryption and shared only by two designated persons. In common key encryption, data is decrypted by using a common key. The designated persons must safely manage the common key.

### Component Container Administrator

Users other than the super users who can set up, start, and stop J2EE servers and batch servers. A Component Container Administrator can be set in a UNIX system.

### conditional branching

Processing to branch to a transition destination according to the information input from a Web window or the processing results of a business-processing program.

### connection pooling

The functionality for pooling the resource connection in memory based on the access to the resource from the J2EE components such as servlets, JSPs, and Enterprise Beans, and batch applications. The Resource connections include JDBC connections and resource adapter connections. By pooling a connection, you can process a request for a resource connection from an application at high speed.

### connection sweeper

Functionality to discard unused connections in the connection pool at fixed intervals.

### container extension library

A library that extends a user-created library interface and function in such a way that it can be used from a J2EE container, web container, and batch server.

### Container-Managed Persistence

This is the model that EJB container users for managing the persistence of the data.

### Container-Managed Transaction

This is the model that the EJB container uses to manage the transaction. Target is Session Bean, Entity Bean, and Message-driven Bean.

### context

Management unit that compiles the web applications.

### context path

See *context root*.

### context root

Root path of a context. Specify the context root in a URL when accessing a web application present inside a context. A context root is also called a *context path*.

## cookie switching functionality

One of the server-switching functionalities provided by load balancers. When the cookie switching functionality is used, a session is redirected to the same server based on the cookie information in the request packet from the client.

## CORBA Naming Service

A Naming Service that conforms to the CORBA specifications for managing the location for storing the remote objects. The CORBA Naming Service is a function provided by Cosminexus TPBroker.

## correlation set

A character string used to uniquely identify a request message that has been sent from a service requester. A request message including a correlation set is sent from a service requester to an HCSC server. The service component's HCSC server sends the response message containing the correlation set back to the service requester. As a result, the service requester can identify the request message to which the received response message corresponds.

## cosminexus.xml

Property file used for defining information unique to Cosminexus Application Server.

## Cosminexus Application Server

The base product (with the core of an application server) for building a system for developing and executing applications with high performance and reliability.

## Cosminexus Component Container

Configuration software for executing a business-processing program (business logic) as a component on the server machine. The Cosminexus Component Container also provides the functionality such as Management Server for managing the application server, integrated user management, and snapshot log collection.

## Cosminexus Component Transaction Monitor

Component software for scheduling requests from a client.

## Cosminexus Manager

The management functionality for systems running on Application Server.

## Cosminexus performance tracer

Configuration software used to output the performance analysis output by each functionality information to a file at predetermined points when a request is processed.

## Cosminexus standard login module

Login module used in the user authentication process of integrated user management. It is the implementation class of the `LoginModule` interface that is included in `javax.security.auth.spi`.

The login modules are as follows:

- `WebPasswordLoginModule`  
Uses a password to authenticate the user.
- `WebCertificateLoginModule`

Uses the client certificate to authenticate the user.

- `WebPasswordLDAPLoginModule`

Uses the authentication functionality of LDAP directory server to authenticate the user.

- `WebPasswordJDBCLoginModule`

Uses the information stored in RDB to authenticate the user.

- `DelegationLoginModule`

Invokes the custom login module.

- `WebSSOLoginModule`

Invokes other login modules during single sign-on.

## CTM

This is an abbreviation of *Component Transaction Monitor*. For details, see *Cosminexus Component Transaction Monitor*.

## CTM daemon

A process for managing the schedule queue that controls requests from the client. The CTM daemon functions as a scheduler for scheduling requests.

If you are using Management Server, you can handle CTM daemon as a logical server.

## CTM domain

A CTM domain is composed of multiple CTM daemons having shared information and a load balancer. A CTM daemon distributes the requests by exchanging the information of a business processing program that is registered in the respective CTM domain, and by exchanging the load balancer information of the schedule queue within the CTM domain.

## CTM domain manager

A process for managing a CTM domain. The information about the CTM daemons on a host is distributed to another CTM domain manager within the CTM domain.

If you are using Management Server, you can handle CTM domain manager as a logical server.

## CTM regulator

A process for distributing and consolidating the requests collected in a CTM daemon from the EJB client. The CTM regulator also provides the gateway functionality for enabling direct invocation of EJB applications running on J2EE servers from the TPBroker client (CORBA client).

## custom binding declaration

A customization instruction described in the schema document to be input when generating a Java source file using the schema compiler. The custom binding declaration is used when you want to change the default JAXB binding.

## custom function

One of the functions used in the data transformation definition. Using this function, any user-created Java program can be invoked and the data can be processed.

## custom login module

Implementation class created when you want to use a module other than the Cosminexus standard login module to perform user authentication of each application.

## custom reception

A functionality (interface) used for receiving execution requests from the service requester. Execution requests from any protocol can be received by operating user-created reception processing on the custom reception framework.

## custom reception framework

A development framework provided on Cosminexus Service Platform for creating a custom reception.

## database queue

The functionality of TP1/EE (TP1/Server Base Enterprise Option) that links systems through the database. The database queue functionality allows messages to be sent and received asynchronously between TP1/EE and J2EE by using the database as a queue.

## data element

Data that is an element of an XML document. The term data element indicates, for example, the string enclosed within tags or tag attributes.

## data encryption key

A key used to encrypt data that must remain confidential to third parties during transmission. A key that encrypts a data encryption key is called a *key encryption key* to distinguish it from data encryption keys.

## data source

Functionality for connecting to a database by using JDBC.

## data transformation

Conversion of the format of a standard message to that of a service component message according to the data transformation definition, when the two types of messages have different message formats.

## data transformation base

Data transformation base is the function that transforms the message formats of request message, response message, in accordance with the data transformation definition.

## data transformation definition

The data transformation definition is used to resolve differences in the message format between standard messages and service component messages. Each element is mapped between the message format definition files for standard messages and those for service component messages, and if necessary, functions are set.

## DB adapter

An HCSC component that defines the database to be operated on and the SQL statement to be executed when using the database operations as a service component.

## DB Connector

A resource adapter used for connecting to a database.



## DD

This is an abbreviation of *Deployment Descriptor*. For details, see [Deployment Descriptor](#).

## deploy

In the case of J2EE application, to enable execution of the J2EE application imported in the J2EE server, from the client.

In the case of J2EE resource adapter, to enable usage of the J2EE resource adapter imported in the J2EE server from all the J2EE applications running on the J2EE server.

## deployment

An action that deploys HCSC components at an appropriate HCSC server. An HCSC component created in the development environment is deployed in the execution environment (HCSC server) via the operating environment.

## deployment definition

Deployment definition involves defining how HCSC components are deployed at the HCSC server and cluster in the development environment, and then updating the system configuration definitions. When a HCSC component is deployed from the operating environment, it is deployed according to the system configuration definitions that contain the deployment definitions created in the development environment.

## deployment definition file

An XML file that defines the processing to read the information necessary for using Web Services security functionality. There are two types of deployment definition files: files for servers and files for clients.

## Deployment Descriptor

Codes the definition information when allocating an application to the operation environment.

## deployment directory format

This is a J2EE application format that has the entity of applications such as EJB or servlet, in a file or directory that conforms to certain rules outside the J2EE server.

## destination address

The address of a system to which a message is sent.

## detached signature

An XML signature in a format in which the signature-target data is separated from the signature element. Detached signatures can also be used for data other than XML documents. The signature-target data in a detached signature can be specified by using a URI, allowing the user to reference external networks and local files.

## Developer

An infrastructure for creating the development environment of Application Server.

## development environment

An environment used to create HCSC components that are needed for calling service modules in the execution environment. The development environment is also used to define how the HCSC components, once created, are deployed at the HCSC server and cluster (deployment definition).

## Development Environment Instant Setup

Sets up the server environment required to develop J2EE applications. This functionality is provided by Developer. If you execute this functionality, the Management Server, host, performance tracer, J2EE server, and embedded database will be set up.

## digest value

A value that is added to data as an electronic signature. The digest value is determined by performing a specific calculation for the signature-target electronic data.

## DII

This is an abbreviation of *Dynamic Invocation Interface*. For details, see [Dynamic Invocation Interface](#).

## disassociation (service platform)

The act of updating the system configuration definition by deleting an HCSC component from an HCSC server (by deleting the deployment definition).

## disk cache

A schema cache that is saved on a disk.

## DI target

Target for injecting the reference by using the Dependency Injection functionality. Dependency Injection is executed for those fields whose names match with the DI target name or for the setter method that consists the DI target name as property.

## document/literal

Interface type for sending and receiving XML documents with the types defined in the schema, as child elements of the SOAP body.

## Document Object Model

Document Object Model describes the content of the XML document parsed by the DOM parser, and data is structured in a tree format that is resident in memory. This tree structure is called a *DOM tree*.

## Document Type Definition

An XML schema that defines information such as the attributes and hierarchy of tags used in an XML document and the order in which the tags appear. XML documents are described according to the syntax defined in this DTD.

## DOM

This is an abbreviation of *Document Object Model*. For details, see [Document Object Model](#).

## DOM API

An API used to access DOMs generated by using the DOM parser. The DOM parser can process data based on the data structure in the XML document.

## DOM tree

Structure of the XML document displayed in a tree format. A DOM tree is generated by parsing by using the DOM parser.

## DTD

This is an abbreviation of *Document Type Definition*. For details, see [Document Type Definition](#).

## dynamic contents

Contents generated dynamically according to the request from the client such as a servlet and JSP.

## Dynamic Invocation Interface

This is the function that calls SOAP service with the standard API defined in JAX-RPC, without using the service interface and stub. As it does not use the stub, calling destination is not fixed to a specific service and you can dynamically change the calling destination.

## EADs

This is an abbreviation of *Elastic Application Data store for Application Server*. EADs is a product for managing data in the memory, in a simple format like a key and a value. With EADs, you can manage multiple servers (EADs servers) as a cluster, process the large amount of data for using the memory area of individual servers within the cluster as a single memory area, and can access the data without considering the individual server from the client.

## EADs client

This is an abbreviation of *Elastic Application Data store Client for Application Server*. This is the client software for executing EADs functionality by accessing the EADs server.

## EADs server

This is the server process for managing data with EADs.

## EAR file

This is an abbreviation of *Enterprise ARchive file*. In this file, multiple files (EJB-JAR file, WAR file, and DD) that configure the J2EE application are packaged in the EAR file format.

A service platform creates an EAR file by packaging HCSC components.

## Eclipse

An open-source integrated development environment provided by the Eclipse Foundation. It provides various functions for improving application development efficiency, such as a function that supports source code editing, and a debugging function.

The service platform provides the functions required for the development of an SOA applied system, as plug-in.

## Eclipse Web Tools Platform

This is a development environment of the Java application.

## effective parameter

A parameter that is set in definition files of application servers. The Smart Composer functionality enables the user to set values in multiple related effective parameters in the batch mode by setting a single abstract parameter.

## EIS

A back-end system such as the database and transaction server, built in an enterprise.

## EJB client

Client program invoking the Enterprise Beans started on the J2EE server. The three types of EJB clients are as follows:

- EJB client applications
- Web applications, such as servlets or JSPs
- Other Enterprise Beans

## EJB client application

A Java application invoking an Enterprise Bean.

## EJB container

An execution environment that controls an Enterprise Bean. An EJB container also provides system level services such as communication and transaction management. The entity of the Enterprise Bean is executed in an EJB container.

## EJB-JAR file

Compressed files such as Enterprise Beans and DDs into JAR format.

## EJB timer

A timer for managing timeouts by using the Timer Service functionality of an EJB container. An EJB timer calls back the timeout method at a specified time or intervals and executes the events.

## elliptic curve cryptography

A public key cryptography technique based elliptic curve algorithm that is hard to solve. This provides an equivalent level of security as RSA encryption with a shorter key length.

## embedded database

A standard database provided by Developer. You can use the embedded database for developing and testing an application on a local machine. This database is restricted for the development use, and cannot be used in the production environment.

## Enterprise Bean

Business logic created according to the EJB architecture. Applicable to business-processing programs.

## entity

An entity contains files that are used in XML documents (such as image data or PDF files) or character strings that are substituted.

## Entity Bean

A bean indicating the persistent data. An Entity Bean is further classified into CMP Entity Bean and BMP Entity Bean.

## EntityManager

An object with an interface used to register an entity to or delete an entity from a database. EntityManager is provided by the JPA provider.

### **enveloped signature**

An XML signature in a format in which a signature element is generated in the signature-target XML document. For an enveloped signature, the signature element itself is not used as the signature target.

### **enveloping signature**

An XML signature in a format in which the signature element contains the signature-target XML document. For an enveloping signature, the value required for the signature is generated from the XML document contained in the signature element.

### **environment configuration file**

A property file used to change the necessary settings according to the execution environment of the server and client. Information specified in an environment configuration file includes the storage locations of keystore files and certificate files.

### **error page customization**

Functionality used to change and display an error page that is returned from web container to any page created by the user when a non-existing resource is accessed from a Web client.

### **event listener**

An object that receives and processes an event. In Application Server, this object receives the status change event of a servlet context object or a session object for each web application.

### **executing node**

A node (running server) used to perform business processing.

### **execution environment**

An environment where appropriate service modules are called and applications are executed via HCSC server, according to execution requests accepted by a service requester.

### **execution log**

The two types of execution logs are the process instance execution log of a business process and the message execution log. The user can use these logs to check the execution and response status of business processes, and the delivery route and status of service module information and messages.

### **execution log information table**

A table used to manage the process instances of business processes and message execution logs of messages.

### **Explicit heap**

A memory space used in Explicit Memory Management functionality. An explicit heap is not subject to Full GC because it is outside the Java heap.

### **Explicit Memory Management functionality**

The functionality using an explicit heap as place for deploying a Java object. An explicit heap is not subject to Full GC because it is outside the Java heap. You can use the Explicit Memory Management functionality to avoid occurrence of a Full GC.

### **Extensible Stylesheet Language**

This is the stylesheet of XML and it can code not only the display method; but also the data processes such as data copy, bifurcation, and extraction.

## FIFO

A unit for grouping messages. Messages are managed for each FIFO.

A FIFO is broadly classified into the following three types:

1. FIFO for registration or releasing

A unit for messages that exist in the queue to be registered or released from the application.

2. FIFO for sending

A unit for messages sent to another system in the communication layer.

3. FIFO for receiving

A unit for messages received from another system in the communication layer.

2 and 3 are sometimes generically called *FIFO for communication*. The FIFO for communication has the same meaning as a group.

## file adapter

An adapter used for direct input and output of files from the execution environment of Cosminexus Service Platform to the local disk on a HCSC server.

## file event linkage

A function (interface) that monitors a specific folder, detects creation of a file as a file event, and then notifies the service platform of the file event.

## file event reception

A function (interface) that receives an event indicating that a file was created in the monitored folder, and then starts processing.

## file number

A serial number contained in a file name. If message log or trace data is output to a file and the size of that file reaches the upper limit, the system increments the serial number in the file name by one and begins outputting data to the file with the new file name.

The term *number of files* implies the number of files output in this way.

## file operation adapter

An adapter used for layout transformation, character code transformation, duplication, compression, and decompression of files and for deletion of files and folders.

## forced termination of J2EE applications

Method used to forcibly interrupt the processing, even if requests are being processed in J2EE applications.

## framework

A frame to stipulate a function and service. By using a framework, you can easily create applications that you want to use in a business.

## front-end EJB

The Enterprise Bean that is used as a receiver of requests.

## **FTP adapter**

An adapter used to send and receive files between Cosminexus Service Platform and an FTP server.

## **FTP client**

Client software that uses FTP to send and receive files.

## **FTP inbound adapter**

A resource adapter used in FTP integration. Conforms to Connector 1.5 specifications.

## **FTP integration**

Functionality used to transmit files between the FTP client and FTP server on Cosminexus Service Platform.

## **FTP reception**

Functionality (interface) that receives execution requests from the FTP client via the FTP inbound adapter.

Files can be transmitted between the FTP client and FTP server on Cosminexus Service Platform by integrating with the file operation adapter and FTP adapter.

## **FTP server**

Server software that sends and receives files based on the requests from the FTP client.

## **function**

A definition of the data transformation processing method used when the value of the source node is processed and mapped to the target node.

Supported functions include the conversion of character strings and numeric values, the acquisition of node names, and the definition of selection and iteration processing according to the conditions that have been specified.

## **functionality for monitoring the J2EE application execution time**

Functionality for monitoring the request execution time for EJB and web applications. If a failure is detected while the execution time is being monitored, the method timeout functionality and method cancellation functionality are activated.

## **functionality layer**

A layer of functionality to output the PRF trace when performance analysis trace is collected. This layer includes the EJB client, web container, CTM, EJB container, JNDI, JTA, and JCA/JDBC.

## **gateway specification functionality**

Functionality used to send gateway information to a web container and to enable correct redirection of the gateway information to a welcome file and Form authentication window when a gateway, such as SSL accelerator or load balancer, is deployed between the client and the web server.

## **GC control functionality**

Functionality used for setting the execution of GC in the waiting state, during the mutual exclusion of the resources. You can avoid the occurrence of the Full GC and the termination of processes for a longer period during the mutual exclusion of the resources. You can use the GC control functionality on batch servers.

## general custom adapter

This adapter calls the service components of a system that has a protocol.

The user can develop an adapter corresponding to any protocol, by using the custom adapter development framework provided by the service platform.

## global CORBA Naming Service

A Naming Service for common management of the information about the business-processing programs (Stateless Session Bean) registered in multiple J2EE servers of a CTM domain, when requests are scheduled with CTM.

## global session

The session failover functionality treats an HTTP session before a failure and an HTTP session inherited after a failure as one session. This is called a *global session*.

## global session ID

An ID that manages a global session. This ID is added to a global session to uniquely identify the global session information within a system.

## global session information

The information retained by a global session is the global session information. The global session information is managed with a database, when using the database session failover functionality.

## global transaction

Transaction managed by the transaction manager provided by the J2EE server. A two-phase commit protocol can be used, and therefore, you can involve multiple resources in a transaction.

## grammar object

A grammar object is an internal object that can be acquired when parsing a schema document for displaying schema grammar definitions.

## group

A unit for grouping the messages on the communication layer. The messages are managed for each group. QoS, such as order guarantee, is provided in the group scope.

## HA monitor

A type of cluster software.

A program that monitors and switches the system when a failure occurs. By integrating with HA monitor, you can improve the reliability and operation rate of a system built using Application Server. A system can be integrated with HA monitor when using AIX or Linux.

By integrating with the HA monitor you can implement a 1-to-1 node switching system, mutual node switching system, or node switching system for the host management model.

## handler

A handler object of the Java logging API that is used to output the log of an application received from a logger to a file and console. You can use a handler object with the J2EE applications, batch applications, and EJB client applications.



CJMessageFileHandler, the file handler to output the log in Hitachi Trace Common library format to a file, is provided in Application Server.

## handler framework

Functionality (framework) that intercepts and adds processing in the JAX-WS engine when a SOAP message is sent and received. Multiple handlers can be added between the Web Service client and Web Service Implementation Class to extend the Web Service functionality.

## HCSC

This is an abbreviation of *Service Coordinator*. For details, see [Service Coordinator](#).

## HCSC-Business Process

This implies the *business process platform*. For details, see [business process base](#).

## HCSC component

A collective name for the service adapters, general custom adapters, business processes, and user-defined receptions that are created in the development environment.

## HCSC component validation

A function for verifying whether or not the adapters, business processes, and data transformation definitions that have been defined are valid. It enables the user to determine at any time whether or not there are required definitions, and whether or not the defined relationship is correct.

## HCSC-Data Transform

This implies the *data transformation platform*. For details, see [data transformation base](#).

## HCSC-Manager

An operations management function used in the operating environment of a Cosminexus Service Platform.

It provides the HCSC server setup function, HCSC component deployment function, and process instance execution-log management function.

## HCSC-Manager command definition file

A file (`csccmd.properties`) used to define the default values of items required in commands that are used in the operating environment. It is created as a J2SE property-format file.

By defining default values in this file, the user can omit the corresponding options during command entry.

## HCSC-Manager definition file

A file (`cscmng.properties`) used to define the information required for customizing the operating environment. It is created as a J2SE property-format file.

The information that can be defined in this file includes the repository import target directory, the size of log files, and the number of log files.

## HCSC-Messaging

This implies the *messaging platform*. For details, see [messaging base](#).

## HCSC server

A server facility that manages the execution of service components in the execution environment. It includes functions required for the execution environment, such as the messaging infrastructure, the business process infrastructure, and the data transformation infrastructure. It also includes the request reception function or all types of adapter functions such as the standard reception and user-defined reception.

## HCSC server configuration definition file

A file (`cscsvsetup.xml`) that defines the configuration of an HCSC server. It is created as an XML file.

The information that can be defined includes an HCSC server, a cluster, and Cosminexus Manager.

## HCSC server runtime definition file

A file (`cscsvconfig.properties`) that defines the runtime information required at HCSC server startup. It is created as a J2SE property-format file.

The information that can be defined includes whether or not execution logs are to be collected, the levels of trace files, and their output destination.

## HCSC server setup definition file

A file (`cscsvsetup.properties`) that defines the information required for setting up an HCSC server. It is created as a J2SE property-format file.

The cluster names to be set up and the standard reception types that can be used in an HCSC server can be defined.

## HCSCTE

A development support function used in a Cosminexus Service Platform. The functions provided by HCSCTE are used as Eclipse plug-ins.

They include functions for creating and defining adapters and business processes.

## host unit management model

A system configuration model where Management Server is deployed on the same host as that of Application Server when you configure the system with the Smart Composer functionality or the management portal.

## HTTP adapter

This is the adapter for calling Web Services (RESTful Web Services) published in the REST style. You can also use this adapter to send and receive files between the service platform and service components.

By linking with the HTTP reception, you can forward the files sent from the client to the web server.

## HTTP reception

This is the function (interface) for receiving an execution request from the HTTP client.

You can use the HTTP reception to send and receive the text data or multimedia data between the Web browser and service components without passing through the Web front system.

## HTTP response compression function

A function to compress an HTTP response for an HTTP request to a servlet, JSP, and static contents, into the `gzip` format with a servlet filter. You can use this function to reduce the communication time between

a web container and a Web client (such as a Web browser) and consequently reduce the response time of a system.

## HTTP session

The `HttpSession` object acquired using the `getSession` method of the `javax.servlet.http.HttpServletRequest` class. Shows the entire HTTP session, including the objects referenced as members by the HTTP session, in addition to the *objects stored in an HTTP session*.

## Hyper-V

This is one of the types of hypervisors. This is the name of the Microsoft provided function for implementing the server virtualization. By using this, you can attain the high performance, availability and reliability, with the 64-bit virtualization technique.

## hypervisor

A control program that allows virtualization software to implement virtual servers. This program manages guest OS resources and performs emulation processing. It directly operates on hardware and operates and controls multiple OSs in virtual environments.

## hypervisor management software

A tool that provides consolidated management of hypervisor products. This tool must be provided for each type of hypervisor.

## IANA

This is an abbreviation of *Internet Assigned Numbers Authority*. For details, see [Internet Assigned Numbers Authority](#).

## IDE

This is an abbreviation of *Integrated Development Environment*. For details, see [Integrated Development Environment](#).

## identifier

A character string used as a key for obtaining information about the running servers from the server definition file. You can use the context root of a SOAP application deployed on the server after removing the forward slash (/) at the beginning of the context root.

## inbound

One of the communication models between a J2EE server and resource adapter as stipulated in the Connector 1.5 specifications. Inbound is a communication model used for accessing the J2EE server from resource adapters.

## in-process

A method for invoking a process. When in-process is used, a high-performance system can be achieved because the started process is optimized to be executed within the J2EE server process. Naming services, transaction services, and HTTP server function can be invoked by in-process. In this case, the CORBA Naming Service, in-process OTS, and the NIO HTTP server are invoked automatically when the J2EE server is invoked.

## instance document

An XML document that is a target for schema verification.

## integrated console

A window that displays information such as error messages for events occurring in a system when integrated with JP1/IM.

## Integrated Development Environment

This is the integrated development environment in which you can execute the Java program or create a WAR file by using GUI. It supports Eclipse on Application Server and BPM & ESB platform.

## integrated naming scheduler server

A host that deploys global the CORBA Naming Service without deploying a J2EE server, when you use request scheduling as per CTM. You can create a replica of an integrated naming scheduler server and can improve the availability. Moreover, the CTM daemon is also required on the integrated naming scheduler server.

## integrated naming scheduler server model

A system configuration model that creates the host that deploys the global CORBA Naming Service without deploying J2EE server when you use request scheduling as per CTM.

## integrated scope

A window that displays a monitoring tree matching the objectives of the administrator as a system-monitoring screen when integrated with JP1/IM.

## integrated user management

Mechanism for integrated management of the user who logs on to the system that has been developed in the application server. You can use integrated user management framework that implements user authentication. You can also use the management portal to manage repositories and monitor resources.

## integrated user management configuration file

This is the setting file (`ua.conf`) for using the JAAS supported user management, and single sign on function.

## integrated user management framework

A framework that realizes user authentication using integrated user management. APIs are provided according to Java standard specifications (JAAS).

## Internet Assigned Numbers Authority

This is the organization for registering the internet names or numbers.

## J2EE application

An application configured by JSPs, servlets, and Enterprise Beans. The J2EE application format handled by Application Server includes the applications of the archive format that are packaged in the EAR file format, and the applications in the exploded archive format that are not archived. The applications packaged in the EAR file format are configured from multiple EJB-JAR files, multiple WAR files, and one DD.

## J2EE component

A user application program such as a servlet, JSP, or Enterprise Bean.

## J2EE container

A server platform for running J2EE applications. It is configured with a web container and EJB container that provide the various APIs to the J2EE components.

## J2EE resource

A resource that can be used by a server. For a J2EE server, you can use resources such as a database, OpenTP1, and SMTP server. You can also use a database for a batch server.

## J2EE resource adapter

Resource adapter provided as a shared stand-alone module for a J2EE server.

## J2EE server

An environment used to create and execute J2EE containers, which are the server infrastructure for executing applications. The Cosminexus service platform uses Cosminexus Component Container as a J2EE server.

## J2EE service

As a function of a J2EE container. The APIs of JNDI, JDBC, JTA, RMI-IIOP, and JavaMail are provided in J2EE components.

## jaas.conf

This implies the configuration file of JAAS. For details, see *JAAS configuration file*.

## JAAS configuration file

This is a settings file for JAAS authentication, which is required for using the functions of the user authentication library and single sign-on library.

## JAAS login module

This is a LoginModule interface mounted class of JAAS API, which is used for user authentication of the JAAS compliant integrated user management.

## JAR file

This is an abbreviation of *Java ARchive file*. The JAR file is an archive for consolidating the class files or data files required for executing a Java program to one file.

## Java Batch

This is an abbreviation of *Batch Applications for the Java Platform* defined in JSR-352.

## JavaBeans

A method used to build an application by embedding programs that are developed as components using the Java language.

## Java logging API

Class and interface of core logging functionality provided in J2SE. With Application Server, functionality is provided to output the user log in Hitachi Trace Common library format by using the Java logging API.

## Java template file

A template file of the transformation function invoked from the custom function. Codes the configuration of the packages, classes, and methods (including arguments).

## JAXB mapping annotation

An annotation specified in the Java source code to be input when creating a schema document by using the schema generator. This annotation is used to change the default mapping.

## JAX-RS engine

This is the engine that serves as a communication platform of RESTful Web Services (Web Resource), complying with the JAX-RS specifications. It is allocated on the Web Resource side, receives the messages received from the client through HTTP protocol and executes the process. The JAX-RS engine performs the required injection based on the annotation included in the resource file, at the time of method calling.

## JAX-RS function

This is the JAX-RS specification compliant function that executes RESTful Web Services (Web Resource). This function provides the communication base for executing Web Resource.

## JAX-WS API

The API provided in the JAX-WS specifications. Used for adding functionality such as handler framework.

## JAX-WS engine

An engine that forms the Communication Infrastructure of a Web Service complying with the JAX-WS specifications. The JAX-WS engine is deployed on the Web Service client and the Web Service and plays the role of marshalling/un-marshalling the sent and received SOAP messages.

## JAX-WS functionality

The functionality for developing and executing the SOAP Web Services compliant with the JAX-WS specifications. It provides the command line interface for Web Service development and the Communication Infrastructure for the SOAP Web Services execution.

## JCA container

A JCA container provides the system level plug-in functionality for connecting the J2EE server or batch server with EIS.

## JDBC connection

A connection for accessing the database from an application implemented on Java. Generated using the standard interface published by Sun Microsystems, Inc.

Cosminexus RM uses the JDBC connection through the DB Connector to access a database.

## JMS client

One of the messaging system components that use the JMS interfaces. A program coded in the Java language and used for sending and receiving messages.

The application is the JMS client for using Cosminexus RM is used.

## JMS interface

An API for sending and receiving messages through a queue, between the applications implemented on Java. The specifications are defined according to the Java Message Service Specification.

The JMS interface provided by Cosminexus RM is based on the PTP (point-to-point) model of JMS Version 1.0.2b.

## JMS provider

One of the messaging system components that use the JMS interfaces. A product that implements the management functionality, the control functionality, and the JMS interfaces required for the messaging system.

Cosminexus RM is the JMS provider for using Cosminexus RM.

## JNDI name space

Name space managing the name information accessed by JNDI. In an Application Server, the EJB object reference is bound with the name of the JNDI name space when J2EE application is deployed.

You can add an optional name in the name of JNDI name space used in the application server. By doing this, the Enterprise Beans and J2EE resources can be look up with the optional name.

## JNDI Naming Service

A standard extension functions for the Java platform that provides interfaces for the Naming Service and directory service in the application.

In Cosminexus RM, the JNDI Naming Service is used for generating the queue objects in the application.

## job

Each operation in the system operations is handled using JP1/AJS.

## job-net

Links the execution sequence of the jobs that are handled using JP1/AJS.

## JP1

An integrated system operations management software provided by Hitachi.

## JP1/AJS

Program suite used for automating the routine or periodic operations from among the daily business operations, thereby reducing the cost incurred for system operations, and implementing reliable operations using fewer people. Configured from the products JP1/AJS - Manager, JP1/AJS - Agent, and JP1/AJS - View.

## JP1/Audit Management - Manager

This is the program product for batch management of the audit log output by the products within the system, by automatically collecting the audit log. You can link with JP1/Base to automatically collect the audit log output by Cosminexus Application Server, management server (for hosts), and open middleware products to be linked, with the audit log management server. Also, you can perform source management of the collected audit log, with the database of audit log management server.

## JP1/Base

This is the program, which provides the base functions of JP1 product, such as JP1/IM, JP1/AJS. You can manage the events of JP1 users, and control the service startup within the system in which JP1 products are used.

## JP1/IM

A group of key programs for integrating and managing an entire corporate information system. JP1/IM is configured from three products such as JP1/IM - Manager, JP1/IM - View, and JP1/IM - CM.

In the virtual system, you can link by using JP1/IM - Manager and JP1/IM - View.

## JP1/ITRM

This program is allocated from current acquisition of IT resources in various system environments and is used for primary management of the IT resource operation cycle till volume checking or optimization.

## JP1/PFM

Program suite that monitors the operating state of the databases and applications configuring enterprise system. In a virtual system, JP1/PFM - Manager, JP1/PFM - Web Console, and JP1/PFM - Agent for Cosminexus are used and integrated.

## JP1/SC/DPM

Software used for executing the deployment operations. Enables the backup of the disk images and the batch installation of the OS and applications.

## JP1 account manager

This is the user, who manages the account by operating JP1/Base, which is the authentication user. With the virtual system, you can manage virtual server manager administrator account and system configuration user account.

## JP1 event

Information about an event that is sent to JP1/Base when the event occurs in the system.

## JP1 Integrated Management server

Host that deploys JP1/IM - Manager for the centralized monitoring of a system by integrating with JP1/IM.

## JP1 Job operation management server

Host that deploys JP1/AJS - Manager, when automatic system operations are performed by integrating with JP1/AJS.

## JP1 permission level

Defines in JP1/Base with the name that indicates the operations (with permissions) that the JP1 user can perform for the management target (resources). With the virtual system, you can set the names for virtual server manager administrator account and system configuration user account.

## JP1 resource group

This is the group in which management targets (resources) are divided and is defined in JP1/Base. With the virtual system, you can set the management unit name for controlling the access of a JP1 user, for the management unit.

## JP1 user

A username of an account managed by JP1/Base. JP1 users registered to the authentication server can control access to management targets (resources).



## JPA provider

JPA implementation that provides the functionality for mapping the Java objects and database and the API functions encapsulating database processing.

## JPQL

Query language defined in the JPA specifications. The language does not depend on the database and operates on the entity class. With the Application Server, database operations can be performed using JPQL.

## JSON-XML transformation

A function that uses the HTTP reception to transform a JSON format request message to XML format or transform an XML format response message to JSON format. This function also uses the HTTP reception to transform the JSON format request message sent from the REST client to an XML format request message. It also transforms an XML format response message sent from a business process to JSON format and returns it to the REST client.

## JSP compiled results

Java source files and class files created by compiling JSP files and tag files.

## JSP debug

A functionality for creating a class file in which the SMAP information that describes the mapping between the rows of the JSP file and Java file is embedded during JSP compilation. This enables the execution of the functionality of the debug tool, such as setting up a breakpoint, in the JSP file.

## JSP pre-compile

A function to compile the un-deployed JSP files and tag files included in a web application. By compiling these files before their deployment, you can reduce the response time of the first request for a web application.

You can also generate Java source files, and specify files that are not to be compiled, when you execute the JSP pre-compile function.

## JSP tag library

Library used for creating JSP tag and is described in JSP specifications. The application server provides the JSP tag library for integrated user management for authenticating the user by using the Cosminexus standard login module.

## key agreement

A mechanism whereby senders and receivers who do not share confidential information in advance can generate and share confidential information that is not disclosed to third parties. A key generated based on the confidential information generated by a key agreement can be used as a common key shared by the sender and receiver only.

## key encryption key

A key used for encrypting and sending data encrypted key (data encryption key) when encrypting data that must remain confidential to third parties during transmission.

## keystore

A protected database that has private keys, public keys, and certificates.

## library JAR

A common library packaged in JAR file format that can be used from all J2EE components in J2EE applications.

## light transaction

A function that enables local transactions to be used in the optimal status.

## live migration

A technology service that moves the guest OS and software running on a virtual server (physical machine) to another physical machine without stopping them.

## load balancer

A device for distributing loads on servers by transferring requests received from, for example, a Web browser in a centralized manner to multiple servers that have equivalent functionality.

## local interface

Interface to invoke an Enterprise Bean by invoking the Java method. There is no communication.

Includes the local home interface and local business interface

## local transaction

Transaction managed by a resource manager of the connection destination. You can include only one resource in the transaction.

## logger

The logger object of Java logging API that acquires the log of J2EE application, batch application, or EJB client application.

## logical connection

A connection operated directly by J2EE components, such as a servlet and Enterprise Beans.

The logical connection used in the case of a resource adapter is `javax.resource.cci.Connection`, and in the case of JDBC is `java.sql.Connection`.

## logical Naming Service

A multiple CORBA Naming Service where JNDI is considered as a target of the round robin search.

## logical server

A server or cluster that is managed by Management Server. The server includes web servers and J2EE servers. A cluster is a set of multiple servers that provide some common functions.

## logical user server

A logical server for which any service or process is defined as the management target of Management Server. It can be started and terminated and its status monitored by the Management Server.

## mail adapter

You can use this adapter to call the mail server that supports SMTP protocol as a service component on the Cosminexus service platform.

## Managed Bean

A Java object that represents a managed resource, and that is implemented according to the JMX specifications. It functions as a resource interface for the manager and provides the manager with resource-related information and operations.

## Management action

A process that is automatically executed when a Management event occurs. The type of process to be executed as a Management action is defined in advance in the Management Server.

## Management agent

An agent program to monitor the operational status of logical servers running on the host and to collect the statistics.

## management command

The management command indicates `mngsvrutil`. For details, see [mngsvrutil](#).

## management domain

A set of logical servers managed by the Management Server. The same management policy is applied to all.

## Management event

An event that is issued in a Management Server in response to the phenomenon occurred in the logical server in the operation management domain when operating with a Management Server. This event can be issued when the message is displayed in the logical server. For example, it can be issued when the threshold value set during resource monitoring is exceeded.

If a Management action is defined for a Management event, it is possible to automatically execute the action in response to the occurred phenomenon.

## management LAN

A LAN that includes a management server.

## management policy

Operations management-related policy, such as operations, monitoring, and security.

## management portal

A GUI for operating the Management Server. The management portal is displayed in the Web browser.

## Management Server

This is a server program that configures the management domain. One server is allocated for one management domain.

Management Server executes the management of the entire management domain by performing the output of the instructions to the Administration Agent instances that are allocated to each host within the management domain.

## management server (for hosts)

A host with Management Server installed when the system is configured by using the Smart Composer functionality or the management portal. The server gives instructions related to management operations for the Administration Agent instances installed on each host in the management domain.

## management server (name of a server function)

A server function that is used to download data such as an EJB stub.

## management server model

A system configuration model employed when the Smart Composer functionality or management portal is used to implement a system in which the Management Server is placed on a separate operations management host from an Application Server.

## management unit

A set of virtual servers to which the same deployment (allocation of processes and deployment and definitions of J2EE applications and resource adapters) is applied.

The concept of a management unit is used for the setup and operation of virtual systems.

## Manager

The operation management functionality of Application Server systems. *Manager* is a collective term for Management Server and Administration Agent.

## mapping (service platform)

The act of connecting the source and target nodes of a transformation when data transformation is defined. The starting point of mapping is called the *mapping source*. The ending point of mapping is called the *mapping target*.

## mapping (XML Processor)

Mapping has the same meaning as binding performed by JAXB. When correlating a Java class to a schema document, the term *mapping* might be used rather than *binding*.

## marshal

The task of saving a Java object in an XML document using a JAXB API is called *marshalling*. Marshal refers to serialization of the Java object in an XML document.

## MBean

This is an abbreviation of *Managed Bean*. For details, see [Managed Bean](#).

## MDB

This is an abbreviation of *Message-driven Bean*. For details, see [Message-driven Bean](#).

## MDB (DB queue) adapter

An adapter used to invoke asynchronous service components by using a DB queue.

## MDB (WS-R) adapter

An adapter used to invoke service components created in MDB (Message-driven Bean) by using WS-R (WS-Reliability).

## member resource adapter

Resource adapter connected to the database node when the connection pool is configured in a cluster. Member resource adapter is always accessed through the root resource adapter. This function is provided for compatibility with previous versions.

## memory cache

A schema cache that is saved in the memory.

## message

A unit of data sent and received between applications that is implemented using the JMS interface.

The messages used in the Cosminexus RM applications are implemented using the Message interfaces and its sub-interfaces.

## Message-driven Bean

This is Message-driven Bean for linking with JMS. EJB container starts Bean in receiving a JMS message from the Destination of JMS.

With Cosminexus RM, you can execute the methods mounted in Message-driven Bean, when a message is registered in the reception queue.

## message format

A data structure for request messages and response messages.

The message format of a request message sent from a service requester to the HCSC server must match the standard message format. If the message format of the message for requesting execution of a service component (a service component message) differs from the standard message format, create a data transformation definition to eliminate any differences between the message formats.

## message format definition file

A file that defines the structure of the message (message format). The types of such files include XML format definition files and binary format definition files. An XML format definition file is used to handle XML format data in messages used to run service components. A binary format definition file is used to handle binary format data (data other than in XML format).

## message inflow

A protocol that applies when a message provider delivers messages to a message endpoint on Application Server. The message inflow functionality is available for Connector 1.5 Inbound communication models.

An example of an applicable message provider is EIS. The applicable message endpoints on Application Server are Message-driven Beans.

## message queue adapter

An adapter used for sending and receiving messages from the execution environment of Cosminexus Service Platform to the existing message queue (IBM MQ system).

## message queue reception

A function (interface) that receives execution requests from the JMS provider (IBM MQ system) via the MQ resource adapter.

## message receipt

This indicates receiving of the message by transfer between servers.

## message transfer

This indicates sending and receiving of messages between multiple systems.

## **messaging**

Messaging means sending and receiving any data between client and server as a message. In the SOAP applications of the Messaging-Type, use the SOAP message that is XML format data while sending and receiving data between client and server.

## **messaging base**

This function calls an appropriate service component in accordance with the definition of a service adapter.

## **method cancellation function**

One of the functionality used to monitor the execution time of the J2EE application. This function executes cancellation of a method after a timeout is notified by the method timeout function. The transaction is also terminated forcibly if you access a database during cancellation.

## **method timeout function**

One of the functionality used to monitor the execution time of the J2EE application. Among the requests present in the monitoring base, the method processing that does not terminate within a fixed time period is notified to the user as a timeout.

## **method trace**

Information that is required when a failure occurs and it is difficult to determine its cause.

## **MIB object**

An object used by SNMP. All objects (information) are uniquely determined by object ID.

## **MIME header**

Header that defines the data format that can be handled in an E-mail or message. When sending and receiving a SOAP message with file attachment, this header defines the correlation between SOAP messages and file attachments within the MIME header.

## **mngsvrutil**

This is CUI for operating Management Server.

## **monitoring tree**

Tree displayed in the integrated scope when a system is integrated with JP1/IM. A system built using the application server provides the functionality to create two types of trees as the monitoring trees: the Cosminexus business-oriented tree and the server-oriented tree.

## **mutual node switching system**

One of the systems that can be implemented using the cluster software. In this system, the executing nodes and standby nodes on the Application Servers are arranged in a 1-to-1 ratio. The mutual node switching system has a standby system by operating the respective Application servers as the executing node.

## **mutual standby**

A configuration in which the executing nodes and standby nodes on the Application Servers are arranged in a 1-to-1 ratio when the operation is performed using the cluster software.

The mutual standby has a standby system by operating the respective Application Servers as the executing node.

## MVC

This is an abbreviation of *Model/View/Controller*. Model manages the logic in a system. View manages the display and I/O. Controller controls View and Model.

## namespace

Identifier defined to indicate different meanings of elements and attributes with the same name in an XML document.

## namespaces in XML

A modifier that is used to avoid name collisions between elements or attributes when more than one language defined in XML is handled in a single document.

## Naming Service

A service that names objects and manages their storage locations so that an object can be accessed by its name even when its storage location is unknown. Application Servers use the CORBA Naming Service.

The Management Server enables a Naming Service to be handled as a logical server.

## Naming Service switching

Switching of CORBA Naming Service that is connected to JNDI when registration, deletion, and search of the EJB home objects are performed through JNDI.

## NIO HTTP server

A web server function that works in a J2EE server process.

## node

A node is a general term for all the systems that includes programs to be executed or the communication devices besides the hardware required for business processes. There are two types of nodes: executing nodes and standby nodes.

## node (each element displayed in the tree viewer)

An element displayed in the tree viewer of the Data Transformation Definition window. The types of such nodes are source nodes that are used as data transformation sources and target nodes that are used as transformation targets.

## node failure

Indicates the failures occur in nodes, excluding servers. This includes the node hardware failure and HA monitoring failure. Note that a failure that occurs in a server is called the *server failure*.

## node switching

You can switch the system when error occurs or when you want to perform system maintenance. When you perform node switching, the standby node inherits the business processing, and becomes the executing node. On the other hand, the executing node becomes the standby node that is prepared for the error occurrences. Hereafter, for the node switching, you can execute the business operations normally on any of the nodes by switching the executing and standby nodes.

## node switching system for host unit management model

One of the systems that can be built using cluster software. A system where multiple executing node Application Servers and one standby node Application Server is allocated, and a Management Server and

Management Agent is allocated respectively for each executing node Application Server and standby node Application Server.

### non-permanent connection

A connection establishment method in which the connection is released each time the request that caused the connection to be established terminates.

### non-protected area

An area in which method cancellation can be used. Non-protected areas apply to the code of user programs. Method cancellation functionality is provided to monitor the execution time of J2EE applications. This functionality is also used by the forced batch termination command.

### normalization

Processing for changing XML documents in accordance with specific rules to eliminate differences in the representation between XML documents. Normalization only changes the description method without changing the meaning of each XML document.

### normal termination of J2EE applications

Method to safely terminate J2EE applications by sequentially implementing the termination processing of web application or EJB.

### N-to-1 recovery system

System where one recovery server is deployed as a standby node for an executing node Application Server in the cluster configuration. The recovery server concludes the transactions for the failed executing node Application Server.

### number of dedicated threads

Number of threads that can ensure the execution of requests that are controlled by the number of concurrently executing threads. You can specify the number of dedicated threads for each web application deployed on the web container or for each business processing logic in a web application.

### number of files

The number of log files to be retained. The number of log files created matches this number of files, and using the log cycles through these files.

### number of shared threads

The number of threads shared by the web applications deployed on a web container.

### Object Access adapter

An adapter used to call a service component in an existing TPBroker system (Object Wrapper system) from the execution environment of Cosminexus service platform.

### objects related to HTTP sessions

A collective term for *objects used for managing HTTP sessions* and *HTTP session*.

### object stored in an HTTP session

A user object stored in an HTTP session by the `setAttribute` method of the `javax.servlet.http.HttpSession` class.



It is also called an *HTTP session attribute*.

### objects used for managing HTTP sessions

Object that is used in a web container and manages an HTTP session.

### Object Transaction Service

This is the service required for using distributed transactions by TPBroker OTS.

### operating environment

The operating environment reads the EAR file created in the development environment from the repository, and deploys the file to the execution environment. The operating environment also sets up the HCSC servers that will be used in the execution environment. After the applications begin running in the execution environment, the startup, termination, and status of the system are monitored.

### Oracle RAC

A cluster functionality of Oracle database. With an application server, you can connect to a clustered Oracle database with the Oracle RAC functionality.

### ORB gateway

A gateway functionality that can directly call the EJB application operated in J2EE server from CORBA client. ORB gateway is provided by CTM regulator process.

### OTM gateway

Gateway functionality that can directly invoke an EJB application that is operating in J2EE server, from the TPBroker OTM client. It is provided by OTM gateway process.

### OTS

This is an abbreviation of *Object Transaction Service*. For details, see *Object Transaction Service*.

### outbound

One of the communication models between a J2EE server and resource adapter as stipulated in the Connector 1.5 specifications. Outbound is a communication model for accessing the resource adapter from the J2EE server.

### out-process

A method to activate a process. If out-process is activated, it is executed external to the J2EE server processes. The user must activate the CORBA Naming Service when using a Naming Service in out-process.

### packaging

Assembling an EAR file such that a HCSC component created in the development environment can be deployed in the execution environment.

### pending queue

A queue for storing requests when the maximum number of concurrently executable threads is specified and the number of executed threads reaches the maximum.

## percent encoding

Percent encoding includes a percent sign with two-character hexadecimal after that, and expresses the characters, such as the Japanese characters that cannot be used in a URL.

## performance analysis trace

Trace information for analyzing the performance of Application Server, the functions of the BPM/ESB platform, and application processing.

## performance analysis trace file

A text file that edits and outputs the trace information in the CSV format, for analyzing the performance of the system configured on Application Server.

## performance tracer

A PRF daemon.

Management Server can handle performance tracers as logical servers.

## permanent connection

A connection establishment method in which a connection is continuously used without releasing the connection even if the request that caused the connection to be established terminates.

## persistence (service platform)

The act of recording the execution status of process instances of business processes in logs in the database.

## persistent resource adapter

A Reliable Messaging resource adapter that stores persistent messages in the database. This adapter retains reproductivity of messages and implements the highly reliable asynchronous exchange of messages.

## physical connection

Connection of the connection destination resource. Usually, a J2EE container operates the physical connection. The physical connection used in a resource adapter is `javax.resource.spi.ManagedConnection`, and that used in JDBC is `javax.sql.XAConnection`.

## physical machine

A physical computer.

## physical tier

A set of server machines to which the same deployment (process arrangement, deployment of J2EE applications and resource adapters, and definitions) is applied.

This concept is used when a system is implemented using the Smart Composer functionality.

## Plain Old Java Object or Plain Ordinary Java Object

This is the terminology that indicates the Java object, created in the specification range of Java.

## planned node switching

One of the methods of node switching. When operator maintains nodes, this method switches nodes in planned manner.

## planned termination

Planned termination is a method to stop running server processes or server threads after execution completes.

## POJO

This is an abbreviation of *Plain Old Java Object* or *Plain Ordinary Java Object*. For details, see *Plain Old Java Object* or *Plain Ordinary Java Object*.

## prefork MPM

A module that operates with multiple processes.

## PRF daemon

An IO process that outputs a PRF trace from buffer to file.

In a Management Server, PRF daemon can be treated as a logical server. When supported by a Management Server, PRF daemon is called as *performance tracer*.

## PRF trace

Trace information that has been output by each function of application servers when requests are processed. The trace information is output to a buffer; when a specified amount of trace information has accumulated, it is then output to a PRF trace file.

## PRF trace collection level

Level to collect the PRF trace. The levels are *Standard level*, *Advance level*, and *Maintenance level*. If *Advance level* or *Maintenance level* is specified, there are more trace collection points as compared to the *Standard level*.

## PRF trace file

A binary format file to which PRF trace is output. This is a base file for converting to trace-based performance analysis file (CSV format).

## PRF trace output library

Library embedded in each functionality of the application server system. It provides a functionality to output the PRF trace to a buffer for each function layer.

## PRF trace service

A program that works to output a PRF trace. This program is resident in a process that outputs a PRF trace or in the PRF daemon.

## private key

A private key (also called a *closed key*) is used to decrypt data and create an electronic signature used in public key cryptography. Private keys must be safely managed by their respective owners.

When receiving encrypted data, the receiver decrypts the data by using the receiver's own private key. When adding an electronic signature to the data to be sent, the sender creates the electronic signature by using the sender's own private key.

## process instance

An application entity that is executed by a business process. It corresponds to a workflow item.

## process-wise definition file

A definition file that is created when operations specific to a process must be specified.

## protected area

An area in which method cancellation cannot be used. An example of a protected area is a source of J2EE services. Method cancellation functionality is provided to monitor the execution time of J2EE applications. This functionality is also used by the forced batch termination command.

## public key

Public key is used by public key cryptography. The public key releases information to the communication partner. When sending encrypted data, the sender encrypts the data by using the public key of the receiver. When validating a received electronic signature, the receiver uses the public key of the sender.

## publish (service platform)

An action that adds (performs deployment definition for) HCSC components to the HCSC server and updates the system configuration definition.

## queue

A storage destination of the messages sent and received by applications.

In Cosminexus RM, a queue is created on the database.

## queue creation file

A file used for defining the queues used in a non-persistent resource adapter. In a persistent resource adapter, a queue is created using commands, but in a non-persistent resource adapter, by defining the queue attributes in the queue creation file beforehand, the queue information is enabled when the resource adapter starts.

## queue definition file

A file that associates the queue display name registered in the JNDI Naming Service and the actual queue name. If the full path of the queue definition file is specified in the `QueueConfigFileName` property, the defined queue display name is registered in the JNDI Naming Service when Cosminexus RM starts.

## queue definition statement

A statement used for defining the queue attribute and the queue name within the queue creation file. The queue information is restored when the resource adapter starts according to the contents coded in the queue definition statement.

## realm

Range that applies the same authentication policy in a system performing integrated user management.

## RealServer

This implies the real server of the load balancing function. This is an object that indicates an actual server which is the distribution destination of the requests received by `VirtualServer`, on the load balancer. One real server of the load balancer is created for each virtual server of the virtual system.

## reception process

An API that codes the process for receiving the service component invocation requests and for transmitting messages. A reception supporting any protocol can be developed by operating the user-created reception process on the custom reception framework.

## recovery server

An Application Server instance that functions as a standby node when an N-to-1 recovery system is set up by using the cluster software.

If an uncompleted transaction exists in Application Server on an execution node where an error occurred, node switching occurs, and the relevant transaction is resolved to release the resource.

## redeploy functionality

A functionality used for replacing J2EE applications. It is applied when the running J2EE application is to be replaced with a corrected version of the J2EE application, such as when a J2EE application is being tested.

## reload functionality

A functionality to switch the classes and JSP files that constitute an application, without terminating the application that is running.

You can execute the reload functionality for an application deployed in the exploded archive format.

## remote interface

Interface that invokes an Enterprise Bean with the help of RMI-IIOP communication based on the interface rules of Java RMI.

Includes the remote home interface and the remote business interface.

## Remote Procedure Call

This is the procedure for executing the process on a different machine in the network. SOAP application of RPC format provides the service in the format of specifying the argument in the client side and receiving the return value from the server side.

## repository

A directory for storing defined HCSC components and system configuration definitions. The stored information is transferred between the development and operating environments using repository management functions (repository import/export functions).

## requester service

A function (interface) for receiving request messages from a service requester. This function is included on the HCSC server. When the requester service starts, request messages from a service requester can be received.

Synchronous reception (Web Services or Session Bean) and asynchronous reception (MDB (WS-R) or MDB (DB queue)) requests can be received.

## request message

A message for requesting execution of a service component. A request message is sent from a service requester to an HCSC server or from an adapter within the HCSC server to a service component.

## request processing thread

Thread generated in the web server for receiving and processing the requests from clients, such as a Web browser. In the case of the in-process HTTP server, the thread is generated in a web container.

## request reception

A common name for standard receptions and user-defined receptions. This is a functionality (interface) to receive execution requests from a service requester.

## request scheduling

Functionality to properly distribute the servers that execute the requests from the client, on the basis of the load, and restrict the number of requests sent to the server.

## request trace

Information used to understand which business process or service adapter is targeted by a request received by the standard reception, business process reception, or server-to-server transfer reception in the messaging base. The request trace is also used to understand the results of the request.

## required resource

A machine resource (such as the CPU, memory, or disk capacity) that is required to satisfy performance requirements.

## resource adapter

A function for connecting a J2EE server or batch server to EIS based on the J2EE Connector Architecture.

The Application Server system provides a DB Connector that is a resource adapter for connecting to the database and a DB Connector for Cosminexus RM.

You can also use the uCosminexus TP1 Connector that is a resource adapter to connect the OpenTP1 and SPP, the TP1/Message Queue - Access that is a resource adapter to connect to the TP1/Message Queue, and the Cosminexus RM that is a resource adapter to connect to the queues on the database.

## resource class

A program used to implement a web resource. For web resource development, web resource implementation is coded by using the resource class, provider, and application.

## resource manager

A function to manage the resources. DBMS is a resource manager.

## response message

A message used to return service component execution results. The two types of response messages are those that are sent from service components to the HCSC server, and those that are sent from the HCSC server to service requesters.

## reverse proxy server

A web server deployed at DMZ between an external network such as an internet and internal network where an Application Server is deployed and has a function to broadcast the requests from an external network to the internal network.

In the Application Server, you can use the Hitachi Web Server as a reverse proxy server. The reverse proxy module is embedded and operates in the reverse proxy server.

## role

A unit used when controlling access to a context. Role is defined for each group. The roles required for accessing the contexts, wherein the access is to be controlled, are also defined. The access to the context

becomes successful when the role possessed by the user accessing the context matches the role defined in the context.

### root application information

Information output in the trace-based performance analysis (performance analysis trace). This information is acquired by the first process in the series of processing executed in an event.

### root context

Root path in a WAR file wherein the context root is a null character (name is not specified in the context root).

### root resource adapter

Adapter to cluster the member resource adapters and receive the requests from a user program, when the connection pool is clustered. This function is provided for compatibility with previous versions.

### round-robin policy

A policy applied when multiple EJB home objects with the same name existing in the CORBA Naming Service are looked up.

The EJB home object reference can be acquired by round-robin search, and the load balancing of the requests sent to the J2EE server without being identified in the EJB client can be implemented.

### round-robin search

Search functionality to look up multiple EJB home objects with the same name existing on the CORBA Naming Service, based on the round robin policy.

### RPC

This is an abbreviation of *Remote Procedure Call*. For details, see [Remote Procedure Call](#).

### RSA encryption

An encryption and decryption technique that is most widely used as the standard for public key cryptography. This technique is based on the mathematical fact that it is difficult to factorize large numbers. *RSA* represents the initials of the three inventors (Rivest, Shamir, and Adleman).

### scale in

A process of reducing the number of servers when reducing the size of the system.

### scale out

A process of increasing the number of servers with the aim of improving the processing performance of an entire system.

### scaling up

To improve performance by upgrading the memory and CPU of a machine in the system.

### schedule policy

Policy for deciding the distribution standards, when performing the scheduling for the requests with CTM. You can select either a method to distribute the requests to the CTM having lesser load or a method to distribute the requests on priority to the CTM daemon that accepts the requests.

### schedule queue

Schedule queue is a queue that holds the requests, when performing the scheduling for the requests with CTM. The schedule queue is created for each J2EE application, and is managed by the CTM daemon.

### schema cache

Grammar objects that are saved for reusing schema documents.

Depending on the specifications of a schema definition file, the grammar objects are saved either in the memory or on a disk.

### schema compiler

A program used to generate a Java source code in the JavaBean format, when schema document is input and the JAXB mapping annotations are added. If the schema document includes user instructions given through the custom binding declaration, bind the schema elements to the Java source code based on the instructions.

### schema definition file

A file for specifying schema documents to be cached and the save locations of cache.

### schema document

An XML document that defines a logical data structure within an XML document, and that is written according to the XML schema specifications.

### schema generator

A program used to generate a schema document from the declaration part of the class and field, when a Java source file is input. If the Java class includes user instructions given through the JAXB mapping annotations, mapping is done to the schema components based on the instructions.

### security element

An element contained in a SOAP message and related to security. In this manual, the term *security element* refers collectively to security token elements, signature elements, and encryption elements.

### security header

An element named `wsse:Security` contained in a SOAP header. A security header consists of security elements.

### security identity

Authentication information transmitted to a web container and an EJB container, when the user authentication by the J2EE server is successful.

### SecurityManager

A J2EE server's function that provides web container runtime protection based on the security policy.

### security token element

An element related to security tokens stipulated in WS-Security. The security token elements that can be handled in the Web Services security functionality are the `UsernameToken` element and `BinarySecurityToken` element.

### serialization

The act of converting an object in a program to a format that can be represented in SOAP messages.



### server communication agent

An agent program invoked on the virtual server to set up and operate Application Server on the virtual server from the virtual server manager.

### server management command

A group of commands used to set the applications and resources managed in the server.

### server-oriented tree

One of the monitoring trees displayed in the integrated scope when integrated with JP1/IM. This is a monitoring tree that mainly consists of the server machine (host).

### server start/stop hook function

A function to automatically invoke the initialization process and termination process for using a container extension library, when starting or stopping a J2EE server or web server. This function does not work if the J2EE server or web server terminates abnormally.

### server virtualization technique

A technique that shows one server as if there were multiple servers. Using this technique, you can divide or integrate the resources of one physical server to show that multiple virtual servers are operating and you can show multiple physical servers as one server. Also, the OS and applications are allocated for each of these virtual servers.

### service (SOA)

A software component that is in a one-to-one correspondence with a business and that can reuse the functions required for the business. In SOA, a business system is built by combining services. This allows users to promptly change the system in accordance with any changes in the business.

### service (Windows)

In Windows systems, a function that creates and performs processes that automatically start when the system starts, apart from processes that start when the user logs in. Such services include the Messenger service that monitors emails and the Schedule service that runs tasks (registered by using the `at` command) at regular intervals.

### service adapter

The service adapter is a component for linking with various types of services, on the service platform. It provides adapters for connecting with various systems such as Web Services, databases, Mainframe systems, and online systems. You can also create a general custom adapter for calling the system that has optional protocols, as and when required.

### service component

Application processing that can be executed from service adapters and database adapters. Web Services, Session Bean, MDB (WS-R), MDB (DB queue), and database operations can be used as service components.

### service component message

A message with a format unique to the service component in question. If the service component is database manipulation, the service component message is called a *database adapter message*.

## Service Coordinator

One of the component software products that make up Service Platform. It provides the following functions for configuring and operating the system with SOA applied in Service Platform: business process execution functionality, data transformation functionality, adapter definition functionality, execution environment management functionality, and messaging control functionality.

## service lock

A function that safely blocks only the relevant service while the entire system is operating when, for example, only a specific business-processing program needs to be replaced during the operation of a J2EE application.

## service requester

The service requester is a client application for calling the reception on the HCSC server.

Note that protocols or the message format to be used differs depending on the type of the reception.

## service unit

A closed part of a system that provides application services consisting of J2EE and web servers is called a *service unit*. The Smart Composer functionality enables the user to implement a system and perform batch start and termination for each service unit.

This concept is used when a system is implemented using the Smart Composer functionality.

## servlet and JSP service method

`service method` of `javax.servlet.Servlet` and method invoked from the `service method`.

The method invoked from the `service method` is the `do*` method (such as `doGet` and `doDelete`) for `servlet`, and the `_jspService` method for `JSP`.

## servlet filter

A function to filter requests to a `servlet` or `JSP`, and responses from a `servlet` or `JSP`. With the help of a `servlet filter`, you can wrap the requests before executing the `servlet` or `JSP`, or responses after executing the `servlet` or `JSP`, change the data, and acquire the trace for a resource.

The session failover filter, HTTP response compression filter, and client performance filter are provided as the `servlet filters` for implementing the Application Server functionality.

## session

Unit indicating the working series of a web application. A session usually consists of a set of multiple requests from the Web client to the web server.

## Session Bean

Bean mainly for executing the business process. Session Bean can have only one client. If the client is terminated, the corresponding Session Bean also terminates. The Bean operates only between the sessions with the client and, therefore, it is temporary and non-persistent. Session Bean is classified into Stateful Session Bean and Stateless Session Bean.

## Session Bean adapter

An adapter used to call service components by using Session Bean.

## session failover functionality

Functionality used to manage the objects registered in an HTTP session object of a running J2EE application as the session information and to pass the managed session information to another J2EE server when an error occurs in the J2EE server. Even when an error occurs in J2EE server and the requests are transmitted to another J2EE server, the business continues as prior to the occurrence of an error. This functionality includes the database session failover functionality that is used by the database to manage session information.

## Setup Wizard

A function for configuring a system, using a wizard program that has an interactive format. The Setup Wizard sets only the minimum required items, and can configure a system that can execute J2EE applications. The Setup Wizard is functionality recommended to configure the execution environment with minimum required procedures. However, the Setup Wizard can be used to configure only one system on a single machine.

## SFTP adapter

Based on SFTP, this is an adapter used to transfer files between a service platform and the SFTP server.

## single sign-on

Functionality to allow a user ID to seamlessly use multiple different systems by logging on once.

## single sign-on information repository

Executes user mapping of integrated user management framework and stores the authentication information and mapping information of each system for user authentication by single sign-on.

## single sign-on library

Library to perform user mapping on the basis of the information about the single sign-on information repository that stores the user mapping information, and then to implement single sign-on.

## sizing

A process for determining the machine specifications and the number of machines that satisfy the system requirements for business (performance and reliability requirements). Sizing determines the machine configuration to be used in the business system.

## Smart Agent

A process that provides a dynamic distribution directory service when you use a global transaction or CTM.

When using Management Server, you can handle the Smart Agent as a logical server. CTM is managed by the Smart Agent.

Note that even for a global transaction, the Smart Agent is not required if you use the in-process transaction service.

## Smart Composer functionality

The Smart Composer functionality supports the easy setup and operations of the systems running on Application Server for a general 3-tier model, when setting up systems using the Application Server. The system can be set up easily and quickly, since setting the entire system and deploying the J2EE application and resource adapter can be performed together.

The operation functionality such as starting the built system in a batch and changing the settings of the system in a batch are supported by this functionality.

## snapshot log

A log file that displays the status of a J2EE server or batch server at a certain point.

The information necessary for troubleshooting is automatically output to the log file.

In the case of using Management Server, this log file is output at the following times:

- When an error occurs in the logical server
- When the collection of snapshot log by management commands or the management portal is requested

When Management Server is not used, a snapshot log is output when the command (`snapshotlog`) is executed. The information of the host who is executing this command can only be output by this command.

## SOAP

This is an XML based protocol that brings a communication protocol such as the HTTP to the lower level and specifies the communication between systems through a network.

### SOAP 1.1/1.2 combined mode

This mode indicates the standard specifications and communication platform of the Web Services to be used, on the service platform. Specify the SOAP 1.1/1.2 combined mode to use service components and service requesters for the SOAP 1.1 specifications and the SOAP 1.2 specifications. With the SOAP 1.1/1.2 combined mode, use the JAX-WS engine provided by Cosminexus, as the communication infrastructure.

### SOAP 1.1 mode

This mode indicates the standard specifications and communication platform of the Web Services to be used, on a service platform. Specify the SOAP 1.1 mode to use service components and service requesters for the SOAP 1.1 specifications. With the SOAP 1.1 mode, use the SOAP Communication Infrastructure provided by Cosminexus, as the communication infrastructure.

### SOAP adapter

An adapter used to invoke service components by using Web Services (SOAP communication).

### SOAP application

This is the application for Web Services developed by using the SOAP application development support function, which is the pre-existing function of Cosminexus Application Server.

### SOAP application development support function

Functionality provided in Cosminexus to develop SOAP applications. With the SOAP application development support function, you can develop SOAP applications while using development support commands.

### SOAP attachment

A part containing multiple body information of SOAP messages. Binary data might also be included in a SOAP attachment.

### SOAP body

Element of a SOAP message. In the SOAP body, describe the contents of the outgoing message.

## SOAP Client Library

A library that mediates the processing implemented in the client and data transmission of the server. The SOAP Client Library receives the message from the processing implemented in the client, and invokes the SOAP service. After the processing is performed in the SOAP service, the returned message is analyzed, and returned to the invoking source as the process result.

## SOAP Communication Infrastructure

Communication infrastructure of Web Services (SOAP applications) provided by Cosminexus. SOAP Communication Infrastructure corresponds with the SOAP 1.1 specifications.

## SOAP engine

An engine that mediates sending and receiving between client and SOAP service. The SOAP engine analyzes the message sent from client and sends it to the SOAP service. After the processing is performed in the SOAP service, the returned message is sent to the client.

## SOAP envelope

Element of a SOAP message. It is the most external element of the message and has child elements such as SOAP header and SOAP body.

## SOAP fault

This indicates SOAP messages used to code errors that occur during SOAP message processing. SOAP fault can be divided into messages created by a SOAP engine and messages created by a SOAP service developer.

## SOAP header

Element of a SOAP message. In the SOAP header, specify the address of the message processing and specify whether message processing is required.

## SOAP messages

The messages used for sending and receiving data between systems by using the SOAP protocol. The SOAP message consists of elements such as SOAP envelope, SOAP header, and SOAP body.

## SOAP messages with attachments

A SOAP message with any file attachment in addition to the SOAP header and SOAP body.

## SOAP reception

A function (interface) that receives service component invocation requests in a system that uses Web Services (SOAP communication).

## SOAP service

A program (service) among the programs that build a SOAP application, deployed at the server machine to perform the processing requested from the client.

## SOAP with Attachments API for Java

This is one of the functions included in Java XML Pack and provides an API for dealing with SOAP messages having attachment.

## Software as a Service

A software distribution form for distributing the functionality that a user requires, among the functionality of software, so as to enable the user to use the required functionality. This is also known as *SaaS*.

## spare node

A node that is initially started as a standby node is called a *spare node*. This name does not change, even if a standby node becomes an executing node due to node switching.

## SQL operation definition file

A file that defines SQL statements to execute when a database adapter is used to access the database. It is the base file used to create an XML-format definition file for a database adapter.

## standard message (standard message format)

This message (message format) is commonly used within a business process. When linking with a service having a different message format, you can link by changing the message format of a standard message according to the connection destination service, by using a data transformation and use the changed message format as a common message within a business process.

## standard reception

This is a fixed interface that receives the service component execution requests from the service requester. It is provided as a function of the HCSC server. If a standard reception starts, the HCSC server can accept request messages from a service requester.

Synchronous reception (Web Services or Session Bean) and asynchronous reception (MDB (WS-R) or MDB (DB queue)) requests can be received.

## standard reception (MDB (DB queue))

A function (interface) that receives service component invocation requests in a system that uses MDB (DB queue).

## standard reception (MDB (WS-R))

A function (interface) that receives service component invocation requests in a system that uses MDB (WS-R).

## standard reception (Session Bean)

A function (interface) that receives service component invocation requests in a system that uses Session Bean.

## standard reception (Web Services)

A function (interface) that receives service component invocation requests in a system that uses Web Services (SOAP communication).

## standby node

Specifies the standby node that is prepared for errors (standby server).

## Stateful Session Bean

A Bean that can maintain an internal status. Unlike a Stateless Session Bean, after this Bean is instantiated by generating from the home interface, the Stateful Session Bean cannot be created or destroyed each time a method is invoked. This Bean is appropriate in the case of continuous processing for each session.

## Stateless Session Bean

A Bean that does not maintain an internal status. An EJB container independently manages the creation and destruction of an instance of this Bean. Even if you consecutively invoke methods of the same Bean, there

is no guarantee that the methods will be of the same instance. As a result, in a Stateless Session Bean, you cannot perform continuous processing with multiple methods while maintaining the internal status. This Bean is appropriate when coding a process that can be finished with a single method.

### static contents

Contents that are always the same without any impact on the request contents among the files, such as HTML files and image files, used for responding to the requests from the client.

### static contents cache function

A function that caches the static contents in the memory. By caching those static contents into the memory that have been accessed once, you can reduce the frequency of accessing the file system when you access these static contents for the second time and thereafter, and improve the response speed.

### statistics collection functionality

Functionality to periodically collect the statistics of each functionality in the J2EE server and batch server, and output the same to a file. The output file is called a *statistics file*.

### structure activity

An activity that defines the structure of processing in a business process, such as branch, parallel, and loop iteration processing.

### Struts

A framework for developing the user interface of a web application. In addition to the functionality of managing web applications with a servlet that acts as a controller of MVC (Model View Controller) architecture, the user interface components are handled as components, and the user interface can be built by arranging these components in a form.

### synchronization point message

A message containing an instruction for OpenTP1 to conclude a transaction for a transaction branch.

### synchronization point processing

Processing that is performed by OpenTP1 to conclude a transaction in a transaction branch.

### system configuration definition

Definition information that includes setup information for HCSC servers and clusters and information about how HCSC components are deployed at HCSC servers and clusters.

The HCSC server and cluster setup information is updated in the operating environment. In the development environment, information is defined about how HCSC components are deployed at the HCSC server and cluster.

### temporary close processing

Processing to disconnect connections when the number of connections between OpenTP1 and TP1 inbound adapters reaches the threshold.

### Timer Service

Functionality provided by an EJB container. The EJB container calls back the timeout method in the specified time, lapsed time, or at intervals.

## TP1/EE

An option product used along with TP1/Server Base. TP1/EE provides the functionality for sending and receiving messages between Cosminexus RM through the database. Communication between different components can be implemented between Cosminexus and OpenTP1 using TP1/EE.

## TP1/RPC reception

Functionality (interface) that receives service component invocation requests from the service requester on an existing OpenTP1 system.

## TP1 adapter

An adapter used to call a service component in an existing OpenTP1 system from the execution environment of Cosminexus Service Platform.

## TP1 inbound adapter

A resource adapter used in the TP1 inbound integrated function. Complies with the Connector 1.5 specifications.

## TP1 inbound integration functionality

The functionality for invoking a Message-driven Bean in Application Server from SUP of OpenTP1 system via inbound using TP1 inbound adapters.

## TP1 integrated system

A system configuration used to connect the service requester and service components existing in an OpenTP1 system.

## trace collection point

Outputs PRF trace in each function layer of the application server system. The number of trace collection points differs with the specification of the PRF trace collection level.

## trace common library

A library for collecting traces. Because multiple products use the common library, the trace format can be unified among products.

## transaction global identifier

An identifier consisting of a system node ID and a global transaction number (unique number assigned by the system to manage global transactions).

## transaction identifier

An identifier that uniquely identifies a transaction.

## transaction manager

Functionality to manage a transaction. Provided with the Application Server. In the case of global transactions, TPBroker OTS is used by the backend of transaction manager.

## transaction service

A service that manages a transaction when using a global transaction. Indicates all the services provided by TPBroker OTS. A transaction service is invoked by the in-process of J2EE server.



## transfer between servers

The act of transferring messages between Reliable Messaging instances or between a Reliable Messaging instance and other products available for communication.

## Transformation API for XML

This is an API included in the JAXP specification and is the standard API of the XSLT transformer.

If you use TrAX, you can execute XML conversion process from the Java program. If you want to perform simple XML document conversion, you can execute only TrAX.

## transformation function

Java program invoked from the custom function.

## transformation function definition file

File that defines the configuration of the transformation function invoked from the custom function.

## translet

Java byte code that the compiler making up the XSLTC transformer generates in memory by parsing an XSLT stylesheet. A translet enables high-speed transformation of an XML document.

## transmit

To transmit a message to a transmission-destination queue during a transfer between servers.

## transmit destination queue

A queue to which a message is transmitted.

## TrAX

This is an abbreviation of *Transformation API for XML*. For details, see [Transformation API for XML](#).

## trust store

A keystore containing certificates that can be trusted. When server authentication is performed, whether the server can be trusted is determined based on the certificates contained in this trust store.

## uCosminexus Client

A product used to build an EJB client environment.

## uCosminexus Service Architect

A product that allows the user to configure and run the development environment of a Cosminexus service platform.

## uCosminexus Service Platform

A product that allows the user to configure and run the execution and operating environments of a Cosminexus service platform.

## UDDI

UDDI defines the APIs used for publishing and searching for information related to SOAP Web Services and the UDDI registry that stores that information.

## UML

This is an abbreviation of *Unified Modeling Language*. For details, see [Unified Modeling Language](#).

## unconcluded transaction

Transaction that is not concluded and is being processed.

## Unified Modeling Language

This is a modeling language laid down by OMG. This provides a notation method to express the structure of application, based on the object trend in more structural and formal format, which is even more abstract than the source code. The notation method provided by UML is further divided in the use case diagram, class diagram, and sequence diagram depending on the contents of objective of the analysis.

## Uniform Resource Identifier

This is the standard that has the method of specifying the position of data on the Web and method of specifying a certain data on the Web with a specific name, as the method of URL. It has the combination of URL and URN and you can use the same for expressing the internet resources, and identifying the name space in an XML document. URI is a generic concept and holds a position above URL. It is prescribed with RFC 1630.

## Uniform Resource Locator

This is the standard for specifying a position of a certain data on the Web.

## unmarshal

The task of reading an XML document and converting the XML document to a Java object using a JAXB API is called *unmarshalling*. An unmarshal is deserializing an XML document.

## URI

This is an abbreviation of *Uniform Resource Identifier*. For details, see [Uniform Resource Identifier](#).

## URI decoding function

A function that decodes URL-encoded character strings contained in the servlet path and additional path information in a request URI. Character strings decoded by using the URI decoding function are used for various matching processing in Application Server.

## URL

This is an abbreviation of *Uniform Resource Locator*. For details, see [Uniform Resource Locator](#).

## user authentication library

A JAAS-supported user management library that authenticates users based on the information in the user information repository configured on the LDAP directory server. After authenticating, the library provides information about the authenticated users to applications.

## user-defined reception

A function (interface) for accepting execution requests from the service requesters. Unlike a standard reception included in an HCSC server, a user can define any interface using this function. If you deploy a defined user-defined reception in an HCSC server and start the server, the HCSC server can accept the request messages sent from a service requester.

### user-defined reception runtime definition file

This is the file (`cscurcptnconfig.properties`) that defines the SOAP reception information. It is created as a file in the J2SE property format.

You can define the Max threads, the number of dedicated threads, and the size of the pending queues in this file.

### user extension performance analysis trace

Trace information used to analyze the performance of an application.

### user information

Information for login of a user to a system configured with Application Server.

### user information repository

Repository that stores the information used for user authentication during logon, when performing integrated user management. You can use an LDAP directory server or a database (RDB).

### user log

A log that output by a J2EE application, batch application, or client application.

### user mapping

Correlation of the information of the same user saved in different user information repositories.

### user message

A request message sent by a service requester.

### user property file

The user property file is named `usrconf.properties`. The user property file specifies the system properties of the J2EE server, web container server, or Java VM executing the server management commands. The storage location and the keys that can be specified differ for the user property files used by the J2EE server, web container server, and server management commands.

### user-specified name space functionality

Functionality for the user to give an optional name to the EJB home object reference names and to the J2EE resource names registered in the JNDI name space. By giving an optional name, lookup can be performed with a name that does not depend on the server name and application name, when the requests are distributed by CTM and the load is balanced using a load balancer.

### user thread

Threads created explicitly by the user in a servlet and JSP.

### usrconf.properties

For details, see *user property file*.

### validation processing

Processing to verify that electronic signatures added to data are unaltered.

## version setup functionality of web applications

Functionality to execute web applications compliant with the specified version without changing the version of web applications defined in `web.xml`. You can use this functionality to move the applications created with earlier versions.

## Virtage

This is one of the hypervisor types. It indicates the server logical classification setup. It provides the most suitable high performance and highly reliable server virtualization technique, in case of simple server integration and also in case of core system.

## virtual environment

An environment that uses a virtual machine implemented by the virtualization software.

## virtualization software

A collective term for products implementing the virtual machine using the software.

## VirtualServer

This implies the virtual server of the load balancer. For details, see [virtual server of the load balancer](#).

## virtual server (for load balancing)

This is a virtual server for managing multiple real servers with the load balancer. The load balancer automatically distributes the traffic that accesses the virtual server from the client to the real server.

## virtual server (virtualization software)

This is a logical machine that is implemented by the virtualization software. You can perform the operation management of the application execution environment (Application Server) for the machine on which the OS or the product is installed, by using the virtual server manager.

## virtual server manager

A process used for setting up the virtual system and managing virtual server operations. The process sets up the operating environment of the virtual system and provides functions for operating and managing virtual servers, such as configuring the application execution environment (Application Server) on virtual servers and starting and stopping businesses.

## virtual server of the load balancer

An object that represents a virtual server used to receive requests on the load balancer. One virtual server of the load balancer is created for each management unit in a virtual system.

## VMware ESX

A type of hypervisor developed by VMware. This software creates virtual hardware (virtual servers) on physical machines.

## W3C

This is an abbreviation of *World Wide Web Consortium*. For details, see [World Wide Web Consortium](#).

## WAR file

This is an abbreviation of *Web ARchive file*. A WAR file contains components of a web application compressed in a WAR format. It contains the files required for executing a web application, including HTML files, JSP files, Java class files, JAR files, and web application deployment descriptors.

## web application

Application created for the client provided by the Web browser. It is the cluster of servlet programs, JSP file, HTML/XML documents.

## web container

An execution environment that controls web application. web container also provides all types of services such as security and transaction. A web application runs on web container.

web application conforming to the specifications of Java Servlet2.5 and JavaServer Pages Specification v2.1 can be executed.

## Web Resource

A RESTful Web Service that uses the JAX-RS function.

## web server

A program to execute the processing related to requests receptions from the Web browser and data transmission to Web browser. HTTP Server, Microsoft IIS, or in-process HTTP server can be used on the Application Server. The in-process HTTP server is the web servers running in J2EE server processes.

## Web server integration

A method for linking with HTTP Server as a web server used in Application Server. This method uses the reverse proxy function of HTTP Server.

## Web Service Implementation Class

A program for implementing SOAP Web Services. During the SOAP Web Services development, the classes that are auto generated by the command are used to code the implementation of the Web Service.

## Web Services

This program (service) is provided through a network by using the Web related technology. With Application Server, you can develop and execute SOAP Web Services and RESTful Web Services.

## Web Services client

This is the client program that uses the Web Services. It codes the process for calling the Web Services by using the classes automatically created by commands, in the development of the client of SOAP Web Services. The client of RESTful Web Services is developed by using the standard Java API.

## Web Services Interoperability Organization

WS-I is a group that lays does the standard specifications for improving the mutual connectivity between Web Services products and platforms created by different vendors.

## Web Services Reliability

This is an open asynchronous communication protocol for internet that is standardized by the standardization group OASIS.

## Web Services security

In this manual, the security technology for SOAP messages based on the WS-Security specifications is called *Web Services security*.

## Web Services security functionality

Functionality to implement Web Services security. You can use Web Services security functionality by specifying the definition file provided by Web Services - Security.

## Web Services security functionality definition file

An XML file used to define the details of the Web Services security functionality. The Web Services security functionality definition file is placed on both the server and clients.

## Web Services security policy definition file

An XML file used to define the policy that must be followed when using the Web Services security functionality. The Web Services security policy definition file is placed on both the server and clients.

## Web system

A Web cluster system that is configured with a single load balancer and multiple web servers and application servers. It provides a single application service.

## Web window

In this manual, the term *Web window* refers to each window in the window transitions for web applications.

## WFA

This is an abbreviation of *Work-Flow Architecture*. For details, see [Work-Flow Architecture](#).

## Windows Server Failover Cluster

A type of cluster software.

Program that monitors and switches the system when a failure occurs. By integrating the system with the Windows Server Failover Cluster, the reliability and operation rate of a system built using Application Server can be improved.

By integrating the system with Windows Server Failover Cluster, you can implement a 1-to-1 node switching system, mutual node switching system, N-to-1 recovery system, and node switching system for the host management model.

## wizard

A type of Help functionality provided with package software products. In general, an interactive navigator functionality that supports the setup operation is called a *wizard*. Complex parameter setup operations requiring detailed knowledge, such as formatting of tables and documents, and creation of cross-tabulation tables, are navigated in an interactive manner.

## worker MPM

A module that operates with multiple processes and multiple threads.

## Work-Flow Architecture

This is the notation about business flow proposed by the Ministry of Economy, Trade and Industry, in the enterprise architecture. You can manifest the business-related organization or in-charge, business flow and the communicated information.

## work folder

A folder created by the HCSC server for handling files sent and received by a service platform.

## World Wide Web Consortium

This is the non-profit making group that proposes the Web related technology standardization including XML or DOM.

## WSDL

This is an abbreviation of *Web Service Description Language*. Based on XML, WSDL is one of the language specifications for coding SOAP Web Services.

## WSDL generating function

The functionality for automatically generating WSDL using the development support commands.

## WS-I

This is an abbreviation of *Web Services Interoperability Organization*. For details, see [Web Services Interoperability Organization](#).

## WS-R

This is an abbreviation of *Web Services Reliability*. For details, see [Web Services Reliability](#).

## WS-Security

The specification related to SOAP Web Services security defined by OASIS. The WS-Security uses the XML security technology.

## WTP

This is an abbreviation of *Eclipse Web Tools Platform*. For details, see [Eclipse Web Tools Platform](#).

## WTP connector

Eclipse plug-ins are used for starting J2EE servers from WTP and deploying J2EE applications on the J2EE servers.

## XML document

A document written in XML format.

## XML encryption

Encryption for preventing the leaking of data to third parties while the data is being sent or received. XML encryption also applies to data other than XML documents, such as binary data.

## XML encryption application

An application developed by using functionality provided by XML Security - Core that encrypts and decrypts data.

## XML format definition file

A message format definition file used for handling XML data. The XML format definition file is created as an XML schema file.

## XML parser

A program that parses an XML document.

There are two types of parsers: DOM parsers that use a DOM API, and SAX parsers that use SAX. DOM parsers output the parsing result for XML documents as a DOM tree. SAX parsers report the parsing result as an event rather than outputting DOM trees.

These parsers are collectively called *XML parsers* in this manual.

### XML schema

A schema defining a logical data structure in XML documents by using specifications defined in the W3C Recommendation.

### XML security

In this manual, XML signatures and XML encryption defined in the W3C are collectively called *XML security*.

### XML signature

An electronic signature that is added to electronic data to prevent spoofing or data falsification by third parties. An XML signature can be added to electronic data other than XML documents.

### XML signature application

An application developed by using functions provided by XML Security - Core that adds an XML signature to data and verifies the data added to the XML signature.

### XML specifications

Specifications defined in the XML 1.0 and XML 1.1 documents of the W3C Recommendation. The XML parser for Cosminexus XML Processor can process XML documents that follow XML specifications.

### XPath

The standard specification (defined in the W3C Recommendation) related to the method for indicating specific elements in XML documents. XPath defines how to access elements and attributes by navigating the tree structure of data in XML format.

XPath enables you to specify any location in a document without specifying an anchor in the XML document.

### XSL

This is an abbreviation of *Extensible Stylesheet Language*. For details, see [Extensible Stylesheet Language](#).

### XSLT

This is an abbreviation of *XSL Transformations*. For details, see [XSL Transformations](#).

### XSLTC transformer

An XSLTC transformer offers the same functionality as the XSLT transformer provided by Cosminexus XML Processor, with improved performance in XML document transformation. An XSLTC transformer consists of the compiler that parses each XSLT style sheet and the runtime processor that performs transformation.

### XSL Transformations

These are specifications for converting the structure of XML document such as converting the XML document to the XML document, HTML, or text conforming to the style sheet.



## XSLT transformer

A program that implements XSLT. The XSLT transformer enables you to transform an XML document into an XML document, HTML, or text that follows a style sheet.

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