

JP1 Version 13

**JP1/Automatic Job Management System 3 for
Cloud Service Applications**

3021-3-L61(E)

Notices

■ Relevant program products

For details about the applicable OS versions, and the service packs and patches required for JP1/Automatic Job Management System 3, see the Release Notes.

JP1/Automatic Job Management System 3 for Cloud Service Applications (For Windows):

P-2A12-3HDL JP1/Automatic Job Management System 3 for Cloud Service Applications 13-00

The above product includes the following:

P-CC2A12-4HDL JP1/Automatic Job Management System 3 for Cloud Service Applications version 13-00 (For Windows Server 2022, Windows Server 2019, Windows Server 2016)

P-CC2A2C-6LDL JP1/Base version 13-00 (For Windows Server 2022, Windows Server 2019, Windows Server 2016)

JP1/Automatic Job Management System 3 for Cloud Service Applications (For Linux):

P-8412-3HDL JP1/Automatic Job Management System 3 for Cloud Service Applications 13-00

The above product includes the following:

P-CC8412-4HDL JP1/Automatic Job Management System 3 for Cloud Service Applications version 13-00 (For Linux 7, Linux 8, Linux 9, Oracle Linux 7, Oracle Linux 8, Oracle Linux 9, SUSE Linux 12, SUSE Linux 15)

P-CC842C-6LDL JP1/Base version 13-00 (For Linux 7, Linux 8, Linux 9, Oracle Linux 7, Oracle Linux 8, Oracle Linux 9, SUSE Linux 12, SUSE Linux 15)

■ Export restrictions

If you export this product, please check all restrictions (for example, Japan's Foreign Exchange and Foreign Trade Law, and USA export control laws and regulations), and carry out all required procedures.

If you require more information or clarification, please contact your Hitachi sales representative.

■ Trademarks

HITACHI, JP1, Job Management Partner 1, uCosminexus, HiRDB are either trademarks or registered trademarks of Hitachi, Ltd. in Japan and other countries.

Amazon Web Services, AWS, the Powered by AWS logo, Amazon Web Services are trademarks of Amazon.com, Inc. or its affiliates.

Microsoft is a trademark of the Microsoft group of companies.

Microsoft, Azure are trademarks of the Microsoft group of companies.

Microsoft, Windows are trademarks of the Microsoft group of companies.

Microsoft, Windows Server are trademarks of the Microsoft group of companies.

Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

Oracle, Java, and MySQL are registered trademarks of Oracle and/or its affiliates.

Red Hat is a registered trademark of Red Hat, Inc. in the United States and other countries.

RHEL is a trademark or a registered trademark of Red Hat, Inc. in the United States and other countries.

UNIX is a trademark of The Open Group.

Other company and product names mentioned in this document may be the trademarks of their respective owners.

This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

Portions of this software were developed at the National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana-Champaign.

This product includes software developed by the University of California, Berkeley and its contributors.

This software contains code derived from the RSA Data Security Inc. MD5 Message-Digest Algorithm, including various modifications by Spyglass Inc., Carnegie Mellon University, and Bell Communications Research, Inc (Bellcore).

Regular expression support is provided by the PCRE library package, which is open source software, written by Philip Hazel, and copyright by the University of Cambridge, England.

The original software is available from <ftp://ftp.csx.cam.ac.uk/pub/software/programming/pcre/>

1. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)
2. This product includes cryptographic software written by Eric Young (ey@cryptsoft.com)
3. This product includes software written by Tim Hudson (tjh@cryptsoft.com)
4. This product includes the OpenSSL Toolkit software used under OpenSSL License and Original SSLeay License. OpenSSL License and Original SSLeay License are as follow:

LICENSE ISSUES

=====

The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts.

OpenSSL License

/* =====

* Copyright (c) 1998-2019 The OpenSSL Project. All rights reserved.

*

* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:

*

* 1. Redistributions of source code must retain the above copyright
* notice, this list of conditions and the following disclaimer.

*

* 2. Redistributions in binary form must reproduce the above copyright
* notice, this list of conditions and the following disclaimer in
* the documentation and/or other materials provided with the
* distribution.

*

* 3. All advertising materials mentioning features or use of this
* software must display the following acknowledgment:

* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"

*

* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to

```

* endorse or promote products derived from this software without
* prior written permission. For written permission, please contact
* openssl-core@openssl.org.
*
* 5. Products derived from this software may not be called "OpenSSL"
* nor may "OpenSSL" appear in their names without prior written
* permission of the OpenSSL Project.
*
* 6. Redistributions of any form whatsoever must retain the following
* acknowledgment:
* "This product includes software developed by the OpenSSL Project
* for use in the OpenSSL Toolkit (http://www.openssl.org/)"
*
* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.
* =====
*
* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product includes software written by Tim
* Hudson (tjh@cryptsoft.com).
*
*/
Original SSLeay License
-----
/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
* All rights reserved.
*
* This package is an SSL implementation written
* by Eric Young (eay@cryptsoft.com).
* The implementation was written so as to conform with Netscapes SSL.
*
* This library is free for commercial and non-commercial use as long as

```

```
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).
*
* Copyright remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.
* If this package is used in a product, Eric Young should be
given attribution
* as the author of the parts of the library used.
* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.
*
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the copyright
* notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
* notice, this list of conditions and the following disclaimer in the
* documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
* must display the following acknowledgement:
* "This product includes cryptographic software written by
* Eric Young (eay@cryptsoft.com)"
* The word 'cryptographic' can be left out if the rouines from the library
* being used are not cryptographic related :-).
* 4. If you include any Windows specific code (or a derivative thereof) from
* the apps directory (application code) you must include an acknowledgement:
* "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
*
* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
```

* SUCH DAMAGE.

*

* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed. i.e. this code cannot simply be
* copied and put under another distribution licence

* [including the GNU Public Licence.]

*/

This product includes software developed by the Java Apache Project for use in the Apache JServ servlet engine project (<http://java.apache.org/>).

This product includes software developed by IAIK of Graz University of Technology.

This product includes software developed by Daisuke Okajima and Kohsuke Kawaguchi (<http://relaxngcc.sf.net/>).

This product includes software developed by Andy Clark.

This product includes the OpenSSL library.

The OpenSSL library is licensed under Apache License, Version 2.0.

<https://www.apache.org/licenses/LICENSE-2.0>

Java is a registered trademark of Oracle and/or its affiliates.



■ Microsoft product screen shots

Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.

■ Microsoft product name abbreviations

This manual uses the following abbreviations for Microsoft product names.

Abbreviation		Full name or meaning
Windows 10	Windows 10(x86)	Windows(R) 10 Enterprise (32bit)

Abbreviation		Full name or meaning
Windows 10	Windows 10(x86)	Windows(R) 10 Home (32bit)
		Windows(R) 10 Pro (32bit)
	Windows 10(x64)	Windows(R) 10 Enterprise (64bit)
		Windows(R) 10 Home (64bit)
		Windows(R) 10 Pro (64bit)
Windows 11	Windows(R) 11 Enterprise (64bit)	
	Windows(R) 11 Home (64bit)	
	Windows(R) 11 Pro (64bit)	
Windows Server 2016	Microsoft(R) Windows Server(R) 2016 Datacenter	
	Microsoft(R) Windows Server(R) 2016 Standard	
Windows Server 2019	Microsoft(R) Windows Server(R) 2019 Datacenter	
	Microsoft(R) Windows Server(R) 2019 Standard	
Windows Server 2022	Microsoft(R) Windows Server(R) 2022 Datacenter	
	Microsoft(R) Windows Server(R) 2022 Standard	

Note:

Windows is sometimes used generically, referring to Windows Server 2022, Windows Server 2019, Windows Server 2016, Windows 11, and Windows 10.

■ Issued

Jun. 2023: 3021-3-L61(E)

■ Copyright

Copyright (C) 2023, Hitachi, Ltd.

Copyright (C) 2023, Hitachi Solutions, Ltd.

Preface

This manual describes the functions of JP1/Automatic Job Management System 3 for Cloud Service Applications (abbreviated hereafter to JP1/AJS3 for Cloud Service Applications).

■ Intended readers

This manual is intended for:

- Those who have constructed, are using, or wish to use an automated job operation system by using JP1/AJS, or who have sufficient knowledge to construct and operate a JP1/AJS system, and wish to use JP1/AJS.
- Those who wish to use JP1/AJS and cloud services together.

■ Organization of this manual

This manual is organized as follows:

1. Functional Overview of JP1/AJS3 for Cloud Service Applications

Chapter 1 explains the functional overview of JP1/AJS3 for Cloud Service Applications.

2. System Configuration of JP1/AJS3 for Cloud Service Applications

Chapter 2 explains the system configuration of JP1/AJS3 for Cloud Service Applications.

3. Designing and Building the System

Chapter 3 describes the procedure for installing and setting up JP1/AJS3 for Cloud Service Applications.

4. Designs and definitions of service linkage job

Chapter 4 describes the procedure for defining service linkage jobs using JP1/AJS3 for Cloud Service Applications.

5. Management operation of service linkage jobs

Chapter 5 describes a procedure for executing in JP1/AJS3 a service linkage job defined on JP1/AJS3 for Cloud Service Applications.

6. Operation

Chapter 6 describes GUI operations in JP1/AJS3 for Cloud Service Applications.

7. Commands

Chapter 7 describes the commands that are used for JP1/AJS3 for Cloud Service Applications.

8. Troubleshooting

Chapter 8 describes the procedures for dealing with problems and the data that must be collected.

9. Messages

Chapter 9 describes the messages that are issued by JP1/AJS3 for Cloud Service Applications.

A. Files and Directories

Appendix A lists the files and directories for the JP1/AJS3 for Cloud Service Applications.

B. Limitations

Appendix B describes the limitations for JP1/AJS3 for Cloud Service Applications.

C. Estimation

Appendix C describes about estimating the resources required to operate JP1/AJS3 for Cloud Service Applications.

D. Port number to be set

Appendix D explains the port number to be set and the direction through the firewall.

E. JP1/AJS3 Environment Setting Parameters

Appendix E provides information about a list of environmental setting parameters configured on JP1/AJS3 installed on the host that runs service linkage jobs of JP1/AJS3 for Cloud Service Applications.

F. Service linkage job information definition files

Appendix F explains the files that define the service linkage job information of JP1/AJS3 for Cloud Service Applications.

G. Reference Material for This Manual

Appendix G provides reference materials for readers of this manual.

H. Glossary

Appendix H defines terms used in this manual.

Contents

Notices	2
Preface	8

1	Functional Overview of JP1/AJS3 for Cloud Service Applications	15
1.1	Overview of JP1/AJS3 for Cloud Service Applications	16
1.1.1	Features of JP1/AJS3 for Cloud Service Applications	16
1.1.2	Functions that JP1/AJS3 for Cloud Service Applications provides	16
2	System Configuration of JP1/AJS3 for Cloud Service Applications	19
2.1	To check operating environment	20
2.1.1	Prerequisite programs	20
2.2	Consider system configuration	21
2.2.1	Use in on-premises environment	21
2.2.2	Use in cloud environment	25
2.2.3	Configuration in cluster system	31
2.2.4	Operation in disaster-recovery configuration	33
3	Designing and Building the System	34
3.1	Installation	35
3.1.1	Installing JP1/Base	35
3.1.2	Installation (for Windows)	35
3.1.3	Installation (for Linux)	36
3.2	Uninstallation	38
3.2.1	For Windows	38
3.2.2	For Linux	38
3.3	Setup	40
3.3.1	Setup for using service linkage jobs	40
3.3.2	Setting up the SSL communication environment	41
3.3.3	Setting up the cluster environment	47
3.3.4	Setting up the execution host for a service linkage job	49
3.3.5	Changing the settings during operation	51
3.3.6	Setting automatic startup and termination of the JP1/AJS3 for Cloud Service Applications service	52
3.4	Configuration filedetails (JP1/AJS3 for Cloud Service Applications)	54
3.4.1	Details of setting items of the environment setting file (ajs3csaweb.conf)	54
3.4.2	Details on the settings in the HTTP server definition file (httpsd.conf)	64
3.4.3	User property file for J2EE server (usrconf.properties)	68
3.4.4	Option definition file for J2EE server (usrconf.cfg)	70

3.4.5	System property file for server management commands (usrconf.properties)	72
3.5	Configuration file details (JP1/AJS3)	75
3.5.1	Connection configuration file	75
3.6	JP1/AJS3 for Cloud Service Applications database file	80
3.6.1	Details of database files	80
3.7	Backup and recovery	83
3.7.1	the configuration information for JP1/AJS3 for Cloud Service Applications Backing up	83
3.7.2	the configuration information for JP1/AJS3 for Cloud Service Applications Recovering	85
3.7.3	Backing up and recovering the entire system	85
3.8	Notes when running anti-virus software	86

4 Designs and definitions of service linkage job 88

4.1	Designs of service linkage jobs	89
4.1.1	Consideration according to connection-destination services and command execution environments	89
4.1.2	Considering the method for managing authentication information corresponding to the commands to be executed	90
4.1.3	Considering the linkage processing	91
4.2	Definition flow of a service linkage job	93
4.3	Definition items of service linkage job information	94
4.3.1	Variables used for the definition of service linkage job information	94
4.3.2	Escaping a command line for cloud service linkage information	95
4.3.3	Notes on the definitions of service linkage job information	96
4.4	How to define service linkage jobs	98
4.4.1	Details of the definition of service linkage jobs	98
4.4.2	Place where service linkage jobs can be defined	98
4.4.3	Definition items of service linkage jobs	98
4.4.4	Icon of service linkage jobs	100
4.4.5	Operation of service linkage jobs	100
4.4.6	Notes on service linkage jobs	101
4.5	Unit definition parameters of service linkage jobs	103
4.5.1	Description format of unit definition parameters of service linkage jobs	103
4.5.2	Details of the unit definition parameters of service linkage jobs	103

5 Management operation of service linkage jobs 105

5.1	Execution of service linkage jobs	106
5.2	Details of service linkage jobs	107
5.2.1	Status of service linkage jobs	107
5.2.2	Environment variables for command execution	107
5.2.3	Execution results of service linkage jobs	107
5.2.4	Killing of service linkage jobs	108
5.2.5	Return codes of service linkage jobs	109

5.3 Notes on execution of service linkage jobs 110

6 Operation 111

- 6.1 Web browser settings 112
- 6.2 Window transitions 113
- 6.3 Login window 114
- 6.4 Common display items 115
- 6.5 Home window 116
- 6.6 Service linkage job definition window 118
 - 6.6.1 Output definition file dialog box 120
- 6.7 Execution definitions window 121
 - 6.7.1 Variable settings 122
 - 6.7.2 Linkage processing settings 124
 - 6.7.3 Job output processing 137
 - 6.7.4 Setting variables dialog box 137
- 6.8 Connection definitions window 140
 - 6.8.1 Common environment variable settings 141
 - 6.8.2 Variable settings 142
 - 6.8.3 Connection processing 143
 - 6.8.4 Connection termination processing 146
 - 6.8.5 Setting variables dialog box 148
- 6.9 Authentication definitions window 150
 - 6.9.1 ID/user 151
 - 6.9.2 Security information/password 151
 - 6.9.3 Additional information item 1 to 3 152
- 6.10 Notes on Web GUI 154

7 Commands 155

- Command description format 156
- List of commands 158
- ajscsasetup (Windows, Linux) 159
- jajs_csa (Linux only) 163
- jajs_csa_stop (Linux only) 165
- jajs_log (Linux only) 167
- jajs_log.bat (Windows only) 173
- ajscsajobreg (Windows only) 179
- ajscsajoblist (Windows only) 181
- ajscsajobdel (Windows only) 183

8 Troubleshooting 185

- 8.1 Troubleshooting procedure 186
- 8.2 Types of log information and storage locations 187
 - 8.2.1 Application Server Common Logs 187

8.2.2	Application Server Logs	189
8.2.3	Server Job Logs	189
8.2.4	Command Log	189
8.2.5	Service Linkage Job Log	190
8.2.6	List of log files and directories	191
8.3	Data to be collected when a problem occurs	197
8.3.1	Data to collect	197
8.4	Collecting data for troubleshooting	201
8.4.1	Details of how to collecting data	201
8.5	Troubleshooting	205
8.5.1	Troubleshooting SSL communications	205
8.5.2	Troubleshooting Web Browser Problems	205
8.5.3	Troubleshooting failures of jobs and linked cloud services	205
8.5.4	Troubleshooting for service linkage jobs	208

9 Messages 210

9.1	JP1/AJS3 for Cloud Service Applications Messages	211
9.1.1	Message format	211
9.1.2	Message ID	211
9.1.3	Format of message explanations	211
9.2	List of output destinations for messages	213
9.2.1	Output destinations of messages beginning with KNBB	213
9.3	List of messages	220
9.3.1	Messages beginning with KNBB	220

Appendixes 276

A	Files and Directories	277
A.1	In Windows	277
A.2	In Linux	279
B	Limitations	281
C	Estimation	282
D	Port number to be set	283
E	JP1/AJS3 Environment Setting Parameters	284
E.1	Format of the environment setting parameters	284
E.2	List of Environment Setting Parameters	284
E.3	Details of the environment setting parameters	285
F	Service linkage job information definition files	287
F.1	Connection definition file	287
F.2	Execution definition file	291
F.3	Service linkage definition file	298
G	Reference Material for This Manual	300
G.1	Related publications	300

G.2	Conventions: Fonts and symbols	300
G.3	Use of folder names and directory names	301
G.4	Conventions: Abbreviations for product names	301
G.5	Conventions: Acronyms	302
G.6	Conventions: KB, MB, GB, and TB	302
H	Glossary	304

Index 307

1

Functional Overview of JP1/AJS3 for Cloud Service Applications

This chapter explains the functional overview of JP1/AJS3 for Cloud Service Applications.

Also explained are service linkage jobs that can be used as the custom jobs of JP1/AJS3 by being defined to JP1/AJS3 for Cloud Service Applications.

1.1 Overview of JP1/AJS3 for Cloud Service Applications

JP1/AJS3 for Cloud Service Applications is a product that supports linkage between a job that has been shifted to the cloud and is using a cloud service and JP1/AJS3 that executes existing main business operations. It can put together information for linkage with cloud services for central management and/or provide such information as a job that can be used with JP1/AJS3.

1.1.1 Features of JP1/AJS3 for Cloud Service Applications

The features of JP1/AJS3 for Cloud Service Applications are described below:

(1) Managing information linkage with a cloud service as a component

The series of processing necessary for linkage with a cloud service, including authentication, execution, monitoring, and result check, was in the past realized by coding processing with a script. With JP1/AJS3 for Cloud Service Applications, information necessary for connection with a cloud service and authentication and the information necessary for execution of the cloud service can be created by low-code development as components on a website screen. In addition, these components are combined as a flow of a series of processing and managed as *service linkage job information*.

When using a new cloud service or when changing linkage processing due to function addition or specification change at the side of the cloud service, linkage with the cloud service can be realized with new linkage processing content by creating or updating a component, which makes it possible to quickly respond to a change in the business operation.

(2) Realizing the business operation of a cloud service with simple job definition

Service linkage job information created with JP1/AJS3 for Cloud Service Applications can be used as a custom job of JP1/AJS3. This makes it possible to easily load a business operation using a cloud service to the job net of JP1/AJS3, so that the business operation using the cloud service and on-premises main business operation can be seamlessly executed.

This custom job is called a *service linkage job*.

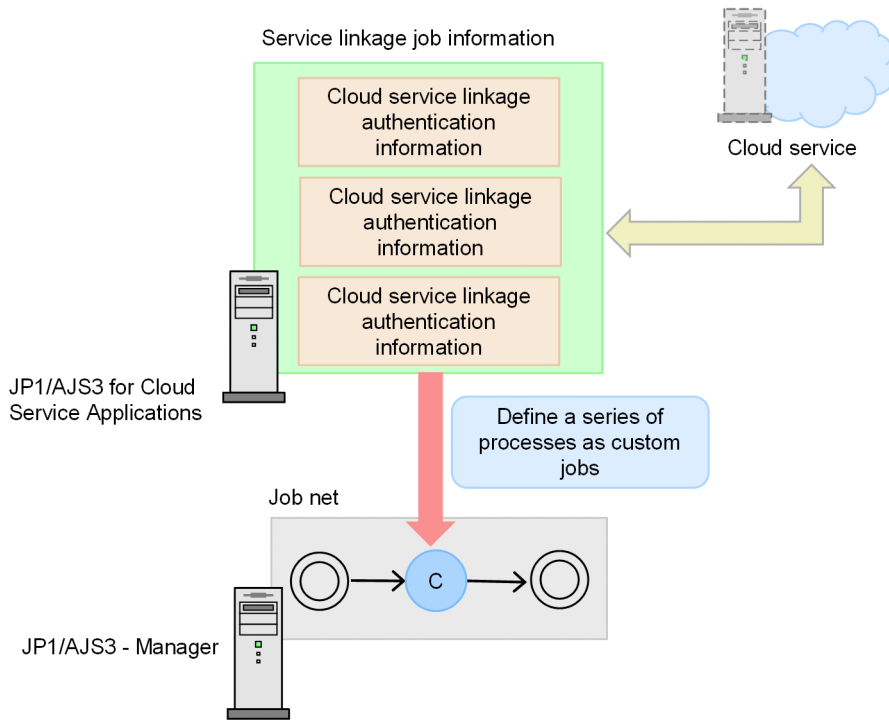
1.1.2 Functions that JP1/AJS3 for Cloud Service Applications provides

JP1/AJS3 for Cloud Service Applications provides these functions:

- Function to define service linkage job information
- Function to register service linkage job information as a custom job
- Function to execute service linkage jobs with JP1/AJS3

The functions that JP1/AJS3 for Cloud Service Applications provides are shown in the figure below.

Figure 1–1: Functions that JP1/AJS3 for Cloud Service Applications provides



(1) Function to define service linkage job information

This function is to define service linkage job information. It is available on the website screen of JP1/AJS3 for Cloud Service Applications.

With JP1/AJS3 for Cloud Service Applications, linkage with a cloud service by using a command line interface (CLI) that can coordinate with the cloud service is assumed. The service linkage job information defines and use this CLI information.

Service linkage job information consists of the following three pieces of information:

Cloud service linkage connection information

This information is on the interface for connecting to the cloud service. For example, the login command and an option for logging in with the user's login information specified as the option fall within this category. This information is hereafter referred to as *service linkage connection information* or abbreviated as *connection information*. In addition, the definition of service linkage connection information is abbreviated as the *connection definition*.

Cloud service linkage authentication information

This information is necessary for an interface for connecting a cloud service. For example, a username and a password used for authenticating a user account fall under this category. This information is hereafter referred to as *service linkage authentication information* or abbreviated as *authentication information*. In addition, definition of service linkage authentication information is abbreviated as *authentication definition*.

Cloud service linkage execution information

This is information on an interface for using a cloud service after connection of the cloud service. For example, an execution command and options for executing processing by calling a server-less service, and a result check command and options for checking the result of the processing of the service that was executed fall under this category. This information is hereafter referred to as *service linkage execution information* or abbreviated as *execution information*. In addition, definition of service linkage execution information is abbreviated as *execution definition*.

(2) Function to register service linkage job information as a custom job

This function registers service linkage job information as a custom job of JP1/AJS3.

By registering service linkage job information defined with JP1/AJS3 for Cloud Service Applications as a custom job from JP1/AJS3 - View, it can be defined as a service linkage job on JP1/AJS3.

(3) Function to execute service linkage job with JP1/AJS3

This function is to execute a service linkage job with JP1/AJS3.

A service linkage job is executed based on information registered as a custom job and service linkage job information that was obtained from the JP1/AJS3 for Cloud Service Applications server when the job was executed.

2

System Configuration of JP1/AJS3 for Cloud Service Applications

This chapter explains the system configuration of JP1/AJS3 for Cloud Service Applications.

2.1 To check operating environment

This section explains the operating environment and prerequisites for JP1/AJS3 for Cloud Service Applications.

2.1.1 Prerequisite programs

The prerequisite programs of JP1/AJS3 for Cloud Service Applications are shown in the following table:

Table 2–1: Prerequisite programs of JP1/AJS3 for Cloud Service Applications

Name of program	Version	Prerequisite
JP1/Base	13-00 or later	In same equipment
JP1/AJS3 - Manager ^{#1}	13-00 or later	In system
JP1/AJS3 - Agent ^{#1 #2}	13-00 or later	In system
JP1/AJS3 - View ^{#1}	13-00 or later	In system

#1

For the prerequisites of the programs in the JP1/AJS3 series, refer to the description on the prerequisites of JP1/AJS3 in the *JP1/Automatic Job Management System 3 System Design (Configuration) Guide*.

#2

Excluding JP1/AJS3 - Agent Minimal Edition

Note that the prerequisite Web browsers for JP1/AJS3 for Cloud Service Applications are shown below. For the supported version, refer to the *Release Note*.

- Microsoft Edge
- Firefox ESR
- Google Chrome

2.2 Consider system configuration

With JP1/AJS3 for Cloud Service Applications, system configuration where an on-premises environment and a cloud environment exist in a mix can be used.

The system configuration of JP1/AJS3 for Cloud Service Applications is shown below.

Note

The system configuration of JP1/AJS3 for Cloud Service Applications and JP1/AJS3 - View is not restricted in any way.

Make sure that the configuration allows connection of service linkage job execution destination host (JP1/AJS3 - Agent or JP1/AJS3 - Manager) and JP1/AJS3 for Cloud Service Applications.

2.2.1 Use in on-premises environment

This section describes the system configuration for constructing JP1/AJS3 for Cloud Service Applications in an on-premises environment.

Note that *JP1/AJS3 for Cloud Service Applications* is abbreviated as *JP1/AJS3 for CSA* in the figures of this section.

Note

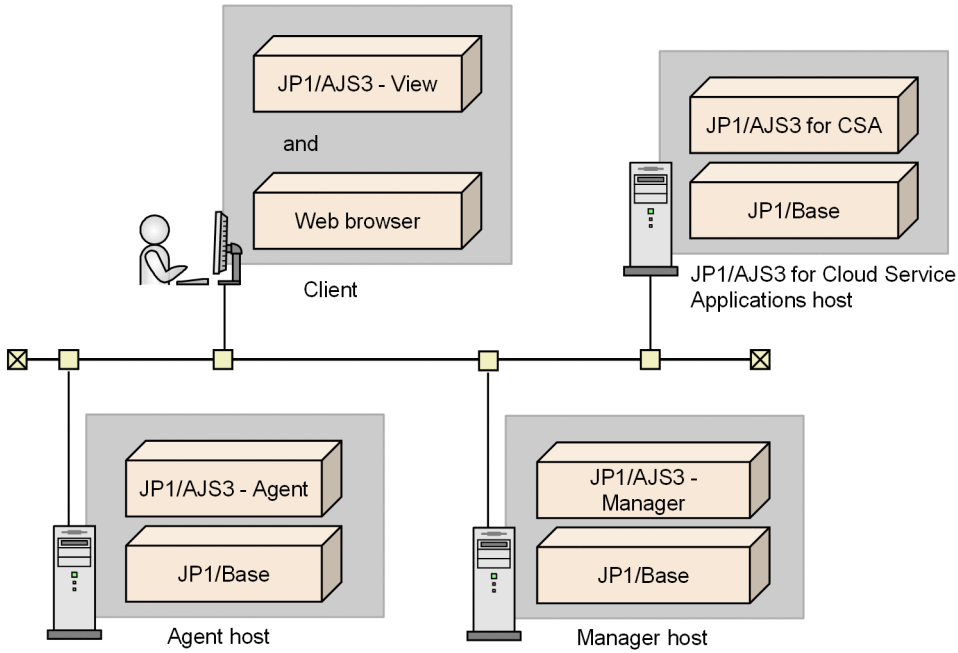
It is also possible to use the manager host as a service linkage job destination host without constructing an agent host.

(1) To construct only JP1/AJS3 for Cloud Service Applications

Construct JP1/AJS3 for Cloud Service Applications in a host separate from the one for JP1/AJS3 - Manager and JP1/AJS3 - Agent.

JP1/AJS3 - Manager and JP1/AJS3 - Agent are constructed in an on-premises environment.

Figure 2–1: Example of system configuration for constructing only JP1/AJS3 for Cloud Service Applications



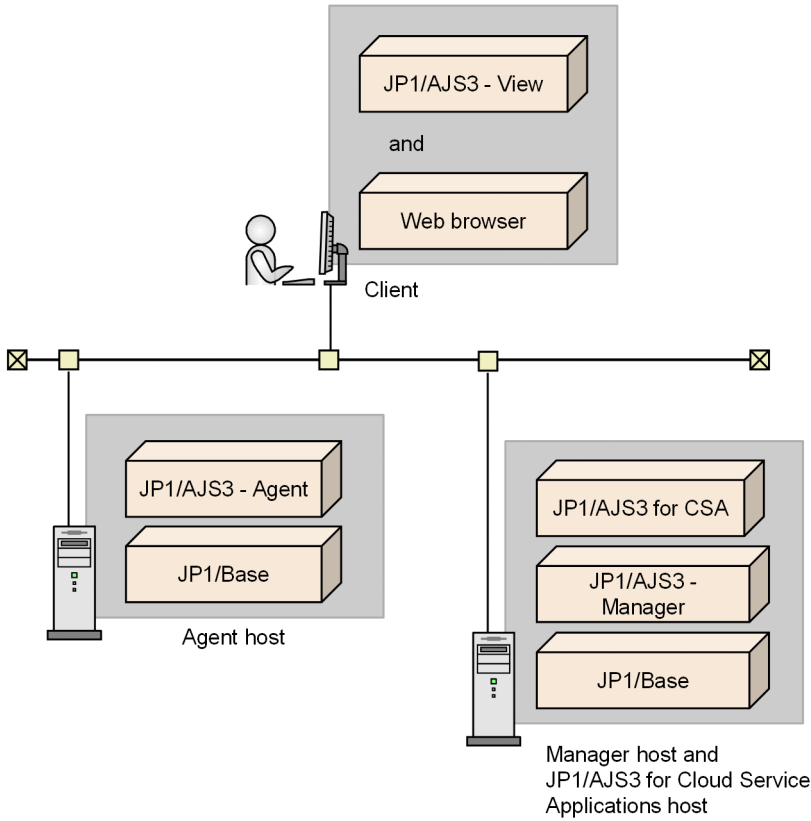
Legend:

JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

(2) To construct on-premises JP1/AJS3 - Manager and JP1/AJS3 - Agent in same host

JP1/AJS3 for Cloud Service Applications and JP1/AJS3 - Manager and JP1/AJS3 - Agent are constructed in the same host.

Figure 2–2: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications and JP1/AJS3 - Manager are on the same host



Legend:

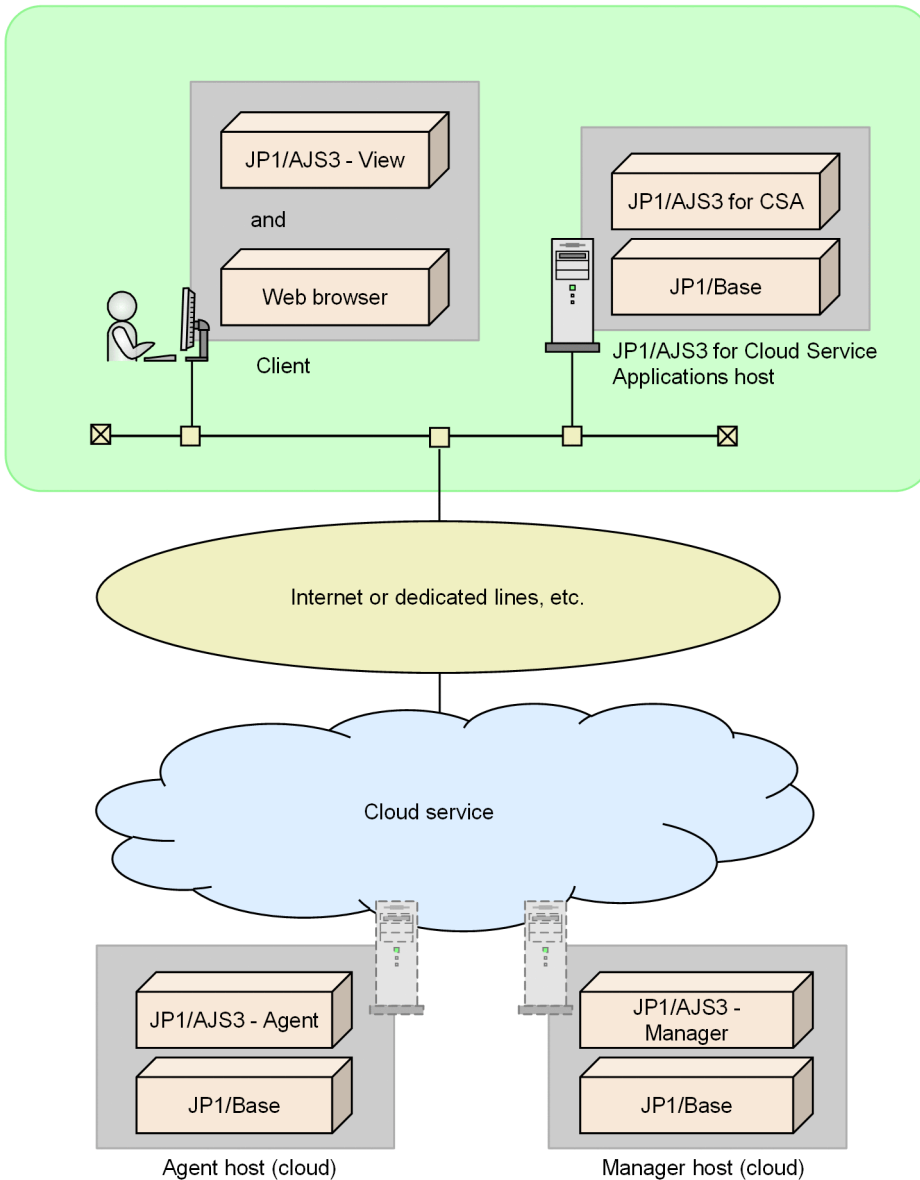
JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

(3) To construct JP1/AJS3 - Manager and JP1/AJS3 - Agent in cloud

JP1/AJS3 for Cloud Service Applications is constructed in an on-premises host and JP1/AJS3 - Manager and JP1/AJS3 - Agent are in the cloud.

Figure 2–3: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications in on-premises host and JP1/AJS3 - Manager and JP1/AJS3 - Agent in the cloud

On-premises



Legend:

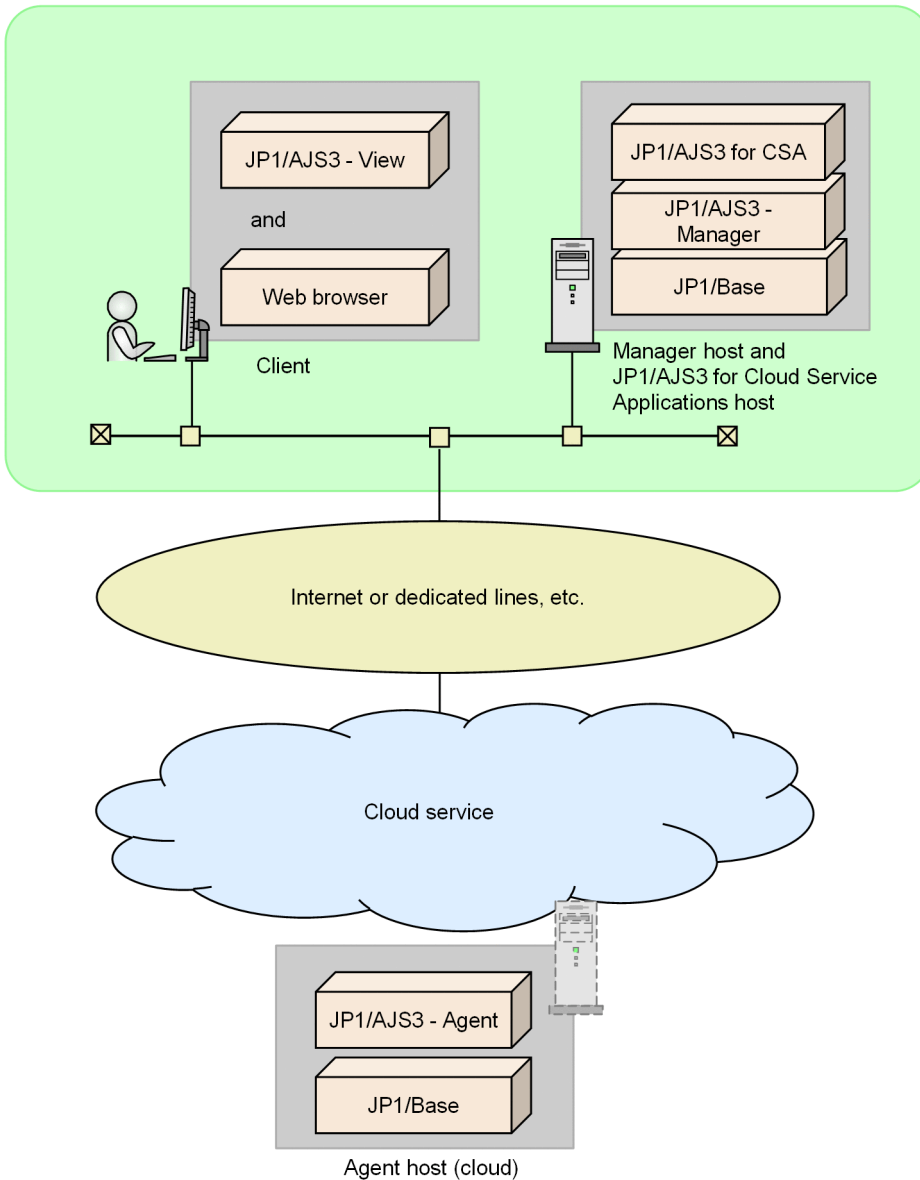
JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

(4) To construct JP1/AJS3 - Manager and JP1/AJS3 - Agent in on-premises environment and on cloud in mix

JP1/AJS3 for Cloud Service Applications is constructed on an on-premises host while JP1/AJS3 - Manager and JP1/AJS3 - Agent are constructed in an on-premises environment and on a cloud in mix.

Figure 2–4: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications and JP1/AJS3 - Manager in on-premises host and JP1/AJS3 - Agent in the cloud

On-premises



Legend:

JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

Notes

- JP1/AJS3 - Manager and JP1/AJS3 for Cloud Service Applications can also be constructed on another host.
- It is also possible to construct JP1/AJS3 - Manager on a cloud and JP1/AJS3 - Agent in an on-premises environment.

2.2.2 Use in cloud environment

This section explains the system configuration for constructing JP1/AJS3 for Cloud Service Applications in a cloud environment.

 **Note**

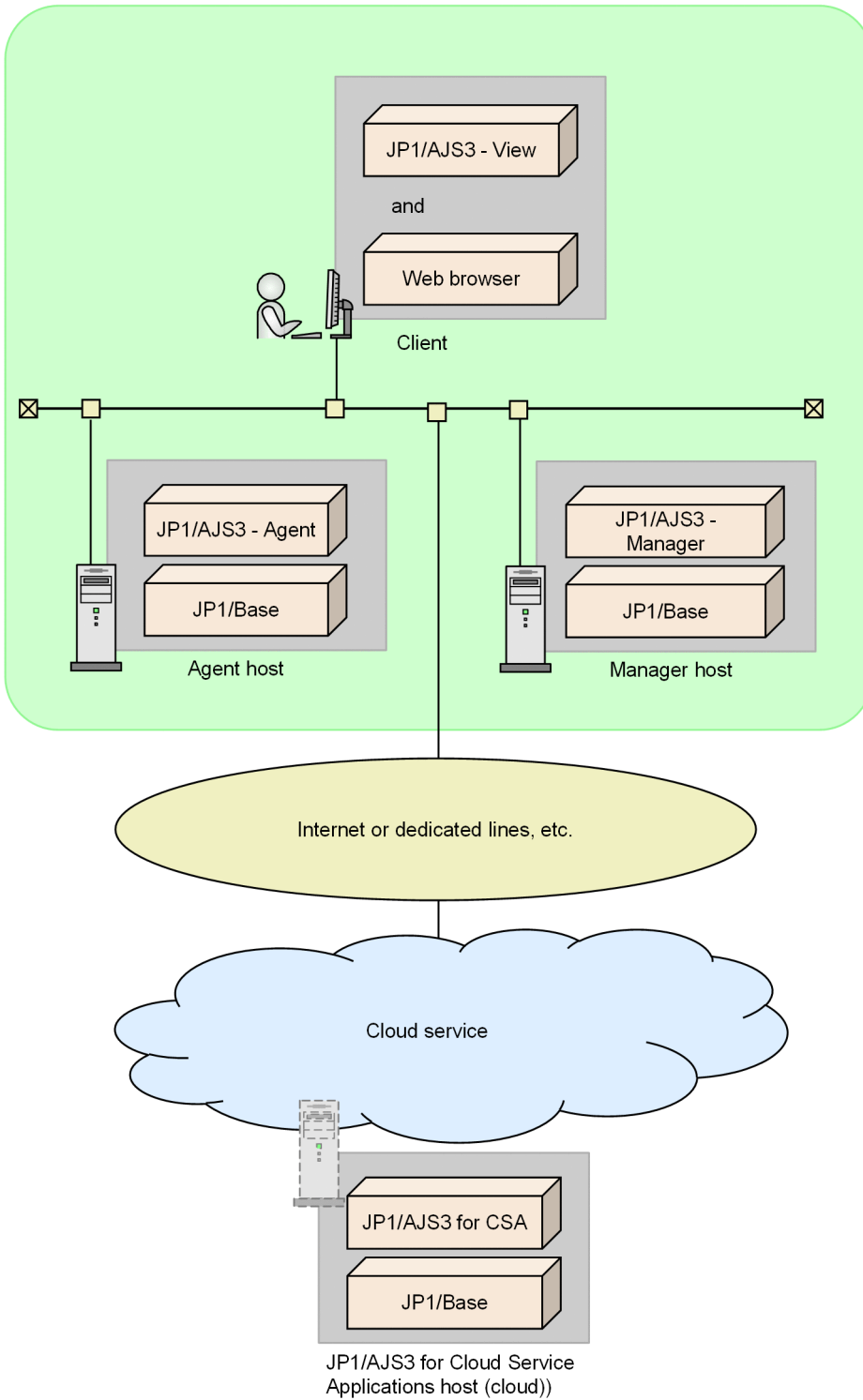
It is also possible to use the manager host as a service linkage job destination host without constructing an agent host.

(1) To construct JP1/AJS3 - Manager and JP1/AJS3 - Agent in on-premises environment

JP1/AJS3 for Cloud Service Applications is constructed on a cloud, and JP1/AJS3 - Manager and JP1/AJS3 - Agent are in an on-premises environment.

Figure 2–5: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications on cloud and JP1/AJS3 - Manager and JP1/AJS3 - Agent in the on-premises host

On-premises



Legend:

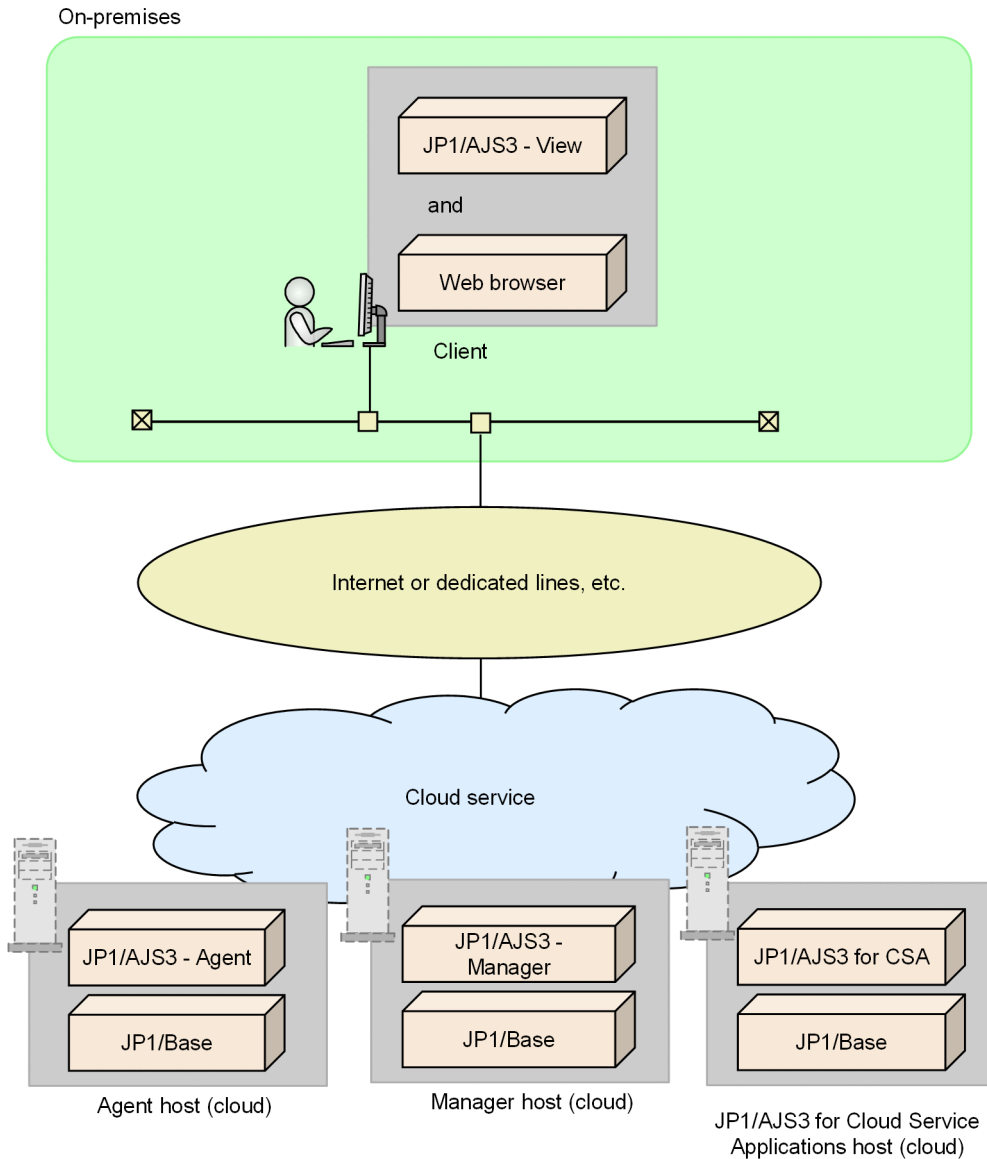
JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

(2) To construct only JP1/AJS3 for Cloud Service Applications in cloud

JP1/AJS3 for Cloud Service Applications is constructed in a cloud host separate from the one for JP1/AJS3 - Manager and JP1/AJS3 - Agent.

JP1/AJS3 - Manager and JP1/AJS3 - Agent are also constructed in the cloud.

Figure 2–6: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager, and JP1/AJS3 - Agent in the cloud



Legend:

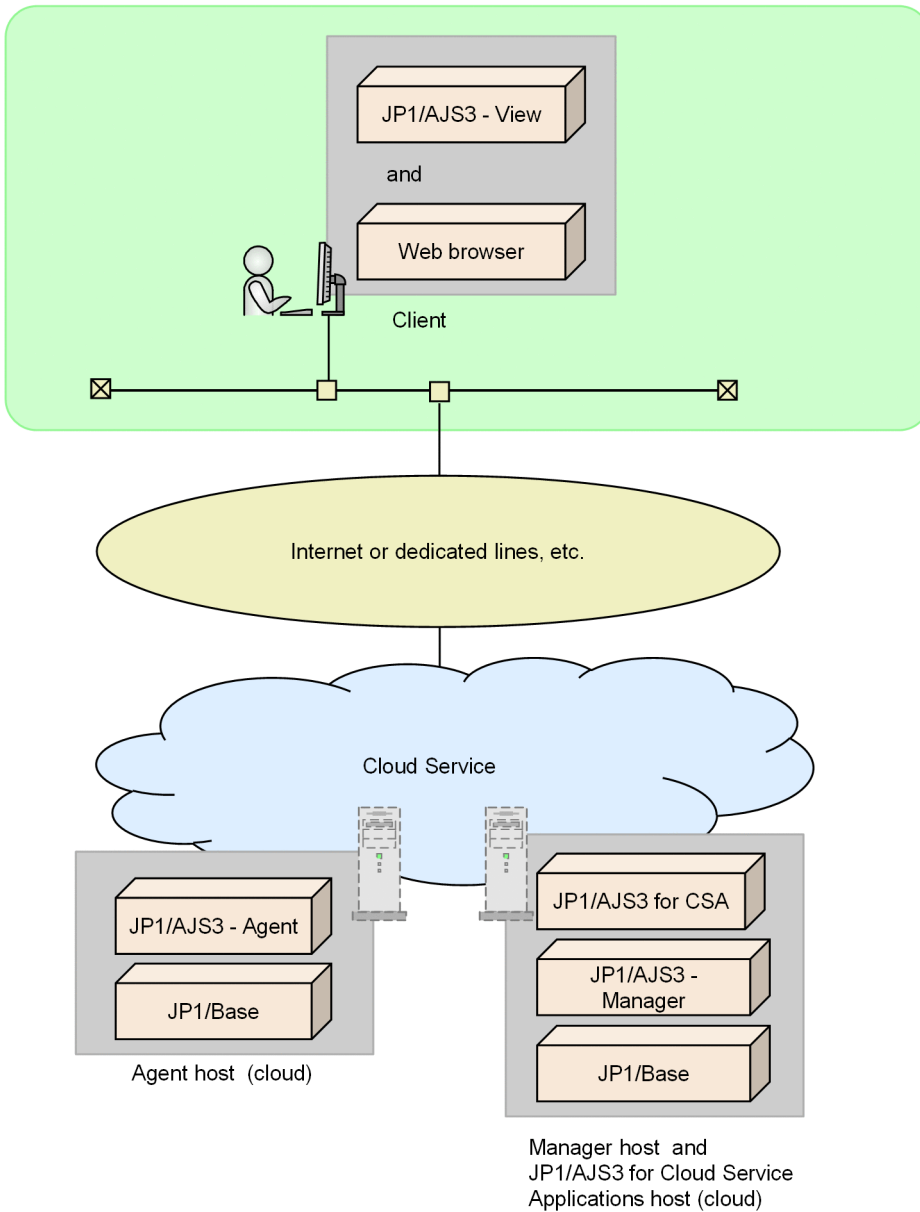
JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

(3) To construct on the same host as JP1/AJS3 - Manager or JP1/AJS3 - Agent on cloud

JP1/AJS3 for Cloud Service Applications is constructed on the same host as the one for JP1/AJS3 - Manager or JP1/AJS3 - Agent in the cloud.

Figure 2–7: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications on the same cloud host for JP1/AJS3 - Manager

On-premises



Legend:

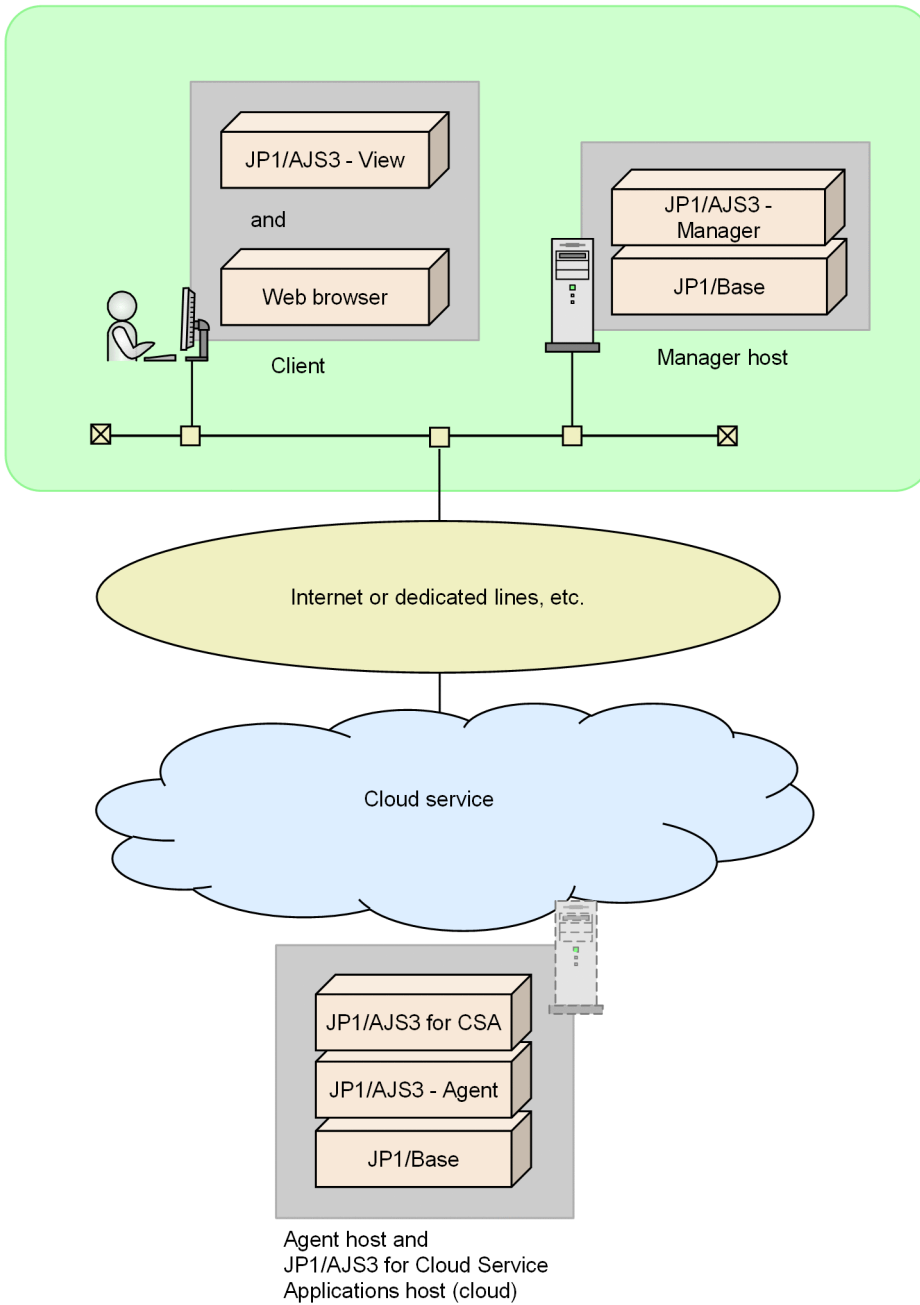
JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

(4) To construct JP1/AJS3 - Manager and JP1/AJS3 - Agent in a mix of on-premises and cloud

JP1/AJS3 for Cloud Service Applications is constructed on a host in a cloud, while JP1/AJS3 - Manager and JP1/AJS3 - Agent are constructed in a mixed environment of on-premises and cloud.

Figure 2–8: Example of system configuration for constructing JP1/AJS3 for Cloud Service Applications and JP1/AJS3 - Agent in the cloud host and JP1/AJS3 - Manager in on-premises

On-premises



Legend:

JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

Notes

- JP1/AJS3 - Agent and JP1/AJS3 for Cloud Service Applications can be constructed on another host.
- It is possible to construct JP1/AJS3 - Manager in a cloud and JP1/AJS3 - Agent in an on-premises environment.

2.2.3 Configuration in cluster system

A cluster system operates multiple server systems in linkage as one system. By constructing two servers in the same environment and, if the server executing a business operation (execution system) fails, letting the server standing by (standby server) take over the processing, the business operation can be continued.

(1) Prerequisites of cluster system

When using JP1/AJS3 for Cloud Service Applications in a cluster system, the following prerequisites must be satisfied:

1. The cluster software must be a program that can control the following 2 to 4:
 2. It must be able to use a shared disk that can be taken over from the execution system to the standby system.
In particular, the following conditions must be satisfied:
 - The shared disk must be assigned before JP1/AJS3 for Cloud Service Applications is started.
 - The assignment of the shared disk must not be released while JP1/AJS3 for Cloud Service Applications is being executed.
 - The assignment of the shared disk must be released after JP1/AJS3 for Cloud Service Applications is stopped.
 - Exclusive control is carried out so that the shared disk can be accessed only from the execution system node.
 - Files must be protected by such a system as a file system with a journal function, so that the files will not be erased in case of a system failure.
 - Even in a case of failover, the contents written to files must be guaranteed and taken over.
 - Failover can be forcibly executed even if an ongoing process is using the shared disk.
 - Recovery processing that is performed if a failure in the shared disk is detected must be controlled by the cluster software and JP1/AJS3 for Cloud Service Applications does not have to be aware of the recovery processing. If starting or stopping JP1/AJS3 for Cloud Service Applications is necessary as an extension of the recovery processing, the cluster software must request JP1/AJS3 for Cloud Service Applications to execute starting or stopping.
 3. The IP address used for a cluster operation must satisfy the following conditions:
 - Communication must be able to be performed using an IP address that can be taken over and is used for a cluster operation.
 - The IP address used for a cluster operation must be uniquely determined from the host name used for a cluster operation.
 - The IP address used for a cluster operation must be assigned before JP1/AJS3 for Cloud Service Applications is started.
 - The IP address used for a cluster operation must not be deleted while JP1/AJS3 for Cloud Service Applications is being executed.
 - Correspondence between the host name used for a cluster operation and the IP address used for a cluster operation must not be changed while JP1/AJS3 for Cloud Service Applications is being executed.
 - The IP address used for a cluster operation must be deleted after JP1/AJS3 for Cloud Service Applications is stopped.
 - Recovery processing that is performed if a network failure in the shared disk is detected must be controlled by the cluster software, and JP1/AJS3 for Cloud Service Applications does not have to be aware of the recovery processing. If starting or stopping JP1/AJS3 for Cloud Service Applications is necessary as extension of the recovery processing, the cluster software must request JP1/AJS3 for Cloud Service Applications to execute starting or stopping.

- The host name used for a cluster operation must be set in the hosts file or name server and can be transmitted through TCP/IP communication.

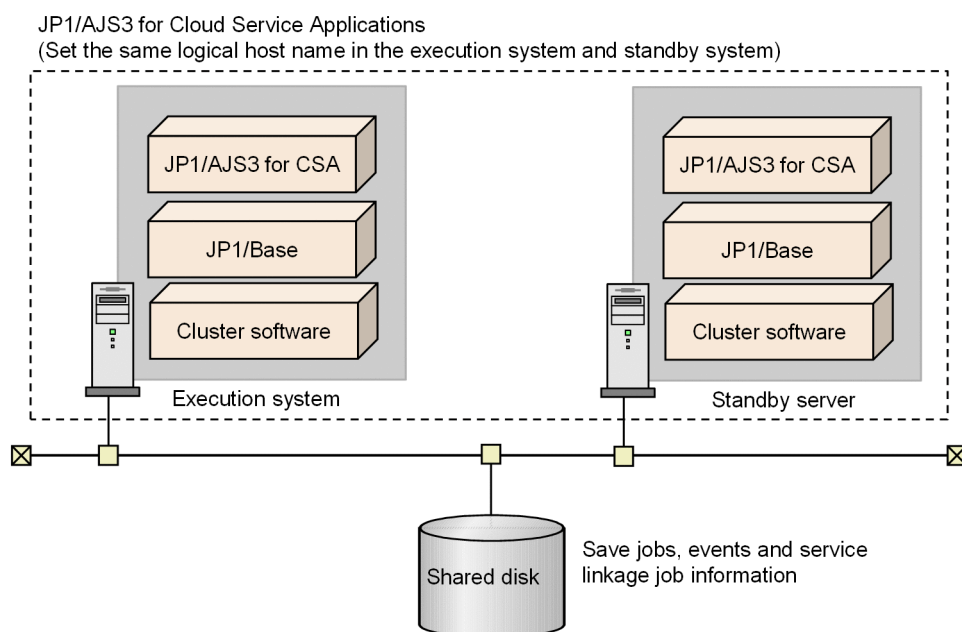
Unless the above conditions are satisfied, a problem may occur in the operation of JP1/AJS3 for Cloud Service Applications. For example, the following problems may occur:

- If data that was written by the execution system break at the time of failover, A problem of an error, data loss, or failure in starting may occur and JP1/AJS3 for Cloud Service Applications cannot operate correctly.
- If recovery processing is not performed even when an NIC failure occurs, A communication error occurs and JP1/AJS3 for Cloud Service Applications cannot operate correctly until NIC is changed through control by the cluster software or the server fails over to another server.

(2) System configuration to be supported

An example of system configuration for operating JP1/AJS3 for Cloud Service Applications in a cluster system is shown below.

Figure 2–9: Example of system configuration for operating JP1/AJS3 for Cloud Service Applications in a cluster system



Legend:

JP1/AJS3 for CSA: JP1/AJS3 for Cloud Service Applications

If a cloud service is supported, JP1/AJS3 for Cloud Service Applications created on a cloud can be configured in a cluster system.

! Important

- If a logical host environment is created for each of JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager, and JP1/AJS3 - Agent, they will fail over, in case of a failure, without affecting one another. It is therefore recommended to construct JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager, and JP1/AJS3 - Agent on different logical hosts.

- When considering system configuration during a cluster operation, a host name in FQDN format cannot be used as a logical host name.
- JP1/AJS3 for Cloud Service Applications can be set up with one logical host per physical host. This means that plural JP1/AJS3 for Cloud Service Applications of different logical host names cannot be set up on one physical host.
- JP1/AJS3 for Cloud Service Applications supports an active-standby cluster configuration. It does not support an active-active cluster configuration.
- When constructing JP1/AJS3 for Cloud Service Applications in a cluster configuration in a cloud environment, an IP address cannot be used as the host name of the JP1/AJS3 for Cloud Service Applications server.

For details on constructing JP1/AJS3 - Manager and JP1/AJS3 - Agent in a cluster system, refer to the description on the configuration example of a cluster system in the *JP1/Automatic Job Management System 3 System Design (Configuration) Guide*.

2.2.4 Operation in disaster-recovery configuration

Disaster recovery is a configuration to prepare for the contingencies of large-scale disasters by creating a system the same as the one that normally operates at a separate, remote location and copying the contents of the disk that has been updated during normal operation to the disk at the remote location.

To use JP1/AJS3 for Cloud Service Applications in a disaster-recovery configuration, the following operations must be performed as necessary:

- Backup and recovery of setup information and operation information
For details, refer to [3.7 Backup and recovery](#).
- Configurational change of the host name or IP address
For details, refer to [3.3.5 Changing the settings during operation](#).

For details when using JP1/AJS3 - Manager and JP1/AJS3 - Agent in the disaster-recovery configuration, refer to the description on the configuration example for disaster-recovery operation in the *JP1/Automatic Job Management System 3 System Design (Configuration) Guide*.

3

Designing and Building the System

This chapter describes the procedure for installing and setting up JP1/AJS3 for Cloud Service Applications.

The installation process requires administrator rights (for Windows) or superuser privileges (for Linux).

This chapter also describes backup and recovery procedures.

3.1 Installation

This section describes the procedure for installing JP1/AJS3 for Cloud Service Applications.

3.1.1 Installing JP1/Base

JP1/Base must be installed on the host where JP1/AJS3 for Cloud Service Applications will be installed. If JP1/Base is already installed on the host, it can be used.

After installing JP1/AJS3 for Cloud Service Applications, you must configure the user authentication feature and perform the following setup in JP1/Base before you can set up JP1/AJS3 for Cloud Service Applications.

- Registering JP1 users who access the resources on JP1/AJS3 for Cloud Service Applications

Register the following JP1 users.

- JP1 users who access JP1/AJS3 for Cloud Service Applications from clients.
- JP1 users who execute service linkage jobs.
- Configuring access rights

Specify the permission level of a JP1 resource group for each registered JP1 user.

JP1/AJS3 for Cloud Service Applications provides access rights based on the following JP1 permission level names.

JP1_CSA_Admin

Administrator rights for JP1/AJS3 for Cloud Service Applications. This level has the rights to create, view, edit, and delete each definition of service linkage job information.

JP1_CSA_AuthEditor

This level has the rights to create, view, edit, and delete authentication definitions.

JP1_CSA_Guest

This level has the rights to view each definition of service linkage job information.

JP1_CSA_JobExec

This is the view permission when executing a service linkage job. To execute a service linkage job, a JP1 user requires this permission.

The JP1 users who log in to JP1/AJS3 for Cloud Service Applications to create, view, edit, and delete definitions of service linkage job information must assign rights to the resource group JP1_CSA and the JP1 resource group in the definition.

For details of the installation and setup of JP1/Base, please see the *JP1/Base User's Guide*.

3.1.2 Installation (for Windows)

The following shows the procedure for a new installation of JP1/AJS3 for Cloud Service Applications on a Windows host.

1. Log on as an administrator to the host where JP1/AJS3 for Cloud Service Applications will be installed.
2. Close all programs that will link with JP1/AJS3.

If you are using a program that will link with JP1/AJS3 on the host where JP1/AJS3 for Cloud Service Applications will be installed, please be sure to close it. If the Windows Event Viewer is open, please close it.

3. Set the media for JP1/AJS3 for Cloud Service Applications.

The Hitachi Integrated Installer screen appears.

4. Follow the instructions on screen to enter the necessary information and install the software.

The following shows the information to provide during installation.

- User information

Enter your user name and other information.

- Installation folder

Specify the folder where JP1/AJS3 for Cloud Service Applications will be installed. Do not install it in the same folder as another product.

5. The installation is complete. When a restart is requested, restart the host.

For the setup of JP1/AJS3 for Cloud Service Applications, please see [3.3 Setup](#).

Notes

- The installation folder specified when installing JP1/AJS3 for Cloud Service Applications must be 75 bytes or less in path length. Please make sure that the path to the installation folder does not contain multi-byte characters. The default installation folder for JP1/AJS3 for Cloud Service Applications is `C:\Program Files\Hitachi\JP1AJS3CSA`.
- JP1/AJS3 for Cloud Service Applications cannot be installed directly under a drive.
- If you are not the administrator when User Account Control (UAC) is enabled, you must be the administrator to install the software.
- For the folders and files that will be created during installation and notes, please see [A. Files and Directories](#).
- When you install JP1/AJS3 for Cloud Service Applications, the ports for internal communication (22267, 22268, and 22269) must be available. If you want to use them for other purposes, you must install JP1/AJS3 for Cloud Service Applications while they are available before you can change the ports to use.

3.1.3 Installation (for Linux)

The following shows the procedure for a new installation of JP1/AJS3 for Cloud Service Applications on a Linux host.

1. Log in as a superuser to the host where JP1/AJS3 for Cloud Service Applications will be installed, or switch to a superuser with the `su` command.

2. Close all programs that will link with JP1/AJS3 for Cloud Service Applications.

If you are using a program that will link with JP1/AJS3 for Cloud Service Applications on the host where JP1/AJS3 for Cloud Service Applications will be installed, please be sure to close it. If the Windows Event Viewer is open, please close it.

3. Set the media for JP1/AJS3 for Cloud Service Applications.

4. Mount the installation media.

Use `/mnt/dvdrom` as the mount directory. For the mount command, please see the OS documentation.

5. Execute the following command to start the Hitachi PP Installer.

```
/mnt/dvdrom/X64LIN/setup /mnt/dvdrom
```

6. Enter I on the initial screen.

A list of software that you can install is displayed.

7. Select the JP1/AJS3 series program that you want to install and enter I.

The selected program will be installed.

To select a program, move the cursor and use the space bar to select it.

8. After the installation is successfully completed, enter Q.

The initial screen of the Hitachi PP Installer appears again.

For the setup of JP1/AJS3 for Cloud Service Applications, please see [3.3 Setup](#).

Note

When you install JP1/AJS3 for Cloud Service Applications, the ports for internal communication (22267, 22268, and 22269) must be available. If you want to use them for other purposes, you must install JP1/AJS3 for Cloud Service Applications while they are available before you can change the ports to use.

3.2 Uninstallation

This section describes the procedure for uninstalling JP1/AJS3 for Cloud Service Applications.

The uninstallation process requires administrator rights (for Windows) or superuser privileges (for Linux).

3.2.1 For Windows

This section describes the procedure for uninstalling JP1/AJS3 for Cloud Service Applications on a host that runs Windows.

1. Exit programs.

Close all programs before the uninstallation.

2. In Windows, from Control Panel - Add/Remove Programs, uninstall the program.

At Add/Remove Programs, select the program that you want to uninstall and uninstall it.

3. Delete user files.

When JP1/AJS3 for Cloud Service Applications is deleted, the files that were created by the user, such as definition files and log files created after installation, will not be deleted.

To delete these files, use Explorer to delete the folder where JP1/AJS3 for Cloud Service Applications was installed.

Note

If you are not the administrator when User Account Control (UAC) is enabled, you must be the administrator to uninstall the software.

3.2.2 For Linux

This section describes the procedure for uninstalling JP1/AJS3 for Cloud Service Applications on the host that runs Linux.

1. Exit programs.

Close all programs before the uninstallation.

2. Execute the following command to start the Hitachi PP Installer.

```
/etc/hitachi_setup
```

The Hitachi PP Installer is started and the initial screen appears.

3. Enter D on the initial screen.

A list of programs that you can uninstall is displayed.

4. Select the JP1/AJS3 series program that you want to uninstall and enter D.

The selected program will be uninstalled.

To select a program, move the cursor and use the space bar to select it.

5. After the uninstallation is successfully completed, enter Q.

The initial screen of the Hitachi PP Installer appears again.

6. Check the deleted files.

After deleting JP1/AJS3 for Cloud Service Applications, check if any of the following directories remain. If so, please delete them.

```
/opt/jp1ajs3csa  
/var/opt/jp1ajs3csa  
/etc/opt/jp1ajs3csa
```

3.3 Setup

This section describes the method for setting up JP1/AJS3 for Cloud Service Applications.

3.3.1 Setup for using service linkage jobs

This section describes the setup for using service linkage jobs at JP1/AJS3 for Cloud Service Applications.

(1) Setup flow

The following shows the flow for setting up JP1/AJS3 for Cloud Service Applications.

1. Set up the JP1/AJS3 for Cloud Service Applications server.
2. Set up the execution host for a service linkage job.
3. Define the information for executing a service linkage job.
4. Set up at JP1/AJS3 - View.

(2) Setting up the JP1/AJS3 for Cloud Service Applications server

The following shows the procedure for setting up the JP1/AJS3 for Cloud Service Applications server.

1. Configure JP1/Base's user authentication feature.
For details, please see [3.1.1 Installing JP1/Base](#).
2. Configure the JP1/AJS3 for Cloud Service Applications server as required.
For details, please see [3.3.1\(3\) Configuring the JP1/AJS3 for Cloud Service Applications server](#).
3. Configure the settings for SSL communication as required.
You can use SSL communication to allow the Web GUI and the JP1/AJS3 for Cloud Service Application server to communicate via HTTPS, preventing passwords and other information from being intercepted. Communication between the JP1/AJS3 for Cloud Service Application server and the execution host for a service linkage job is also encrypted using SSL.
For the procedure for setting up SSL communication, please see [3.3.2 Setting up the SSL communication environment](#).
4. Configure the firewall settings.
When a firewall is used in the environment, please configure it so that communication between JP1/AJS3 for Cloud Service Applications and a Web browser can pass through the firewall.
For details about port number, please see [D. Port number to be set](#).
5. Start the services of JP1/AJS3 for Cloud Service Applications.
Start the following services.
 - JP1/AJS3 CSA Web Application Server service
 - JP1/AJS3 CSA HTTP Server service
6. Check that the following URL can be accessed with your Web browser.
Access the following URL and confirm that the Web GUI login screen appears.

`http://host-name-or-IP-address-of-the-CSA-server:port-number/ajscsa/login.html`

The default port number is 22265 for HTTP connection and 22266 for HTTPS connection.

To enable SSL communication and connect using HTTPS, start the URL with `https`.

(3) Configuring the JP1/AJS3 for Cloud Service Applications server

Configure the JP1/AJS3 for Cloud Service Applications server as required. Depending on your environment, edit the configuration files shown in the following table.

Table 3–1: Table 3-1 Configuration files for the JP1/AJS3 for Cloud Service Applications server environment

What you want to set or change	Settings file	Reference
Change the size and number of log files	Environment-settings file (<code>ajs3csaweb.conf</code>)	3.4.1
Change the default port number that receives connection requests from Web browsers	HTTP server definition file (<code>httpsd.conf</code>)	3.4.2
Enable SSL communication	HTTP server definition file (<code>httpsd.conf</code>)	3.3.2, 3.4.2
Change the default port number used for communication between the HTTP server and the J2EE server	HTTP server definition file (<code>httpsd.conf</code>)	3.4.2
	User property file for J2EE server (<code>usrconf.properties</code>)	3.4.3
Change the default port number for internal management of the J2EE server	User property file for J2EE server (<code>usrconf.properties</code>)	3.4.3
	System property file for server management commands (<code>usrconf.properties</code>)	3.4.5
Change the maximum size of the Java heap used by applications on the J2EE server	Option definition file for J2EE server (<code>usrconf.cfg</code>)	3.4.4

3.3.2 Setting up the SSL communication environment

To configure SSL communication at JP1/AJS3 for Cloud Service Applications, a server certificate is required on the server-side host and a root certificate is required on the client-side host. For the server and root certificates, please see the description of encryption of JP1/AJS3 communication by SSL in the *JP1/Automatic Job Management System 3 System Design (Configuration) Guide*.

(1) Configuring JP1/AJS3 for Cloud Service Applications to communicate over SSL

The following shows the procedure for configuring the JP1/AJS3 for Cloud Service Applications to communicate with a client host over SSL.

1. Execute the command to create a private key.

Execute the following command. The command to use is different depending on the type of certificate to create. The following command creates a private key without a passphrase in PEM format. You cannot use a private key with a passphrase or one that is not in PEM format.

To create an RSA certificate

For Windows:

```
installation-folder-of-JP1/AJS3 for Cloud Service Applications\uCPSB\ht  
ttpsd\sbin\openssl.bat genrsa -rand name-of-the-file-to-use-for-random-n  
umber-generation -out path-to-the-private-key-file bit-length-of-the-pr  
ivate-key
```

For Linux:

```
/opt/jp1ajs3csa/uCPSB/httpsd/sbin/openssl.sh genrsa -rand name-of-the-f  
ile-to-use-for-random-number-generation -out path-to-the-private-key-fi  
le bit-length-of-the-private-key
```

To create an ECDSA certificate

For Windows:

```
installation-folder-of-JP1/AJS3 for Cloud Service Applications\uCPSB\h  
ttpsd\sbin\openssl.bat ecparam -genkey -noout -rand name-of-the-file-t  
o-use-for-random-number-generation -name name-of-the-elliptic-curve -ou  
t path-to-the-private-key-file
```

For Linux:

```
/opt/jp1ajs3csa/uCPSB/httpsd/sbin/openssl.sh ecparam -genkey -noout -r  
and name-of-the-file-to-use-for-random-number-generation[:name-of-the-f  
ile-to-use-for-random-number-generation ...] -name name-of-the-elliptic  
-curve -out path-to-the-private-key-file
```

For the execute permissions of `openssl.bat` and `openssl.sh`, please see the official OpenSSL website. Specify the following *path-to-the-private-key-file*.

For Windows

```
Installation-folder-of-JP1/AJS3 for Cloud  
Service Applications\uCPSB\httpsd\conf\ssl\server\httpsdkey.pem#
```

For Linux

```
/opt/jp1ajs3csa/uCPSB/httpsd/conf/ssl/server/httpsdkey.pem#
```

For details of the command to create a private key, see the description of the command used to obtain a certificate for SSL communication in the *JP1/Automatic Job Management System 3 Configuration Guide*.

`httpsdkey.pem` is the name of the private key file. You can specify any name for the private key file. If you want to change the private key file name from `httpsdkey.pem`, please also change the default encryption key file name `httpsdkey.pem` specified in the Web server definition file (`httpsd.conf`) that will be configured in a later step.

2. To create an ECDSA certificate, convert the format of the private key.

Execute the following command.

For Windows:

```
installation-folder-of-JP1/AJS3 for Cloud Service Applications\uCPSB\https  
d\sbin\openssl.bat pkcs8 -topk8 -in private-key-file-before-conversion -ou  
t private-key-file-after-conversion -nocrypt
```

For Linux:

```
/opt/jp1ajs3csa/uCPSB/httpsd/sbin/openssl.sh pkcs8 -topk8 -in private-key
-file-before-conversion -out private-key-file-after-conversion -nocrypt
```

For the execute permissions of `openssl.bat` and `openssl.sh`, please see the official OpenSSL website.

For details of the command to convert the format of a private key, see the description of the command used to obtain a certificate for SSL communication in the *JP1/Automatic Job Management System 3 Configuration Guide*.

3. Execute the command to create a certificate signing request (CSR).

Execute the following command.

For Windows:

```
installation-folder-of-JP1/AJS3 for Cloud Service Applications\uCPSB\https
d\sbin\openssl.bat req -new signature-algorithm -key path-to-the-private-k
ey-file -out path-to-the-CSR-file
```

For Linux:

```
/opt/jp1ajs3csa/uCPSB/httpsd/sbin/openssl.sh req -new signature-algorithm
-key path-to-the-private-key-file -out path-to-the-CSR-file
```

For the execute permissions of `openssl.bat` and `openssl.sh`, please see the official OpenSSL website.

For the *path-to-the-private-key-file*, specify the path specified for the command to create a private key in step 1. For the *path-to-the-CSR-file*, specify the output folder and CSR file name that you like.

For details of the command to create a certificate signing request (CSR), see the description of the command used to obtain a certificate for SSL communication in the *JP1/Automatic Job Management System 3 Configuration Guide*.

4. Send a CSR to the CA.

When you send a CSR to the CA, it issues a server certificate and a root certificate to validate the server certificate.

5. Obtain server and root certificates in PEM format from the CA.



Important

Server and root certificates cannot be used if they are not in PEM format.

You can specify any names for server and root certificate files.

In the Web server definition file (`httpsd.conf`), which will be configured in a later step, `httpsd.pem` is specified as the default server certificate. If you use this file name, you do not need to change the name of the server certificate file in the Web server definition file.

And the acquired root certificate is used when you configure how a service linkage job communicates via SSL.

6. When you use an intermediate certificate, you must combine the server and intermediate certificates in one file.

Open both certificates in your text editor and paste the content of the intermediate certificate in the server certificate in the following order.

1. Server certificate
2. Intermediate certificate
3. Cross root certificate[#]

[#]: Only when you use a cross root certificate

7. Place the server certificate on the JP1/AJS3 for Cloud Service Applications server.

Place the server certificate in the following folder.

For Windows

Installation-folder-of-JP1/AJS3 for Cloud Service Applications\uCP SB\http sd\conf\ssl\server

For Linux

/opt/jp1ajs3csa/uCP SB/http sd/conf/ssl/server

8. Edit the Web server definition file (http sd.conf) to enable SSL communication.

Uncomment the SSL communication setting section of the Web server definition file (http sd.conf) to enable SSL communication.

The following shows a sample for Windows. In this sample, the port number for communication, the names of the server certificate and private key files, the version of TLS used for SSL communication, and the encryption types that can be used with TLS are left unchanged from the default settings (server certificate: http sd.pem, private key: http sdkey.pem, TLS version: TLSv1.2). Only the comment symbols (#) are deleted.

<Before>

```
:
Listen 22265
#Listen [::]:22265

#Listen 22266
#Listen [::]:22266
#<VirtualHost *:22266>
#  ServerName MyServer
#  SSLEngine On
#  SSLCertificateFile "C:/Program Files/HITACHI/JP1AJS3CSA/uCP SB/http sd/conf/ssl/server/http sd.pem"
#  SSLCertificateKeyFile "C:/Program Files/HITACHI/JP1AJS3CSA/uCP SB/http sd/conf/ssl/server/http sdkey.pem"
#  SSLProtocol +TLSv1.2
#  SSLCipherSuite TLSv1.3 TLS_AES_128_GCM_SHA256:TLS_AES_256_GCM_SHA384
#  SSLCipherSuite AES128-GCM-SHA256:AES256-GCM-SHA384:ECDHE-RSA-AES128-SHA256:ECDHE-RSA-AES256-SHA384:ECDHE-RSA-AES128-GCM-SHA256:ECDHE-RSA-AES256-GCM-SHA384:ECDHE-ECDSA-AES128-SHA256:ECDHE-ECDSA-AES256-SHA384:ECDHE-ECDSA-AES128-GCM-SHA256:ECDHE-ECDSA-AES256-GCM-SHA384
#  AllowEncodedSlashes On
#</VirtualHost>
:
```

<After>

```
:
#Listen 22265
#Listen [::]:22265

Listen 22266
#Listen [::]:22266
<VirtualHost *:22266>
  ServerName MyServer
  SSLEngine On
  SSLCertificateFile "C:/Program Files/HITACHI/JP1AJS3CSA/uCP SB/http sd/conf/ssl/server/http sd.pem"
  SSLCertificateKeyFile "C:/Program Files/HITACHI/JP1AJS3CSA/uCP SB/http sd/conf/ssl/server/http sdkey.pem"
  SSLProtocol +TLSv1.2
  SSLCipherSuite TLSv1.3 TLS_AES_128_GCM_SHA256:TLS_AES_256_GCM_SHA384
  SSLCipherSuite AES128-GCM-SHA256:AES256-GCM-SHA384:ECDHE-RSA-AES128-SHA256:ECDHE-RSA-AES256-SHA384:ECDHE-RSA-AES128-GCM-SHA256:ECDHE-RSA-AES256-GCM-SHA384:ECDHE-ECDSA-AES128-SHA256:ECDHE-ECDSA-AES256-SHA384:ECDHE-ECDSA-AES128-GCM-SHA256:ECDHE-ECDSA-AES256-GCM-SHA384

```

```
M-SHA384:ECDHE-ECDSA-AES128-SHA256:ECDHE-ECDSA-AES256-SHA384:ECDHE-ECDSA-AES128-GCM-SHA256:ECDHE-ECDSA-AES256-GCM-SHA384
  AllowEncodedSlashes On
</VirtualHost>
:
```

If the port number for SSL communication, the names of the server certificate and private key files, the version of TLS used for SSL communication, and the encryption types that can be used with TLS are changed from the default values in your environment, please change these settings as required.

The following shows the default values in the Web server definition file (`httpsd.conf`).

- Port number for SSL communication: 22266
- Name of the server certificate file: `httpsd.pem`
- Name of the private key file: `httpsdkey.pem`
- Version of TLS used for SSL communication: TLSv1.2
- Encryption types that can be used with TLSv1.3:
 - `TLS_AES_128_GCM_SHA256`
 - `TLS_AES_256_GCM_SHA384`
- Encryption types that can be used with TLSv1.2:
 - `AES128-GCM-SHA256`
 - `AES256-GCM-SHA384`
 - `ECDHE-RSA-AES128-SHA256`
 - `ECDHE-RSA-AES256-SHA384`
 - `ECDHE-RSA-AES128-GCM-SHA256`
 - `ECDHE-RSA-AES256-GCM-SHA384`
 - `ECDHE-ECDSA-AES128-SHA256`
 - `ECDHE-ECDSA-AES256-SHA384`
 - `ECDHE-ECDSA-AES128-GCM-SHA256`
 - `ECDHE-ECDSA-AES256-GCM-SHA384`

For details of the Web server definition file (`httpsd.conf`), please see [3.4.2 Details on the settings in the HTTP server definition file \(httpsd.conf\)](#).

9. Edit the Web server definition file (`httpsd.conf`) to enable log output for SSL communication.

Uncomment the `LogFormat` and `CustomLog` sections of the Web server definition file (`httpsd.conf`) to enable log output for SSL communication. The following shows a sample for Windows.

<Before>

```
:
#LogFormat "%t %{version}c %{cipher}c %{clientcert}c" hws_ssl
#CustomLog "|\"C:/Program Files/HITACHI/JP1AJS3CSA/uCPSB/httpsd/sbin/rot
atelogs2.exe\" \"C:/Program Files/HITACHI/JP1AJS3CSA/uCPSB/httpsd/logs/ssl
\" 10240 8\"" hws_ssl
:
```

<After>

```
:
LogFormat "%t %{version}c %{cipher}c %{clientcert}c" hws_ssl
CustomLog "|\"C:/Program Files/HITACHI/JP1AJS3CSA/uCPSB/httpsd/sbin/rota
telogs2.exe\" \"C:/Program Files/HITACHI/JP1AJS3CSA/uCPSB/httpsd/logs/ssl\"
```

```
" 10240 8\" hws_ssl  
:
```

10. Restart the JP1/AJS3 CSA HTTP Server service.

11. Place the root certificate in PEM format on the destination execution host for a service linkage job.

To verify the server certificate of the JP1/AJS3 for Cloud Service Applications server at the destination (execution host for a service linkage job), place the root certificate of the CA that issued the server certificate of the JP1/AJS3 for Cloud Service Applications server at an arbitrary location on the destination host.

If a root certificate has already been placed on the destination host, please check whether the CA that issued the root certificate is the same as the CA from which the server certificate was obtained in step 3.

If the CA's are the same:

You can use the root certificate that is already placed as it is. You do not need to overwrite the root certificate.

If the CA's are different:

Please combine the root certificate that is already placed with the root certificate that you have obtained. In this case, please make sure that each root certificate corresponds to the relevant section of the combined root certificate so that you can replace the section appropriately when the root certificate expires. Because root certificates are encoded in Base64, you do not know which section corresponds to which root certificate when you check the combined file.

For details, please see the *JP1/Base User's Guide*.

(2) Configuring a service linkage job to communicate via SSL.

The following shows the procedure for configuring a service linkage job to communicate over SSL.

1. Check whether the root certificate of the destination JP1/AJS3 for Cloud Service Applications server is located on the execution host for a service linkage job.

The root certificate for the JP1/AJS3 for Cloud Service Applications server is placed to configure JP1/AJS3 for Cloud Service Applications to communicate via SSL. For details, please see [3.3.2\(1\) Configuring JP1/AJS3 for Cloud Service Applications to communicate over SSL](#).

2. Enable SSL communication.

Enter the following information in the connection configuration file that describes the settings of a connection between a service linkage job and the corresponding JP1/AJS3 for Cloud Service Applications server.

```
CAFile=full-path-name-of-the-file-placed-in-step-1
```

When you create a new connection configuration file, you must configure it. For details of a connection configuration file, please see [3.5.1 Connection configuration file](#).

(3) Configuring your Web browser to communicate over SSL.

The following shows the procedure for configuring your Web browser to communicate over SSL.

1. Allow SSL communication in your Web browser.

SSL/TLS must also be enabled in your Web browser. For the setting method, please see the documentation of your Web browser.

If SSL/TLS is disabled, the login screen will not appear even when you access the URL for SSL communication. If SSL/TLS is disabled after you log in, further operations will not be available.

3.3.3 Setting up the cluster environment

This section describes the installation and setup for cluster operation.

For an overview of cluster operation, please see the description of the cluster system in the *JP1/Automatic Job Management System 3 Administration Guide*.

(1) Notes for setting up a cluster system.

- Check whether the cluster software that you will use is supported before setup and operation. For details of setting up a cluster system, see the documentation of the cluster system that you will use.
- Please be sure to set up a cluster system in JP1/Base before setting up the system in JP1/AJS3 for Cloud Service Applications.
- Please install JP1/AJS3 for Cloud Service Applications on the primary and secondary nodes in the same drive and directory.
- To use SSL communication on a logical host in a cluster system, acquire a server certificate by using the host name of the logical host. Even if you acquire a server certificate by using the host name of the physical host, you cannot use it on the logical host. However, in the following case, you can use the same server certificate on the physical host as on the logical host.
 - If a logical host name is specified as the SAN on the server certificate of a physical host
 - If the server certificate of the physical host is a wildcard certificate and the specified host name matches the logical host name

For details on acquiring server certificates and configuring other SSL communication settings, see [3.3.2 Setting up the SSL communication environment](#).

(2) Installation for cluster operation

Install JP1/AJS3 for Cloud Service Applications on the local disks of the primary and secondary nodes. When installing it, specify the same drive and directory name for both the primary and secondary nodes.

Important

Do not install JP1/AJS3 for Cloud Service Applications on a shared disk.

(3) Setting up JP1/AJS3 for Cloud Service Applications

The following shows the method for setting up a cluster environment for JP1/AJS3 for Cloud Service Applications.

(a) Steps on the primary node

1. Set up JP1/AJS3 for Cloud Service Applications for cluster operation.

Execute the following command.

```
ajscsasetup -d shared-directory -h logical-host-name-of-JP1/Base -m
```

2. Register the JP1/AJS3 for Cloud Service Applications service in the cluster software that you will use.
For details, please see [\(4\) Registration to the cluster software](#).

(b) Steps on the secondary node

1. Set up JP1/AJS3 for Cloud Service Applications for cluster operation.

Execute the following command.

```
ajscsasetup -d shared-directory -h logical-host-name-of-JP1/Base -s
```

2. Register the JP1/AJS3 for Cloud Service Applications service in the cluster software that you will use.

For details, please see (4) *Registration to the cluster software*.

(4) Registration to the cluster software

Register the JP1/AJS3 for Cloud Service Applications service in the cluster software that you will use.

For details of the registration method, please see the documentation of your cluster software. Please note the following in registration.

- Please make sure that the JP1/AJS3 for Cloud Service Applications service is inherited from the primary node to the second node along with the IP address and shared disk to be used.
- Please make sure that the IP address and shared disk are inherited and that JP1/Base is started on the secondary node before the JP1/AJS3 for Cloud Service Applications service is started.
- If the JP1/AJS3 for Cloud Service Applications service is configured to start automatically, please change the setting so that it does not start automatically.
- For other notes, please see *Notes for creating the system* in the *Release Notes*.

The following shows the information about JP1/AJS3 for Cloud Service Applications that is required for registering cluster software.

(a) For Windows

Services to configure in the cluster software.

Use the steps below to register services in the cluster software.

1. In Windows, go to **Control Panel** and **Administrative Tools** and select **Services**.
2. Change the **Startup Type** setting of the services to register in the cluster software from **Automatic** to **Manual**.

The following shows the services to register in the cluster software:

- JP1/AJS3 CSA HTTP Server service
- JP1/AJS3 CSA Web Application Server service

Change the **Startup Type** setting of these services from **Automatic** to **Manual**.

3. Register the JP1/AJS3 CSA Web Application Server service and the JP1/AJS3 CSA HTTP Server service in the cluster software so that they are started in this order.

The following shows the display and service names of the services to register in the cluster software.

JP1/AJS3 CSA HTTP Server service

- Display name: JP1/AJS3 CSA HTTP Server
- Service name: JP1_AJS3_CSA_HTTP_Server

JP1/AJS3 CSA Web Application Server service

- Display name: JP1/AJS3 CSA Web Application Server
- Service name: JP1_AJS3_CSA_Web_Application_Server

Starting/stopping services

You must use the cluster software to start or stop the services registered in the software.

Monitoring service operation

The cluster software monitors the start status of the services.

(b) For Linux

Table 3–2: Information about JP1/AJS3 for Cloud Service Applications that is required for registration in the cluster software.

Features to register	Description
Start	Start JP1/AJS3 for Cloud Service Applications. Command to use <code>/etc/opt/jp1ajs3csa/jajs_csa</code> You must start it after the shared disk and logical IP address are available. For details of the <code>jajs_csa</code> command, please see <i>jajs_csa (Linux only)</i> in 7. <i>Commands</i> .
Stop	Stop JP1/AJS3 for Cloud Service Applications. Command to use <code>/etc/opt/jp1ajs3csa/jajs_csa_stop</code> You must stop it before the shared disk and logical IP address become unavailable. For details of the <code>jajs_csa_stop</code> command, please see <i>jajs_csa_stop (Linux only)</i> in 7. <i>Commands</i> .
Monitor operations	Check whether JP1/AJS3 for Cloud Service Applications has ended abnormally. The <code>ps</code> command is used to see if the process exists. Sample usage of the <code>ps</code> command <code>ps -ef grep "process-to-monitor" grep -v "grep"</code> The following shows the processes to monitor. <ul style="list-style-type: none">• JP1/AJS3 CSA HTTP Server service <code>/opt/jp1ajs3csa/uCPSB/httpsd/sbin/httpsd</code>• JP1/AJS3 CSA Web Application Server service <code>/opt/jp1ajs3csa/uCPSB/CC/server/bin/cjstartsv ajs3csa</code>
Forcibly terminate	Same as stop.

3.3.4 Setting up the execution host for a service linkage job

This section describes the procedure for setting up the execution host for a service linkage job.

(1) Configuring the connection with the JP1/AJS3 for Cloud Service Applications server

Configure the following settings to connect the execution host for a service linkage job with the JP1/AJS3 for Cloud Service Applications server.

- Host name of the JP1/AJS3 for Cloud Service Applications server.
- Protocol for connecting with the JP1/AJS3 for Cloud Service Applications server.
- Port number for connecting with the JP1/AJS3 for Cloud Service Applications server.
- Connection timeout time with the JP1/AJS3 for Cloud Service Applications server.

- Settings for when a proxy is used to connect with the JP1/AJS3 for Cloud Service Applications server.
- Name of the certificate file required for SSL communication with the JP1/AJS3 for Cloud Service Applications server.
- Maximum time for processing during a single connection with the JP1/AJS3 for Cloud Service Applications server.
- Number of retries for a communication connection error with the JP1/AJS3 for Cloud Service Applications server.
- Retry interval for a communication connection error with the JP1/AJS3 for Cloud Service Applications server.

Configure these settings in the connection configuration file. For details of a connection configuration file, please see [3.5.1 Connection configuration file](#).

Configure these settings both on the physical host and on the logical host.

The following shows the procedure for configuring the connection configuration file.

1. Create a connection configuration file.

On the execution host for a service linkage job, create a file in an arbitrary directory[#] and describe the settings. The host name of the JP1/AJS3 for Cloud Service Applications server is required. Please be sure to specify it.

If the execution host for a service linkage job has a cluster configuration, place the connection configuration file on a shared disk.

Configure the permissions of the connection configuration file so that a service linkage job (OS user who executes the job) can reference it.

Important

If the connection configuration file contains security information, the user is responsible for managing it.

Note

Create a connection configuration file by copying the sample at the following location.

In Windows:

`JP1/AJS3-installation-folder\conf\ajscsajob_network.conf.model`

In Linux:

`/etc/opt/jplajs2/conf/ajscsajob_network.conf.model`

If the connection configuration file is stored in the following path, the operation of step 2 is not required.

In Windows (Physical host):

`JP1/AJS3-installation-folder\conf\ajscsajob_network.conf`

In Windows (Logical host):

`shared-folder\jplajs2\conf\ajscsajob_network.conf`

In Linux (Physical host):

`/etc/opt/jplajs2/conf/ajscsajob_network.conf`

In Linux (Logical host):

`shared-directory/jplajs2/conf/ajscsajob_network.conf`

- Execute the following command to set the path to the connection configuration file as an environment setting parameter of the execution host for a service linkage job.

In Windows:

```
jajs_config -k [{JP1_DEFAULT|logical host}# \JP1AJS2\CSA\CSAJOBAGENT\AJSCS  
AEXEC "CSACONNECTCONFIG"="The full path of the connection configuration fi  
le that you placed in step 1"
```

In Linux:

```
jajs_config -k "[{JP1_DEFAULT|logical host}# \JP1AJS2\CSA\CSAJOBAGENT\AJSC  
SAEXEC" "CSACONNECTCONFIG"="The full path of the connection configuration  
file that you placed in step 1"
```

#

For {JP1_DEFAULT|*logical-host-name*}, specify JP1_DEFAULT for a physical host or *logical-host-name* for a logical host.

For details of environment setting parameters, please see *E. JP1/AJS3 Environment Setting Parameters* and the description of environment setting parameters in the *JP1/Automatic Job Management System 3 Configuration Guide*.

3.3.5 Changing the settings during operation

This section describes the setup procedures when you want to change settings during the operation of JP1/AJS3 for Cloud Service Applications.

(1) Changing the host name of the JP1/AJS3 for Cloud Service Applications server

The following shows the procedure for changing the host name of the JP1/AJS3 for Cloud Service Applications server.

Important

You must change the host name of the JP1/AJS3 for Cloud Service Applications server while a service linkage job is not running.

- Log out of all Web screens.
- Stop the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service on the JP1/AJS3 for Cloud Service Applications server.
For Windows, stop the JP1/AJS3 CSA HTTP Server service and then stop the JP1/AJS3 CSA Web Application Server service.
For Linux, execute the following command.

```
jajs_csa_stop
```
- Change the host name of the JP1/AJS3 for Cloud Service Applications server.
For how to change the host name, please see the OS manual.
- If the communication encryption function is used and the host name is changed to a host name that is different from the CN or SAN in the server certificate, obtain the server certificate and place it again.

If the host name is changed to a host name that is different from the CN or SAN in the server certificate, please obtain the server certificate and place it again.

If the server certificate is obtained again and the issuing CA is different from the CA that issued the original server certificate, you must also obtain the root certificate and place it again.

5. Specify a new host name in the Web server definition file (`httpsd.conf`).

For details of the Web server definition file (`httpsd.conf`), please see [3.4.2 Details on the settings in the HTTP server definition file \(`httpsd.conf`\)](#).

6. Start the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service on the JP1/AJS3 for Cloud Service Applications server.

For Windows, stop the JP1/AJS3 CSA Web Application Server service and then stop the JP1/AJS3 CSA HTTP Server service.

For Linux, execute the following command.

```
jajs_csa
```

7. Change the host name of the JP1/AJS3 for Cloud Service Applications server in the connection configuration file so that the execution host for a service linkage job can execute the job.

3.3.6 Setting automatic startup and termination of the JP1/AJS3 for Cloud Service Applications service

The JP1/AJS3 for Cloud Service Applications service can be started automatically when the system starts, and can be terminated automatically when the system terminates.

The following describes how to set automatic startup and termination of the JP1/AJS3 CSA HTTP Server service or the JP1/AJS3 CSA Web Application Server service.

(1) Setting automatic startup of the JP1/AJS3 CSA HTTP Server service or the JP1/AJS3 CSA Web Application Server service

To start the JP1/AJS3 CSA HTTP Server service or JP1/AJS3 CSA Web Application Server service automatically when the system starts, set the automatic start script. The following describes how to set the automatic start script:

1. Open the following file with a text editor such as vi:

```
/etc/rc.d/init.d/jp1ajs3csa
```

2. In the file, delete the shaded part shown below.

```
: # /etc/opt/jp1ajs3csa/jajs_csa
```

3. Close the file.

(2) Setting automatic termination of the JP1/AJS3 CSA HTTP Server service or the JP1/AJS3 CSA Web Application Server service

The following describes how to set the automatic termination script for the JP1/AJS3 CSA HTTP Server service or JP1/AJS3 CSA Web Application Server service:

1. Open the following file with a text editor such as vi:

```
/etc/rc.d/init.d/jplajs3csa
```

2. In the file, delete the shaded part shown below.

```
: # /etc/opt/jplajs3csa/jajs_csa_stop
```

3. Close the file.

(3) Setting the language type when the JP1/AJS3 CSA HTTP Server service and JP1/AJS3 CSA Web Application Server service are started

To set the language type when the JP1/AJS3 CSA HTTP Server service and JP1/AJS3 CSA Web Application Server service are started:

1. Open the following file with a text editor such as vi:

```
/etc/rc.d/init.d/jplajs3csa
```

2. In the file, change the shaded character shown below to any of the values indicated in the table:

```
LANG=C  
or  
LANG=en_US.UTF-8
```

Table 3–3: Value that can be set for LANG.

Language	Value that can be set for LANG
Japanese	<ul style="list-style-type: none">• ja_JP.UTF-8• ja_JP.utf8• ja_JP.SJIS#1• ja_JP.sjis#1
English	<ul style="list-style-type: none">• C• en_US.UTF-8#2• en_US.utf8#2

#1:

Can be used only in SUSE Linux.

#2:

Only 7-bit ASCII characters can be used. Do not use characters other than 7-bit ASCII characters.

3. Close the file.

3.4 Configuration file details (JP1/AJS3 for Cloud Service Applications)

This section describes the details of each configuration file of JP1/AJS3 for Cloud Service Applications.

3.4.1 Details of setting items of the environment setting file (ajs3csaweb.conf)

This subsection describes the details on the format of settings and the items to be set in the environment-settings file (ajs3csaweb.conf).

(1) File storage folder

The following describes the folders for storing the file ajs3csaweb.conf and the model file ajs3csaweb.conf.model.

(a) Model file storage folder

The following shows the folder storing the ajs3csaweb.conf.model file.

In Windows:

```
JP1/AJS3-for-Cloud-Service-Applications-installation-folder\conf
```

In Linux:

```
/etc/opt/jp1ajs3csa/conf
```

(b) ajs3csaweb.conf file storage folder

The following shows the folder storing the ajs3csaweb.conf file.

In Windows:

```
JP1/AJS3-for-Cloud-Service Applications-installation-folder\conf#1
```

```
#:1
```

In a cluster configuration, the file name is as follows:

```
shared-folder\jp1ajs3csa\conf
```

In Linux:

```
/etc/opt/jp1ajs3csa/conf#2
```

```
#:2
```

In a cluster configuration, the file name is as follows:

```
shared-folder/jp1ajs3csa/conf
```

(2) File-editing procedure

The following describes the procedure for editing the ajs3csaweb.conf file:

(a) In Windows

1. Stop the JP1/AJS3 CSA HTTP Server service and then stop the JP1/AJS3 CSA Web Application Server service. To make changes with respect to the logs for the ajscsasetup command, this operation is unnecessary.

2. Back up `ajs3csaweb.conf` to any folder.

To change the command log settings, you must change `ajs3csaweb.conf` in the installation folder instead of the one in the shared folder even in cluster operation. Please back up `ajs3csaweb.conf` in the installation folder.

3. To change the size or number of log files, delete the following files.

To change the settings for command logging

- All command logs
- The `ajscsasetup.mm` and `jajs_csa_service.mm` files under the `mmap` directory

To make changes with respect to the logs related to starting or stopping services (`jajs_csa_service`)

- All logs related to starting or stopping services.
- The `jajs_csa_service.mm` file under the `mmap` directory.

To change the settings for application server logging.

- All application server logs.
- The `appserver.mm` file under the `mmap` directory.

To change the settings for server job logging

- All server job logs.
- The `appserverjob.mm` file under the `mmap` directory.

4. Copy the model file `ajs3csaweb.conf.model` and rename it to `ajs3csaweb.conf`. In a cluster environment, you must conduct the following steps on `ajs3csaweb.conf` under the shared folder. However, to change the settings for command logging, please do so on the `ajs3csaweb.conf` in the installation folder.

5. Open the `ajs3csaweb.conf` file by using a text editor.

6. Modify the definitions to be changed.

7. Save the `ajs3csaweb.conf` file.

8. Start the JP1/AJS3 CSA Web Application Server service and then the JP1/AJS3 CSA HTTP Server service.

To make changes with respect to the logs for the `ajscsasetup` command, this operation is unnecessary.

(b) In Linux

1. Stop the JP1/AJS3 CSA HTTP Server and JP1/AJS3 CSA Web Application Server services by running the following command:

```
/etc/opt/jp1ajs3csa/jajs_csa_stop
```

To make changes with respect to the logs for the `ajscsasetup` command, this operation is unnecessary.

2. Back up `ajs3csaweb.conf` to any directory.

To change the command log settings, you must change `ajs3csaweb.conf` in the installation folder instead of the one in the shared folder even in cluster operation. Please back up `ajs3csaweb.conf` in the installation folder.

3. To change the size or number of log files, delete the following files.

To change the settings for command logging

- All `ajscsasetup` command logs.

- The `ajscsasetup.mm` and `jajs_csa_service.mm` files under the `mmap` directory.

To make changes with respect to the logs for the commands for starting and stopping services (`jajs_csa` and `jajs_csa_stop`)

- All logs related to starting or stopping services.
- The `jajs_csa.mm` file and `jajs_csa_stop.mm` file under the `mmap` directory.

To change the settings for application server logging

- All application server logs.
- The `appserver.mm` file under the `mmap` directory.

To change the settings for server job logging

- All server job logs.
- The `appserverjob.mm` file under the `mmap` directory.

4. Copy the model file `ajs3csaweb.conf.model` and rename it to `ajs3csaweb.conf`. In a cluster environment, you must conduct the following steps on `ajs3csaweb.conf` under the shared folder. However, to change the settings for command logging, please do so also on the `ajs3csaweb.conf` in the installation folder.

5. Open the `ajs3csaweb.conf` file by using a text editor such as `vi`.

6. Modify the definitions to be changed.

7. Save the `ajs3csaweb.conf` file.

8. Start the JP1/AJS3 CSA HTTP Server and JP1/AJS3 CSA Web Application Server services by running the following command:

```
/etc/opt/jplajs3csa/jajs_csa
```

To make changes with respect to the logs for the `ajscsasetup` command, this operation is unnecessary.

(3) When the setting takes effect

If you change it for the command log:

- When executing the `ajscsasetup` command

If you change it, including other changes:

- When the JP1/AJS3 CSA Web Application Server service starts

(4) Format

The following shows the format of settings in the `ajs3csaweb.conf` file:

```
[ ]
HNTR_LOG_LEVEL=level-of-the-message-to-be-output-to-integrated-trace-log
HNTR_LOG_LANG=language-type-of-the-message-to-be-output-to-integrated-trace-log
SYS_LOG_LEVEL=level-of-the-message-to-be-output-to-Windows-event-log
SYS_LOG_LANG=language-type-of-the-message-to-be-output-to-Windows-event-log
COM_LOG_SIZE=size-of-a-command-log-file
COM_LOG_LEVEL=level-of-the-message-to-be-output-to-command-log
```



```
COM_LOG_NUM=number-of-command-log-files
COM_LOG_LANG=language-type-of-the-message-to-be-output-to-command-log
SERVER_LOG_APP_SIZE=size-of-an-application-server-log-file
SERVER_LOG_APP_LEVEL=level-of-the-message-to-be-output-to-application-server-log
SERVER_LOG_APP_NUM=number-of-application-server-log-files
SERVER_LOG_LANG=language-type-of-the-message-to-be-output-to-application-server-log
SERVER_LOG_JOB_SIZE=size-of-server-job-log-file
SERVER_LOG_JOB_LEVEL=level-of-the-message-to-be-output-to-server-job-log-file
SERVER_LOG_JOB_NUM=number-of-server-job-log-files
USED_DEF_LIMIT=Retention period for service-linked job definitions used during job execution
SERVER_SESSION_TIMEOUT=HTTP-session-timeout-period
```

When writing a comment on a line, begin the comment line with a semi colon (;).

(5) Setting items

The following describes the items to be set. Delimit each item by using a linefeed.

(a) HNTR_LOG_LEVEL

The following describes the items to be set. Delimit each item by using a linefeed.

Specifiable values

none

No message is output.

error

Error messages are output.

warn

Error and warning messages are output.

info

Error, warning, and information messages are output.

Default value

info

Recommended value

Default value

(b) HNTR_LOG_LANG

Specify the language type of the messages to be output to the integrated trace log.

Specifiable values

system

Messages are output in the language type set in the OS.

In Windows, If the character encoding set in the OS is neither English ASCII encoding nor Shift-JIS encoding, English ASCII encoding is assumed to be specified.

In Linux, if the character code set in the OS is anything other than the English ASCII code and UTF-8 code, the English ASCII code is assumed.

C

Messages are output by using English ASCII encoding.

SJIS

In Windows, Messages are output by using Shift-JIS encoding. In Linux, unable to specify.

ja_JP.UTF-8 or ja_JP.utf8

In Linux, Messages are output by using UTF-8 encoding. In Windows, unable to specify.

en_US.UTF-8 or en_US.utf8

In Linux, Messages are output by using English ASCII encoding. In Windows, unable to specify.

Default value

system

Recommended value

Set the value appropriate for the operating environment.

(c) **SYS_LOG_LEVEL**

Specifies the message level to output to the Windows event log (for Windows) or syslog (Linux).

Specifiable values

none

No message is output.

error

Error messages are output.

warn

Error and warning messages are output.

info

Error, warning, and information messages are output.

Default value

info

Recommended value

Default value

(d) **SYS_LOG_LANG**

Specify the language type of the messages to be output to the Windows event log.

Important

In Linux, unable to specify.

Specifiable values

system

Messages are output in the language type set in the OS.

If the character encoding set in the OS is neither English ASCII encoding nor Shift-JIS encoding, English ASCII encoding is assumed to be specified.

C

Messages are output by using English ASCII encoding.

SJIS

Messages are output by using Shift-JIS encoding.

Default value

system

Recommended value

Set the value appropriate for the operating environment.

(e) COM_LOG_SIZE

Specify the size of a command log file.

Specifiable values

4 to 16, 384 (units: kilobytes)

Default value

128

Recommended value

Default value

(f) COM_LOG_LEVEL

Specify the level of the messages to be output to the command log.

Specifiable values

none

No message is output.

error

Error messages are output.

warn

Error and warning messages are output.

info

Error, warning, and information messages are output.

Default value

info

Recommended value

Default value

(g) COM_LOG_NUM

Specify the number of command log files.

Specifiable values

1 to 16 (units: files)

Default value

2

Recommended value

Default value

(h) COM_LOG_LANG

Specify the language type of the messages to be output to the command log.

Specifiable values

system

Messages are output in the language type set in the OS.

In Windows, If the character encoding set in the OS is neither English ASCII encoding nor Shift-JIS encoding, English ASCII encoding is assumed to be specified.

In Linux, if the character code set in the OS is anything other than the English ASCII code and UTF-8 code, the English ASCII code is assumed.

C

Messages are output by using English ASCII encoding.

SJIS

In Windows, Messages are output by using Shift-JIS encoding. In Linux, unable to specify.

ja_JP.UTF-8 or ja_JP.utf8

In Linux, Messages are output by using UTF-8 encoding. In Windows, unable to specify.

en_US.UTF-8 or en_US.utf8

In Linux, Messages are output by using English ASCII encoding. In Windows, unable to specify.

Default value

system

Recommended value

Set the value appropriate for the operating environment.

(i) SERVER_LOG_APP_SIZE

Specify the size of an application server log file.

Specifiable values

4 to 16,384 (units: kilobytes)

Default value

8,192

Recommended value

Default value

(j) SERVER_LOG_APP_LEVEL

Specify the level of the messages to be output to the application server log.

Specifiable values

none

No message is output.

error

Error messages are output.

warn

Error and warning messages are output.

info

Error, warning, and information messages are output.

Default value

info

Recommended value

Default value

(k) SERVER_LOG_APP_NUM

Specify the number of application server log files.

Specifiable values

1 to 16 (units: files)

Default value

2

Recommended value

Default value

(l) SERVER_LOG_LANG

Specify the language type of the messages to be output to the application server log.

Specifiable values

system

Messages are output in the language type set in the OS.

If the language type set in the OS is neither Japanese nor English, English is assumed to be specified.

ja

Messages are output in Japanese.

en

Messages are output in English.

Default value

system

Recommended value

Set the value appropriate for the operating environment.

(m) SERVER_LOG_JOB_SIZE

Specify the size of server job log file.

Specifiable values

4 to 16,384 (units: kilobytes)

Default value

11,264

Recommended value

Default value

Cautionary note

If you want to change the default values, you must check the output size of the server job log during job operation and verify the time period during which the log can be kept as history before you can change the values.

(n) SERVERJOB_LOG_JOB_LEVEL

Specify the level of the messages to be output to the server job log file.

Specifiable values

none

No message is output.

error

Error messages are output.

warn

Error and warning messages are output.

info

Error, warning, and information messages are output.

Default value

info

Recommended value

Default value

(o) SERVER_LOG_JOB_NUM

Specify the number of server job log files.

Specifiable values

1 to 16 (units: files)

Default value

3

Recommended value

Default value

(p) USED_DEF_LIMIT

Specify the retention period for historical information on service linkage job definitions that were used during job execution.

Specifiable values

0 to 366 (unit: days)

Default value

180

Recommended value

Set the value appropriate for the operating environment.

Cautionary note

If you set this value to 0, no history information is stored. Therefore, message KNBB2407-Q or KNBB2408-Q will not be displayed in the dialog when service linkage job definitions that have a job execution history are updated or deleted on the Web screen. In addition, when you edit a service linkage job definition, the message The definition has a job execution history! message will not be displayed.

(q) SERVER_SESSION_TIMEOUT

Specify the server session timeout time. If the specified amount of time has passed since the server receives a request for status acquisition, operation, etc. until the next request arrives, the HTTP session times out.

Specifiable values

900 to 3,600 (units: seconds)

Default value

900

Recommended value

Default value

(6) Examples

The following shows an example of definitions in the `ajs3csaweb.conf` file:

```
[ ]
HNTR_LOG_LEVEL=error
HNTR_LOG_LANG=system
SYS_LOG_LEVEL=error
SYS_LOG_LANG=system
COM_LOG_SIZE=10240
COM_LOG_LEVEL=info
COM_LOG_NUM=2
COM_LOG_LANG=system
SERVER_LOG_APP_SIZE=8192
SERVER_LOG_APP_LEVEL=info
SERVER_LOG_APP_NUM=2
SERVER_LOG_JOB_SIZE=8192
SERVER_LOG_JOB_LEVEL=info
SERVER_LOG_JOB_NUM=2
SERVER_LOG_LANG=system
USED_DEF_LIMIT=180
SERVER_SESSION_TIMEOUT=900
```

(7) Notes

- Do not change the settings of items other than those explained herein.
- Do not insert a space before or after the equal sign in a definition line.
- Do not enter a linefeed in the middle of a definition line.
- If you specify a value for an item that cannot be set, the line including the item will be ignored.
- If an item to be set is not found, the default specification for that item is assumed for operation.

- If a setting is invalid, the JP1/AJS3 CSA Web Application Server service cannot start.
- The definition keys of setting items are not case sensitive, but set values are case sensitive.
- If the same setting item is defined on multiple lines, only the first line defining the setting item is valid.

3.4.2 Details on the settings in the HTTP server definition file (httpsd.conf)

This subsection describes the details on the format of settings and the items to be set in the HTTP server definition file (`httpsd.conf`).

(1) File storage folder

The following shows the folder storing the `httpsd.conf` file.

In Windows:

JP1/AJS3-for-Cloud-Service-Applicationse-installation-folder
`\uCP SB\httpsd\conf`

In Linux:

`/opt/jp1ajs3csa/uCP SB/httpsd/conf`

(2) File-editing procedure

The following describes the procedure for editing the `httpsd.conf` file. If you are operating in a cluster environment, follow the edit procedure to set the same definitions for the secondary node as those set for the primary node.

(a) In Windows:

1. Stop the JP1/AJS3 CSA HTTP Server service.
2. Back up the `httpsd.conf` file, and store the backup file in any folder.
3. Open the `httpsd.conf` file by using a text editor.
4. Modify the definitions to be changed.
5. Save the `httpsd.conf` file by using UTF-8 encoding.
6. Start the JP1/AJS3 CSA HTTP Server service.

(b) In Linux

1. Stop the JP1/AJS3 CSA HTTP Server service by running the following command:

```
/etc/opt/jp1ajs3csa/jajs_csa_stop -t http
```

2. Back up the `httpsd.conf` file, and store the backup file in any directory.
3. Open the `httpsd.conf` file by using a text editor such as `vi`.
4. Modify the definitions to be changed.
5. Save the `httpsd.conf` file.

6. Execute the following command to start JP1/AJS3 CSA HTTP Server service:

```
/etc/opt/jplajs3csa/jajs_csa -t http
```

(3) When the setting takes effect

When the JP1/AJS3 CSA HTTP Server service starts

(4) Format

The following shows the format of settings in the `httpsd.conf` file:

```
(Omitted)

ServerRoot "/opt/jplajs3csa/uCPSB/httpsd"

ServerName host-name-of-JP1/AJS3-for-Cloud-service-Applications
DocumentRoot "/opt/jplajs3csa/uCPSB/httpsd/htdocs"

(Omitted)

ProxyPass /ajscsa/ http://localhost:port-number-to-be-used-for-the-communication-between-HTTP-and-J2EE-servers/ajscsa/ timeout=3600 connectiontimeout=30 nocanon
ProxyPassReverse /ajscsa/ http://localhost:port-number-to-be-used-for-the-communication-between-HTTP-and-J2EE-servers/ajscsa/

(Omitted)

Listen port-number-for-the-reception-of-connection-requests-from-client
#Listen [::]:port-number-for-the-reception-of-connection-requests-from-client

#Listen port-number-for-the-reception-of-connection-requests-from-client-during-SSL-communication
#Listen [::]:port-number-for-the-reception-of-connection-requests-from-web-browser-during-SSL-communication
#<VirtualHost *:port-number-for-the-reception-of-connection-requests-from-client-during-SSL-communication>
# ServerName host-name-of-JP1/AJS3-for-Cloud-Service-Applications
# SSLEngine On
# SSLCertificateFile "JP1/AJS3-for-Cloud-Service-Applications-installation-folder/uCPSB/httpsd/conf/ssl/server/name-of-server-certification-file"
# SSLCertificateKeyFile "JP1/AJS3-for-Cloud-Service-Applications-installation-folder/uCPSB/httpsd/conf/ssl/server/name-of-private-key-file"
# AllowEncodedSlashes On
# SSLProtocol version-of-TLS-used-for-SSL-communication
# SSLCipherSuite TLSv1.3 list-of-cipher-types-available-with-TLSv1.3
# SSLCipherSuite list-of-cipher-types-available-with-TLSv1.2
#</VirtualHost>
```

Note that lines beginning with a hash mark (#) are comment lines.

(5) Setting items

The following describes the items to be set.

(a) Host name of JP1/AJS3 for Cloud Service Applications server

The host name of a JP1/AJS3 for Cloud Service Applications server is set automatically.

If you have changed the host name of the JP1/AJS3 for Cloud Service Applications server, change this setting manually.

(b) Port number to be used for communication between HTTP and J2EE servers.

Specify the port number of the port to be used for the communication between the HTTP and J2EE servers on the JP1/AJS3 for Cloud Service Applications server. The default is 22267.

When you want to change the port number from the default, change the port number so that it is appropriate to the environment. Make sure that the value set for the `ProxyPass` and `ProxyPassReverse` entries is the same as the value set for the `webserver.connector.nio_http.port` entry in the user properties file for J2EE server (`usrconf.properties`). For details, see [3.4.3 User property file for J2EE server \(`usrconf.properties`\)](#).

(c) Port number for the reception of connection requests from client

When not using SSL communication, specify the port number of the port at which the JP1/AJS3 for Cloud Service Applications server receives connection requests from the client. The default is 22265.

If you have changed the port number for the reception of connection requests from the web browser, change the port number setting.

(d) Port number for the reception of connection requests from client during SSL communication

When using SSL encryption for communication between the JP1/AJS3 for Cloud Service Applications server and a client, specify the port number of the port at which the JP1/AJS3 for Cloud Service Applications server receives connection requests from the client. The default is 22266.

To enable SSL communication, delete the hash mark (#) at the beginning of the definition line. If you have changed the port number for the reception of SSL communication from the web browser from the default setting, change the port number setting.

For details, see [3.3.2 Setting up the SSL communication environment](#).

(e) Name of server certification file

When using SSL encryption for communication between the JP1/AJS3 for Cloud Service Applications server and client, specify the name of the server certification file obtained from the CA. The default is `httpsd.pem`.

To enable SSL communication, delete the hash mark (#) at the beginning of the definition line, and then change the default setting to the name of the server certification file.

For details, see [3.3.2 Setting up the SSL communication environment](#).

(f) Name of private key file

When using SSL encryption for communication between the JP1/AJS3 for Cloud Service Applications server and client, specify the name of the private key file. The default is `httpsdkey.pem`.

To enable SSL communication, delete the hash mark (#) at the beginning of the definition line, and then change the default setting to the name of the private key file.

For details, see [3.3.2 Setting up the SSL communication environment](#).

(g) Version of TLS used for SSL communication.

Specify `+TLsv1.2` or `+TLsv1.3` as the version of the TLS protocol used for SSL communication. Only the specified version of the TLS protocol is enabled for SSL communication. You can also specify multiple versions in a space-separated list format.

Example:

In the following examples, Δ indicates a halfwidth space.

- To enable only TLSv1.2, specify the following:
`SSLProtocol Δ +TLsv1.2`
- To enable only TLSv1.3, specify the following:
`SSLProtocol Δ +TLsv1.3`
- To enable TLSv1.2 and TLSv1.3, specify the following:
`SSLProtocol Δ +TLsv1.2 Δ +TLsv1.3`

The default is `+TLsv1.2`.

To enable SSL communication, delete the hash mark (#) at the beginning of the definition line, and then edit the entry according to the TLS protocol versions to be used.

(h) List of cipher types available with TLSv1.3

Specify a list of cipher types available with TLSv1.3 in the following format:

```
SSLCipherSuite TLsv1.3 cipher-type-1: cipher-type-2: cipher-type-3...
```

You can specify the following values:

- `TLS_AES_128_GCM_SHA256`
- `TLS_AES_256_GCM_SHA384`

By default, all specifiable values are specified.

To enable SSL communication, always delete the hash mark (#) at the beginning of the definition line even if you do not use TLSv1.3. If you use TLSv1.3, edit the entry according to the cipher types to be used.

(i) List of cipher types available with TLSv1.2

Specify a list of cipher types available with TLSv1.2 in the following format:

```
SSLCipherSuite cipher-type-1: cipher-type-2: cipher-type-3...
```

You can specify the following values:

- `AES128-GCM-SHA256`
- `AES256-GCM-SHA384`

- ECDHE-RSA-AES128-SHA256
- ECDHE-RSA-AES256-SHA384
- ECDHE-RSA-AES128-GCM-SHA256
- ECDHE-RSA-AES256-GCM-SHA384
- ECDHE-ECDSA-AES128-SHA256
- ECDHE-ECDSA-AES256-SHA384
- ECDHE-ECDSA-AES128-GCM-SHA256
- ECDHE-ECDSA-AES256-GCM-SHA384

By default, all specifiable values are specified.

To enable SSL communication, always delete the hash mark (#) at the beginning of the definition line even if you do not use TLSv1.2. If you use TLSv1.2, edit the entry according to the cipher types to be used.

(6) Note

If a setting is invalid, the JP1/AJS3 CSA HTTP Server service cannot start.

3.4.3 User property file for J2EE server (usrconf.properties)

This subsection describes the details on the format of settings and the items to be set in the user properties file for J2EE server (`usrconf.properties`).

(1) File storage folder

The following shows the folder storing the `usrconf.properties` file.

In Windows:

*JP1/AJS3-for-Cloud-Service Applications-installation-
folder\uCPSB\CC\server\usrconf\ejb\ajs3csa*

In Linux:

`/opt/jp1ajs3csa/uCPSB/CC/server/usrconf/ejb/ajs3csa`

(2) File-editing procedure

The following describes the procedure for editing the `usrconf.properties` file. If you are operating in a cluster environment, follow the edit procedure to set the same definitions for the secondary node as those set for the primary node.

(a) In Windows

1. Stop the JP1/AJS3 CSA HTTP Server service and then stop the JP1/AJS3 CSA Web Application Server service.
2. Back up the `usrconf.properties` file, and store the backup file in any folder.
3. Open the `usrconf.properties` file by using a text editor.
4. Modify the definitions to be changed.

5. Save the `usrconf.properties` file.
6. Start the JP1/AJS3 CSA Web Application Server service and then start the JP1/AJS3 CSA HTTP Server service.

(b) In Linux

1. Execute the following command to stop the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service.

```
/etc/opt/jplajs3csa/jajs_csa_stop
```

2. Back up the `usrconf.properties` file, and store the backup file in any directory.
3. Open the `usrconf.properties` file by using a text editor such as `vi`.
4. Modify the definitions to be changed.
5. Save the `usrconf.properties` file.
6. Execute the following command to start the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service.

```
/etc/opt/jplajs3csa/jajs_csa
```

(3) When the setting takes effect

When the JP1/AJS3 CSA Web Application Server service starts

(4) Format

The following shows the format of settings in the `usrconf.properties` file:

```
(omitted)
# Internal http server settings
ejbserver.http.port=port-number-for-the-internal-management-of-J2EE-server
(omitted)
# NIO HTTP Server settings
webserver.connector.ajp13.port=port-number-to-be-used-for-the-communication-between-HTTP-and-J2EE-servers
#webserver.connector.ajp13.max_threads=10
(omitted)
#ejbserver.rmi.naming.port=port-number-for-the-internal-management-of-J2EE-server
(omitted)
```

Note that lines beginning with a hash mark (#) are comment lines.

(5) Setting items

The following describes the items to be set.

(a) Port numbers for the internal management of a J2EE server

Specify the port numbers for the internal management of the J2EE server. The defaults are 22268 and 22269.

When you want to change a port number from its default, change the port number so that it is appropriate to the environment. Make sure that the setting value of `ejbserver.rmi.naming.port` matches the setting value of `ejbserver.rmi.naming.port` in the system properties file for server management commands (`usrconf.properties`). For details, see [3.4.5 System property file for server management commands \(usrconf.properties\)](#).

(b) Port number to be used for communication between HTTP and J2EE servers.

Specify the port number of the port to be used for the communication between the HTTP and J2EE servers on the JP1/AJS3 for Cloud Service Applications server. The default is 22267.

When you want to change the port number from the default, change the port number so that it is appropriate to the environment. Make sure that the setting value of `webserver.connector.nio_http.port` matches the setting value of `ProxyPass` and `ProxyPassReverse` in the web server definition file (`httpsd.conf`). For details, see [3.4.2 Details on the settings in the HTTP server definition file \(httpsd.conf\)](#).

(6) Notes

- Do not change the settings of items other than those explained herein.
- If a setting is invalid, the JP1/AJS3 CSA Web Application Server service cannot start.

3.4.4 Option definition file for J2EE server (usrconf.cfg)

This subsection describes the details on the format of settings and the items to be set in the option definition file for J2EE server (`usrconf.cfg`).

(1) File storage folder

The following shows the folder storing the `usrconf.cfg` file.

In Windows:

```
JP1/AJS3-for-Cloud-Service Applications-installation-  
folder\uCPSB\CC\server\usrconf\ejb\ajs3csa
```

In Linux:

```
/opt/jp1ajs3csa/uCPSB/CC/server/usrconf/ejb/ajs3csa
```

(2) File-editing procedure

The following describes the procedure for editing the `usrconf.cfg` file. If you are operating in a cluster environment, follow the edit procedure to set the same definitions for the secondary node as those set for the primary node.

(a) In Windows

1. Stop the JP1/AJS3 CSA HTTP Server service and then stop the JP1/AJS3 CSA Web Application Server service.
2. Back up the `usrconf.cfg` file, and store the backup file in any folder.
3. Open the `usrconf.cfg` file by using a text editor.

4. Modify the definitions to be changed.
5. Save the `usrconf.cfg` file.
6. Start the JP1/AJS3 CSA Web Application Server service and then start the JP1/AJS3 CSA HTTP Server service.

(b) In Linux

1. Execute the following command to stop the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service.

```
/etc/opt/jplajs3csa/jajs_csa_stop
```

2. Back up the `usrconf.cfg` file, and store the backup file in any directory.
3. Open the `usrconf.cfg` file by using a text editor such as `vi`.
4. Modify the definitions to be changed.
5. Save the `usrconf.cfg` file.
6. Execute the following command to start the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service.

```
/etc/opt/jplajs3csa/jajs_csa
```

(3) When the setting takes effect

When the JP1/AJS3 CSA Web Application Server service starts

(4) Format

The following shows the format of settings in the `usrconf.cfg` file:

```
(omitted)
# java vm options
#add.jvm.arg=-Xms256m
add.jvm.arg=-Xmx the maximum size of Java heap available to applications on
the JP1/AJS3 for Cloud Service Applications server
(omitted)
```

Note that lines beginning with a hash mark (#) are comment lines.

(5) Setting items

The following describes the items to be set.

(a) The maximum size of Java heap available to applications on the JP1/AJS3 for Cloud Service Applications server

Specify the maximum size of the Java heap available to applications on the JP1/AJS3 for Cloud Service Applications server.

Specifiable values

512 to 5120 (units: megabytes)

Default value

2048 (units: megabytes)

Recommended value

Default value

Always end the specified size value with the character "m".

If you change the maximum size from the default, specify a maximum size appropriate for system operation. For the memory requirements, see the *Release Notes*.

(6) Examples

The following shows an example of definitions in the `usrconf.cfg` file:

```
(omitted)
# java vm options
#add.jvm.arg=-Xms256m
add.jvm.arg=-Xmx2048m
(omitted)
```

(7) Notes

- Do not change the settings of items other than those explained herein.
- If a setting is invalid, the JP1/AJS3 CSA Web Application Server service cannot start.

3.4.5 System property file for server management commands (usrconf.properties)

This subsection describes the details on the format of settings and the items to be set in the system properties file for server management commands (`usrconf.properties`).

(1) File storage folder

The following shows the folder storing the `usrconf.properties` file.

In Windows:

```
JP1/AJS3-for-Cloud-Service-Applications-installation-folder\u005CuCPSB\u005C\u005Cadmin\u005Cusrconf
```

In Linux:

```
/opt/jp1ajs3csa/uCPSB/CC/admin/usrconf
```

(2) File-editing procedure

The following describes the procedure for editing the `usrconf.properties` file. If you are operating in a cluster environment, follow the edit procedure to set the same definitions for the secondary node as those set for the primary node.

(a) In Windows

1. Stop the JP1/AJS3 CSA HTTP Server service and then stop the JP1/AJS3 CSA Web Application Server service.
2. Back up the `usrconf.properties` file, and store the backup file in any folder.
3. Open the `usrconf.properties` file by using a text editor.
4. Modify the definitions to be changed.
5. Save the `usrconf.properties` file.
6. Start the JP1/AJS3 CSA Web Application Server service and then start the JP1/AJS3 CSA HTTP Server service.

(b) In Linux

1. Execute the following command to stop the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service.

```
/etc/opt/jplajs3csa/jajs_csa_stop
```

2. Back up the `usrconf.properties` file, and store the backup file in any directory.
3. Open the `usrconf.properties` file by using a text editor such as `vi`.
4. Modify the definitions to be changed.
5. Save the `usrconf.properties` file.
6. Execute the following command to start the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service.

```
/etc/opt/jplajs3csa/jajs_csa
```

(3) When the setting takes effect

When the JP1/AJS3 CSA Web Application Server service starts

(4) Format

The following shows the format of settings in the `usrconf.properties` file:

```
(omitted)
ejbserver.rmi.naming.port=port-number-for-the-internal-management-of-J2EE-server
```

(5) Setting items

The following describes the items to be set.

(a) Port numbers for the internal management of a J2EE server

Specify the port numbers for the internal management of the J2EE server. By default, no setting items are specified. If no setting item is specified, the default 22269 is used.

When you want to change a port number from its default, change the port number so that it is appropriate to the environment. Make sure that the setting value of `ejbserver.rmi.naming.port` matches the setting value of `ejbserver.rmi.naming.port` in the user properties file for J2EE server (`usrconf.properties`). For details, see [3.4.3 User property file for J2EE server \(usrconf.properties\)](#).

(6) Notes

- Do not change the settings of items other than those explained herein.
- If a setting is invalid, the JP1/AJS3 CSA Web Application Server service cannot start.

3.5 Configuration file details (JP1/AJS3)

This section describes the details of each configuration file in JP1/AJS3.

3.5.1 Connection configuration file

This section describes the details of the description format and setting items of the connection configuration file.

Note

The connection configuration file must be located on the execution host for a service linkage job.

(1) File storage folder

It is also optional for the file name and the folder or directory where you want to store the file. However, store it in a folder or directory where the absolute path containing the file name is no more than 255 bytes.

The following is the location of the sample file for the connection configuration file:

In Windows:

```
JP1/AJS3 - Manager or JP1/AJS3 - Agent installation folder\conf\ajscsajob_network.conf.model
```

In Linux:

```
/etc/opt/jplajs2/conf/ajscsajob_network.conf.model
```

(2) File-editing procedure

Copy the existing connection configuration file to any location for backup and edit it with your text editor. You can copy the sample connection configuration file from its storage location and edit it as required.

(3) When the setting takes effect

When executing the next service linkage job.

(4) Format

The following shows the format of connection configuration file:

```
CSAServerName=Host name of the JP1/AJS3 for Cloud Service Applications server
CSAConnectProtocol=Protocol for a service linkages job to connect with the JP1/AJS3 for Cloud Service Applications server
CSAConnectPortNumber=Port number for a service linkage job to connect with the JP1/AJS3 for Cloud Service Applications server
ConnectTimeout=Connection timeout time for connecting the JP1/AJS3 for Cloud Service Applications server
ProxyAddr=Proxy for communication with JP1/AJS3 for Cloud Service Applications server
```

```
CAFile=Name of the server certificate file to verify the server certificate for SSL communication with the JP1/AJS3 for Cloud Service Applications server
Timeout=Maximum time for processing during a single connection with the JP1/AJS3 for Cloud Service Applications server
CSAConnectRetryCount=Number of retries when the connection with the JP1/AJS3 for Cloud Service Applications server cannot be established
CSAConnectRetryInterval=Retry interval when the connection with the JP1/AJS3 for Cloud Service Applications server cannot be established
```

Note that lines beginning with a hash mark (#) are comment lines.

(5) Setting items

The following describes the items to be set.

(a) CSA ServerName

Specify the host name of the JP1/AJS3 for Cloud Service Applications server so that a service linkage job connects to the JP1/AJS3 for Cloud Service Applications server.

This name must be able to be resolved from the execution host for a service linkage job. For name resolution, `jp1hosts` information or `jp1hosts2` information is also effective. For details of `jp1hosts` or `jp1hosts2`, please see the *JP1/Base User's Guide*.

Important

This setting item cannot be specified with the IP address of the JP1/AJS3 for Cloud Service Applications server.

Specifiable number of characters

1 to 255 (units: bytes)

This setting item cannot be omitted. If it is omitted, the commands for a service linkage job terminate with a non-zero return code.

(b) CSAConnectProtocol

Specify the protocol for a service linkages job to connect with the JP1/AJS3 for Cloud Service Applications server.

Specifiable values

- `http`
A non-SSL protocol is used to communicate with the JP1/AJS3 for Cloud Service Applications server.
- `https`
SSL is used to communicate with the JP1/AJS3 for Cloud Service Applications server.

Default value

`http`

If the `CSAConnectProtocol=` setting line is omitted, the default value is assumed to be set.

(c) CSAConnectPortNumber

Specify the port number for a service linkage job to connect with the JP1/AJS3 for Cloud Service Applications server.

Specifiable values

0 to 65535 (units: port number)

Default value

22265

(d) ConnectTimeout

Specify the connection timeout time for connecting the JP1/AJS3 for Cloud Service Applications server with the destination host.

If communication with the destination host is not established after the time specified here has passed, the connection is retried as many times as the retry count specified in `CSAConnectRetryCount` and at the retry interval specified in `CSAConnectRetryInterval`.

Specifiable values

1 to 600 (units: seconds)

Default value

10 (units: seconds)

If the `ConnectTimeout=` setting line is omitted, the default value is assumed to be set.

Depending on the settings of the OS on which a service linkage job runs and the network settings of the system, a timeout may occur in a shorter time than the specified connection timeout time, resulting in a connection error.

For the settings of the OS, please see the OS manual.

(e) ProxyAddr

When you use a proxy for communication with JP1/AJS3 for Cloud Service Applications, specify the proxy to use.

If the `ProxyAddr=` setting line is omitted, no proxy is used (`http_proxy` environment variables, such as environment variables, are not enabled).

Allowable format

```
protocol://user:password@host-name-of-the-proxy-server:port-number
```

The *protocol* must begin with `http://` or `https://`. It is not case sensitive.

If the port number is omitted, 1080 is assumed.

Operation is not guaranteed if incorrect data is specified.



Important

For the *host-name-of-the-proxy-server*, specify a value that can be resolved from the execution host of the service linkage job. You cannot resolve the name of the proxy server by using the `jp1hosts` or `jp1hosts2` information.

Allowable number of characters

- When it begins with `http://`, 8 to 2,083 bytes.
- When it begins with `https://`, 9 to 2,083 bytes.

(f) CAFile

If you want to verify the server certificate for SSL communication with the JP1/AJS3 for Cloud Service Applications server, specify the name of the server certificate file.

You can specify only a server certificate in PEM format. If you specify a server certificate in DER format, an error occurs.

If the `CAFile=` setting line is omitted, the server certificate is not verified.

Allowable number of characters

1 to 511 bytes (units: bytes)

(g) Timeout

Specify the maximum time for processing during a single connection with the JP1/AJS3 for Cloud Service Applications server.

If the process is not completed after the time specified here has passed, it is retried as many times as the retry count specified in `CSAConnectRetryCount` and at the retry interval specified in `CSAConnectRetryInterval`.

Specifiable values

1 to 86,400 (units: seconds)

Default value

600

If the `Timeout=` setting line is omitted, the default value is assumed to be set.

(h) CSAConnectRetryCount

Specify the number of retries when the connection with the JP1/AJS3 for Cloud Service Applications server cannot be established or when the processing time limit specified in `Timeout` is exceeded.

If the JP1/AJS3 for Cloud Service Applications server cannot be connected even after retrying as many times as the value specified here, or if the processing time limit is exceeded, the command for the service linkage job will terminate with a non-zero return code.

Specifiable values

0 to 100 (units: number of retries)

If 0 is specified, no retry is conducted and the command for the service linkage job terminates with a non-zero return code.

Default value

2

If the `CSAConnectRetryCount=` setting line is omitted, the default value is assumed to be set.

(i) CSAConnectRetryInterval

Specify the retry interval when the connection with the JP1/AJS3 for Cloud Service Applications server cannot be established or when the processing time limit specified in `Timeout` is exceeded and `CSAConnectRetryCount` is set to other than 0.

When `CSAConnectRetryCount=0`, this setting item is ignored.

Specifiable values

1 to 300 (units: seconds)

Default value

20

If the `CSAConnectRetryInterval=` setting line is omitted, the default value is assumed to be set.

(6) Notes

- A zero-byte line and a line containing only spaces are ignored.
- If there is a space or tab at the beginning or end of each line, the value after the space or tab is removed is considered the valid value.
- If the value contains spaces in the middle, they are considered part of the value. However, if the value contains a tab in the middle, the command for the service linkage job terminates with a non-zero return code.

Example 1

When `CAFile=C:\AAAΔBBB\CAFileΔ`, the specified value is regarded as `CAFile=C:\AAAΔBBB\CAFile`.

(Legend) Δ: space

Example 2

When `CAFile=C:\AAA<\t>BBB\CAFileΔ`, an error occurs.

(Legend) <\t>: tab, Δ: space

- If the same setting item is defined on multiple lines, the last line is valid.
- If an unknown keyword exists, the command for the service linkage job terminates with a non-zero return code.
- Be sure to specify a value for each item. If no value is specified, the command for the service linkage job terminates with a non-zero return code.
- Each line must be within 4,096 bytes including a line feed code. If a specified line exceeds 4,096 bytes, the command for the service linkage job terminates with a non-zero return code.

3.6 JP1/AJS3 for Cloud Service Applications database file

This section describes the database files of JP1/AJS3 for Cloud Service Applications.

3.6.1 Details of database files

JP1/AJS3 for Cloud Service Applications uses the following database files.

(1) Database file storage location

In Windows, if the destination folder is under the default or system-protected folder:

`%ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA\database\AJSCSA.db`

The default value of `%ALLUSERSPROFILE%` is `system-drive\ProgramData`.

Folders protected by the system use the path to one of the following folders:

- Folder in `system-drive\Windows`
- Folder in `system-drive\Program Files`
- Folder in `system-drive\Program Files (x86)`

In Windows, if the destination folder is other than the above:

`JP1/AJS3-for-CSA-installation-folder\database\AJSCSA.db`

When using cluster operation on Windows:

`shared-folder\jp1ajs3csa\database\AJSCSA.db`

In Linux:

`/var/opt/jp1ajs3csa/database/AJSCSA.db`

When using cluster operation on Linux:

`shared-directory/jp1ajs3csa/database/AJSCSA.db`

(2) Tables in the database

Item number	Table name	Table contents
1	AJSCSADEFINITION	Definition table
2	AJSCSAEXECUTEHISTORY	Execution history table

(3) Database file permissions

In Windows:

"Full Control" in "Administrators"

(Inheritance is disabled, no other users and groups are allowed.)

In Linux:

Permissions: 600 (-rw-----)

Owner: root

Group: root

(4) Temporary file storage location

In Windows, if the installation folder is under the default or system-protected folder:

`%ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA\tmp`

The default value of `%ALLUSERSPROFILE%` is *system-drive*\ProgramData.

Folders protected by the system use the path to one of the following folders:

- Folder in *system-drive*\Windows
- Folder in *system-drive*\Program Files
- Folder in *system-drive*\Program Files (x86)

In Windows, if the installation folder is other than the above:

`JP1/AJS3-for-CSA-installation-folder\tmp`

In Linux:

`/var/opt/jp1ajs3csa/tmp`

(5) Maintaining database files

The database files used at JP1/AJS3 for Cloud Service Applications are automatically maintained each time they are registered, edited, or deleted on the Web screen of JP1/AJS3 for Cloud Service Applications.

Database files are maintained in the following order.

1. Maintain execution history tables.

The execution history tables are maintained (records that have exceeded their retention period are deleted) when database files are automatically backed up.

2. Release invalid space in the entire database files.

3. Back up the entire database files.

While the database files are maintained, the following message log is output to the application server log.

If maintenance is successful

- KNBB3801-I
- KNBB3803-I
- KNBB3805-I

If an error occurs during maintenance

- KNBB3802-W
- KNBB3804-W
- KNBB3806-W



Note

Even if maintenance fails, the Web screen does not indicate it. The failure record is kept only in the application server log.

If an error occurs while the execution history tables are maintained or invalid space in the entire database files is released, no further maintenance is conducted.

(6) Backing up database files automatically

The database files used by JP1/AJS3 for Cloud Service Applications are backed up automatically. The storage location for database file backups is shown below.

In Windows, if the installation folder is under the default or system-protected folder:

`%ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA\database\AJSCSA.db.back`

The default value of `%ALLUSERSPROFILE%` is *system-drive*\ProgramData.

Folders protected by the system use the path to one of the following folders:

- Folder in *system-drive*\Windows
- Folder in *system-drive*\Program Files
- Folder in *system-drive*\Program Files (x86)

In Windows, if the installation folder is other than the above:

`JP1/AJS3-for-CSA-installation-folder\database\AJSCSA.db.back`

When using cluster operation on Windows:

`shared-folder\jp1ajs3csa\database\AJSCSA.db.back`

In Linux:

`/var/opt/jp1ajs3csa/database/AJSCSA.db.back`

When using cluster operation on Linux:

`shared-directory/jp1ajs3csa/database/AJSCSA.db.back`

3.7 Backup and recovery

This section describes the backup and recovery of the configuration information for JP1/AJS3 for Cloud Service Applications.

Back up the configuration information for JP1/AJS3 for Cloud Service Applications in case a failure occurs and the system breaks down. Make a backup when the system is changed, such as when JP1/AJS3 for Cloud Service Applications is set up.

3.7.1 the configuration information for JP1/AJS3 for Cloud Service Applications Backing up

This section describes the tasks required when backing up the configuration information for JP1/AJS3 for Cloud Service Applications.

For the files and directories related to JP1/AJS3 for Cloud Service Applications, please see [A. Files and Directories](#).

(1) Backing up the configuration information for JP1/Base

Back up the configuration information for JP1/Base. For details, please see the *JP1/Base User's Guide*.

(2) Backing up the configuration information for the JP1/AJS3 for Cloud Service Applications server

Back up the files of JP1/AJS3 for Cloud Service Applications shown in the following table.

Table 3–4: Files to back up (in a normal configuration)

File name (In Windows)	File name (In Linux)	Contents
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \conf\ajs3csaweb.conf	/etc/opt/jplajs3csa/conf/ajs3csaweb.conf	Environment-settings file
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\httpsd\conf\ssl\server\httpsdkey.pem	/opt/jplajs3csa/uCPSB/httpsd/conf/ssl/server/httpsdkey.pem	Server private key
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\httpsd\conf\ssl\server\newcert.pem	/opt/jplajs3csa/uCPSB/httpsd/conf/ssl/server/newcert.pem	SSL server certificate
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\httpsd\conf\httpsd.conf	/opt/jplajs3csa/uCPSB/httpsd/conf/httpsd.conf	Web server definition file
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\CC\server\usrconf\ejb\ajs3csa\usrconf.properties	/opt/jplajs3csa/uCPSB/CC/server/usrconf/ejb/ajs3csa/usrconf.properties	User property file for J2EE server

File name (In Windows)	File name (In Linux)	Contents
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\CC\server\usrconf\ejb\ajs3csa\usrconf.cfg	/opt/jplajs3csa/uCPSB/CC/server/usrconf/ejb/ajs3csa/usrconf.cfg	Option definition file for the J2EE server
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\CC\admin\usrconf\usrconf.properties	/opt/jplajs3csa/uCPSB/CC/admin/usrconf/usrconf.properties	System properties file for the server management command
%ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA\database\AJSCSA.db %ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA\database\AJSCSA.db.back	/var/opt/jplajs3csa/database/AJSCSA.db /var/opt/jplajs3csa/database/AJSCSA.db.back	Database file

Table 3–5: Files to back up (in a cluster configuration)

File name (In Windows)	File name (In Linux)	Contents
<i>shared-folder</i> \jplajs3csa\conf\ajs3csaweb.conf	<i>shared-directory</i> /jplajs3csa/conf/ajs3csaweb.conf	Environment-settings file
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\httpsd\conf\ssl\server\httpsdkey.pem	/opt/jplajs3csa/uCPSB/httpsd/conf/ssl/server/httpsdkey.pem	Server private key
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\httpsd\conf\ssl\server\newcert.pem	/opt/jplajs3csa/uCPSB/httpsd/conf/ssl/server/newcert.pem	SSL server certificate
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\httpsd\conf\httpsd.conf	/opt/jplajs3csa/uCPSB/httpsd/conf/httpsd.conf	Web server definition file
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\CC\server\usrconf\ejb\ajs3csa\usrconf.properties	/opt/jplajs3csa/uCPSB/CC/server/usrconf/ejb/ajs3csa/usrconf.properties	User property file for J2EE server
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\CC\server\usrconf\ejb\ajs3csa\usrconf.cfg	/opt/jplajs3csa/uCPSB/CC/server/usrconf/ejb/ajs3csa/usrconf.cfg	Option definition file for the J2EE server
<i>JP1/AJS3-for-Cloud-Service-Applications-installation-folder</i> \uCPSB\CC\admin\usrconf\usrconf.properties	/opt/jplajs3csa/uCPSB/CC/admin/usrconf/usrconf.properties	System properties file for the server management command
<i>shared-folder</i> \jplajs3csa\database\AJSCSA.db <i>shared-folder</i> \jplajs3csa\database\AJSCSA.db.back	<i>shared-directory</i> /jplajs3csa/database/AJSCSA.db <i>shared-directory</i> /jplajs3csa/database/AJSCSA.db.back	Database file

3.7.2 the configuration information for JP1/AJS3 for Cloud Service Applications Recovering

This section describes the tasks required when recovering the configuration information for JP1/AJS3 for Cloud Service Applications.

(1) Recovering JP1/Base

After JP1/Base is set up, recover the physical and logical host environments. For the settings required for recovery, please see the *JP1/Base User's Guide*.

(2) Recovering the JP1/AJS3 for Cloud Service Applications server

Recover the JP1/AJS3 for Cloud Service Applications server using the following procedure.

1. Rebuild the JP1/AJS3 for Cloud Service Applications server (install the software and set up a cluster in the case of a cluster environment).
2. Place the backed-up configuration information file of the JP1/AJS3 for Cloud Service Applications server at its original location.
If you want to recover the backed-up database while the JP1/AJS3 for Cloud Service Applications service is running, please rename `AJSCSA.db.back` to `AJSCSA.db` and place it at its original location.
3. Start the JP1/AJS3 CSA Web Application Server service.
4. Start the JP1/AJS3 CSA HTTP Server service.

3.7.3 Backing up and recovering the entire system

You can back up and recover the entire system of JP1/AJS3 for Cloud Service Applications by using OS commands and backup tools. When you back up and recover the entire system, please note the following.

- Stop the JP1/AJS3 for Cloud Service Applications service.
- For cluster operation, please back up and recover both the local disk and the shared disk.
- If a service linkage job is executed while the service is stopped, the job will end abnormally. Please execute this procedure when no service linkage job is executed.

3.8 Notes when running anti-virus software

If anti-virus software imposes an exclusive control lock on a file or folder used by JP1/AJS3 for Cloud Service Applications, the following problems might arise:

- JP1/AJS3 for Cloud Service Applications does not start.
An exclusive control lock placed on a definition file that JP1/AJS3 for Cloud Service Applications references at startup might prevent JP1/AJS3 for Cloud Service Applications from starting.
- Jobs fail to execute or are delayed.
An exclusive control lock placed on a file needed to execute a job might prevent a job from starting, cause it to terminate abnormally, or delay its execution. This problem can affect any job defined in JP1/AJS3.
- You cannot change definitions.
An exclusive control lock placed on a JP1/AJS3 for Cloud Service Applications definition file might prevent you from adding or changing a job definition.
- JP1/AJS3 cannot output log data.
An exclusive control lock placed on a JP1/AJS3 for Cloud Service Applications definition file might prevent you from adding or changing a job definition.
- JP1/AJS3 for Cloud Service Applications commands end abnormally.
An exclusive control lock placed on a file used by a JP1/AJS3 for Cloud Service Applications command might cause the command to end abnormally.

If you run a virus check during JP1/AJS3 for Cloud Service Applications operation, exclude the following files and folders. If you run a virus check while JP1/AJS3 for Cloud Service Applications is stopped, make sure that the anti-virus program has finished checking the following files and folders before you restart JP1/AJS3 for Cloud Service Applications.

For details about the notes on JP1/AJS3, see the notes on running antivirus software in the manual *JP1/Automatic Job Management System 3 Design Guide (System Construction)*.

In Windows:

- Common files and folders of JP1/AJS3 for Cloud Service Applications that belong to the following categories:
 - JP1/AJS3 for Cloud Service Applications log files and folders
 - Files and folders that users can reference
 - Files and folders that users have no need to reference or modifyFor information about these files and folders, see *A. Files and Directories*.
- In `system-drive\Program Files\Hitachi\HNTRLib2`

In Linux:

- Files and folders of JP1/AJS3 for Cloud Service Applications that belong to the following categories:
 - JP1/AJS3 for Cloud Service Applications log files and folders
 - Files and folders that users can reference
 - Files and folders that users have no need to reference or modifyFor information about these files and folders, see *A. Files and Directories*.
- In `/opt/hitachi/HNTRLib2/`
- In `/var/opt/hitachi/HNTRLib2/`

If you run the data collection tool while a virus check is in progress, exclude the following files and folders, in addition to those listed above, from the virus check.

- Files collected for troubleshooting purposes.
 - Operating system log information required to troubleshoot JP1/AJS3 for Cloud Service Applications problems.
 - JP1-related information required to troubleshoot JP1/AJS3 for Cloud Service Applications problems.

For information about these files, see [8.2 Types of log information and storage locations](#).

- Destination folder for data acquired by the data collection tool.

4

Designs and definitions of service linkage job

This chapter describes the procedure for defining service linkage jobs using JP1/AJS3 for Cloud Service Applications.

4.1 Designs of service linkage jobs

The service linkage jobs of JP1/AJS3 for Cloud Service Applications define how to link the cloud services to be linked. The flow for designing a service linkage job is as follows.

Consider the flow of jobs linked to cloud services, and then decide on the cloud services to execute as JP1/AJS3 jobs or jobnets.

1. Investigate and consider the specifications of the relevant cloud services and the command interfaces that can be linked.
2. Design the processing for connecting to the cloud service.
3. Design the method for managing information for performing authentication with the cloud service.
4. Design the processing for linking to the cloud service.

Based on the content designed in 3, 4, and 5, create definitions in JP1/AJS3 for Cloud Service Applications and run them as service linkage jobs. To design these definitions, the following three considerations are necessary.

- Consider the environment of the connection-destination services and commands to be executed
- Consider the method for managing authentication information corresponding to the commands to be executed
- Consider the linkage processing

The following details each of these considerations.

4.1.1 Consideration according to connection-destination services and command execution environments

You should consider whether to perform connection processing and whether to use common environment variables depending on the connection-destination service.

(1) Whether connection processing is necessary

Depending on the connection-destination service, no processing is required to establish connection or command execution is required, for instance, to enter a user name and password for establishing connection.

The latter case requires defining the cloud service linkage connection information and cloud service linkage authentication information each. For details on these definition items, see [6.8 Connection definitions window](#) and [6.9 Authentication definitions window](#).

(2) Whether common environment variables are necessary

Check for common environment variables that are used for execution of the commands at the execution host. For details on these definition items, see [6.8 Connection definitions window](#).

4.1.2 Considering the method for managing authentication information corresponding to the commands to be executed

Consider the method for managing authentication information corresponding to the interface for the commands to be executed.

If connection processing in *4.1.1 Consideration according to connection-destination services and command execution environments* and common environment variables are necessary, see the management methods in (1) and (2). If connection processing is not particularly necessary, see the management method in (3).

(1) Specifying environment variables during command execution

If the command uses environment variable information (for example, account information or access key information) to perform connection, consider the following management methods.

- Registering information in the authentication definition
- Setting the relevant environment variables in **Common environment variable settings** of the connection definition

With these management methods, environment variables are set and operated for every command that is executed.

(2) Specifying arguments for a command

To specify authentication information in arguments (for example, account information or access key information) to perform connection, consider the following management method.

- Registering information in the authentication definition
- Considering the following definition methods depending on the connection method of the cloud service
 - If the following is unnecessary when a command for connection is executed first:
Using **Command line** of **Connection processing** in the connection definition to set authentication information in the argument of the command
 - If it is always necessary to specify arguments for the command in the linkage processing:
Using each **Command line** item of the execution definition to set authentication information in the argument of the command

(3) Performing operations by using the environment settings on the side of the command

On the command's authentication interface, if connection is possible even if you do not perform connection processing by specifying environment variables and argument as in (1) and (2), it is not necessary to define authentication definitions or connection definitions in JP1/AJS3 for Cloud Service Applications.

For example, if the management method exists on the side of the command as in the following, consider using it.

- Using temporary authentication information
This is a method that assigns access permissions to command execution environments, such as virtual machines, by using the functions of the cloud service. If the management destinations of access permissions are unified on the side of the cloud service, it is advantageous as a method where the distributed management of authentication information is not necessary.
- Using long-term authentication information

This is a method that sets authentication information on the execution-destination host of the service linkage job in advance, for example, by using the setup processing of the command.

4.1.3 Considering the linkage processing

It is necessary to define the processing for linking to cloud services as execution definitions. To define the processing, design the linkage processing as follows. For details on the definition items, see the description of the Execution definition window in [6. Operation](#).

1. In **Execution start processing**, set the command line for executing linkage processing.
2. In **End confirmation processing**, if the command in 1 is asynchronous and does not wait for the end, configure settings so that it waits until the end.
3. In **Post-processing (normal end)**, if it is necessary to collect the results of the executed service, configure the settings.
4. In **Post-processing (abnormal end)**, if it is necessary to suspend service execution if the command execution or end confirmation processing in 1 and 2 end abnormally, configure the settings.

In addition to the aforementioned design, it is necessary to consider the following, taking into account job operation in JP1/AJS3.

- Parameters to be changed dynamically
- Judgment of result
- Designing job output
- Trace information design
- Job output design

The following details these items.

(1) Parameters to be changed dynamically

Parameters that are changed dynamically may be specified for service linkage jobs to be operated. Examples of such parameters include the following.

- File names to be stored in a storage service, file paths to file sources
- Workflow names of workflow services
- Instance names for start or stop of virtual machines of computing services
- Batch names used for batch execution of computing services
- Function names used for server-less code execution services of computing services

Define these items for JP1/AJS3 - View jobs. Define these in JP1/AJS3 - View jobs. Regarding the things to be specified on the side of the job, consider the settings in **Variables settings**.

In addition, design the authentication information used to connect to cloud services in units of job execution. Specify the authentication definition that is used during job definition in JP1/AJS3 - View.

(2) Judgment of result

Consider a judgment condition for the result of a job executed on the host of the connection-destination service. Define these judgment criteria in **End confirmation processing**. Consider whether it is possible to perform judgment based on the standard output of each command.

(3) Designing job output

Consider and design standard output for using the execution result of service linkage jobs for subsequence jobs and what to be output to the result details screen of JP1/AJS3 - View or JP1/AJS3 - Web Console. Define the design content for job output in **Job output processing**.

(4) Trace information design

Consider and design trace information that is checked on the result details screen of JP1/AJS3 - View or JP1/AJS3 - Web Console in the event of an abnormal end of service linkage job execution, or is stored in the log for troubleshooting. Define the design content for trace information in **Trace information settings**.

4.2 Definition flow of a service linkage job

The following illustrates the flow of defining a service linkage job.

1. Output a service linkage job information file on the Web screen of the JP1/AJS3 for Cloud Service Applications server.
Select service linkage job execution information to be used when the service linkage information file is output.
2. Execute the `ajscsajobreg` command for registration with JP1/AJS3 - View.
For details on the `ajscsajobreg` command, see *ajscsajobreg (Windows only)* in 7. *Commands*.
3. Start the custom job details definition screen of JP1/AJS3 - View.
For details on the custom job definition using JP1/AJS3 - View, see the description on the custom job in the *JP1/Automatic Job Management System 3 Linkage Guide*.
4. Enter definition items for the service linkage job on the custom job details definition screen of JP1/AJS3 - View, and click **OK**.
The definitions of the service linkage job will be stored in JP1/AJS3.

4.3 Definition items of service linkage job information

Define service linkage job information on the Web screen of the JP1/AJS3 for Cloud Service Applications server. For details on these definition items, see [6. Operation](#).

This section describes the variables used for definition and notes. Here we provide an explanation of variables used in definitions and notes.

4.3.1 Variables used for the definition of service linkage job information

For a service linkage job, you can define and use information that changes with each job execution as variables.

(1) Types of variables

When defining service linkage job information, you can define and use the following items as variables. For details on specific locations where variables are defined and on definition items for which variables can be used, see [6. Operation](#).

- Variables that store the values specified in custom job definitions
- Variables that store environment variables of the service linkage job execution environment
In JP1/AJS3, you can also store the environment variables that are set at job execution in environment variables of the service linkage job execution environment. For details about environment variables that are set at job execution, see the descriptions of environment variables that are set when jobs are executed from JP1/AJS3 in the *JP1/Automatic Job Management System 3 Command Reference*.
- Variables reserved by the system and available by default
Variables that are automatically set when a service linkage job is executed are variables reserved by the system and available by default.

Variable name	Description
?CSASUUID?	UUID acquired when the service linkage job started
?CSASSTARTDAY?	System date when the service linkage job started
?CSASSTARTTIME?	System time when the service linkage job started

- Variables that store the results of the standard output of the executed command lines
- Variables that store the values of authentication information

(2) Format of variable names

The format of variable names used for service linkage jobs is `?CSAany-character-string?`.

For details about the format that can be specified for service linkage job information, see [6. Operation](#).

(3) How to use variables

When you reference variables in the definition items of the service linkage job information, how to use variables depends on the type of the variable.

- Variables that store the values specified in custom job definitions
- Variables that store environment variables of the service linkage job execution environment

- Variables that are reserved by the system and available by default
- Variables that store the values of authentication information
Specify the variable name as is in the format of `?CSAany-character-string?`.
- Variables that store the results of the standard output of the executed command lines
Specify in the format of `?CSAany-character-string [any-number] ?`. For *any-number*, specify the value of "number-of-lines-1" in the result of standard output. For example, to reference the first line of the results of standard output, specify `?CSAany-character-string [0] ?`. To reference the 15th line, specify `?CSAany-character-string [14] ?`. Do not add a leading zero to the number.

(4) Resolution of variables

The value of a variable is resolved when the service linkage job is executed. Note that if the variable is undefined or if the value of *any-number* is invalid when referencing the result of standard output, the variable portion is resolved as an empty character string.

4.3.2 Escaping a command line for cloud service linkage information

When specifying symbol characters that must be escaped in a command line, the method for specifying escape characters differs depending on the OS. In JP1/AJS3 for Cloud Service Applications, by using the functionality described below, you can escape character strings according to the OS of the job execution host.

Use the following methods to specify escaping:

- Specify in the form of "`@CSA (character-string-to-escape) ASC@`" by enclosing the portion of the command line that you want to escape with "`@CSA (` (escape-start character) and "`) ASC@`" (escape-end character). For example, to escape the character string "a\a", specify "`@CSA(a\a)ASC@`".
- The *character-string-to-escape* is specified as a variable, and is escaped by using the result of resolving the variable.
- Characters from the escape-start character are ignored until the escape-end character appears.

The following shows how to escape in Windows and Linux.

<In Windows>

- If the number of consecutive backslashes (\) before the quotation mark (") is *n* (one or more), set the number of backslashes (\) as 2 times *n*.
- Replace the quotation mark (") with the symbol (\").
- If the number of consecutive backslashes (\) at the end is *n* (one or more), set the number of backslashes (\) as 2 times *n*.
- Enclose the entire character string that you want to escape with quotation marks (").

<In Linux>

- Replace the backquote (`) with the symbol (\`).
- If there is no apostrophe ('), enclose the entire character string that you want to escape with apostrophes (').
- If the string contains apostrophes ('), change it by performing the following:
 - (1) Divide the value by using an apostrophe (').

- (2) Replace the apostrophe (') with a backslash (\), and then enclose each of other divided character string with apostrophes (').
- (3) Concatenate all character strings that were divided in (1) and edited in (2).

4.3.3 Notes on the definitions of service linkage job information

(1) About definitions used for job execution

The service-linkage job definitions and authentication definitions defined in JP1/AJS3 for Cloud Service Applications are used by JP1/AJS3 as service linkage jobs in JP1/AJS3. Therefore, job execution of JP1/AJS3 may be affected if the definition of service linkage is updated or deleted.

Whether or not the job execution of JP1/AJS3 is affected is displayed on the Web screen of JP1/AJS3 for Cloud Service Applications as follows.

- When updating or deleting the service linkage job definition or authentication definition used for a job that has once been executed, the message KNBB2407-Q or KNBB2408-Q is displayed in a dialog.
- When editing each definition on the Web screen of the JP1/AJS3 for Cloud Service Applications, the upper part of the screen shows a message !Definition with job execution history.

Note that the period of time when such dialog or message is displayed depends on the value specified for USED_DEF_LIMIT in the environment setting file. For details on the environment setting file, see [3.4.1 Details of setting items of the environment setting file \(ajs3csaweb.conf\)](#).

In addition, when creating new service-linkage job definitions or authentication definitions, if you perform registration by using a definition name that has previously been executed, even if the job has not executed even once, the aforementioned display processing is performed.

To check the details of a user's job in JP1/AJS3, use one of the following methods:

- Check the unit name and host name of the job by referencing server job logs of JP1/AJS3 for Cloud Service Applications. For details about server job logs, see [8.2.3 Server Job Logs](#).
- From the content of the unit definitions output by the `ajspriint` command or by JP1/AJS3 - Definition Assistant in JP1/AJS3, search for and check the service linkage jobs. For details about unit definition parameters, see [4.5 Unit definition parameters of service linkage jobs](#). For details about how to check the name of a service linkage job, see the description of the `ajscsajoblist` (Windows only) in [7. Commands](#).

(2) About definitions used in the service linkage job definitions

For service linkage job definitions, the connection definition and execution definition are specified to execute a job as the service linkage job. Therefore, job execution of JP1/AJS3 may be affected if the connection definition and execution definition are updated or deleted.

Whether or not the service linkage job definitions are affected is shown on the Web screen of JP1/AJS3 for Cloud Service Applications as follows.

- When updating or deleting the connection definition or execution definition used for the service linkage job definitions, the message KNBB2409-Q or KNBB2410-Q is displayed in a dialog.

- When editing each definition on the Web screen of the JP1/AJS3 for Cloud Service Applications, the upper part of the screen shows a message stating !Definition used for the service linkage job definitions.

(3) About handling of authentication information

Information that is registered with Protect specified in the authentication definitions is stored in the database file (AJSCSA.db) and backup file (AJSCSA.db.back) in the data directory in a non-plain-text, protected state.

No authentication information is output to a log file, nor the standard output or standard error output of a job.

Consider the notes below while taking into account the operations above when building an environment and designing security measures.

- Communication is performed by using protected non-plain-text information. However, authentication information is included in communication data. For this reason, we recommend that you build an SSL communication environment, unless your environment has no security risks, such as the risk of data being read on the communication path.
- JP1/AJS3 for Cloud Service Applications does not output protected authentication information to the standard output, standard error output, and logs, but may output authentication information to the command line used for definition. Before specifying definitions, check and verify the specifications of the command lines to be used.

(4) Other notes

- To check with the changed service linkage job information about whether the job has been executed, take either of the following methods.
 - Open the service linkage job log file on the job execution host, and check if the command line with changed details has been output on the CLI.
 - When details have been changed in the standard error output or standard output of the service linkage job, check the execution result details check screen of JP1/AJS3 - View or the data in the standard output file.

4.4 How to define service linkage jobs

Define a service linkage in JP1/AJS3.

This section describes how to define service linkage jobs.

4.4.1 Details of the definition of service linkage jobs

Register service linkage jobs as custom jobs of JP1/AJS3. For details on custom jobs, see the description on the custom job in the *JP1/Automatic Job Management System 3 Linkage Guide*.

4.4.2 Place where service linkage jobs can be defined

Service linkage jobs can be defined as unit definitions in the following places.

- root jobnet
- nested jobnet group
- root job group[#]
- job group[#]

#

Service linkage jobs cannot be defined from the New menu item of JP1/AJS3 - View, but can be defined by the following methods.

- With the service linkage job existing on the clip board when using JP1/AJS3 - View, paste the job under the root job group or job group.
- In the unit definition file, describe the definitions of the service linkage job under the root job group or jog group, and execute the `ajsdefine` command.

Service linkage jobs cannot be defined any place other than the above.

4.4.3 Definition items of service linkage jobs

There are following two types of definition items of service linkage jobs.

- Items to be defined on the Custom job unit definition screen
- Items to be defined on the Custom job details definition screen

(1) Items to be defined on the Custom job unit definition screen

The following table shows the items to be defined on the Custom job unit definition screen.

Table 4–1: Custom job unit definition items

Definition items	Comment
Unit name	--

Definition items	Comment
Comment	--
Exec-agent	--
Priority	--
Standard output	--
Standard error	--
End judgment (Rule)	--
End judgment (Warning)	Define the value according to the return code of the service linkage job.
End judgment (Abnormal)	Define the value according to the return code of the service linkage job.
Retry on abnormal end	--
Return code (Less than or equal to)	--
Return code (Greater than or equal to)	--
Maximum retry times	--
Retry interval	--
User name	--
Hold	--
Type	--
Set timeout period	Specify this item according to the details of service linkage job.
Timeout period	Specify this item according to the details of service linkage job.
Delayed end	--
Time assumed as delay	--
Owner	--
JP1 resource group	--
Executed by	--

Legend:

--: Same as those set for the existing job definition

(2) Items to be defined on the Custom job details definition screen

The following table shows the items to be defined on the Custom job details definition screen.

Table 4–2: Custom job details definition items

Definition items	Comment	Whether to specify macro variables
Authentication definition name	Specify the name of service linkage authentication information to be applied.	Y
Variable definition items		Y

Legend:

Y: Macro variables can be specified.

The result of passing on of macro variables can be checked with JP1/AJS3 - View or the `ajsshows` command.

4.4.4 Icon of service linkage jobs

For the icon of service linkage jobs, you can use either the icon of a custom job or the default icon installed in JP1/AJS3 - View.

The format of the custom job icon is the same as that of the gif file for icons used for registering a custom PC job or custom UNIX job. For details, see the description on the gif file format for icons in the *JP1/Automatic Job Management System 3 Linkage Guide*.



Note

The icon of service linkage jobs can be displayed only with JP1/AJS3 - View. JP1/AJS3 - Web Console displays the same icon as those of other standard custom jobs.

4.4.5 Operation of service linkage jobs

This section describes registration, listing, and deletion of service linkage jobs.

(1) Registration of service linkage jobs

The following shows the procedure for registering a service linkage job.

1. Export a service linkage definition file from the JP1/AJS3 for Cloud Service Applications server, and place the file in a desired folder on the host with JP1/AJS3 - View installed.
2. Start the command prompt on the host with JP1/AJS3 - View installed.
3. Specify the path to the service linkage definition file, custom job name, and the path to the icon file (when using the custom job icon) for arguments, and execute the `ajscsajobreg` command.
For details on the `ajscsajobreg` command, see *ajscsajobreg (Windows only)* in 7. *Commands*.
4. Restart JP1/AJS3 - View.
The registered information will be enabled after restart.
5. Click the **Custom jobs** tab in the Jobnet Editor window, and check that the icon has been added.
Place the mouse cursor over the icon, and the custom job name appears in a tool tip.

(2) Listing of service linkage jobs

The following shows the procedure for listing service linkage jobs.

1. Start the command prompt on the host with JP1/AJS3 - View installed.
2. Execute the `ajscsajoblist` command.
For details on the `ajscsajoblist` command, see *ajscsajoblist (Windows only)* in 7. *Commands*.

(3) Deletion of service linkage jobs

The following shows the procedure for deleting a service linkage job.

1. Start the command prompt on the host with JP1/AJS3 - View installed.
2. Specify a custom job name you want to delete for an argument, and execute the `ajscsajobdel` command.
For details on the `ajscsajobdel` command, see *ajscsajobdel (Windows only)* in 7. *Commands*.
3. Restart JP1/AJS3 - View.
The registered information will be enabled after restart.
4. Click the **Custom jobs** tab in the Jobnet Editor window, and check that the icon has been deleted.

(4) When using a different service linkage job for each JP1 user

You can switch the service linkage job displayed on the Jobnet Editor window of JP1/AJS3 - View based on each JP1 user by dividing folders containing custom job registration information and service linkage job specific information for each JP1 user.

The following shows the procedure for using a different service linkage job for each JP1 user.

1. Create an `extend` folder immediately under the custom job registration information folder *data-folder-of-JP1/AJS3 - View\custom.dir*. Then, immediately under this folder, create a folder specified in the user specified option file `jajsCustomJobDirectory`.
2. Create a `extend` folder immediately under the folder storing service linkage job specific information *data-folder-of-JP1/AJS3 - View\csadef*. Then, immediately under this folder, create a folder specified in the user specified option file `jajsCustomJobDirectory`.
3. Grant the read and write privileges to the folder created in the steps 1 and 2.
4. For the environment variable `AJS_CSA_VIEW_CUSTOMJOBDIR`, specify the folder name that is specified for `jajsCustomJobDirectory` in the user specified option file.
If no folder name is specified for the environment variable or if the specified folder does not exist, the default folder (custom job registration information folder: *data-folder-of-JP1/AJS3 - View\custom.dir*, and the folder storing service linkage job specific information: *data-folder-of-JP1/AJS3 - View\csadef*) is used for operation.
5. Operate the service linkage jobs used by the JP1 user by following the procedures for registering, listing, and deleting service linkage jobs.

4.4.6 Notes on service linkage jobs

The service linkage jobs registered by the procedure described in 4.4.5 *Operation of service linkage jobs* are displayed in the Register Custom Job dialog box of JP1/AJS3 - View.

The following shows notes on operating service linkage jobs using this dialog box.

- Do not change service linkage jobs in the Register Custom Job dialog box.
- If a service linkage job is deleted from the Register Custom Job dialog box, unnecessary files remain undeleted. Delete manually the files shown in the table below.

Table 4–3: Files of service linkage jobs that need manual deletion

Custom job types	Files to be deleted
Common	<i>JP1/AJS3 - View-installation-folder</i> ^{#1} \image\custom\CUSTOM_PC_CS <i>acustom-job-name</i> .gif
	%ALLUSERSPROFILE% ^{#2} \Hitachi\JP1\JP1_DEFAULT\JP1AJS2V\csadef\ <i>custom-job-name</i> .json
	%ALLUSERSPROFILE% ^{#2} \Hitachi\JP1\JP1_DEFAULT\JP1AJS2V\log\ <i>custom-job-name</i> {1 2}.log

#1

By default, the JP1/AJS3-installation-folder is *system-drive*\Program Files (x86)\HITACHI\JP1AJS2V.

#2

By default, %ALLUSERSPROFILE% is *system-drive*\ProgramData.

4.5 Unit definition parameters of service linkage jobs

This section describes the definition parameters of service linkage jobs. For details on the unit definition parameters of JP1/AJS, see the description on the creation of information definition files in the manual *JP1/Automatic Job Management System 3 Command Reference*.

4.5.1 Description format of unit definition parameters of service linkage jobs

The following shows the description format of the unit definition parameters of a service linkage job.

```
{
  ty={cpj|rcpj};
  cm="comment";
  cty="CSAservice-linkage-job-name";
  sc="$JP1AJS2_JPOEXEPATH$/ajscsaexec";
  env="AJS_CSA_AUTHINFNAME=authentication-definition-name";
  env="AJS_CSA_DEFINFNAME=service-linkage-job-definition-name";
  env="AJS_CSA_ENV_variable-value=value-to-be-input-in-the-custom-job-definition";
  so="standard-output-file-name";
  se="standard-error-output-file-name";
  etm=n;
  fd=Required-execution-time;
  pr=n;
  ex="execution-agent-name";
  un="execution-user-name";
  jd={nm|ab|cod};
  wth=n;
  tho=n;
  abr={y|n};
  rjs=lower-limit-of-automatic-retry-return-code;
  rje=upper-limit-of-automatic-retry-return-code;
  rec=maximum-number-of-retry-times;
  rei=retry-interval;
  ha={y|n};
  eu={ent|def};
}
```

4.5.2 Details of the unit definition parameters of service linkage jobs

This section describes the details of the unit definition parameters of service linkage jobs. For parameters other than those listed below, see the description on the creation of information definition files in the manual *JP1/Automatic Job Management System 3 Command Reference*.

```
cty="CSAservice-linkage-job-name";
```

This is a parameter for specifying a custom job class name. For a service linkage job of JP1/AJS3 for Cloud Service Applications, specify a character string with a service linkage job name added at the end of CSA, as the custom job class name.

```
sc="$JP1AJS2_JPOEXEPATH$/ajscsaexec";
```

This is a parameter for specifying a script file name. For a service linkage job of JP1/AJS3 for Cloud Service Applications, this parameter is fixed to `$JP1AJS2_JPOEXEPATH$/ajscsaexec`.

```
env="AJS_CSA_AUTHINFNAME=authentication-definition-name";
```

This is a parameter for specifying the environment variable `AJS_CSA_AUTHINFNAME`. When authentication definition is required for executing a service linkage job of JP1/AJS3 for Cloud Service Applications, specify an authentication definition name.

```
env="AJS_CSA_DEFINFNAME=service-linkage-job-definition-name";
```

This is a parameter for specifying the environment variable `AJS_CSA_DEFINFNAME`. Specify a service linkage job definition name of JP1/AJS3 for Cloud Service Applications. This item is required.

```
env="AJS_CSA_ENV_variable-value=value-to-be-input-in-the-custom-job-definition";
```

This is a parameter for specifying the environment variable `AJS_CSA_ENV_variable-value`. Specify a value to be input in the custom job definition. Specify the name that has been defined in the service linkage definition file, with the *variable-value* in the environment variable key name specified with an integer between 0 and 10.

5

Management operation of service linkage jobs

This chapter describes a procedure for executing in JP1/AJS3 a service linkage job defined on JP1/AJS3 for Cloud Service Applications.

5.1 Execution of service linkage jobs

Service linkage jobs are executed using information defined on the JP1/AJS3 for Cloud Service Applications server and information of the custom job definition executed from JP1/AJS3 - Manager. Obtain service linkage job execution information from the defined JP1/AJS3 for Cloud Service Applications server.

A service linkage job is executed in the order shown below based on the definition on the JP1/AJS3 for Cloud Service Applications server.

Connection definitions (Connection processing)

When connection processing is defined in the connection definitions, connection processing to the cloud service is executed according to the definitions.

When the connection processing result is "Normal", the processing is executed according to the execution definitions.

Execution definitions

1. The processing is executed according to the execution start processing of execution definitions.

When the execution result is "Normal", the processing is executed according to the definitions of the end confirmation processing or post processing (when ended normally).

When the execution result is "Abnormal", the processing is executed according to the post-processing definitions (when ended abnormally). When there is no of post-processing definition (when ended abnormally), job output processing is executed.

2. The processing is executed according to the definitions of the end confirmation processing of the execution definitions.

When the execution result is "Normal", processing is executed according to the post-processing definitions (when ended normally) or job output processing definitions.

When the execution result is "Abnormal", processing is executed according to the definitions of the post processing (when ended abnormally). When there is no definition of post processing (when ended abnormally), the job output processing is executed.

3. When the conditions below are met, processing is executed according to the definitions of the post processing (when ended normally).

- Post processing (when ended abnormally) is defined in the execution definitions.

- The execution results of the execution start processing or end confirmation processing are "Normal".

4. When the conditions below are met, processing is executed according to the definitions of the post processing (when ended abnormally).

- Post processing (when ended abnormally) is defined in the execution definitions.

- The execution results of the execution start processing or end confirmation processing are "Normal".

5. When the output processing of a job is defined in the execution definitions, the output processing to the job standard output and job standard error output is executed according to the definitions.

This output processing is executed regardless of the results of the execution start processing, end confirmation processing, post processing (when ended normally), and post processing (when ended abnormally).

Connection definitions (Connection termination processing)

When connection termination processing is defined in the connection definitions, the termination processing of connection with the cloud service is executed according to the definitions. Note that this processing is not executed if the connection processing has failed with an error.

Even if the execution result of the execution definitions is "Abnormal", if the connection result is normal or no connection processing is defined, this processing is executed.

5.2 Details of service linkage jobs

This section describes the details of service linkage jobs.

5.2.1 Status of service linkage jobs

The following describes the statuses of service linkage jobs.

(1) When there does not exist a file on the command line defined on the JP1/AJS3 for Cloud Service Applications server

The service linkage job will end with any return code other than 0.

If there does not exist an "execution file name" or "script file name", a standard JP1/AJS job fails to start. However, a service linkage job does not fail to start even if no file exists on the command line defined on the JP1/AJS3 for Cloud Service Applications server.

(2) Statuses of service linkage jobs and cloud services

In a service linkage job, multiple commands are executed. The "Running" status of the service linkage job that can be checked with JP1/AJS3 may differ from the status of "Running" on the cloud service, depending on when the command is executed.

5.2.2 Environment variables for command execution

The environment variables set for command execution from a service linkage job are enabled according to the priority shown below (1 indicates the highest priority).

- For Windows
 1. Environment variables specified for individual commands
 2. Environment variables specified for environment variables common across the system
 3. Environment variables set for the service linkage job process
(Environment variables set by job execution of JP1/AJS3 and environment variables set by a service linkage job)
- For Linux
 1. Definitions in the system login script
 2. Environment variables specified for individual commands
 3. Environment variables specified for environment variables common across the system
 4. Environment variables set for the service linkage job process
(Environment variables set by job execution of JP1/AJS3 and environment variables set by a service linkage job)

5.2.3 Execution results of service linkage jobs

Execution results of service linkage jobs are output to the standard output and standard error output according to the service linkage execution information. With no information defined, execution results are not output.

The following shows how to output character strings that are defined in the output processing of a job on the JP1/AJS3 for Cloud Service Applications server.

- Standard output
Output without a line break added
- Standard error output
Output with a line break added

When defining service linkage execution information, define information for checking the status on the cloud service side during execution of a service linkage job.

5.2.4 Killing of service linkage jobs

The following table shows the operation when a service linkage job is killed and when the timeout time is reached.

Table 5–1: Operation when a service linkage job is forcibly terminated

Target		Status
Manager	Job on the scheduler service	The status of the service linkage job turns to "kill".
Execution destination (Agent)	Service linkage job	The system forcibly terminates the process of the service linkage job execution program.
	Command	The command process continues operating.
Linked cloud service		The status remains as it was before the forced termination of the service linkage job.

Depending on when killing occurs, the status of a request to the linked cloud service may be unknown. Because of this, check the execution status of the job on the job execution destination and the status of linked cloud service, and take actions as needed.

The following describes how to take actions.

Actions on the service linkage job execution host

When there are unnecessary files on the job execution host, delete them as needed.

The command executed by the service linkage job may still remain running. Therefore, check the command execution status on the job execution host by following the steps below, and forcibly terminate it.

1. Find the process ID of the command from the log of the execution program of the service linkage job.
2. Check the command execution status from the process ID and execution file name by using, for instance, an OS command.

Actions to the linked cloud service

Stop the cloud service as needed because a server-less application may be running.

For details on how to check the status of the linked cloud service, see [8.5.3 Troubleshooting failures of jobs and linked cloud services](#).

Note

In the case that multiple executions are not permitted with the linked cloud service and the command defined in the service linkage execution definitions activated, if you re-execute a service linkage job that has been forcibly terminated or reached the termination time, the job may not be executed immediately or an error may occur.

Stop the linked cloud service or the command before re-executing the service linkage job.

5.2.5 Return codes of service linkage jobs

The following table shows return codes when service linkage jobs are executed.

Table 5–2: Return codes of service linkage jobs

Return codes	Content	Corresponding messages
0	Ended normally	--
1 to 50	This is the return code set according to the definitions, if any, on the JP1/AJS3 for Cloud Service Applications server.	KNBB6301-E KNBB6302-E KNBB6303-E
60	Failed to obtain an environment variable.	KNBB6400-E
61	Contains an error in the environment variable or the definition items of the JP1/AJS3 for Cloud Service Applications server.	KNBB6100-E
62	Failed to read the environment setting parameter.	KNBB6401-E
63	Contains an error in the environment setting parameter.	KNBB6101-E
70	Failed to read the connection configuration file.	KNBB6200-E
71	Contains an error in the connection configuration file.	KNBB6201-E
80	Failed to resolve the name (IP address resolution) of the JP1/AJS3 for Cloud Service Applications server.	KNBB6204-E
81	Failed to connect to the JP1/AJS3 for Cloud Service Applications server.	KNBB6202-E
82	An error occurred in communication with the JP1/AJS3 for Cloud Service Applications server.	KNBB6203-E
83	Contains an error in the information obtained from the JP1/AJS3 for Cloud Service Applications server.	KNBB6300-E
90	Failed to execute the command from the service linkage job.	KNBB6304-E
100	A memory shortage occurred.	KNBB6450-E
110	System error.	KNBB6451-E
120	An unexpected error occurred.	KNBB6452-E
Signal no.+128	The command executed by the service linkage job has received a signal and ended.	KNBB6305-E

5.3 Notes on execution of service linkage jobs

- A service linkage job obtains the latest information on the JP1/AJS3 for Cloud Service Applications server. Therefore, if you change definitions used for the service linkage jobs on the JP1/AJS3 for Cloud Service Applications server, the service linkage job may not correctly operate.

When changing definitions on the JP1/AJS3 for Cloud Service Applications server, make sure that the service linkage job operates correctly.

- Service linkage jobs are custom jobs. As with existing custom jobs, the return codes that can be checked with JP1/AJS3 include the return codes of service linkage jobs and the return codes set by JP1/AJS3, which is described in 7.10.3 *Checking the return code of a job* in the *JP1/Automatic Job Management System 3 System Design (Work Tasks) Guide*.
- Check in advance if a command can be executed in the environment before executing a service linkage job. When the command defined on the JP1/AJS3 for Cloud Service Applications server does not exist, the command defined on the JP1/AJS3 for Cloud Service Applications server ends with a return value other than 0.
- Make sure that the sizes of the standard output and standard error output of the command defined on the JP1/AJS3 for Cloud Service Applications server are not too large. We recommend that the total size of standard output and standard error output is approximately 3 MB (megabyte).

If the size is large, the service linkage job behaves as follows:

For Windows:

The service linkage job ends with a return value of "100" (insufficient memory).

For Linux:

The process of the service linkage job is stopped by the kernel, the status of the service linkage job is "Forcibly terminated", and the return value is "-1".

- Make sure that the full unit name[#] of the service linkage job does not contain the following characters (some of the symbols and characters that can be used for migration from the previous product (JP1/AJS)).

" \

If the full unit name[#] contains any of the above characteristics, the service linkage job ends with a return value of "82".

#

Contains the job net name and job group name in the upper layer of the job

- When the execution host of the service linkage job is on Windows, there is a limitation on the number of characters of OS command lines. Set the number of characters of command lines (command lines after the variable replacement) defined on the JP1/AJS3 for Cloud Service Applications server to be approximately 8000. If the number of characters exceeds the limitation on OS command lines, the command defined on the JP1/AJS3 for Cloud Service Applications server ends with a value other than 0.

6

Operation

This chapter describes GUI operations in JP1/AJS3 for Cloud Service Applications.

6.1 Web browser settings

When using the Web GUI, check the Web browser settings shown below. For details on how to adjust the settings, see the document for your Web browser.

Pop-up blocking setting

If the pop-up blocking setting of the Web browser is enabled, a dialog box of the Web GUI may be blocked. In the pop-up blocking setting of the Web browser, add the address of the CSA server to the site you want to permit so that the pop-up block can be released.

JavaScript setting

The Web GUI requires the JavaScript (Active Scripting) settings to be enabled on your Web browser. The JavaScript (Active Scripting) settings are enabled by default. If disabled, you cannot log in to JP1/AJS3 for the Cloud Service Applications. Also, if the setting is disabled after login, operations after that will be unavailable.

Web storage setting

The Web GUI requires the Web storage (DOM storage and site data) setting to be enabled on your Web browser. The Web storage (DOM storage and site data) setting is enabled by default.

SSL/TLS setting

To use the communication encryption function, the SSL/TLS setting needs to be enabled on the Web browser. The SSL/TLS setting is enabled by default. If the SSL/TLS setting is disabled, the login screen is not displayed even if you access the CSA server. Also, if the SSL/TLS setting is disabled after login, operations after that will be unavailable.

Cautionary note

While using the Web GUI, do not switch the page being displayed to another page or use **Back** or **Next** on the Web browser.

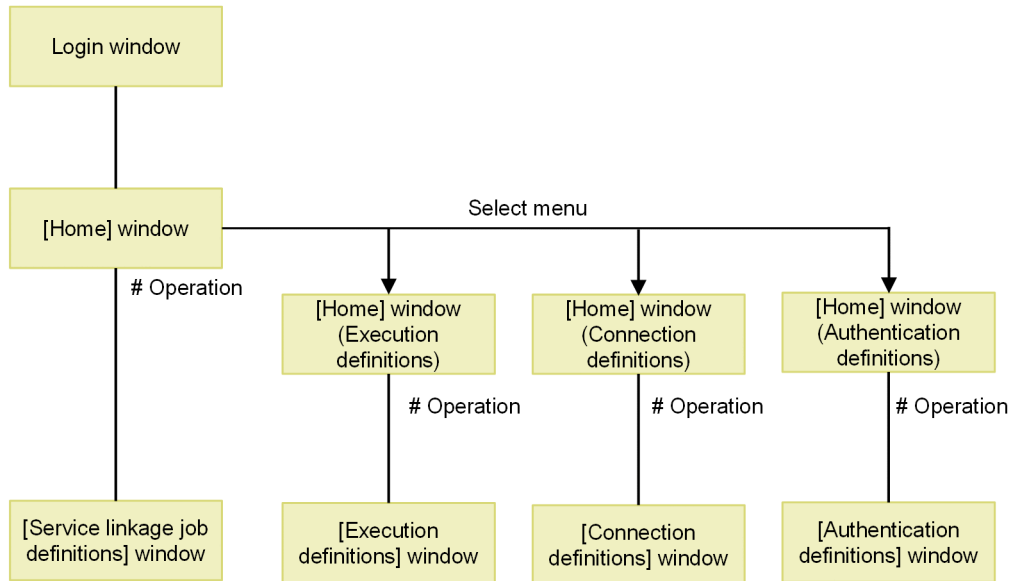
Supplementary note

The language of the Web GUI depends on the setting of your Web browser.

6.2 Window transitions

The following figure shows the window transitions in JP1/AJS3 for Cloud Service Applications.

Figure 6–1: Window transitions in JP1/AJS3 for Cloud Service Applications



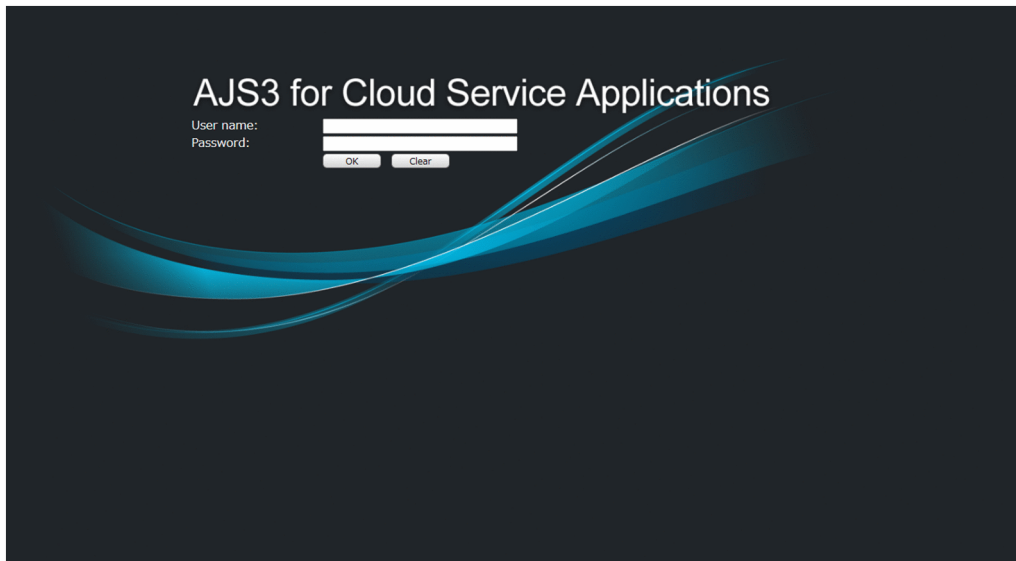
Legend:

#Operation : Click the Create button or click the definition name in the list

6.3 Login window

This section explains about the Login window.

Figure 6–2: Login window



The following shows the display items and input restrictions for the Login window:

User name

Enter the JP1 username to log in.

Password

Enter the password of the JP1 user.

OK button

Enter **User name** and **Password** and click the **OK**.
If there is no problem, the Home window will appear.

Clear button

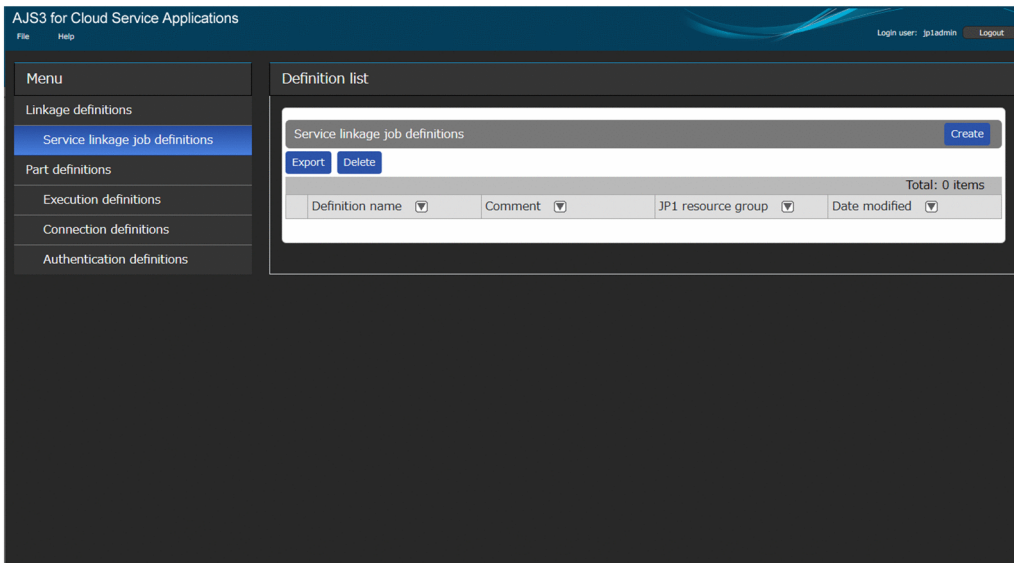
Initialize **User name** and **Password**.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	User name	Text box	Character string of 1 to 31 bytes.	Required	None
2	Password	Text box	Character string of 1 to 32 bytes.	Required	None

6.4 Common display items

This section explains display items in common on the top of the screen in each window after logging in to JP1/AJS3 for Cloud Service Applications.

Figure 6–3: The window after logging in



File

Click it to display the following menu items:

Logout

A logout confirmation message is displayed. Click **OK** to return to the login screen.

Help

Click it to display the following menu items:

Version information

Display the **Version information** dialog box.

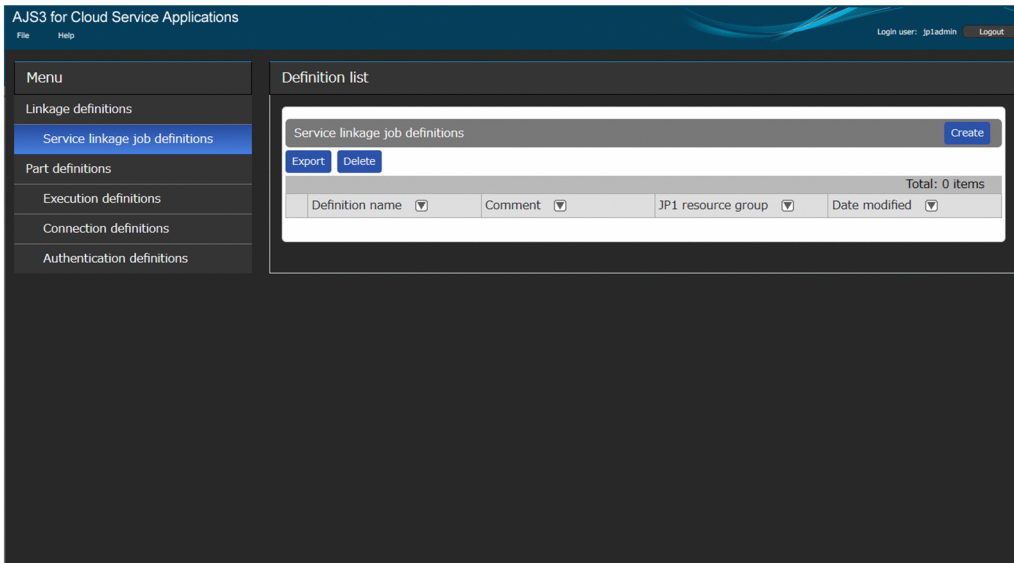
Logout button

A logout confirmation message is displayed. Click **OK** to return to the login screen.

6.5 Home window

Home window displays a list of the information defined in the JP1/AJS3 for Cloud Service Applications.

Figure 6–4: Home window



The following shows the display items for the Home window:

Menu

The following items are displayed:

Service linkage job definition

Click this item to display the list of service linkage job definitions registered in the **Definition list**. This item is selected when you log in to the system.

Execution definition

Click this item to display the list of execution definitions registered in the **Definition list**.

Connection definition

Click this item to display the list of connection definitions registered in the **Definition list**.

Authentication definition

Click this item to display the list of authentication definitions registered in the **Definition list**.

Definition list

This area lists the definitions of the item you select from the **Menu**. The service linkage job definitions are listed when you log in to the system.

Create button

The screen changes to the new definition screen of the definitions being listed.

Export button

This button outputs the definitions of the items selected in the definition list to a file.
Note that this button is not shown while the **Authentication definitions** is displayed.

Delete button

This button deletes the definitions of the items selected in the definition list.

Sort button

When the screen is opened, the data are displayed unsorted. Press (▼) for ascending sorting or (▲) for descending sorting to change the sorting of the definitions. Press the button repeatedly to toggle between ascending and descending order. The data do not return to the unsorted state. Pressing the button in another column changes the column's button to ascending. This action clears sorting from the previously sorted column.

Definition name

This column shows the definition names. Clicking any of the links displays its corresponding definition screen.

Comment

Display the comment of the definition.

JP1 resource group

Display the JP1 resource group of the definition.

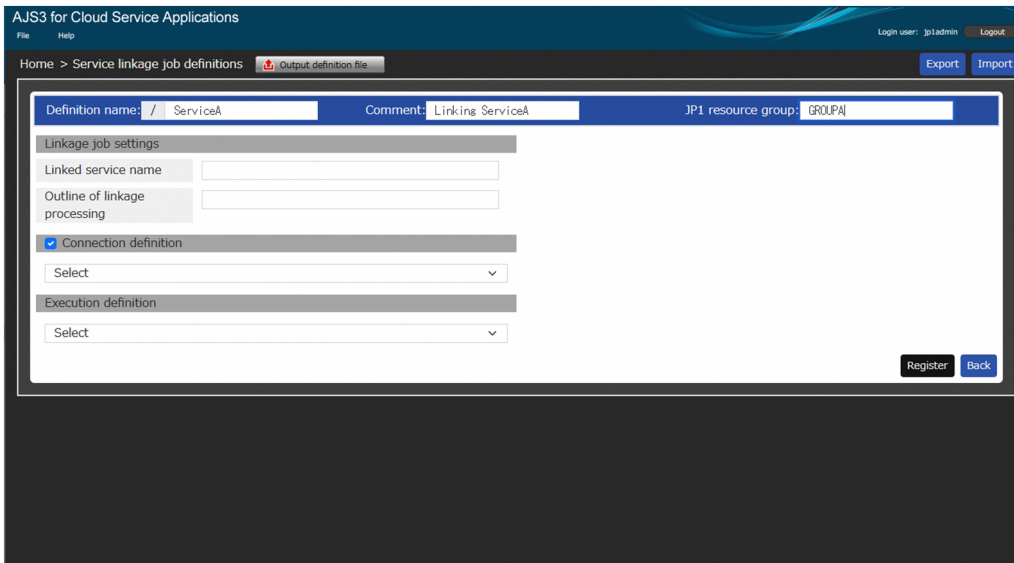
Date modified

The update date and time of the definition is displayed in the format of year, month, date, minutes, and seconds (YYYY/MM/dd HH:mm:ss).

6.6 Service linkage job definition window

In the Service linkage job definition window, you can view and edit service linkage job definitions in detail.

Figure 6–5: Service linkage job definition window

The screenshot shows the 'Service linkage job definitions' window in the AJS3 application. At the top, there's a navigation bar with 'Home > Service linkage job definitions' and buttons for 'Export' and 'Import'. Below this, there are three input fields: 'Definition name: / ServiceA', 'Comments: Linking ServiceA', and 'JP1 resource group: GROUPA'. The main content area is divided into three sections: 'Linkage job settings' with 'Linked service name' and 'Outline of linkage processing' text boxes; 'Connection definition' with a checked checkbox and a 'Select' dropdown; and 'Execution definition' with a 'Select' dropdown. At the bottom right, there are 'Register' and 'Back' buttons.

The following shows the display items and input restrictions for the Service linkage job definition window:

Definition name

Enter the definition name of the service linkage job information. It is saved in the format of */definition-name*. It cannot be changed when editing.

Comment

Display the comment of the service linkage job information.

JP1 resource group

Display the JP1 resource group of the service linkage job information.

Linkage job settings

Set linkage information of a service linkage job information.

Linked service name

Enter a linkage-destination service name to be linked by the service linkage job. This information can be managed as information that associates the cloud service after job execution. Therefore, complete this item whenever possible.

Outline of linkage processing

Enter the overview of processing to be linked by the service linkage job. This information can be managed as information that associates the executed processing of the cloud service after job execution. Therefore, complete this item whenever possible.

Connection definition

Use this item to show whether or not to use connection definitions for the service linkage job. With this item selected, the drop-down list allows you to select a connection definition. Without this item selected, no drop-down list is displayed.

Execution definition

Select an execution definition to use for the service linkage job from the drop-down list.

Output definition file button

This button displays the Output definition file dialog to output a service linkage job definition information file necessary for registration with JP1/AJS3 -View. For details, see [6.6.1 Output definition file dialog box](#).

Export button

Clicking this button outputs the service linkage job information being displayed as the service linkage job definitions file (sljobdefExport.txt). This file will be output to the download folder set by the Web browser.

For details about a service linkage job definitions file, see [F.3 Service linkage definition file](#).



Note

Even during input of service linkage job definitions, a service linkage job definition file can be exported.

Import button

Click this button to display the Open dialog allowing you to select a service linkage job definition file to be reflected to the screen. Select a service linkage job definition file. It will be reflected on the Service linkage job definitions screen.

For details about the format of a service linkage job definitions file, see [F.3 Service linkage definition file](#).



Note

Even during input of service linkage job definitions, the service linkage job definition file can be imported.

Register button

Click this button to register the service linkage job definitions, which have been input on the Service linkage job definitions screen with JP1/AJS3 for Cloud Service Applications. When registration is successfully completed, the Home window is displayed. If an error occurs, the item with the error is highlighted.

Back button

Go to the Home window without doing anything.

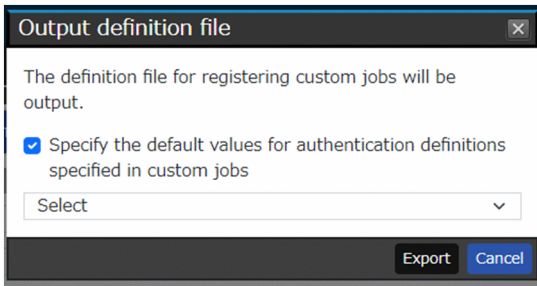
No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Definition name	Text box	Character string of 1 to 30 bytes. Single-byte alphanumeric characters, - (hyphen), and _ (underscore) are available.	Required	None
2	Comment	Text box	Character string within 243 bytes.	Not required	None
3	JP1 resource group	Text box	Character string within 63 bytes. Single-byte alphanumeric characters and _ (underscores) are available.	Not required	JP1_CSA
4	Linked service name	Text box	Character string within 150 bytes.	Not required	None
5	Outline of linkage processing	Text box	Character string within 243 bytes.	Not required	None
6	Connection definition	List box	Specify the registered connection definition.	Required [#]	None
7	Execution definition	List box	Specify the registered execution definition.	Required	None

[#]: In case of using a connection definition.

6.6.1 Output definition file dialog box

This section explains about the Output definition file dialog box.

Figure 6–6: Output definition file dialog box



The following shows the display items and input restrictions for the Output definition file dialog box:

Specify the default values for authentication definitions specified in custom jobs

Selecting this item outputs the authentication definition name selected from the pull-down menu as the default value of the authentication definition of the custom job.

Export button

Clicking this button outputs the service linkage job definition information file (`sljobdef.txt`) for registering custom jobs. Do not change the output content of the service linkage job definition information file. Note that depending on the editor software, the character code, line break code, and existence of BOM might change simply by resaving the file.

If the content of the file is invalid, for example, when a BOM is assigned, the KNBB4511-E error occurs when executing the `ajscsajobreg` command for custom job registration, and the processing fails.

Cancel button

Close the dialog box without doing anything.

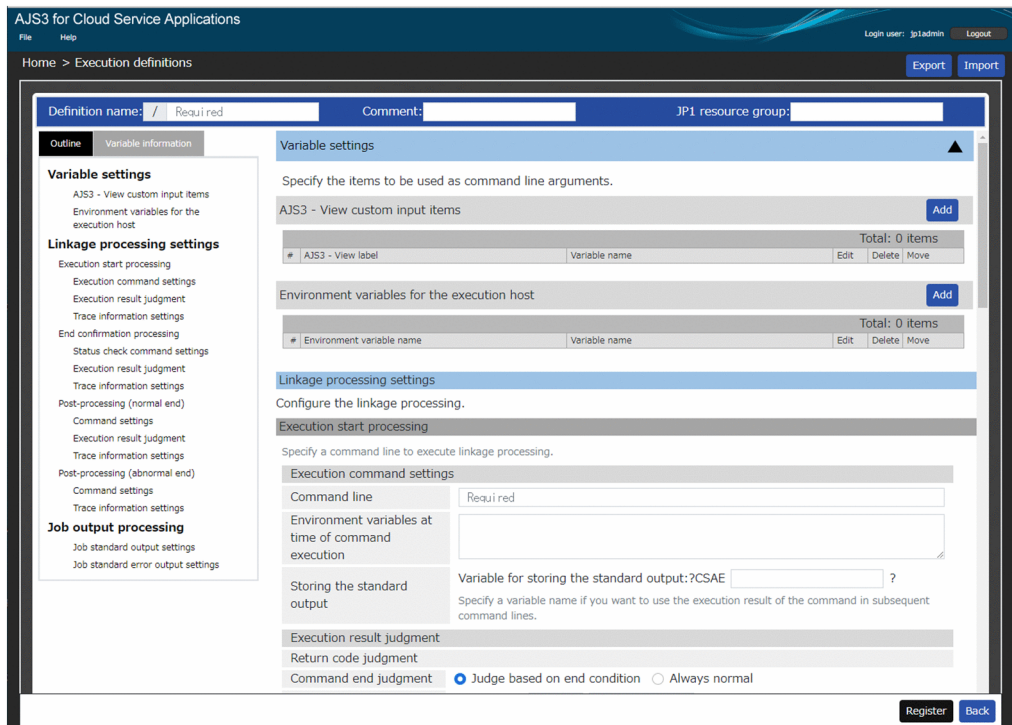
No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Specify the default values for authentication definitions specified in custom jobs	List box	Specify the registered authentication definition.	Required [#]	None

[#]: In case of specifying a default value of the authentication definition.

6.7 Execution definitions window

In the Execution definitions window, you can view and edit execution definitions in detail.

Figure 6–7: Execution definitions window



The following shows the display items and input restrictions for the Execution definitions window:

Definition name

Enter the definition name of the execution definition information. It is saved in the format of */definition-name*. It cannot be changed when editing.

Comment

Display the comment of the execution definition information.

JP1 resource group

Display the JP1 resource group of the execution definition information.

Outline tab

This tab shows the outline of the items in the right-hand definition area in a tree format. Clicking an item in the outline jumps to its corresponding item in the right-hand definition area.

Cautionary note

With an item hidden in the right-hand definition area, clicking the corresponding item in the outline does not jump to the item. Show in advance the hidden item in the right-hand definition area.

Variable information tab

Displays the variable information defined by each item in the definition area on the right side and the variable information that is reserved by the system and available by default.

Export button

Clicking this button outputs the execution information being displayed as the execution definition file (`sldefExport.txt`). This file will be output to the download folder set by the Web browser.

For details about an execution definitions file, see [F.2 Execution definition file](#).



Note

Even during input of execution definitions, an execution definition file can be exported.

Import button

Click this button to display the Open dialog allowing you to select an execution definition file to be reflected to the screen. Select an execution definition file. It will be reflected on the Execution definitions screen.

For details about the format of an execution definition file, see [F.2 Execution definition file](#).



Note

Even during input of execution definitions, an execution definition file can be imported.

Register button

Click this button to register the execution definitions, which have been input on the Execution definitions screen with JP1/AJS3 for Cloud Service Applications. When registration is successfully completed, the Home window is displayed. If an error occurs, the item with the error is highlighted.

Back button

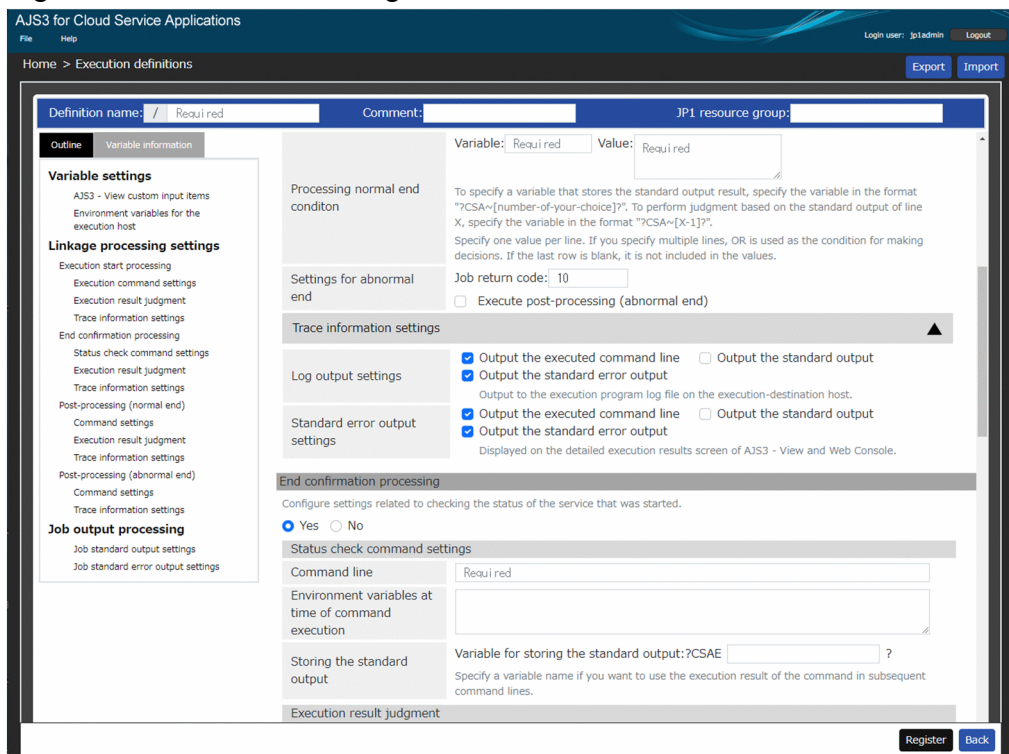
Go to the Home window without doing anything.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Definition name	Text box	Character string of 1 to 30 bytes. Single-byte alphanumeric characters, - (hyphen), and _ (underscore) are available.	Required	None
2	Comment	Text box	Character string within 243 bytes.	Not required	None
3	JP1 resource group	Text box	Character string within 63 bytes. Single-byte alphanumeric characters and _ (underscores) are available.	Not required	JP1_CSA

6.7.1 Variable settings

This section explains about **Variable settings** in the Execution definitions window.

Figure 6–8: Variable settings in the Execution definitions window



The following shows the display items for **Variable settings**:

AJS3 - View custom input items

Display added variables and the list of AJS3 - View label name.

Add button

Click this button to open the Setting variables dialog box. Up to 15 variables can be added. For details about this dialog, see [6.7.4 Setting variables dialog box](#).

Delete button

Click this button to delete the variable for the selected row.

Edit button

Click this button to open the Setting variables dialog box with the variable for the selected row. For details about this dialog, see [6.7.4 Setting variables dialog box](#).

↑ button

Move the variable in the selected row one row up.

↓ button

Move the variable in the selected row one row down.

Environment variables for the execution host

Display added variables and list of environment variables.

Add button

Click this button to open the Setting variables dialog box. Up to 32 variables can be added. For details about this dialog, see [6.7.4 Setting variables dialog box](#).

Delete button

Click this button to delete the variable for the selected row.

Edit button

Click this button to open the Setting variables dialog box with the variable for the selected row. For details about this dialog, see [6.7.4 Setting variables dialog box](#).

↑ button

Move the variable in the selected row one row up.

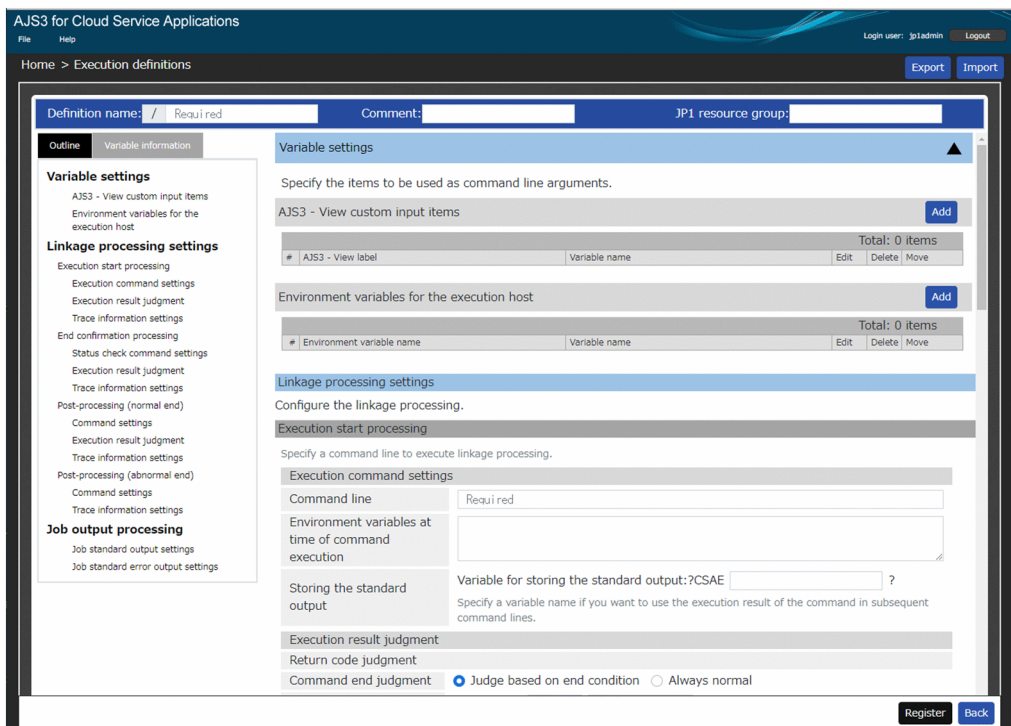
↓ button

Move the variable in the selected row one row down.

6.7.2 Linkage processing settings

This section explains about **Linkage processing settings** in the Execution definitions window.

Figure 6–9: Linkage processing settings in the Execution definitions window



AJS3 for Cloud Service Applications

File Help Login user: jp1admin Logout

Home > Execution definitions

Export Import

Definition name: / Requi red Comment: JP1 resource group:

Outline Variable information

Variable settings
 AJS3 - View custom input items
 Environment variables for the execution host

Linkage processing settings
 Execution start processing
 Execution command settings
 Execution result judgment
 Trace information settings
 End confirmation processing
 Status check command settings
 Execution result judgment
 Trace information settings
 Post-processing (normal end)
 Command settings
 Execution result judgment
 Trace information settings
 Post-processing (abnormal end)
 Command settings
 Trace information settings

Job output processing
 Job standard output settings
 Job standard error output settings

Processing normal end condition
 Variable: Requi red Value: Requi red
 To specify a variable that stores the standard output result, specify the variable in the format "?CSA~[number-of-your-choice]?". To perform judgment based on the standard output of line X, specify the variable in the format "?CSA~[X-1]?". Specify one value per line. If you specify multiple lines, OR is used as the condition for making decisions. If the last row is blank, it is not included in the values.

Settings for abnormal end
 Job return code: 10
 Execute post-processing (abnormal end)

Trace information settings
 Output the executed command line Output the standard output
 Output the standard error output
 Output to the execution program log file on the execution-destination host.

Log output settings
 Output the executed command line Output the standard output
 Output the standard error output
 Displayed on the detailed execution results screen of AJS3 - View and Web Console.

Standard error output settings

End confirmation processing
 Configure settings related to checking the status of the service that was started.
 Yes No

Status check command settings
 Command line: Requi red
 Environment variables at time of command execution

Storing the standard output
 Variable for storing the standard output: ?CSAE [] ?
 Specify a variable name if you want to use the execution result of the command in subsequent command lines.

Execution result judgment

Register Back

AJS3 for Cloud Service Applications

File Help Login user: jp1admin Logout

Home > Execution definitions

Export Import

Definition name: / Requi red Comment: JP1 resource group:

Outline Variable information

Variable settings
 AJS3 - View custom input items
 Environment variables for the execution host

Linkage processing settings
 Execution start processing
 Execution command settings
 Execution result judgment
 Trace information settings
 End confirmation processing
 Status check command settings
 Execution result judgment
 Trace information settings
 Post-processing (normal end)
 Command settings
 Execution result judgment
 Trace information settings
 Post-processing (abnormal end)
 Command settings
 Trace information settings

Job output processing
 Job standard output settings
 Job standard error output settings

Specify whether to end the check immediately or to continue the check if the status check command fails.

Return code judgment
 Command end judgment: Judge based on end condition Always normal
 Abnormal end condition: Return code: > 0
 Settings for abnormal end: Job return code: 10
 Execute post-processing (abnormal end)

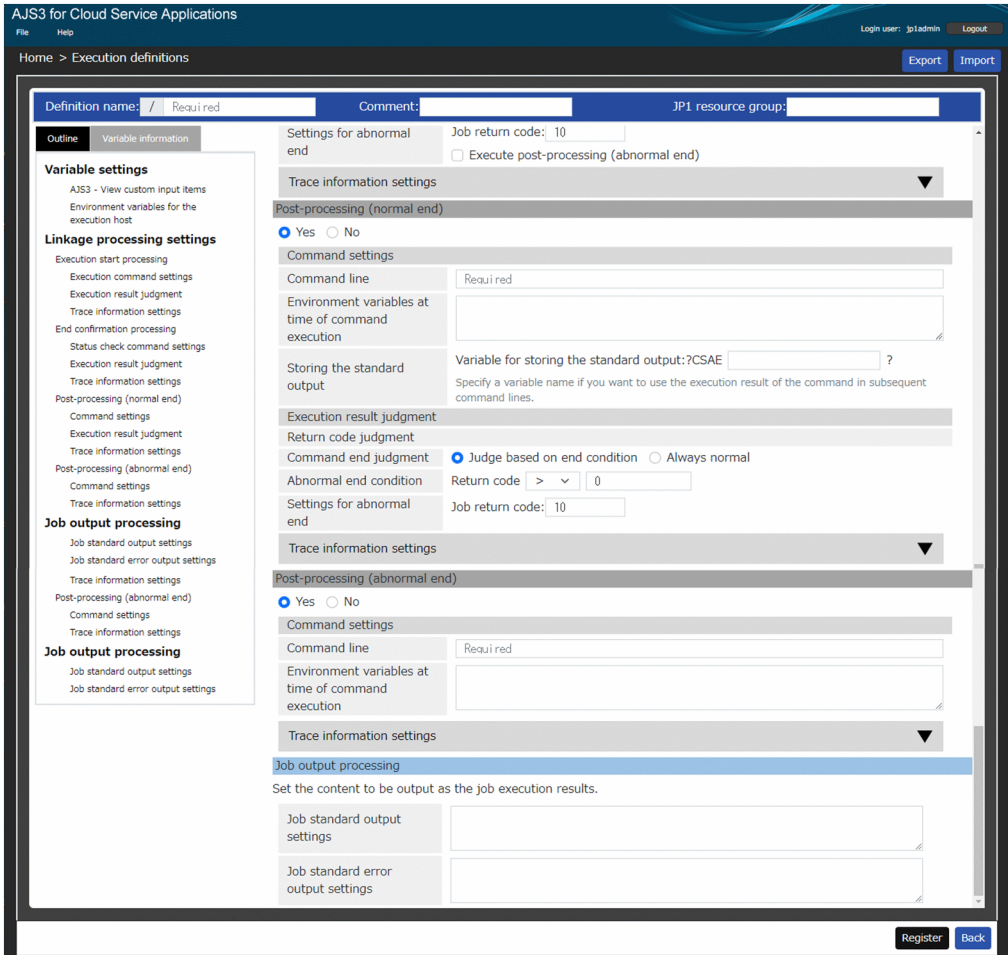
Output content judgment (Standard output)
 Command end judgment: Judge based on end condition Always normal
 Variable: Requi red Value: Requi red
 To specify a variable that stores the standard output result, specify the variable in the format "?CSA~[number-of-your-choice]?". To perform judgment based on the standard output of line X, specify the variable in the format "?CSA~[X-1]?". Specify one value per line. If you specify multiple lines, OR is used as the condition for making decisions. If the last row is blank, it is not included in the values.

Processing normal end condition
 Yes No

Retry settings
 Value of the retry condition: Requi red
 Specify one value per line. If you specify multiple lines, OR is used as the condition for making decisions. If the last row is blank, it is not included in the values.
 If neither the normal end condition nor the retry condition is met, processing ends abnormally in accordance with [Settings for abnormal end].
 Repeat interval: 0 minutes
 Number of times to repeat: 1 times
 Total time: 0minutes
 Settings at end of repeat: Job return code: 10
 Execute post-processing (abnormal end)

Processing continuation conditions

Register Back



The following shows the display items and input restrictions for the Linkage processing settings window:

(1) Execution start processing

(a) Execution command settings

Command line

Enter the command line to run.

Environment variable at time of command execution

Enter an environment variable to be used for command line execution in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

Storing the standard output - Variable for storing the standard output

Enter a variable name in the *?CSAExxxx?* format where the standard output details are stored for passing. Replace *xxxx* with a value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Character string within 1,023 bytes. A tab character can also be specified. You can specify a variable in this input item.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Also, specify "@CSA(<i>characters-to-escape</i>)ASC@" at locations where escaping is required. For details, see section 4.3.2 Escaping a command line for cloud service linkage information .	Required	None
2	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above. A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None
3	Variable for storing the standard output	Text box	Character string of 58 bytes or less. A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) are available.	Not required	None

(b) Execution result judgment

Return code judgment - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition
Judge the execution result as normal or abnormal based on the return code.
- Always normal
Judge the execution result always as normal regardless of the return code. When this item is selected, **Abnormal end condition** and **Settings for abnormal end** are hidden.

Abnormal end condition

Enter an abnormal end condition of the return code of the execution command.

Settings for abnormal end

Set operation when the abnormal end condition is met.

Job return code

Enter the return code of the job.

Execute post-processing (abnormal end)

Select this item when executing the processing set for **Post-processing (abnormal end)** before the end of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Conditions for Abnormal end condition	List box	Select from the following. Equal to (=), not equal to (!=), less than (<), more than (>), equal to or less than (<=), equal to or more than (>=)	Required	None
2	Value for Abnormal end condition	Text box	A numerical value between 0 and 2,147,483,647.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
3	Job return code	Text box	A numerical value between 1 and 50.	Required	None

Judgment of the output content (standard output) - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition
Judge the execution result as normal or abnormal based on the standard output details output by the command.
- Always normal
Judge the execution result always as normal regardless of the standard output details. When this item is selected, **Processing normal end condition** and **Settings for abnormal end** are hidden.

Processing normal end condition

Set the variable and its values for judging the normal end condition.

Variable

Enter a variable for judging the normal end condition in the ?CSAxxxxxx [YYYY] ? or ?CSAxxxxx? format. Specify the YYYY with a value one less than the number of rows you want to use for judgment of the standard output. Even in the case of only one row, the YYYY needs to be specified (0 should be specified in such a case).

Value

Enter up to 10 values that match the value of the specified variable. Multiple values can be specified by entering a line break for each one. When the value matches the value stored in the specified variable, the processing is judged as normal end.

Settings for abnormal end

Set the operation when the processing normal end condition is not satisfied.

Job return code

Enter the return code of the job.

Execute post-processing (abnormal end)

Select this item when executing the processing set for **Post-processing (abnormal end)** before the end of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Variable	Text box	Character string of 70 bytes or less. The variable can be specified in the ?CSAxxxxxx [YYYY] ? or ?CSAxxxxx? format. The characters that can be specified for xxxxxx and YYYY are as follows. xxxxxx: A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) YYYY: 0 to 9 (Arabic numbers)	Required	None
2	Value	Text box	Character string within 1,023 bytes. No line break is counted as part of the character string above. A tab character can also be specified. Up to 1,032 characters can be entered.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
2	Value	Text box	You can specify a variable in this input item.	Required	None
3	Job return code	Text box	A numerical value between 1 and 50.	Required	None

(c) Trace information settings

Log output settings

Configure settings for output to the service linkage job log file. For details about service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Output the executed command line

Select whether to output the executed command line to the log.

Output the standard output

Select whether to output the standard output of executed commands to the log.

Output the standard error output

Select whether to output the standard error output of executed commands to the log.

Standard error output settings

Sets the output to the standard error output.

Output the executed command line

Select whether to output the executed command line to the standard error output.

Output the standard output

Select whether to output the standard output of the executed command to the standard error output.

Output the standard error output

Select whether to output the standard error output of the executed command to the standard error output.

(2) End confirmation processing

To perform the end confirmation processing of the service executed for the execution start processing, select **Yes** and set the items below. If **No** is selected, the items below are not shown.

(a) Status check command settings

Command line

Enter the command line to run.

Environment variable at time of command execution

Enter an environment variable to be used for command line execution in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

Storing the standard output - Variable for storing the standard output

Enter a variable name in the *?CSAExxxx?* format where the standard output details are stored for passing. Replace *xxxx* with a value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Character string within 1,023 bytes.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	A tab character can also be specified. You can specify a variable in this input item. Also, specify "@CSA(characters-to-escape)ASC@" at locations where escaping is required. For details, see section 4.3.2 Escaping a command line for cloud service linkage information .	Required	None
2	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above. A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None
3	Variable for storing the standard output	Text box	Character string of 58 bytes or less. A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) are available.	Not required	None

(b) Execution result judgment

Return code judgment - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition
Judge the execution result as normal or abnormal based on the return code.
- Always normal
Judge the execution result always as normal regardless of the return code. When this item is selected, **Abnormal end condition** and **Settings for abnormal end** are hidden.

Abnormal end condition

Enter an abnormal end condition of the return code of the status check command.

Settings for abnormal end

Set operation when the abnormal end condition is met.

Job return code

Enter the return code of the job.

Execute post-processing (abnormal end)

Select this item when executing the processing set for **Post-processing (abnormal end)** before the end of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Conditions for Abnormal end condition	List box	Select from the following. Equal to (=), not equal to (!=), less than (<), more than (>), equal to	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Conditions for Abnormal end condition	List box	or less than (<=), equal to or more than (>=)	Required	None
2	Value for Abnormal end condition	Text box	A numerical value between 0 and 2,147,483,647.	Required	None
3	Job return code	Text box	A numerical value between 1 and 50.	Required	None

Judgment of the output content (standard output) - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition

Judge the execution result as normal or abnormal and whether to retry the processing based on the standard output details output by the command.

- Always normal

Judge the execution result always as normal regardless of the standard output details. When this item is selected, the following are hidden: **Processing normal end condition**, **Retry settings**, and **Settings for abnormal end**.

Processing normal end condition

Set the variables and their values for judging the normal end condition and processing continuity condition.

Variable

Enter a variable name for judging the normal end condition and processing continuity condition in the ?CSAxxxxxx [YYYY] ? or ?CSAxxxxxx? format. Specify the YYYY with a value one less than the number of rows you want to use for judgment of the standard output. Even in the case of only one row, the YYYY needs to be specified (0 in such a case).

Value

Enter up to 10 values that match the value of the specified variable. Multiple values can be specified by entering a line break for each one. When the value matches the value stored in the specified variable, the processing is judged as normal end.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Variable for processing normal end condition	Text box	Character string of 70 bytes or less. The variable can be specified in the ?CSAxxxxxx [YYYY] ? or ?CSAxxxxxx? format. The characters that can be specified for xxxxxx and YYYY are as follows. xxxxxx: A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) YYYY: 0 to 9 (Arabic numbers)	Required	None
2	Value for processing normal end condition	Text box	Character string within 1,023 bytes. No line break is counted as part of the character string above. A tab character can also be specified. Up to 1,032 characters can be entered.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
2	Value for processing normal end condition	Text box	You can specify a variable in this input item.	Required	None

Retry settings

Select whether to retry the processing based on the standard output details of the command. To retry the processing, select **Yes** and set the **Processing continuation conditions**. If **No** is selected, the **Processing continuation conditions** is not shown.

Processing continuation conditions

Enter conditions for the continuing operation.

Value of the retry condition

Enter up to 10 values that match the value of the variable of the specified normal end condition. Multiple values can be specified by entering a line break for each one. When the value matches the value stored in the specified variable, re-execute the status check command after the **Repeat interval**.

Repeat interval

Enter an interval for repeated execution.

Number of times to repeat

Enter the number of times of repeated execution.

Total time

This item displays the total time to be taken for the retry of the end confirmation processing based on the **Repeat interval** and **Number of times to repeat**. For a value outside the range of input restriction, - is shown.

Note that the total time includes neither the execution time of the status check command nor any other processing time.

Settings at end of repeat - Job return code

Enter the return code of the job when the processing has been performed for the specified number of times.

Settings at end of repeat - Execute post-processing (abnormal end)

Select this item when executing the processing set for **Post-processing (abnormal end)** before the end of the job in the case where the processing has been performed for the specified number of times.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Value of the retry condition	Text box	Character string within 1,023 bytes. No line break is counted as part of the character string above. A tab character can also be specified. Up to 1,032 characters can be entered. You can specify a variable in this input item.	Required	None
2	Repeat interval	Text box	A numerical value between 0 and 10. The unit is minutes.	Required	None
3	Number of times to repeat	Text box	A numerical value between 1 and 2,880.	Required	None
4	Total time	--	A numerical value between 1 and 2,880.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
4	Total time	--	The unit is minutes. This item displays the value of the product of the repeat interval and the repeat count.	Required	None
5	Job return code	Text box	A numerical value between 1 and 50.	Required	None

Settings for abnormal end

Set the operation when neither the normal end condition nor the processing continuity condition is met.

Job return code

Enter the return code of the job.

Execute post-processing (abnormal end)

Select this item when executing the processing set for **Post-processing (abnormal end)** before the end of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Job return code	Text box	A numerical value between 1 and 50.	Required	None

(c) Trace information settings

Log output settings

Configure settings for output to the service linkage job log file. For details about service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Output the executed command line

Select whether to output the executed command line to the log.

Output the standard output

Select whether to output the standard output of executed commands to the log.

Output the standard error output

Select whether to output the standard error output of executed commands to the log.

Standard error output settings

Sets the output to the standard error output.

Output the executed command line

Select whether to output the executed command line to the standard error output.

Output the standard output

Select whether to output the standard output of the executed command to the standard error output.

Output the standard error output

Select whether to output the standard error output of the executed command to the standard error output.

(3) Post-processing (normal end)

To perform post-processing after normal termination, select **Yes** and set the following items. If **No** is selected, the items below are not shown.

(a) Command settings

Command line

Enter the command line to run.

Environment variable at time of command execution

Enter an environment variable to be used for command line execution in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

Storing the standard output - Variable for storing the standard output

Enter a variable name in the ?CSAExxxx? format where the standard output details are stored for passing. Replace xxxx with a value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Character string within 1,023 bytes. A tab character can also be specified. You can specify a variable in this input item. Also, specify "@CSA(characters-to-escape)ASC@" at locations where escaping is required. For details, see section 4.3.2 <i>Escaping a command line for cloud service linkage information</i> .	Required	None
2	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above. A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None
3	Variable for storing the standard output	Text box	Character string of 58 bytes or less. A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) are available.	Not required	None

(b) Execution result judgment

Return code judgment - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition
Judge the execution result as normal or abnormal based on the return code.
- Always normal
Judge the execution result always as normal regardless of the return code. When this item is selected, **Abnormal end condition** and **Settings for abnormal end** are hidden.

Abnormal end condition

Enter an abnormal end condition of the return code of the status check command.

Settings for abnormal end

Set operation when the abnormal end condition is met.

Job return code

Enter the return code of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Conditions for Abnormal end condition	List box	Select from the following. Equal to (=), not equal to (!=), less than (<), more than (>), equal to or less than (<=), equal to or more than (>=)	Required	None
2	Value for Abnormal end condition	Text box	A numerical value between 0 and 2,147,483,647.	Required	None
3	Job return code	Text box	A numerical value between 1 and 50.	Required	None

(c) Trace information settings

Log output settings

Configure settings for output to the service linkage job log file. For details about service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Output the executed command line

Select whether to output the executed command line to the log.

Output the standard output

Select whether to output the standard output of executed commands to the log.

Output the standard error output

Select whether to output the standard error output of executed commands to the log.

Standard error output settings

Sets the output to the standard error output.

Output the executed command line

Select whether to output the executed command line to the standard error output.

Output the standard output

Select whether to output the standard output of the executed command to the standard error output.

Output the standard error output

Select whether to output the standard error output of the executed command to the standard error output.

(4) Post-processing (abnormal end)

To perform post-processing after abnormal termination, select **Yes** and set the following items. If **No** is selected, the items below are not shown.

(a) Command settings

Command line

Enter the command line to run.

Environment variable at time of command execution

Enter an environment variable to be used for command line execution in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Character string within 1,023 bytes. A tab character can also be specified. You can specify a variable in this input item. Also, specify "@CSA(characters-to-escape)ASC@" at locations where escaping is required. For details, see section 4.3.2 Escaping a command line for cloud service linkage information .	Required	None
2	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above. A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None

(b) Trace information settings

Log output settings

Configure settings for output to the service linkage job log file. For details about service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Output the executed command line

Select whether to output the executed command line to the log.

Output the standard output

Select whether to output the standard output of executed commands to the log.

Output the standard error output

Select whether to output the standard error output of executed commands to the log.

Standard error output settings

Sets the output to the standard error output.

Output the executed command line

Select whether to output the executed command line to the standard error output.

Output the standard output

Select whether to output the standard output of the executed command to the standard error output.

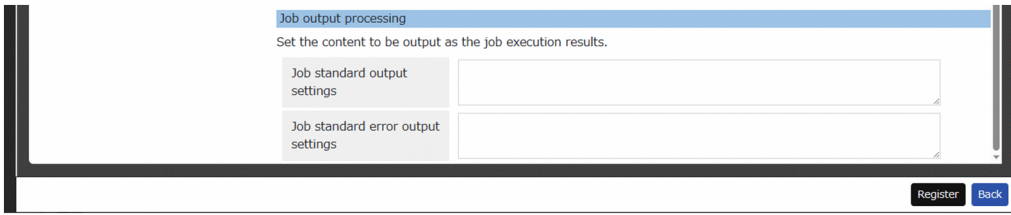
Output the standard error output

Select whether to output the standard error output of the executed command to the standard error output.

6.7.3 Job output processing

This section explains about **Job output processing** in the Execution definitions window.

Figure 6–10: Job output processing in the Execution definitions window



The following shows the display items and input restrictions for the Job output processing window:

Job standard output settings

Enter the contents to be output to the standard output as the job execution result.

Job standard error output settings

Enter the contents to be output to the standard error output as the job execution result.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Job standard output settings	Text box	Character string within 1,023 bytes. Line breaks are also counted in the above string. A tab character can also be specified. You can specify a variable in this input item.	Not required	None
2	Job standard error output settings	Text box	Character string within 1,023 bytes. Line breaks are also counted in the above string. You can specify a variable in this input item.	Not required	None

6.7.4 Setting variables dialog box

The Setting variables dialog is displayed for adding a new variable by pressing **Add** or editing an existing variable by pressing **Edit** in the **AJS3 - View custom input items** or **Environment variables for the execution host**.

Figure 6–11: Setting variables dialog box for the AJS3 - View custom input items

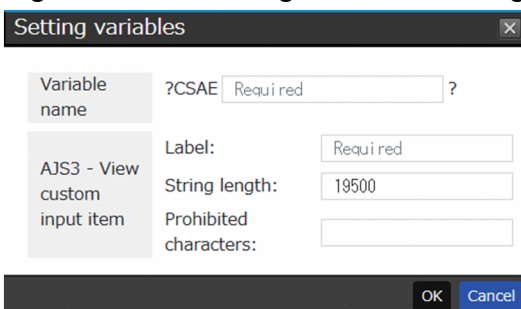
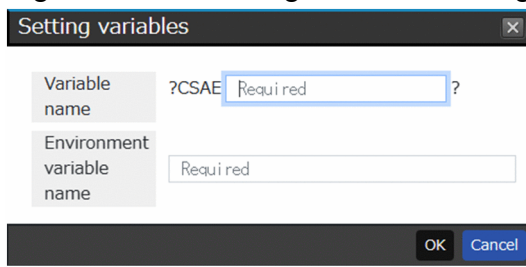


Figure 6–12: Setting variables dialog box for the Environment variables for the execution host



The following shows the display items and input restrictions for the Setting variables dialog box:

Variable name

When the system is started with the **AJS3 - View custom input items**, enter a variable name in the `?CSAExxxx?` format with `xxxx` replaced with the desired value. This variable stores the standard output details entered on the details definition screen of the service linkage job of JP1/AJS3 - View and sets information to be passed. When the system is started with the **Environment variables for the execution host**, enter the name of the variable that stores the value of the environment variable set on the execution host and sets the information to be passed.

AJS3 - View custom input items

This item is displayed only when you click the **Add** or **Edit** button in **AJS3 ? View custom input items**.

Label

Enter the label name of the input item on the detailed definition screen of the service linkage job of JP1/AJS3 - View.

String length

Enter the input string length in the detail definition screen of the service linkage job of JP1/AJS3 - View.

Prohibited characters

Enter characters with a regular expression that are to be prohibited to input on the details definition screen of service linkage jobs of JP1/AJS3 - View.

Available regular expressions are those that can be used in the .NET Framework. For details, see the related documents provided by Microsoft Corporation.

Environment variable name

This item is displayed only when **Add** or **Edit** is pressed in **Environment variables for the execution host**.

Enter an environment variable name to be stored in the variable.

OK button

Click this button to register the variable with the entered information.

Cancel button

Closes the Setting variable dialog box without doing anything.

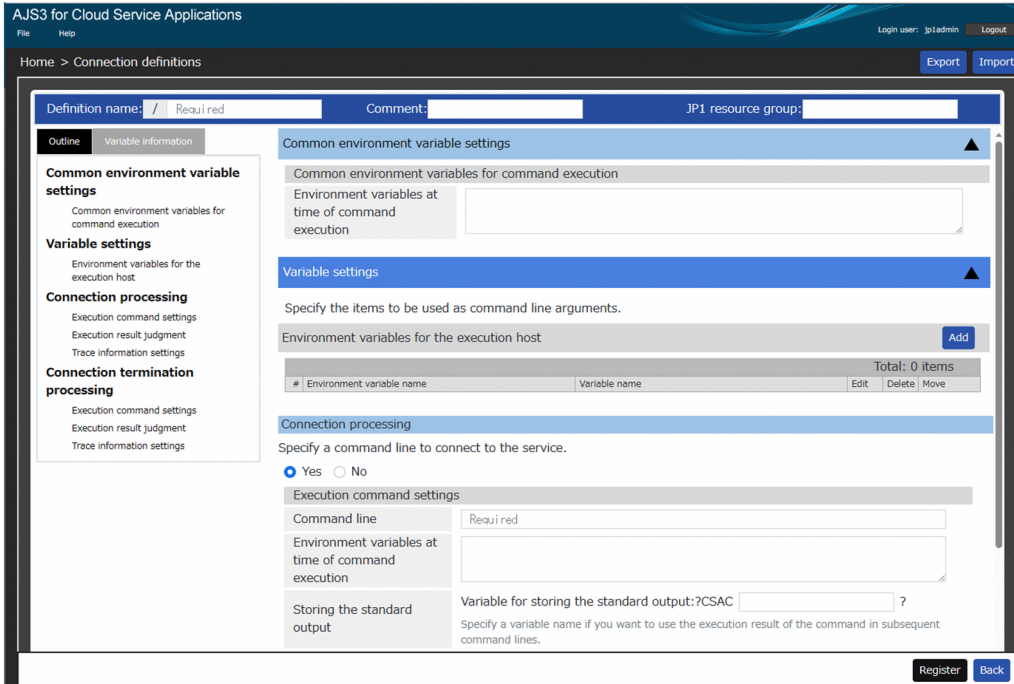
No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Variable name	Text box	Character string within 58 bytes. A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) are available.	Required	None
2	Label	Text box	Character string within 60 bytes.	Required	None
3	String length	Text box	A numerical value between 1 and 19,500.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
4	Prohibited characters	Text box	Character string within 95 bytes.	Not required	None
5	Environment variable name	Text box	Character string within 64 bytes.	Required	None

6.8 Connection definitions window

In the Connection definitions window, you can view and edit connection definitions in detail.

Figure 6–13: Connection definitions window



The following shows the display items and input restrictions for the Connection definitions window:

Definition name

Enter the definition name of the connection definition information. It is saved in the format of */definition-name*. It cannot be changed when editing.

Comment

Display the comment of the connection definition information.

JP1 resource group

Display the JP1 resource group of the connection definition information.

Outline tab

This tab shows the outline of the items in the right-hand definition area in a tree format. Clicking an item in the outline jumps to its corresponding item in the right-hand definition area.

Cautionary note

With an item hidden in the right-hand definition area, clicking the corresponding item in the outline does not jump to the item. Show in advance the hidden item in the right-hand definition area.

Variable information tab

Displays the variable information defined by each item in the definition area on the right side and the variable information that is reserved by the system and available by default.

Export button

Clicking this button outputs the connection information being displayed as the connection definition file (`slcondefExport.txt`). This file will be output to the download folder set by the Web browser.

For details about a connection definitions file, see *F.1 Connection definition file*.



Note

Even during input of connection definitions, a connection definition file can be exported.

Import button

Click this button to display the Open dialog allowing you to select a connection definition file to be reflected to the screen. Select a connection definition file. It will be reflected on the Connection definitions screen.

For details about the format of a connection definition file, see [F.1 Connection definition file](#).



Note

Even during input of connection definitions, a connection definition file can be imported.

Register button

Click this button to register the connection definitions, which have been input on the Connection definitions screen with JP1/AJS3 for Cloud Service Applications. When registration is successfully completed, the Home window is displayed. If an error occurs, the item with the error is highlighted.

Back button

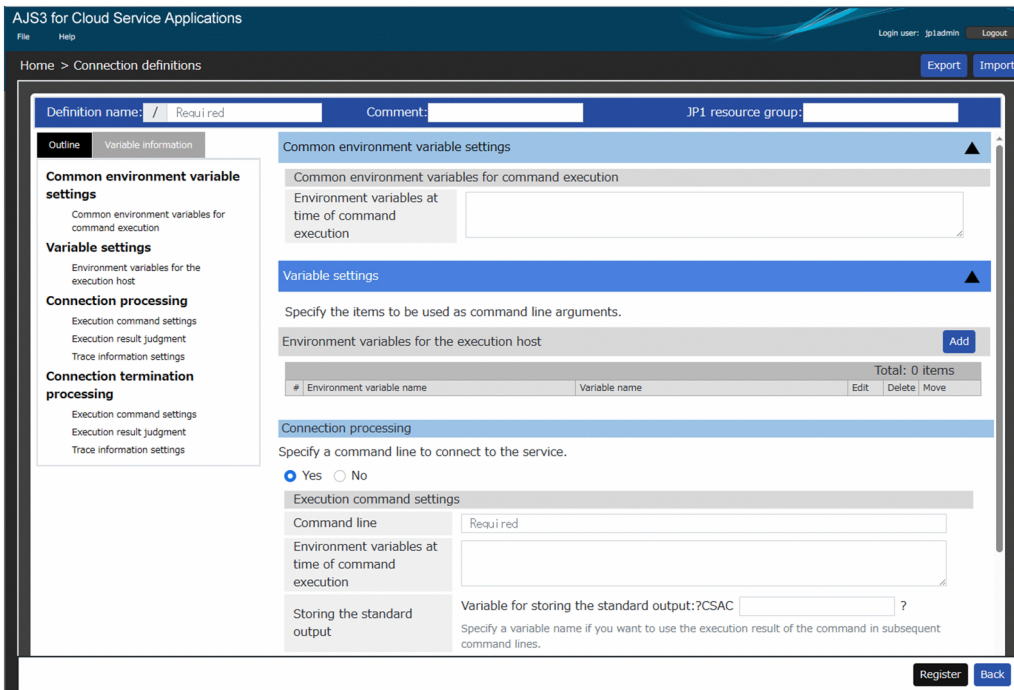
Go to the Home window without doing anything.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Definition name	Text box	Character string of 1 to 30 bytes. Single-byte alphanumeric characters, - (hyphen), and _ (underscore) are available.	Required	None
2	Comment	Text box	Character string within 243 bytes.	Not required	None
3	JP1 resource group	Text box	Character string within 63 bytes. Single-byte alphanumeric characters and _ (underscores) are available.	Not required	JP1_CSA

6.8.1 Common environment variable settings

This section explains about **Common environment variable settings** in the Connection definitions window.

Figure 6–14: Common environment variable settings in the Connection definitions window



The following shows the display items for **Common environment variable setting**:

(1) Common environment variables for command execution

Environment variables at time of command execution

Enter an environment variable to be used for command line execution with connection definitions and execution definitions commonly in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

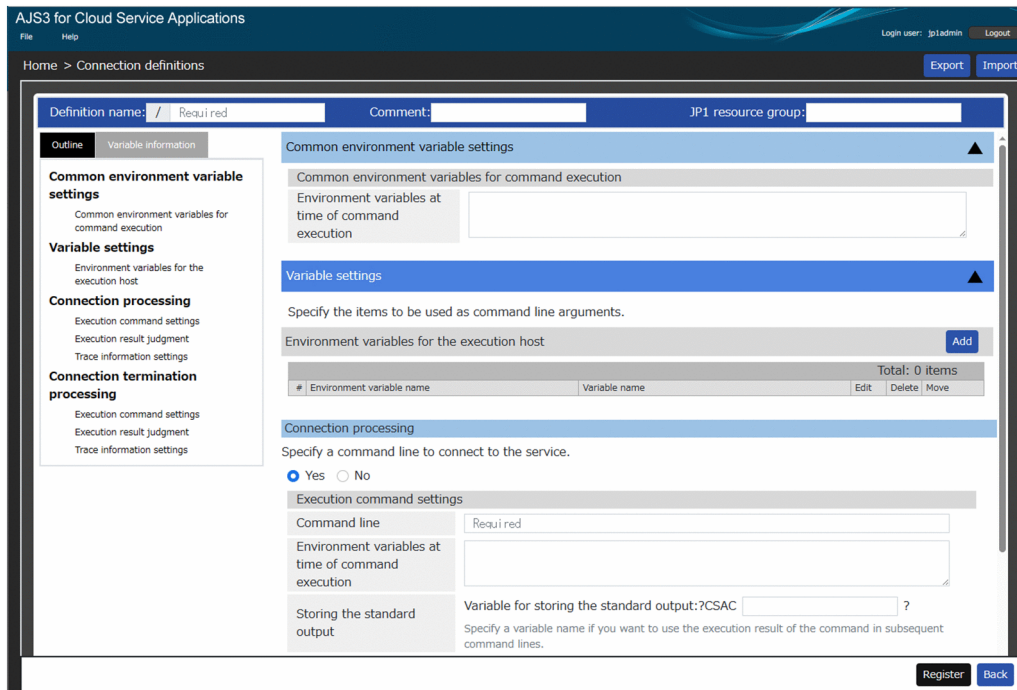
The following environment variable is prioritized over that set for this item: the environment variable set for **Environment variables at time of command execution** in the command line of each definition.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above. A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None

6.8.2 Variable settings

This section explains about **Variable settings** in the Connection definitions window.

Figure 6–15: Variable settings in the Connection definitions window



The following shows the display items for **Variable settings**:

Environment variables for the execution host

Display added variables and the list of environment variables name.

Add button

Click this button to open the Setting variables dialog box. Up to 32 variables can be added. For details about this dialog, see [6.8.5 Setting variables dialog box](#).

Delete button

Click this button to delete the variable for the selected row.

Edit button

Click this button to open the Setting variables dialog box with the variable for the selected row. For details about this dialog, see [6.8.5 Setting variables dialog box](#).

↑ button

Move the variable in the selected row one row up.

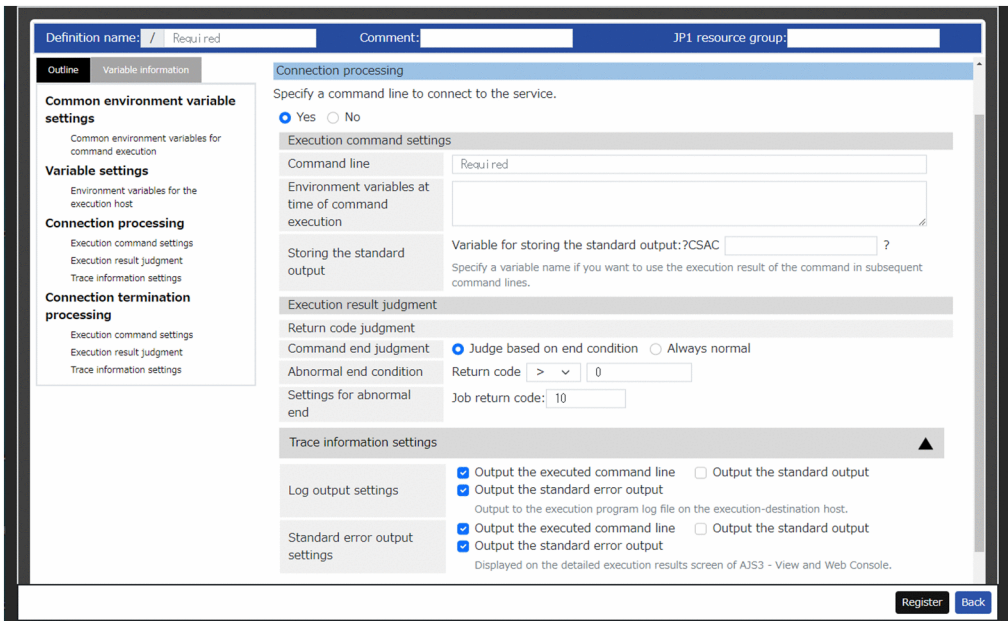
↓ button

Move the variable in the selected row one row down.

6.8.3 Connection processing

This section explains about **Connection processing** in the Connection definitions window.

Figure 6–16: Connection processing in the Connection definitions window



When setting connection processing by specifying a command line for establishing a connection to a service, select **Yes** and set the items shown below. If **No** is selected, the items below are not shown.

The following shows the display items for **Connection processing**:

(1) Execution command settings

Command line

Enter the command line to run.

Environment variable at time of command execution

Enter an environment variable to be used for command line execution in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

Storing the standard output - Variable for storing the standard output

Enter a variable name in the *?CSACxxxx?* format where the standard output details are stored for passing. Replace *xxxx* with a value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Character string within 1,023 bytes. A tab character can also be specified. You can specify a variable in this input item. Also, specify "@CSA(characters-to-escape)ASC@" at locations where escaping is required. For details, see section 4.3.2 <i>Escaping a command line for cloud service linkage information</i> .	Required	None
2	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above.	Not required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
2	Environment variables at time of command execution	Text box	A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None
3	Variable for storing the standard output	Text box	Character string of 58 bytes or less. A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) are available.	Not required	None

(2) Execution result judgment

Return code judgment - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition
Judge the execution result as normal or abnormal based on the return code.
- Always normal
Judge the execution result always as normal regardless of the return code. When this item is selected, **Abnormal end condition** and **Settings for abnormal end** are hidden.

Abnormal end condition

Enter an abnormal end condition of the return code of the execution command.

Settings for abnormal end

Set operation when the abnormal end condition is met.

Job return code

Enter the return code of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Conditions for Abnormal end condition	List box	Select from the following. Equal to (=), not equal to (!=), less than (<), more than (>), equal to or less than (<=), equal to or more than (>=)	Required	None
2	Value for Abnormal end condition	Text box	A numerical value between 0 and 2,147,483,647.	Required	None
3	Job return code	Text box	A numerical value between 1 and 50.	Required	None

(3) Trace information settings

Log output settings

Configure settings for output to the service linkage job log file. For details about service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Output the executed command line

Select whether to output the executed command line to the log.

Output the standard output

Select whether to output the standard output of executed commands to the log.

Output the standard error output

Select whether to output the standard error output of executed commands to the log.

Standard error output settings

Sets the output to the standard error output.

Output the executed command line

Select whether to output the executed command line to the standard error output.

Output the standard output

Select whether to output the standard output of the executed command to the standard error output.

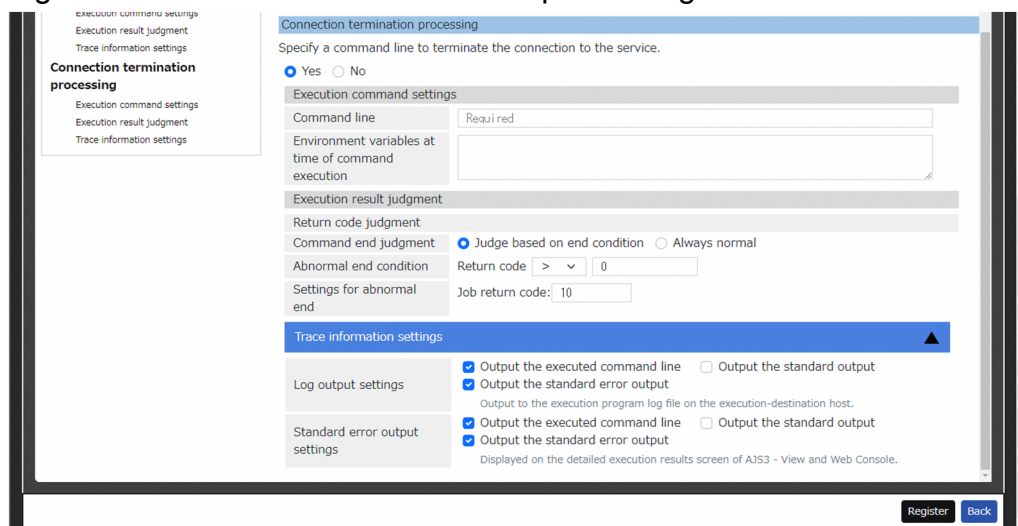
Output the standard error output

Select whether to output the standard error output of the executed command to the standard error output.

6.8.4 Connection termination processing

This section explains about **Connection termination processing** in the Connection definitions window.

Figure 6–17: Connection termination processing in the Connection definitions window



When setting disconnection processing by specifying a command line for disconnection from a service, select **Yes** and set the items shown below. If **No** is selected, the items below are not shown.

The following shows the display items for **Connection termination processing**:

(1) Execution command settings

Command line

Enter the command line to run.

Environment variable at time of command execution

Enter an environment variable to be used for command line execution in the *environment-variable-name=environment-variable-value* format. When specifying multiple variables, enter a line break for each one.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Command line	Text box	Character string within 1,023 bytes. A tab character can also be specified. You can specify a variable in this input item. Also, specify "@CSA(characters-to-escape)ASC@" at locations where escaping is required. For details, see section 4.3.2 Escaping a command line for cloud service linkage information .	Required	None
2	Environment variables at time of command execution	Text box	Character string of 20,479 bytes or less. No line break is counted as part of the character string above. A tab character can also be specified. Up to 27,304 characters can be entered. You can specify a variable in this input item.	Not required	None

(2) Execution result judgment

Return code judgment - Command end judgment

Select operation at the end of a command from either of the following.

- Judge based on the end condition
Judge the execution result as normal or abnormal based on the return code.
- Always normal
Judge the execution result always as normal regardless of the return code. When this item is selected, **Abnormal end condition** and **Settings for abnormal end** are hidden.

Abnormal end condition

Enter an abnormal end condition of the return code of the execution command.

Settings for abnormal end

Set operation when the abnormal end condition is met.

Job return code

Enter the return code of the job.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Conditions for Abnormal end condition	List box	Select from the following. Equal to (=), not equal to (!=), less than (<), more than (>), equal to or less than (<=), equal to or more than (>=)	Required	None
2	Value for Abnormal end condition	Text box	A numerical value between 0 and 2,147,483,647.	Required	None

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
3	Job return code	Text box	A numerical value between 1 and 50.	Required	None

(3) Trace information settings

Log output settings

Configure settings for output to the service linkage job log file. For details about service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Output the executed command line

Select whether to output the executed command line to the log.

Output the standard output

Select whether to output the standard output of executed commands to the log.

Output the standard error output

Select whether to output the standard error output of executed commands to the log.

Standard error output settings

Sets the output to the standard error output.

Output the executed command line

Select whether to output the executed command line to the standard error output.

Output the standard output

Select whether to output the standard output of the executed command to the standard error output.

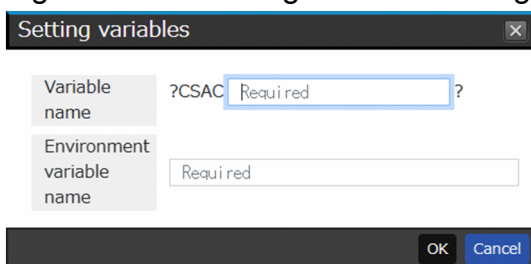
Output the standard error output

Select whether to output the standard error output of the executed command to the standard error output.

6.8.5 Setting variables dialog box

The Setting variables dialog is displayed for adding a new variable by pressing **Add** or editing an existing variable by pressing **Edit** in the **Environment variables for the execution host**.

Figure 6–18: Setting variables dialog box



The following shows the display items and input restrictions for the Setting variables dialog box:

Variable name

Enter the name of a variable, in the `?CSACxxxx?` format with `xxxx` replaced with a desired value that stores the value of the environment variable set on the execution host and sets the information to be passed.

Environment variable name

Enter an environment variable name to be stored in the variable.

OK button

Click this button to register the variable with the entered information.

Cancel button

Closes the Setting variable dialog box without doing anything.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Variable name	Text box	Character string within 58 bytes. A to Z (uppercase alphabetical letters) and 0 to 9 (Arabic numbers) are available.	Required	None
2	Environment variable name	Text box	Character string within 64 bytes.	Required	None

6.9 Authentication definitions window

In the Authentication definitions window, you can view and edit authentication definitions in detail.

Figure 6–19: Authentication definitions window

The following shows the display items and input restrictions for the Authentication definitions window:

Definition name

Enter the definition name of the authentication definition information. It is saved in the format of */definition-name*. It cannot be changed when editing.

Comment

Display the comment of the authentication definition information.

JP1 resource group

Display the JP1 resource group of the authentication definition information.

Register button

Click this button to register the connection definitions, which have been input on the Authentication definitions screen with JP1/AJS3 for Cloud Service Applications. When registration is successfully completed, the Home window is displayed.

If an error occurs, the item with the error is highlighted.

Back button

Go to the Home window without doing anything.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Definition name	Text box	Character string of 1 to 30 bytes. Single-byte alphanumeric characters, - (hyphen), and _ (underscore) are available.	Required	None
2	Comment	Text box	Character string within 243 bytes.	Not required	None
3	JP1 resource group	Text box	Character string within 63 bytes.	Not required	JP1_CSA

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
3	JP1 resource group	Text box	Single-byte alphanumeric characters and _ (underscores) are available.	Not required	JP1_CSA

6.9.1 ID/user

Sets the ID and user information used to connect to the service.

The following shows the display items for **ID/user**:

Variable for storing the standard output

The variable name storing the ID and user information is fixed to ?CSAAIDINFO?.

Value

Enter a value to be set for the variable.

Update value

Select whether to update the value at the time of registration. With the item selected, the **Value** field is enabled. Without the item selected, the **Value** field is disabled.

This item must remain selected because the item is always updated at the time of new creation. With this item selected, the value is updated.

Comment

Enter a comment of the value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Value	Text box	Character string of 128 bytes or less. You can use an alphanumeric character (ASCII).	Required	None
2	Comment	Text box	Character string within 48 bytes.	Required	None

6.9.2 Security information/password

Set security information and a password for connection with a service.

The following shows the display items for **Security information/password**:

Protect

The data are protected as security information. The selection status cannot be changed.

Variable for storing the standard output

The variable name storing the security information and password is fixed to ?CSAAPWDINFO?.

Value

Enter a value to be set for the variable.

Each input character is displayed with •.

Without the **Update value** selected, the field is always shown with ••• When the **Update value** is selected, the input characters are overwritten with null characters.

When editing, ••• is always displayed regardless of the value at the time of registration.

Update value

Select whether to update the value at the time of registration. With the item selected, the **Value** field is enabled. Without the item selected, the **Value** field is disabled.

Comment

Enter a comment of the value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Value	Text box	Character string of 128 bytes or less. You can use an alphanumeric character (ASCII).	Required	None
2	Comment	Text box	Character string within 48 bytes.	Required	None

6.9.3 Additional information item 1 to 3

Set other additional information to be used for connection with a service.

The following shows the display items and input restrictions of the **Additional information item 1** to **Additional information item 3**.

Protect

The data are protected as security information.

Variable for storing the standard output

The variable name storing additional information is fixed to ?CSAAINF1? through ?CSAAINF3?.

Value

Enter a value to be set for the variable. The display differs depending on whether **Protect** is selected or not.

- Without the **Protect** selected
The input characters are displayed as they are.
The input characters are displayed as they are regardless of whether the **Update value** is selected.
- With the **Protect** selected
Each input character is displayed with •.
Without the **Update value** selected, the field is always shown with ••• When the **Update value** is selected, the input characters are overwritten with null characters.

When editing the definition registered with the **Protect** selected, ••• is always displayed regardless of the value at the time of registration.

Update value

Select whether to update the value at the time of registration. With the item selected, the **Protect** is enabled and the **Value** field is enabled. Without the item selected, the **Value** and **Protect** are disabled.

Comment

Enter a comment of the value.

No.	Display item	Input format	Input restriction	Required/Not required	Assumed value
1	Value	Text box	Character string of 128 bytes or less. You can use an alphanumeric character (ASCII).	Required	None
2	Comment	Text box	Character string within 48 bytes.	Required	None

6.10 Notes on Web GUI

This section describes notes on the use of the Web GUI.

About OS limitations on command lines

When the execution host of service linkage jobs is on Windows, the number of characters that can be used is approximately 8,000 because there is a limitation on OS command lines.

Input value restrictions

Multibyte input characters, if included, are counted with the value calculated with the number of UTF-8 bytes. The number of characters cannot be input to fields other than number input fields. Therefore, enter a value while considering the number of UTF-8 bytes if multibyte characters are included.

When an input value includes control characters

Delete control characters when performing registration on each definition screen or outputting a file on the service linkage job definition screen. The control characters to be deleted are as follows: 00 to 1F, 7F to 9F, and Unicode control characters (\u200E, \u200F, \u200D, \u200C, \u202A, \u202D, \u202E, \u202C, \u206E, \u206F, \u206B, \u206A, \u206D, \u206C, \u001E, \u001F, \u202B).

Note that 0A (LF) and 09 (tab character) are not deleted from some input items. For those input items where these control characters are not deleted, refer to the input value restrictions of each definition screen.

The available number of characters does not include control characters because, as described above, they are deleted when the number of input characters is counted.

Operation at the time of exporting or importing

When data are exported while being input, the inputs to the screen at the time of export may not be shown on the screen.

Specifically, check the following after importing.

- When the data is exported with only an environment variable name input for the **Environment variables at time of command execution** on the execution definition screen and connection definition screen, *environment-variable-name=* is displayed on the screen when the data are imported.
- When the data is exported with only = input for the **Environment variables at time of command execution** on the execution definition screen and connection definition screen, a blank line is displayed on the screen when imported.
- When the data are exported and then imported with the **Connection definitions** item selected but no definition selected on the Service linkage job definitions screen, the item is not selected on the screen.

7

Commands

This chapter describes the commands that are used for JP1/AJS3 for Cloud Service Applications.

Command description format

The following describes the command description format, including how to specify commands and the command syntax symbols.

How to specify commands

The commands are specified using the following format:

```
ajsxxx
  [ $\Delta_1$  -option-A [ $\Delta_0$  value-a [, value-b [, value-c ...]]]      ... (1)
  [ $\Delta_1$  -option-B [ $\Delta_0$  value-a [, value-b [, value-c ...]]]      ... (1)
  [ $\Delta_1$  arbitrary-name-X [ $\Delta_1$  arbitrary-name-Y [ $\Delta_1$  arbitrary-name-Z ...]] } ... (2)
```

Legend:

- Δ_0 : Specify zero or more space characters. Spaces can be omitted.
- Δ_1 : Specify one or more space characters. Spaces cannot be omitted.

Here, (1) is called an option, and (2) is called an argument.

The following describes the rules for specifying arguments:

- Specify an option first, and then specify an arbitrary name such as a unit name. If you specify any name before the option, the system assumes the entire specification as a name.
- Multiple options can be specified in any order.
- To specify more than one value for one option, use a comma (,) to separate each value.
- Options without a value can be specified in succession.

Example:

-a-b-c can be specified as -abc.

- Two-byte options without a value cannot be specified in succession.

Example:

-a-ab cannot be specified as -aab, or -cd -cf cannot be specified as -cdcf.

- When specifying options in succession, you can specify a value of the last option.

Example:

In -abc xyz, xyz is a value of the c option.

- If you specify a value for an option that does not have a value, the system assumes anything that follows the value to be a name.
- An error occurs if you specify an invalid option.
- To specify a character string beginning with a hyphen (-) for the first name, such as *arbitrary-name-X* in the above example of command specification, specify -- Δ_1 before *arbitrary-name-X*. (The system assumes anything that follows -- Δ_1 to be a name.)

You do not need to specify -- Δ_1 for the second and subsequent names.

Example:

To specify two names -jobA and -jobB, specify -- -jobA -jobB.

- You can use regular expressions for names.

- An error occurs if the number of specified names exceeds the limit.
- Character strings specified in arguments are case-sensitive. Be careful to use a correct combination of uppercase and lowercase letters.

Symbols used for command syntax explanations

The following table lists the conventions used in command syntax explanations:

Table 7–1: Symbols used for command syntax explanations

Symbol	Convention and example
	Only one of the options separated by a vertical bar can be used at one time. Example: A B C A, B, or C
{ }	One of the items enclosed in braces and separated by a vertical bar must be specified. Example: { A B C } Specify A, B, or C.
[]	The item or items enclosed in brackets are optional. When multiple items are listed, choose one or omit all. Example: [A] Specify A or nothing. [B C] Specify B, C, or nothing.
...	The item or items preceding the ellipsis (. . .) can be repeated. Example: A, B, . . . After A, specify B as many times as necessary.
<u> </u> (underline)	The underlined characters are the system default when you omit all the items enclosed in brackets. If there is no default, only the specified item will take effect. Example: [<u>A</u> B] A is assumed if you do not specify either item.

List of commands

The following table shows the commands for JP1/AJS3 for Cloud Service Applications.

Table 7–2: List of JP1/AJS3 for Cloud Service Applications commands

Functionality	Command name	Windows	Linux	Required privileges	Supported products
Setup the JP1/AJS3 for Cloud Service Applications server.	ajscsasetup	Y	Y	Windows: Administrators Linux: Superuser	C
Start the service of the JP1/AJS3 for Cloud Service Applications.	ajjs_csa	--	Y	Linux: Superuser	C
Stop the service of the JP1/AJS3 for Cloud Service Applications.	ajjs_csa_stop	--	Y	Linux: Superuser	C
Collects the necessary data when a failure occurs.	ajjs_log	--	Y	Linux: Superuser	C
	ajjs_log.bat	Y	--	Windows: Administrators	C
Register the service linkage job.	ajscsajobreg	Y	--	None	V
List the registered service linkage jobs.	ajscsajoblist	Y	--	None	V
Delete the service linkage job.	ajscsajobdel	Y	--	None	V

Legend:

Y: Supported

--: Not supported

V: JP1/AJS3 - View

C: JP1/AJS3 for Cloud Service Applications

ajscsasetup (Windows, Linux)

Format

```
ajscsasetup
  -c|-p|-d Shared-directory-name -h Logical-host-name-of-JP1/Base [-m
|-s]
```

Description

Setup the JP1/AJS3 for Cloud Service Applications server.

Execution privileges

In Windows: Administrators privileges

In Linux: Superuser privileges

Storage directory

In Windows:

JP1/AJS3 for Cloud Service Applications-installation-folder\bin\

In Linux:

/opt/jp1ajs3csa/bin/

Arguments

-c

This option displays the setup details of the JP1/AJS3 for Cloud Service Applications server. The following shows the display items and their descriptions.

No.	Display item	Description
1	Logical host name of JP1/Base	When a logical host is set up, this item shows the logical host name.
2	Shared directory name	When a shared directory is used, this item shows the path to the shared directory.

-p

This option returns the configuration of the JP1/AJS3 for Cloud Service Applications server from the cluster configuration to the default one.

The settings of each configuration file are returned to the defaults, including path and log output destination.

-d *Shared-directory-name*

When setting up the JP1/AJS3 for Cloud Service Applications server with a cluster configuration, specify the full path to the shared directory.

The number of characters that can be specified is 2 to 100 (unit: byte).

For Windows, if the first two bytes are specified with characters other than the drive letter (e.g., C:), the command terminates abnormally.

Do not specify a disk on the network drive. Also, do not specify a path including multibyte characters.

Do not specify the drive and the root directory.

As the shared directory, *specified-shared-directory-name*\jps1ajs3csa is created for Windows, and *specified-shared-directory-name*/jps1ajs3csa for Linux. Under this directory, an environment definition file is created, where the database file is copied. This environment definition file is necessary for operating the JP1/AJS3 for Cloud Service Applications server with a cluster configuration. Note that if these directories already exist with the `-m` option specified, the command terminates abnormally. When the `-m` option is specified, make sure that these directories do not exist before executing a command.

-h Logical-host-name-of-JP1/Base

Specify the logical host name where the JP1 user authentication information is set, which is used for cluster configuration.

The number of characters that can be specified is 1 to 255 (unit: byte).

-m

Specify this option when setting up the JP1/AJS3 for Cloud Service Applications server as the primary node of the cluster configuration.

Specify this option together with the `-d` option. If the directory specified for the `-d` option does not exist, the command terminates abnormally.

When setting up the primary node, make sure that the shared disk is mounted.

-s

Specify this option when setting up the JP1/AJS3 for Cloud Service Applications server as the secondary node of the cluster configuration.

Specify this option together with the `-d` option.

When setting up the secondary node, specify the `-d` option with the path to the shared directory that has been specified for setting up the primary node.

Notes

- The information set by the `ajscsasetup` command is reflected the next time the JP1/AJS3 CSA HTTP Server service or the JP1/AJS3 CSA Web Application Server service is started. Therefore, if the setting is changed by the `ajscsasetup` command when the service is in operation, the setting information displayed using `-c` differs from the current operation status.
- When a command is executed with `-c` specified, even if the `ajscsasetup.conf` and `ajs3csaweb.conf` files are invalid, the processing is continued.
- Logs output by this command are always output to a physical host in a cluster configuration environment. In the case of `ajs3csaweb.conf`, this command also always refers to `ajs3csaweb.conf` on the physical host.
- When the `ajscsasetup` command is executed, settings of the user property file for J2EE server (`usrconf.properties`)# might return to the initial state, and startup of JP1/AJS3 CSA Web Application Server services might fail. After the execution of the `ajscsasetup` command, set again the user property file for J2EE server (`usrconf.properties`).

This problem occurs when both of the following conditions are met:

1. The settings of the user property file for J2EE server (`usrconf.properties`) are changed before the execution of the `ajscsasetup` command.
2. The `-d` or `-p` option is specified for the argument of the `ajscsasetup` command.

#:

For details about setup items of the user property file for J2EE server (`usrconf.properties`) to be used for setting the JP1/AJS3 for CSA Web Application Server, see [3.4.3 User property file for J2EE server \(`usrconf.properties`\)](#).

Return values

0	Normal end
Value other than 0	Abnormal end

Example 1

Display the setup details of the JP1/AJS3 for Cloud Service Applications server.

```
ajscsasetup -c
```

Output example

```
KNBB2520-I Output of settings data will now start.
Logical host name      logicalhost
Shared directory      E:\share
KNBB2521-I Output of settings data ended.
```

Example 2

This option returns the configuration of JP1/AJS3 for Cloud Service Applications server from the cluster configuration to the default.

```
ajscsasetup -p
```

Example 3

Set up the JP1/AJS3 for Cloud Service Applications server as the primary node when the shared directory is `E:\SHARE` and the logical host of JP1/Base is `logicalhost`.

```
ajscsasetup -d E:\SHARE -h logicalhost
```

or

```
ajscsasetup -d E:\SHARE -h logicalhost -m
```

Example 4

Set up the JP1/AJS3 for Cloud Service Applications server as the secondary node when the shared directory is `E:\SHARE` and the logical host of JP1/Base is `logicalhost`.

```
ajscsasetup -d E:\SHARE -h logicalhost -s
```

jajs_csa (Linux only)

Format

```
jajs_csa  
  [-t {http|app}]
```

Description

Start the service of the JP1/AJS3 for Cloud Service Applications.

Execution privileges

Superuser privilege

Storage directory

/etc/opt/jp1ajs3csa/

Arguments

-t {http|app}

Specify and start a service of JP1/AJS3 for Cloud Service Applications.

http

Start the JP1/AJS3 CSA HTTP Server service.

app

Start the JP1/AJS3 CSA Web Application Server service.

If you omit this option, the JP1/AJS3 CSA Web Application Server service and the JP1/AJS3 CSA HTTP Server service start in that order.

Notes

- This command applies only to Linux. You cannot use this command in Windows.
- If an attempt to start the JP1/AJS3 CSA Web Application Server service fails, stop processing of this service might be performed within the command, causing the KNBB2524-E message to be displayed together with the KNBB2525-E message. In this case, no action is required for the KNBB2525-E message.
- If you execute this command with this option omitted, startup processing is performed for the JP1/AJS3 CSA Web Application Server, and then for the JP1/AJS3 CSA HTTP Server. If an error occurs in the JP1/AJS3 CSA HTTP Server service during startup, the JP1/AJS3 CSA Web Application Server service is still running. The following table lists the services in which an error has occurred and the status of each service.

Table 7–3: Services in which an error occurred and the service status

Service status	Service in which an error has occurred	
	JP1/AJS3 CSA Web Application Server	JP1/AJS3 CSA HTTP Server
Status of JP1/AJS3 CSA Web Application Server	Stop	Running
Status of JP1/AJS3 CSA HTTP Server	Stop	Stop

- If an attempt is made to start the JP1 /AJS3 CSA HTTP Server service while it is already running, the KNBB2524-E message is displayed, and the command terminates abnormally.
- By default, the JP1/AJS3 CSA HTTP Server service is started by the user privilege with the user ID `nobody` and the group ownership `root`. If an attempt to start the service fails with the KNBB2524-E message displayed, check if the `nobody` user exists in the system. If the `nobody` user does not exist, create that user, or open the setting file `/opt/jp1ajs3csa/uCPSB/httpsd/conf/httpsd.conf` in a text editor and specify that user and group ownership for the `User` and `Group` lines.

```
User nobody
Group root
```

Return values

0	Normal end
Value other than 0	Abnormal end

Example 1

Start a service of JP1/AJS3 for Cloud Service Applications.

```
jajs_csa
```

Example 2

Start only the JP1/AJS3 CSA HTTP Server service among the services of JP1/AJS3 for Cloud Service Applications.

```
jajs_csa -t http
```

Example 3

Start only the JP1/AJS3 CSA Web Application Server service among the services of JP1/AJS3 for Cloud Service Applications.

```
jajs_csa -t app
```

jajs_csa_stop (Linux only)

Format

```
jajs_csa_stop  
  [-t {http|app}]
```

Description

Stop the service of the JP1/AJS3 for Cloud Service Applications.

Execution privileges

Superuser privilege

Storage directory

/etc/opt/jp1ajs3csa/

Arguments

-t {http|app}

Specify and stop a service of JP1/AJS3 for Cloud Service Applications.

http

Stop the JP1/AJS3 CSA HTTP Server service.

app

Stop the JP1/AJS3 CSA Web Application Server service.

If you omit this option, the JP1/AJS3 CSA HTTP Server service and the JP1/AJS3 CSA Web Application Server service stop in that order.

Notes

- This command applies only to Linux. You cannot use this command in Windows.
- In the case where the JP1/AJS3 CSA HTTP Server service was forcibly terminated last time because, for example, power was turned off, if you use this command to stop the JP1/AJS3 CSA HTTP Server service before restarting it, the KNBB2525-E message is displayed, and the command terminates abnormally.
- When the JP1/AJS3 CSA Web Application Server service stops, the command might terminate with the KNBB2715-W message displayed even though no error message or warning message was output. In such a case, no action is required for the KNBB2715-W message. This situation occurs because some processes have already been stopped internally, and the message indicates that stop processing of the JP1/AJS3 CSA Web Application Server service has completed normally.

Return values

0	Normal end
Value other than 0	Abnormal end

Example 1

Stop the JP1/AJS3 for Cloud Service Applications service.

```
jajs_csa_stop
```

Example 2

Stop only the JP1/AJS3 CSA HTTP Server service among the services of JP1/AJS3 for Cloud Service Applications.

```
jajs_csa_stop -t http
```

Example 3

Stop only the JP1/AJS3 CSA Web Application Server service among the services of JP1/AJS3 for Cloud Service Applications.

```
jajs_csa_stop -t app
```

jajs_log (Linux only)

Format

```
jajs_log
  [-h logical-host-name]
  [-f storage-directory]
  [-s]
  [-t]
  [-u]
  [-b]
  [additional-file]
```

Description

This command collects maintenance information, such as the JP1/AJS3 for Cloud Service Applications definitions, operating information, and information about the OS.

By default, the results of executing the data collection tool are output to the following files under `/tmp/jplajs2/trouble/`.

For physical host

1. `JP1_DEFAULT_1st.tar.Z`
The data for the first reports are output.
2. `JP1_DEFAULT_2nd.tar.Z`
The data for the second reports are output.
3. `JP1_DEFAULT_3rd.tar.Z`
All the other data are output.

For logical host

1. `logical-host-name_1st.tar.Z`
The data for the first report are output.
2. `logical-host-name_2nd.tar.Z`
The data for the second report are output.
3. `logical-host-name_3rd.tar.Z`
All the other data are output.

Execution privileges

Superuser privilege

Storage directory

`/opt/jplajs3csa/tools/`

Arguments

-h *logical-host-name*

Specify the name of the target logical host. Data of JP1/Base is collected from the specified logical host.

In addition, the data collection tool collects the data on the physical host in addition to the data on the specified logical host.

If you do not specify a name, the physical host logs are collected.

-f storage-directory

Use a full path without space characters to specify the directory used to store the collected information. If the specified directory name contains a space character, the system assumes that the character string before the space is the storage directory name and treats the characters after the space as other arguments.

When you use a relative path to specify a storage directory, the specified path is created under the root directory and the collected data are stored there.

If you specify a directory that does not exist, a new directory with that name is created. If data have already been collected in the specified storage directory, a message asking whether you want to overwrite the data appears.

If you omit this option, the collected data are output to `/tmp/jp1ajs2/trouble/`.

-s

Specify this option if you do not want to collect information about the database used by JP1/AJS3.

If you do not specify this option, the data collection tool collects information about the database.

-t

Specify this option if you do not want to obtain the `hosts`, `services`, and `password` files.

-u

Specify this option if you do not want to obtain the core file.

Although you specify this option, the back trace information is collected.

-b

Specify this option if you do not want to collect detailed information about JP1/Base.

The detailed information about JP1/Base is the data for the second report, which is output to the `JP1BASE_INFO` directory.

If you do not specify this option, the data collection tool collects detailed information about JP1/Base.

When this option is not specified, it is automatically determined whether to collect the information. Therefore, do not specify this option if you are unsure about whether detailed information about JP1/Base needs to be collected.

Specify this option only when you want to suppress the collection of detailed information about JP1/Base.

If free disk space at the output destination is insufficient, execute the data collection tool with the `-b` option specified, and then execute the data collection tool for JP1/Base (`jobs_log`) to collect detailed information about JP1/Base. For details about the data collection tool for JP1/Base (`jobs_log`), see the *JP1/Base User's Guide*.

additional-file

Use the full path without space characters to specify the file that is not usually obtained by using the data collection tool, such as the core file of the JP1/AJS3 commands. If the specified file name contains a space character, the system assumes that the character string before the space is an additional file name and treats the characters after the space

as other arguments. Using this argument, you can collect information that is not automatically collected by the data collection tool.

If the core file is specified as an additional file, the core file is collected even if you specify the `-u` option.

You can specify a directory name for `additional-file`. If you specify a directory, all the data in the specified directory are collected.

Notes

- If you collect data about a logical host in a cluster configuration, you must mount the shared disk for the logical host.
- The data collection tool uses the `gzip` command to compress the collected data. If the `gzip` command is not installed in the environment where the data collection tool is executed, the data collection tool uses the `tar` command to compress and output the data. It does not use the `compress` command. If the `tar` command is not installed, the data collection tool terminates abnormally, and processing ends.
- Because the user might not have reference permission for a file contained in the script, the superuser must execute the script.
- If you have already created a file containing the results of executing the script, JP1/AJS3 outputs a message asking for permission to overwrite the file. Enter `y` to overwrite the file. If you do not want to overwrite the file, enter `n`.
- If no core dump file is output, a message (`tar: core? Is unknown.The file is not dumped.`) is displayed. This is not a problem.
- If the target product is not installed or is being used by another process, or a file that cannot be accessed because of its file attribute is detected, a message stating that there is no applicable directory or file or that the target file cannot be accessed might be displayed during the collection of data. This is not a problem.
- Because the `ajs2collectcore` command is executed internally while the data collection tool is being executed, some data cannot be collected, depending on the OS. For details, see *ajs2collectcore (UNIX only)* in *3. Commands Used for Normal Operations* in the manual *JP1/Automatic Job Management System 3 Command Reference*.
- If there are no data to be collected, a file containing the execution result of the data collection tool is not created.
- Do not execute more than one data collection tool at the same time.
- The data collection tool executed by an AJS administrator cannot collect information that requires superuser privileges. We recommend that a user with superuser privileges executes the data collection tool.
For an AJS administrator to execute the data collection tool, the following operations must be performed.
 - The output destination file must be deleted before the data collection tool is executed.
 - The JP1 administrator group must be granted write permissions for the output destination directory.
 - The JP1 administrator group must be granted access permissions for the root directory.
 - To specify the additionally collected data, the JP1 administrator group must be granted access permissions.
- When you specify options, do not specify characters or symbols that have special meanings in the script. If you specify such characters and symbols, an unexpected error might occur.
- When the `ajscsasetup` command was used with the `-d` option specified for system setup, you need to manually obtain the directory specified for the `-d` option.

Return values

0	Normal end
Value other than 0	Abnormal end

Messages

Message	Description	System action
Directory <i>directory-name</i> is created	A directory is created.	Continues processing.
Some data could not be collected by AJS Administrator.	Some data could not be collected because an AJS administrator executed the data collection tool.	Continues processing.
Overwrite file (<i>file-name</i>) ok?	This message asks you whether you want to overwrite <i>file-name</i> . Press <i>y</i> to continue the processing, or press <i>n</i> to cancel the processing.	Waits for a user response.
[CAUTION] When a target program is not installed, or when file access fails because some other process is using the file or because a necessary file-access permission is lacking, a message might be output that states that file access failed or a directory or file does not exist. Such a message does not indicate a problem.	This message is displayed when the specified file is being used or was not found during data collection. However, there is no problem.	Continues processing.
Output file name : (<i>file-name</i>)	The file indicated by <i>file-name</i> has been created.	Terminates the processing.
Write permission error (<i>directory-name</i>)	You do not have write permission. Possible reasons are as follows: <ul style="list-style-type: none"> You do not have permission to create a directory. The directory is being used by another process. Correct the error, and then re-execute the data collection tool.	Terminates the processing.
Make directory (<i>directory-name</i>) is unsuccessful	The directory could not be created. Possible reasons are as follows: <ul style="list-style-type: none"> You do not have permission to create a directory. The directory is being used by another process. Correct the error, and then re-execute the data collection tool.	Terminates the processing.
Read permission error (<i>file-name</i>)	You do not have read permission. Obtain read permission, and then re-execute the data collection tool.	Terminates the processing.
File <i>file-name</i> is not found	The directory or file specified as the additional file was not found. Specify a correct path, and then re-execute the data collection tool.	Terminates the processing.
[-s] [-f <i>output-file</i>] [-h <i>Logical-Host-Name</i>] [-t] [-u] [-e] [-b] [<i>add-in-file</i> ...]	The options are specified incorrectly. Specify the options correctly, and then re-execute the data collection tool.	Terminates the processing.
The collection of detailed information on JP1/Base begins.	Collection of detailed information about JP1/Base has started.	Continues processing.

Message	Description	System action
The collection of detailed information on JP1/Base ended.	Collection of detailed information about JP1/Base has ended	Continues processing.

Example 1

The following command collects data about a physical host.

```
jajs_log
```

Example 2

The following command collects data about a logical host (`cluster`).

```
jajs_log -h cluster
```

Example 3

The following command outputs information, including the core file (`/tmp/core`), to a specified file (`/tmp/trouble`).

```
jajs_log -f /tmp/trouble /tmp/core
```

Data that can be collected

The data collection tool collects the data from JP1/AJS3 for Cloud Service Applications in addition to the data from JP1/AJS3 - Manager. The data additionally collected from JP1/AJS3 for Cloud Service Applications are shown below. For details on data collected from JP1/AJS3 - Manager, see *jajs_log or _04 (UNIX only)* in *3. Commands Used for Normal Operations* in the manual *JP1/Automatic Job Management System 3 Command Reference*.

The data for the first reports (`/tmp/jplajs2/trouble/JP1_DEFAULT_1st.tar.z#1`)

Names of directory or file containing collected data	Description
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED^{#2}</code>	Storage destination of shared directory information
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/conf^{#2}</code>	Storage destination of configuration files
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/database^{#2}</code>	Storage destination of database information
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/database/jplajscsadbdef.dat^{#2}</code>	Definition information output result file
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/database/jplajscsadbexe.dat^{#2}</code>	History information output result file
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/log^{#2}</code>	Storage destination of log files
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/sys^{#2}</code>	Storage destination of system files
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED/tmp^{#2}</code>	Storage destination of temporary files
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/etc/opt/jplajs3csa/conf</code>	Storage destination of configuration files excluding the root certificate
<code>/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/opt/jplajs3csa/sys</code>	Storage destination of system files

Names of directory or file containing collected data	Description
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/srvdata	Storage destination of data of the HTTP server and application server
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/srvdata/snapshot.zip	Data of the HTTP server and application server
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/var/opt/jplajs3csa/database	Storage destination of database information
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/var/opt/jplajs3csa/database/jplajscsadbdef.dat	Definition information output result file
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/var/opt/jplajs3csa/database/jplajscsadbexe.dat	History information output result file
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/var/opt/jplajs3csa/log	Storage destination of log files
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/var/opt/jplajs3csa/sys	Storage destination of system files
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/var/opt/jplajs3csa/tmp	Storage destination of temporary files
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/snapshotlog.txt	Log file output by the tool that collects data of the HTTP server and application server
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/jplajs3csadbinfo.txt	Database information
/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/_csaras.filelist	File list

#1

When the `-f` option is omitted, data are output here.

#2

/tmp/jplajs2/trouble/JP1AJS3CSA_INFO/SHARED and files and directories under it are collected only when setup is executed by using the `ajscssetup` command with the `-d` option specified and when the directories and files exist.

jajs_log.bat (Windows only)

Format

```
jajs_log.bat
  [-h logical-host-name]
  [-f storage-directory]
  [-s]
  [-t]
  [-u]
  [-b]
```

Description

This command collects maintenance information, such as the JP1/AJS3 for Cloud Service Applications definitions, operating information, and information about the OS.

By default, the results of executing the data collection tool are output to the following files under %TEMP%\jplajs2\backlog.

For physical host

1. JP1_DEFAULT\JP1_DEFAULT_1st
The data for the first reports are output.
2. JP1_DEFAULT\JP1_DEFAULT_2nd
The data for the second reports are output.
3. JP1_DEFAULT\JP1_DEFAULT_3rd
All the other data are output.

For logical host

1. *logical-host-name**logical-host-name*_1st
The data for the first report are output.
2. *logical-host-name**logical-host-name*_2nd
The data for the second report are output.
3. *logical-host-name**logical-host-name*_3rd
All the other data are output.

Execution privileges

Administrators privileges

Storage directory

JP1/AJS3 for Cloud Service Applications-installation-folder\tools\

Arguments

-h *logical-host-name*

Specify the name of the target logical host. Data of JP1/Base is collected from the specified logical host.

In addition, the data collection tool collects the data on the physical host in addition to the data on the specified logical host.

If you do not specify a name, the physical host logs are collected.

-f *storage-directory*

Use the absolute path to the folder to which collected data are output. You can also use a relative path from the location in which the command is executed. However, you cannot specify the root directory.

To specify a path that contains spaces, enclose the entire path in double quotation marks ("").

If you specify a folder that does not exist, a new folder with that name is created.

If data have already been collected in the specified storage folder, a message asking whether you want to overwrite the files is displayed.

If you specify too long a path to the storage folder, data collection might fail. If data collection fails, specify a shorter path, and then retry collection data.

If you omit this option, the collected data are output to %TEMP%\jplajs2\backlog. If you specify this option, the value of this option overrides the storage folder that was changed from the default by customizing the tool.

-s

Specify this option if you do not want to collect information about the database used by JP1/AJS3.

If you do not specify this option, the data collection tool collects information about the database.

-t

Specify this option if you do not want to obtain the `hosts`, `services`, and `password` files.

-u

Specify this option if you do not want to obtain dump files.

-b

Specify this option if you do not want to collect detailed information about JP1/Base.

The detailed information about JP1/Base is the data for the second report, which is output to the `JP1BASE_INFO` directory.

If you do not specify this option, the data collection tool collects detailed information about JP1/Base.

When this option is not specified, it is automatically determined whether to collect the information. Therefore, do not specify this option if you are unsure about whether detailed information about JP1/Base needs to be collected.

Specify this option only when you want to suppress the collection of detailed information about JP1/Base.

If free disk space at the output destination is insufficient, execute the data collection tool with the `-b` option specified, and then execute the data collection tool for JP1/Base (`jbs_log`) to collect detailed information about JP1/Base. For details about the data collection tool for JP1/Base (`jbs_log`), see the *JP1/Base User's Guide*.

additional-file

Use the full path without space characters to specify the file that is not usually obtained by using the data collection tool, such as the core file of the JP1/AJS3 commands. If the specified file name contains a space character, the system assumes that the character string before the space is an additional file name and treats the characters after the space as other arguments. Using this argument, you can collect information that is not automatically collected by the data collection tool.

If the core file is specified as an additional file, the core file is collected even if you specify the `-u` option.

You can specify a directory name for `additional-file`. If you specify a directory, all the data in the specified directory are collected.

Notes

- If you execute the data collection tool without the `-s` option specified during startup of the JP1/AJS3 service, the job might end abnormally. In such a case, JP1/AJS3 does not collect information about the ISAM database.
- To collect data about a logical host in a cluster configuration, execute the data collection tool on the logical host on which the logical host runs.
- The data collection tool does not compress the data if collects. To compress the data, use a data compression tool.
- If you have already created a file containing the results of batch files, JP1/AJS3 outputs a message asking for permission to overwrite the file. To override the file, specify `y`. If you do not want to overwrite the file, specify `n`.
- While a batch file is being executed, JP1/AJS3 might display an error message stating that a sharing violation has occurred for a file in the `JP1/Cloud Service Linkage-installation-folder\sys` folder. This is not a problem.
- If you perform an operation on the collected data, such as moving it or deleting it immediately after the execution of the data collection tool has finished, a message reporting that the process cannot access a file because another process is currently using the file might be displayed. This message is displayed because a process that collects OS information internally is still being executed despite termination of the tool. If this message is displayed, wait a while and then retry the operation.
- If you execute the data collection tool while using Outlook, the following message might be displayed:

```
The program is attempting to access email addresses in Outlook. Is this all right?
```

This message is displayed because of the machine configuration collection program (`msinfo32`) that is executed internally by the data collection tool. This program does not affect the operation of the data collection tool or Outlook. The data collection tool does not collect email addresses. If this message is displayed, click the **No** button.

- When you execute the data collection tool, you must open the Command Prompt window as an administrator. If you are not an administrator, UAC will frequently open a confirmation dialog box while the data collection tool is running. If you turn UAC off, you will not need to open the Command Prompt window as an administrator.
- Do not execute more than one data collection tool at the same time.
- When you specify options, do not specify characters or symbols that have special meanings in the batch file. If you specify such characters and symbols, an unexpected error might occur.
- When the `ajscssetup` command was used with the `-d` option specified for system setup, you need to manually obtain the directory specified for the `-d` option.

Return values

0	Normal end
Value other than 0	Abnormal end

Messages

Message	Description	Action
Finished. Press any key.	The process ended normally. Press any key.	Wait for a user response.
Failed. Press any key.	The process did not end normally. Press any key. See the output OS messages, remove the cause of the error, and then re-execute the process.	Wait for a user response.
File <i>file-name</i> is exist. Delete to continue? (y/n)	A file created the last time this process was executed exists. Press <i>y</i> to delete the file and continue processing, or press <i>n</i> to stop processing.	Wait for a user response.
Directory <i>directory-name</i> is exist. Delete to continue? (y/n)	A directory created the last time this process was executed exists. Press <i>y</i> to delete the directory and continue processing, or press <i>n</i> to stop processing.	Wait for a user response.
Error exist in option.	An option is specified incorrectly. Specify the option correctly, and then re-execute the process.	Complete the process.
The following logical hosts exist, other than the specified logical host. : <i>logical-host-name</i>	A logical host environment other than the one specified for the <i>-h</i> option exists. If necessary, re-execute the process.	After this message, the following message is output: Finished. Press any key.
The collection of detailed information on JP1/Base begins.	Collection of detailed information about JP1/Base has started.	Continue processing.
The collection of detailed information on JP1/Base ended.	Collection of detailed information about JP1/Base has ended.	Continue processing.
The collection of Event Log in text format begins.	Collection of event log data in text format has started.	Continue processing.
The collection of Event Log in text format ended.	Collection of event log data in text format has ended.	Continue processing.

Example 1

The following command collects data about a physical host.

```
jajs_log.bat
```

Example 2

The following command collects physical host data while the JP1/AJS3 service is running.

```
jajs_log.bat -s
```

Example 3

The following command collects data about a logical host (*cluster*).


```
jajs_log.bat -h cluster
```

Data that can be collected

The data collection tool collects the data about JP1/AJS3 for Cloud Service Applications in addition to the data about JP1/AJS3 - Manager. The data additionally collected from JP1/AJS3 for Cloud Service Applications are shown below. For details on data collected from JP1/AJS3 - Manager, see *jajs_log.bat* or *_04.bat (Windows only)* in *3. Commands Used for Normal Operations* in the manual *JP1/Automatic Job Management System 3 Command Reference*.

The data for the first reports (%TEMP%\jplajs2\backlog\JP1_DEFAULT\JP1_DEFAULT_1st"1)

Name of folder or file containing collected data	Description
\JP1AJS3CSA_INFO\ALLUSERSPROFILE	Storage destination of user data
\JP1AJS3CSA_INFO\ALLUSERSPROFILE\conf	Storage destination of configuration files excluding the root certificate
\JP1AJS3CSA_INFO\ALLUSERSPROFILE\database	Storage destination of database information
\JP1AJS3CSA_INFO\ALLUSERSPROFILE\database\jplajscsadbdef.dat	Database definition file output result file (authentication information excluded)
\JP1AJS3CSA_INFO\ALLUSERSPROFILE\database\jplajscsadbexe.dat	History information output result file of the database
\JP1AJS3CSA_INFO\ALLUSERSPROFILE\log	Storage destination of log files
\JP1AJS3CSA_INFO\ALLUSERSPROFILE\tmp	Storage destination of temporary files
\JP1AJS3CSA_INFO\conf	Storage destination of configuration files excluding the root certificate
\JP1AJS3CSA_INFO\database#2	Storage destination of database information
\JP1AJS3CSA_INFO\database\jplajscsadbdef.dat#2	Definition information output result file
\JP1AJS3CSA_INFO\database\jplajscsadbexe.dat#2	History information output result file
\JP1AJS3CSA_INFO\HNTRLib2	Storage destination of log files
\JP1AJS3CSA_INFO\jplcommon_ajs2	Storage destination of product information files
\JP1AJS3CSA_INFO\jplcommon_ajs3csa	Storage destination of log files
\JP1AJS3CSA_INFO\log#2	Storage destination of log files
\JP1AJS3CSA_INFO\SHARED#3	Storage destination of shared folder information
\JP1AJS3CSA_INFO\SHARED\conf#3	Storage destination of configuration files excluding the root certificate
\JP1AJS3CSA_INFO\SHARED\database#3	Storage destination of database information
\JP1AJS3CSA_INFO\SHARED\database\jplajscsadbdef.dat#3	Definition information output result file
\JP1AJS3CSA_INFO\SHARED\database\jplajscsadbexe.dat#3	History information output result file
\JP1AJS3CSA_INFO\SHARED\log#3	Storage destination of log files
\JP1AJS3CSA_INFO\SHARED\tmp#3	Storage destination of temporary files
\JP1AJS3CSA_INFO\srvdata	Data of the HTTP server and application server
\JP1AJS3CSA_INFO\srvdata\snapshot.zip	Data of the HTTP server and application server

Name of folder or file containing collected data	Description
\JP1AJS3CSA_INFO\sys	Storage destination of system files
\JP1AJS3CSA_INFO\tmp#2	Storage destination of temporary files
\JP1AJS3CSA_INFO\Version\ProductInfo.txt	Product information file
\JP1AJS3CSA_INFO\Version\Version.txt	Product information file
\JP1AJS3CSA_INFO\FILELIST.txt	File list output file
\JP1AJS3CSA_INFO\GETERROR.log	Error log file
\JP1AJS3CSA_INFO\JP1AJS3CSA.DAT	Registry information
\JP1AJS3CSA_INFO\PERMISSIONINFO.TXT	Folder permissions output file

#1

When the `-f` option is omitted, data are output here.

#2

Collection is performed only if the relevant folders and files are deployed in the installation destination folder.

#3

\JP1AJS3CSA_INFO\SHARED and the files and directories under it are collected only when setup is executed by using the `ajscssetup` command with the `-d` option specified and when the directories and files exist.

ajscsajobreg (Windows only)

Format

```
ajscsajobreg
  -d service-linkage-job-definition-file-name
  -n custom-job-name
  [-i icon-file-name]
  [-f]
```

Description

This command registers the service linkage job.

Execution privileges

Administrators privileges

Storage directory

JP1/AJS3 - View-installation-folder\bin

Arguments

-d *service-linkage-job-definition-file-name*

Specify an absolute or relative path to the service linkage job definition file name.

-n *custom-job-name*

Specify a custom job name of a service linkage job.

The number of characters that can be specified is 1 to 7 (unit: byte).

Only the following characters can be specified.

- English letters (Case-insensitive)
- Numbers
- - (Hyphen)
- _ (Underscore)

A specified character string with @ added at the end is treated as the custom job name.

-i *icon-file-name*

Specify an absolute or relative path to the icon file name.

If this option is omitted, the default icon is used.

-f

A service linkage job of the same name, if any, is forcibly overwritten and registered.

Notes

None.

Return values

0	Normal end
Value other than 0	Abnormal end

Example 1

Register a service linkage job under the following conditions:

- Path to a service linkage job definition file: `d:\temp\sldef01.json`
- Service linkage job name: `awss3UL`
- Path to an icon file: Not specified (The default icon is used)

```
ajscsajobreg -d d:\temp\sldef01.json -n awss3UL
```

When a service linkage job has been successfully registered, the following is displayed.

```
KNBB4501-I The service linkage job has been registered. (awss3UL)
```

Example 2

Forcibly overwrite and register a service linkage job under the following conditions.

- Path to a service linkage job definition file: `d:\temp\sldef02.json`
- Service linkage job name: `azbsDL`
- Path to an icon file: `d:\icon\image01.gif`

```
ajscsajobreg -d d:\temp\sldef02.json -n azbsDL -i d:\icon\image01.gif -f
```

When a service linkage job has been successfully registered, the following is displayed.

```
KNBB4501-I The service linkage job has been registered. (azbsDL)
```

ajscsajoblist (Windows only)

Format

```
ajscsajoblist
```

Description

This command lists the registered service linkage jobs.

Job names of service linkage jobs are displayed in ascending order and in the format as follows:

```
Job name 1
  Service linkage job definition name 1
  Authentication definition name 1
Job name 2
  Service linkage job definition name 2
  Authentication definition name 2
:
```

Execution privileges

None.

Storage directory

JP1/AJS3 - View-installation-folder\bin

Arguments

None.

Notes

- In the Service Linkage Job Definition window, select the check box for **Specify the default value of the authentication definition specified in the custom job**. The authentication definition name is output only for the service linkage job in which the definition file output by specifying the default authentication definition name is registered. For details on how to output definition files, see [6. Operation](#).

Return values

0	Normal end
Value other than 0	Abnormal end

Example 1

List the registered service linkage jobs when the service linkage jobs of `aws3UL` and `azbsDL` are registered.

```
ajscsajoblist
```

The output is as follows:

```
awss3UL
  /s101
  /auth01
azbsDL
  /s102
  /auth02
```

Example 2

List the registered service linkage jobs when no service linkage job is registered.

```
ajscsajoblist
```

The output is as follows:

```
KNBB4514-W The service linkage job is not registered.
```

ajscsajobdel (Windows only)

Format

```
ajscsajobdel  
{-n custom-job-name|-a}
```

Description

This command deletes the service linkage job.

Execution privileges

Administrators privileges

Storage directory

JP1/AJS3 - View-installation-folder\bin\

Arguments

-n *custom-job-name*

Specify a custom job name of a service linkage job you want to delete.

The number of characters that can be specified is 1 to 7 (unit: byte).

Only the following characters can be specified.

- English letters (Case insensitive)
- Numbers
- - (Hyphen)
- _ (Underscore)

-a

Delete all registered service linkage jobs.

This option cannot be specified together with -n.

Notes

None.

Return values

0	Normal end
Value other than 0	Abnormal end

Example 1

Delete the registered service linkage jobs `aws3UL`.

```
ajscsajobdel -n awss3UL
```

When a service linkage job has been successfully deleted, the following is displayed.

```
KNBB4515-I The service linkage job has been deleted. (awss3UL)
```

Example 2

Delete the service linkage job `awss3DL`, which does not exist.

```
ajscsajobdel -n awss3DL
```

The output is as follows:

```
KNBB4517-E The specified service linkage job cannot be deleted because it does not exist. (awss3DL)
```

Example 3

Delete all registered service linkage jobs when the service linkage jobs of `awss3UL` and `awss3DL` are registered.

```
ajscsajobdel -a
```

When the service linkage jobs have been successfully deleted, the following are displayed.

```
KNBB4515-I The service linkage job has been deleted. (awss3UL)  
KNBB4515-I The service linkage job has been deleted. (awss3DL)
```


8

Troubleshooting

This chapter describes the procedures for dealing with problems and the data that must be collected.

8.1 Troubleshooting procedure

If a problem occurs in JP1/AJS3 for Cloud Service Applications, use the following procedure to troubleshoot:

1. Check the status.

Check the status of the problem. If a message is output, read it. For details about why each message is output and how to troubleshoot, see [9. Messages](#).

2. Collect data.

You need to collect data to identify the cause of a problem. Collect the necessary data after reading [8.3 Data to be collected when a problem occurs](#) and [8.4 Collecting data for troubleshooting](#).

3. Investigate the problem.

Identify the cause of the problem based on the data you have collected. Either pinpoint where the problem occurred or narrow down the problem range.

8.2 Types of log information and storage locations

The following table shows the log information that is output during JP1/AJS3 for Cloud Service Applications operation.

Table 8–1: List of log information

Target host	Log name	Explanation
JP1/AJS3 for Cloud Service Applications server	System failure log	Logs information about system problems for system administrators. For details, see the description of System failure log in the manual, <i>JP1/Automatic Job Management System 3 Troubleshooting</i> .
	Application server common logs	The system outputs logs when the application server starts and stops. For details, see <i>8.2.1 Application Server Common Logs</i> .
	Application server logs	The system outputs logs of screen operations of JP1/AJS3 for Cloud Service Applications. For details, see <i>8.2.2 Application Server Logs</i> .
	Server job logs	The system outputs the service linkage job information, JP1/AJS3 - Agent host information, JP1/AJS3 - Manager host information, and job information, when a service linkage job is executed. For details, see <i>8.2.3 Server Job Logs</i> .
	Trace log	Outputs maintenance information. The internal format is not disclosed.
	Command log	The system outputs the log of command operations for JP1/AJS3 for Cloud Service Applications. For details, see <i>8.2.4 Command Log</i> .
<ul style="list-style-type: none"> JP1/AJS3 - Manager host JP1/AJS3 - Agent host 	Service linkage job log	The system outputs the operation history of service linkage jobs. For details, see <i>8.2.5 Service Linkage Job Log</i> .
	Service linkage job trace log	Outputs maintenance information. The internal format is not disclosed.
JP1/AJS3 - View host	Service linkage job operation command log	Outputs maintenance information of registration, deletion, and list display commands of service linked jobs. The internal format is not disclosed.
	Service linkage job operation command error information log	Outputs maintenance information when an error occurs in the registration, deletion, and list display commands of service linked jobs. The internal format is not disclosed.
	Service linkage job definition log	Outputs maintenance information of detailed definition screen of unit of service linkage jobs. The internal format is not disclosed.

8.2.1 Application Server Common Logs

Outputs logs when the application server starts and stops.

The output format of the application server common log is shown below.

```
OS-informationΔHost-nameΔTime-zoneΔLog-function-start-time
NumberΔDateΔTimeΔProduct-identifierΔProcess-IDΔThread-IDΔMessage-IDΔMessage-
text
:
```

Legend:

Δ: Space character

Details of output items are described below.

OS information

The system outputs information about the operating system on which the log function is running.

Host name

The system outputs the name of the host on which the log function is running.

Time zone

The system outputs the time zone of the operating system.

Log function start time

The system outputs the log function start time.

Number

The system outputs the four-digit serial number of the common log for application servers.

Date and Time

The system outputs the acquisition date and time of the common log for application server.

Product identifier

The system outputs the name identifying the product.

Process ID

Process ID is output as a hexadecimal number.

Thread ID

ID to identify threads is output as a hexadecimal number.

Message ID

The system outputs the Message ID. For details of message, see [9. Messages](#).

Message text

The system outputs the message text corresponding to the Message ID. For details of message, see [9. Messages](#).

An example of the output of the application server common log is shown below:

```
**** Microsoft WindowsNT6.1(Build:7601) Service Pack 3 host1 TZ=(local)-9:0
0 2022/04/07 11:03:20.713
0001 2022/04/22 11:40:41.763   AJS3forCSA  00001AFC 0000144C KNBB3001-I Sta
rt the startup process of the CSA Web Application Server service
:
```

Cautionary note

When log records in a log file are wrapped around to the next file, the original file is not deleted but is overwritten with new log records from the top of the file. To distinguish between log records output before and after wrapping around, the following character string (endpoint identifier) is output at the end of the latest log record.

```
-----< End of Data >-----
```

The endpoint identifier that is output at the end of the previous log is deleted, and the endpoint identifier is output again after a new log is output. Therefore, note the following points when referencing a job execution history log file:

- To check the latest log data, reference the log data preceding the endpoint identifier. The log data that follows the endpoint identifier is the log records output before wrapping around.

- If the log records in a log file have been wrapped around in special timing, two or more endpoint identifiers might remain in the job execution history log file. In such a case, the first endpoint identifier counted from the top of the file is valid.

8.2.2 Application Server Logs

Outputs logs when the application server starts and stops.

The output format of the application server log is the same as the application server common log. For details, see [8.2.1 Application Server Common Logs](#).

The output format of the application server log is shown below.

```
**** Microsoft WindowsNT6.1 (Build:7601) Service Pack 3 host1 TZ=(local)-9:0
0 2022/04/07 11:03:20.713
0001 2022/04/22 11:40:41.763 AJS3forCSA 00001AFC 0000144C KNBB3212-E The
user name or password is invalid.
:
```

8.2.3 Server Job Logs

The system outputs the service linkage job information, JP1/AJS3 - Agent host information, JP1/AJS3 - Manager host information, and job information, when a service linkage job is executed.

The output format of the server job log is the same as the application server common log. For details, see [8.2.1 Application Server Common Logs](#).

The output format of the server job log is shown below.

```
**** Microsoft WindowsNT6.1 (Build:7601) Service Pack 3 host1 TZ=(local)-9:0
0 2022/04/07 11:03:20.713
0001 2022/04/22 11:40:41.763 AJS3forCSA 00001AFC 0000144C KNBB3034-I UUID
ΔJP1 user name for job executionΔAgent-host-nameΔManager-host-nameΔSchedule
r-servicenameΔFull-unit-nameΔExecution-IDΔJob-IDΔService-linkage-job-informa
tion-definition-nameΔAuthentication-definition-nameΔLinked-service-nameΔOver
view of-linked-processingΔCLI-for-execution-processingΔJP1-resource-group-na
me
:
```

Legend:

Δ: Space character

8.2.4 Command Log

The system outputs the log of command operations for JP1/AJS3 for Cloud Service Applications.

The output format of the command log is the same as that of the application server common log. For details, see [8.2.1 Application Server Common Logs](#).

8.2.5 Service Linkage Job Log

When a service linkage job is executed, a service linkage job log is output to the JP1/AJS3 - Manager host or JP1/AJS3 - Agent host.

The output format of service linkage job log is shown below.

```
DateΔTimeΔProcess-IDΔThread-IDΔMessage-IDΔMessage-text  
:
```

Legend:

Δ: Space character

Details of output items are described below.

Date and Time

The system outputs date and time of acquisition of the server job log.

Process ID

Process ID is output as a hexadecimal number.

Thread ID

ID to identify threads is output as a hexadecimal number.

Message text

The system outputs the message text shown below.

Table 8–2: Output format of message text for service linkage jobs log

Output
The system outputs the message text with the Message ID in the following format: For details of message, see 9. Messages .
<pre>Message IDΔMessage text corresponding to the Message ID</pre>
The following format is output when jobs are started:
<pre>KNBB6000-I Starting service linkage job scheduler-service-name:unit-completion-name:execution-IDΔOS-user-name-when-executing-jobΔman ager-host-nameΔJP1-user-name-when-executing-jobΔjob-IDΔagent-host-name</pre>
The value of the environment variable name specified by the unit definition for the service linkage job is output in the following format.
<pre>Environment variable name=value</pre>
For defining jobs in JP1/AJS3 for Cloud Service Applications, when the log output settings in Trace information settings are specified as Output the executed command line, Output the standard output, and Output the standard error output, then logs will be output in the following format.
<pre>KNBB6004-I Processing name Service linkage job executed by the command line. CLI_STDOUT:Standard output for the command executed by the service linkage job# CLI_STDERR:Standard error output for the command executed by the service linkage job#</pre>
#: If there is no standard output or standard error output, nothing is output. If there are multiple lines, each line is output in the above format.
When a job is completed, message text that indicates completion is output in the following format.
<pre>Job ended. RET=return-value</pre>

8.2.6 List of log files and directories

(1) Log files and directories in Windows

The log file names and folder names of the Windows versions of JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager, JP1/AJS3 - Agent, and JP1/AJS3 - View are shown below.

The *Log name* column lists the names of the logs created by JP1/AJS3 for Cloud Service Applications.

In *Log file and folder names* column, the following abbreviations are used for folders:

1. CSA_Path

- If the installation folder is the default installation folder or is in a folder protected by the system^{#1}:

`%ALLUSERSPROFILE%#2\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA`

- If the installation folder is other than the above:

JP1/AJS3 - for Cloud Service Applications-installation-folder

The default installation folder is *system-drive*\Program Files (x86)\HITACHI\JP1AJS3CSA.

2. Mgr_Path

- If the installation folder is the default installation folder or is in a folder protected by the system^{#1}:

`%ALLUSERSPROFILE%#2\Hitachi\JP1\JP1_DEFAULT\JP1AJS2`

- If the installation folder is other than the above:

JP1/AJS3 - Manager-installation-folder

The default installation folder is *system-drive*\Program Files (x86)\HITACHI\jplajs2.

3. Agt_Path

- If the installation folder is the default installation folder or is in a folder protected by the system^{#1}:

`%ALLUSERSPROFILE%#2\Hitachi\JP1\JP1_DEFAULT\JP1AJS2`

- If the installation folder is other than the above:

JP1/AJS3 - Agent-installation-folder

The default installation folder is *system-drive*\Program Files (x86)\HITACHI\jplajs2.

4. View_Path

`%ALLUSERSPROFILE%#2\Hitachi\JP1\JP1_DEFAULT\JP1AJS2V`

#1

A *folder protected by the system* is the path to a folder in any of the following:

- *system-drive*\Windows
- *system-drive*\Program Files
- *system-drive*\Program Files (x86)

#2

The default for `%ALLUSERSPROFILE%` is *system-drive*\ProgramData.

In a cluster system, unless otherwise specified, make the substitutions shown in the following table for the indicated abbreviations.

Table 8–3: Log output folders in a cluster system

Abbreviation in Table 8-4 to Table 8-7	Log output folder in a cluster system
<i>CSA_Path</i>	<i>shared-disk-name\jp1ajs3csa</i>
<i>Mgr_Path</i>	<i>shared-disk-name\jp1ajs2</i>
<i>Agt_Path</i>	<i>shared-disk-name\jp1ajs2</i>

The *Default disk space* column indicates the disk space allocated to a log file when the default environment settings is used for operation, and is the total disk space size when there are multiple log files. If the user has not changed the size of a log file, the disk space indicated in the table is the disk space allocated to that log file.

The *Maximum disk space* column indicates the maximum amount of disk space that a log file uses. This value includes changes to definitions, and is the total disk space size when there are multiple log files. The values in this column are the maximum values for log files whose size varies according to the definitions.

The *Timing for switching files* column indicates either a limit or the point at which JP1/AJS3 for Cloud Service Applications switches the log file (output file for the log) to another file. A value in this column indicates that there are multiple log files, and that the file with the oldest update date is overwritten when the maximum disk space has been reached. The values in parentheses indicate the default timing for switching log files.

Table 8–4: Log files and folders in JP1/AJS3 for Cloud Service Applications (for Windows)

Log name	Log file and folder names	Default disk space ^{#1}	Maximum disk space ^{#1}	Timing for switching files ^{#2}
Application server common log	<i>CSA_Path\log\appserverN^{#3}.log</i>	16,384	16,384	8,192
Application server log	<i>CSA_Path\log\appserverN^{#3}.log</i>	16,384	262,144	8,192
Server job log	<i>CSA_Path\log\appserverjobN^{#4}.log</i>	33,792	262,144	11,264
Trace log ^{#7}	<i>CSA_Path\log\csatrace{1 2}.log</i>	16,384	16,384	8,192
Command log	<i>CSA_Path\log\CommandName^{#5}N^{#6}.log</i>	256	262,144	128

#1

The unit is kilobytes unless otherwise specified.

#2

The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.

#3

N is an integer from 1 to the value specified by `SERVER_LOG_APP_NUM` (number of log files of application server) in the environment setting file (`ajs3csaweb.conf`).

#4

N is an integer from 1 to the value specified by `SERVERJOB_LOG_JOB_NUM` (number of log files of server jobs) in the environment setting file (`ajs3csaweb.conf`).

#5

The file name begins with the name of the next command that was executed.

- ajscsasetup

- jajs_csa_service

Note that logs output by using the `ajscssetup` command are always output by the physical host, even in a cluster configuration environment. In addition, the format is not disclosed for the information output for logs related to `ajajs_csa_service`.

#6

N is an integer from 1 to the value specified by `COM_LOG_NUM` (number of log files of commands) in the environment setting file (`aj3csaweb.conf`).

#7

The format of the information output is not disclosed.

Table 8–5: Log files and folders in JP1/AJS3 - Manager (for Windows)

Log name	Log file and folder names	Default disk space ^{#1}	Maximum disk space ^{#1}	Timing for switching files ^{#2}
Service linkage job log	<i>Mgr_Path</i> \log\ajscs aexec{01 02 03 04 05 06 07 08 09 10}.log	256,000	1,126,400	Log file size of environment setting parameter (25,600)
Service linkage job trace log ^{#3}	<i>Mgr_Path</i> \log\ajscs atrace	20,480	20,480	Wraparound

#1

The unit is kilobytes unless otherwise specified.

#2

The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.

#3

The format of the output information is not disclosed.

Table 8–6: Log files and folders in JP1/AJS3 - Agent (for Windows)

Log name	Log file and folder names	Default disk space ^{#1}	Maximum disk space ^{#1}	Timing for switching files ^{#2}
Service linkage job log	<i>Agt_Path</i> \log\ajscsa exec{01 02 03 04 05 06 07 08 09 10}.log	256,000	1,126,400	Log file size of environment setting parameter (25,600)
Service linkage job trace log ^{#3}	<i>Mgr_Path</i> \log\ajscs atrace	20,480	20,480	Wraparound

#1

The unit is kilobytes unless otherwise specified.

#2

The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.

#3

The format of the information output is not disclosed.

Table 8–7: Log files and folders in JP1/AJS3 - View (for Window)

Log name	Log file and folder names	Default disk space ^{#1}	Maximum disk space ^{#1}	Timing for switching files ^{#2}
Service linkage job operation command log ^{#3}	<i>View_Path</i> \log\csajo breg[#nnnn_]#4{1 2}.log	2,048	2,048	1,024
Service linkage job operation command error information log ^{#3}	<i>View_Path</i> \log\ajscs ajobreg{1 2}.log	2,048	2,048	1,024

Log name	Log file and folder names	Default disk space#1	Maximum disk space#1	Timing for switching files#2
Service linkage job definition log	<i>View_Path</i> \log\csade fcustom_jobname#5{1 2}.log	100	100#5	50

#1

The unit is kilobytes unless otherwise specified.

#2

The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.

#3

The format of the information output is not disclosed.

#4

Assigns any value between 0001 and 9999 to *nnnn* in #*nnnn*_ and creates the log file.

#5

Create according to the number of registered service-linked jobs (custom jobs). Therefore, the maximum disk usage will increase or decrease depending on the number of registered service linkage jobs.

(2) Log files and directories in Linux

The log file names and folder names of the Linux versions of JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager, JP1/AJS3 - Agent, and JP1/AJS3 - View are shown below.

The *Log name* column lists the names of the logs created by JP1/AJS3 for Cloud Service Applications.

In *Log file and folder names* column, the following abbreviations are used for folders:

In a cluster system, consider the path names indicate the directories in the Log output directory in a cluster system column in the following table unless otherwise specified.

Table 8–8: Log output directories in a cluster system

Value in Table 8-9 and Table 8-11	Log output folder in a cluster system
/var/opt/jplajs2/	<i>shared-disk-name</i> /jplajs2
/var/opt/jplajs3csa/	<i>shared-disk-name</i> /jplajs3csa

The *Default disk space* column indicates the disk space allocated to a log file when the default environment settings is used for operation, and is the total disk space size when there are multiple log files. If the user has not changed the size of a log file, the disk space indicated in the table is the disk space allocated to that log file.

The *Maximum disk space* column indicates the maximum amount of disk space that a log file uses. This value includes changes to definitions, and is the total disk space size when there are multiple log files. The values in this column are the maximum values for log files whose size varies according to the definitions.

The *Timing for switching files* column indicates either a limit or the point at which JP1/AJS3 for Cloud Service Applications switches the log file (output file for the log) to another file. A value in this column indicates that there are multiple log files, and that the file with the oldest update date is overwritten when the maximum disk space has been reached. The values in parentheses indicate the default timing for switching log files.

Table 8–9: Log files and folders in JP1/AJS3 for Cloud Service Applications (Linux)

Log name	Log file and folder names	Default disk space ^{#1}	Maximum disk space ^{#1}	Timing for switching files ^{#2}
Application server common log	/var/opt/jplajs3csa/log/appserversysN ^{#3} .log	16,384	16,384	8,192
Application server log	/var/opt/jplajs3csa/log/appserverN ^{#3} .log	16,384	262,144	8,192
Server job log	/var/opt/jplajs3csa/log/appserverjobN ^{#4} .log	33,792	262,144	8,192
Trace log ^{#7}	/var/opt/jplajs3csa/log/csatrace{1 2}.log	16,384	16,384	8,192
Command log	/var/opt/jplajs3csa/log/CommandName ^{#5} N ^{#6} .log	256	262,144	128

#1
The unit is kilobytes unless otherwise specified. The value in parentheses is the kilobyte value expressed in gigabytes.

#2
The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.

#3
N is an integer from 1 to the value specified by SERVER_LOG_APP_NUM (number of log files of application server) in the environment setting file (ajs3csaweb.conf).

#4
N is an integer from 1 to the value specified by SERVERJOB_LOG_JOB_NUM (number of log files of server jobs) in the environment setting file (ajs3csaweb.conf).

#5
The file name begins with the name of the next command that was executed.
- ajscsasetup
- jajs_csa
- jajs_csa_stop
Note that logs output by using the ajscsasetup command are always output by the physical host, even in a cluster configuration environment.

#6
N is an integer from 1 to the value specified by COM_LOG_NUM (number of log files of commands) in the environment setting file (ajs3csaweb.conf).

#7
The format of the information output is not disclosed.

Table 8–10: Log files and folders in JP1/AJS3 - Manager (for Linux)

Log name	Log file and folder names	Default disk space ^{#1}	Maximum disk space ^{#1}	Timing for switching files ^{#2}
Service linkage job log	/var/opt/jplajs2/log/ajscsaexec{01 02	256,000	1,126,400	Log file size of environment setting parameter (25,600)

Log name	Log file and folder names	Default disk space#1	Maximum disk space#1	Timing for switching files#2
Service linkage job log	03 04 05 06 07 08 09 10}.log	256,000	1,126,400	Log file size of environment setting parameter (25,600)
Service linkage job trace log#3	/var/opt/jplajs2/log/ajscsatriace	20,480	20,480	Wraparound

- #1 The unit is kilobytes unless otherwise specified. The value in parentheses is the kilobyte value expressed in gigabytes.
- #2 The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.
- #3 The format of the information output is not disclosed.

Table 8–11: Log files and folders in JP1/AJS3 - Agent (for Linux)

Log name	Log file and folder names	Default disk space#1	Maximum disk space#1	Timing for switching files#2
Service linkage job log	/var/opt/jplajs2/log/ajscsaexec{01 02 03 04 05 06 07 08 09 10}.log	256,000	1,126,400	Log file size of environment setting parameter (25,600)
Service linkage job trace log#3	/var/opt/jplajs2/log/ajscsatriace	20,480	20,480	Wraparound

- #1 The unit is kilobytes unless otherwise specified. The value in parentheses is the kilobyte value expressed in gigabytes.
- #2 The value in parentheses in this column indicates the default timing for switching log files. The unit is kilobytes.
- #3 The format of the information output is not disclosed.

8.3 Data to be collected when a problem occurs

This section describes the data you need to collect when a problem occurs in JP1/AJS3 for Cloud Service Applications.

JP1 provides data collection tools for batch collection of required data. Data that can be collected using the initial settings of the data collection tools are indicated with symbols in the tables above.

8.3.1 Data to collect

(1) Log information about the OS

You need to collect the following log information about the OS.

(a) Data to collect in Windows

Table 8–12: OS log information that must be collected when a problem occurs (for Windows)

Type of information	Default storage location for files	Collection by the tool
Windows event log	Event log file	Y
Windows registry information	--	Y
hosts file services file	<ul style="list-style-type: none">• <i>system-folder</i>\system32\drivers\etc\hosts• <i>system-folder</i>\system32\drivers\etc\services	Y
Machine configuration ^{#1}	--	Y
List of program products with running services ^{#1}	--	Y
Network configuration ^{#1}	--	Y
Memory dump ^{#2}	--	N
Crash dump ^{#2}	--	N
Problem report	--	N

Legend:

Y: The data collection tools can collect data.

N: The data collection tools cannot collect data.

#1

Various kinds of computer information that include this information, such as the hardware environment, software environment, and Internet environment, can be obtained. Obtaining this information might take several minutes. Wait until the System Information dialog box closes.

#2

Windows memory dumps and crash dumps cannot be acquired with the data collection tool. Collect the corresponding information manually when a problem occurs.

For the collection method, see [8.4.1\(1\)\(c\) Obtain a dump file](#) and [8.4.1\(1\)\(d\) Collect problem reports](#).

(b) Data to collect in Linux

Table 8–13: OS log information that must be collected when a problem occurs (for Linux)

Type of information	Default storage location for files	Collection by the tool
syslog	/var/log/messages*	Y
hosts file services file passwd file inittab file	/etc/hosts /etc/services /etc/passwd /etc/inittab	Y
Patch information for each OS	--	Y
Shared library file for each OS	--	Y
List of processes	--	Y
core file	--	N
Network information	--	Y
Information about installed Hitachi products	/etc/.hitachi/pplistd/pplistd	Y

Legend:

Y: The data collection tools can collect data.

N: The data collection tools cannot collect data.

(2) Information about JP1

You need to collect the following information about JP1. If the problem occurs while your system is connected to a network, you also need to obtain the files on the JP1/AJS3 - Manager host to which the system is connected.

(a) Data to collect in Windows

Table 8–14: JP1 information to be collected for a problem occurring (for Windows)

Type of information	Default storage location for files	Collection by the tool
Log files	It depends on where JP1/AJS3 for Cloud Service Applications are installed. When JP1/AJS3 for Cloud Service Applications is installed in the default installation location, under the <i>system drive</i> \Windows folder, or under the <i>system drive</i> \Program Files folder %ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA\log When JP1/AJS3 for Cloud Service Applications is installed in a folder other than the above <i>JP1/AJS3 - for Cloud Service Applications-installation-folder</i> \log	Y
Settings file	<i>JP1/AJS3 - for Cloud Service Applications-installation-folder</i> \conf	Y
Get folder access rights	<i>JP1/AJS3 - for Cloud Service Applications-installation-folder</i> \	Y
Integrated trace log folder	<i>system drive</i> \Program Files\hitachi\HNTRLib2	Y

Type of information	Default storage location for files	Collection by the tool
Thread dump	<i>JP1/AJS3 - for Cloud Service Applications-installation-folder\uCPSB\CC\server\public\ejb\ajs3csa</i>	Y
Database information	--	Y

Legend:

Y: The data collection tools can collect data.

#

The default for %ALLUSERSPROFILE% is *system-drive\ProgramData*.

(b) Data to collect in Linux

Table 8–15: JP1 information that must be collected when a problem occurs (for Linux)

Type of information	Default storage location for files	Collection by the tool
Log files	<i>/var/opt/jplajs3csa/log</i>	Y
Settings file	<i>/opt/jplajs3csa/conf</i>	Y
Get folder access rights	<i>/opt/jplajs3csa</i>	Y
Integrated trace log folder	<i>/var/opt/hitachi/HNTRLib2/spool</i>	Y
Thread dump	<i>/opt/jplajs3csa/uCPSB/CC/server/public/ejb/ajs3csa</i>	Y
Database information	--	Y

Legend:

Y: The data collection tools can collect data.

Important

When you collect information, use the tar command instead of the cp command. Because the directory from which files are obtained also contains system files, using the cp command might lead to unexpected results.

(3) List of processes

(a) Data to collect in Windows

In Windows, start Task Manager and open the **Processes** page. Check the operating status of processes.

For details about JP1/AJS3 processes, see Processes (for Windows) in the manual *JP1/Automatic Job Management System 3 Troubleshooting*.

(b) Data to collect in Linux

Use the ps command to check the operating status of processes.

For details about JP1/AJS3 processes, see Processes (for Linux) in the manual *JP1/Automatic Job Management System 3 Troubleshooting*.

(4) Operation data

Collect the following information about the operation that was being performed when the problem occurred:

- Details about the operation
- Time that the problem occurred
- Machine configuration (the version of each OS, host name, JP1/AJS3 for Cloud Service Applications and JP1/AJS3 - Manager, JP1/AJS3 - View configuration)
- Whether the problem is reproducible
- Login user name for the Windows host or Linux host using JP1/AJS3 for Cloud Service Applications

(5) Error information displayed on the screen

Make hard copies of the following:

- Windows on the screen when an application error has occurred
- Error message dialog box (and display the displayed information when a details button (if there is one) is clicked)

(6) Other information

In addition to the above information, you need to collect the following information:

- Contents of **System Log** and **Application Log** of the Windows Event Viewer window
- Arguments specified in a command when the problem occurs during the execution of a command

8.4 Collecting data for troubleshooting

By collecting data, you can investigate and identify the causes of a problem, and then take the necessary measures.

This section describes details of how to collect data when a problem occurs.

8.4.1 Details of how to collecting data

The following shows how to collect data when a problem occurs.

(1) Collecting data for troubleshooting in Windows

(a) Execute the data collection tool

JP1/AJS3 for Cloud Service Applications provides the data collection tool (`jajs_log.bat`).

Use this tool if you have not changed the output destinations of log files and other data from the defaults, or if you do not need to collect data other than the data collected by default.

The following shows examples of executing the data collection tool:

```
C:\Program Files\Hitachi\JP1AJS3CSA\tools\jajs_log.bat
```

By default, the results of executing the data collection tool are output under `%TEMP%\jplajs2\backlog`. Back up these folders.

When you use the data collection tools in a cluster system, you can collect data by specifying a logical host name. The data collection tools also provide options for limiting the amount of data that is collected.

For details on the data collection tools, see *jajs_log.bat (Windows only)* in *7. Commands*.

Important

When you execute the data collection tool, you must open the Command Prompt window as an administrator. If you are not an administrator, UAC will frequently open a confirmation dialog box.

(b) Check Windows event logs

Check Windows event logs in the **Event Viewer** pane of Windows. Also, write the logs to the file.

(c) Obtain a dump file

If a STOP error occurs in Windows or if an application crashes, you might have to obtain dump files (a memory dump and a crash dump) and a problem report.

The following describes how to obtain a dump file and a problem report.

■ How to obtain a dump file

The dump files output during the problem should be collected manually. However, in order to output a dump file when a problem occurs, it is necessary to configure the output beforehand.

Follow the procedure below to configure the dump file output.

• **Memory dump output setting procedure**

1. In Control Panel, click **System**.
The System dialog box opens.
2. Click **Advanced systems settings**.
The System Properties dialog box opens.
3. Click **Settings** button in **Startup and Recovery** on **Advanced** tab.
The Startup and Recovery dialog box opens.
4. Select the **Complete memory dump** in the **Write debugging information**, and specify the output destination file in **Dump file**.

Complete Memory Dump may not be displayed depending on the size of the installed memory. In that case, select **Kernel Memory Dump**.

Cautionary note

The memory dump size depends on the real memory size. The larger the physical memory installed, the larger the size of the memory dump. Allocate enough disk space to collect a memory dump. For details see Microsoft documentation.

• **Crash dump output setting procedure**

If a problem occurs, you may need a crash dump (a file containing debug information at the time of the problem). Windows registry information must be set in order to output a crash dump. For detailed setting information, refer to Microsoft's Windows Error Reporting (WER) related support technical information. When setting, set to output complete dump information.

Cautionary note

Crash dumps are output not only when JP1 crashes, but also when other application programs crash. In addition, when crash dumps are output, the amount of disk space is used up accordingly. Allocate sufficient disk space if you want to output crash dumps.

(d) Collect problem reports

You can detect the problem on the machine and investigate solutions for each problem. If a process on the JP1/AJS for Cloud Service Applications server stops due to an application error, follow the steps below to collect a problem report.

1. Right click Windows Start, click **Run** in Windows, enter `wercpl` in the text box, and click **OK**.
The Problem Reports and Solutions dialog box is displayed.
2. On the left pane, click **View Problem History**.
The problems history will be listed.
3. Double-click the applicable problem.
Details about the problem report appear.
4. Click **Copy to clipboard**.
5. Copy the text into a text editor, and save the file.
Use the problem report text file as data for investigating the failure.

(e) Check the status of processes

Check the operating status of the JP1/AJS3 - Manager process at the connection destination in the **Processes** tab of the Windows **Task Manager** window.

For details about the JP1/AJS3 - Manager process, see *Processes* in the manual *JP1/Automatic Job Management System 3 Troubleshooting*.

(f) Check the operation data

For the problem that has occurred, check the operation data and record it. You need to check the following information:

- Details about the operation
- Time that the problem occurred
- Machine configuration (the version of each OS, host name, JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager and JP1/AJS3 - Agent configuration)
- Whether the problem is reproducible
- Login user name for the Windows host using JP1/AJS3 for Cloud Service Applications

(g) Collect error information displayed on the screen

Make hard copies of the following:

- Windows on the screen when an application error has occurred
- Error message dialog box (and display the displayed information when a details button (if there is one) is clicked)

(h) Other information

Collect other necessary information.

- Contents of **System Information** in **Help and Support**

Print the **System Information** from **Help and Support**.

(2) Collecting data for troubleshooting in Linux

(a) Execute the data collection tool

JP1/AJS3 for Cloud Service Applications provides the data collection tool (`jaajs_log`).

Use this tool if you have not changed the output destinations of log files and other data from the defaults, or if you do not need to collect data other than the data collected by default.

The following shows examples of executing the data collection tool:

```
/opt/jp1ajs3csa/tools/jaajs_log
```

By default, the results of executing the data collection tool are output under `/tmp/jp1ajs2/trouble`.

When you use the data collection tools in a cluster system, you can collect data by specifying a logical host name. The data collection tools also provide options for limiting the amount of data that is collected.

For details on the data collection tools, see *jaajs_log (Linux only)* in *7. Commands*.

(b) Obtain the contents of the core file

Obtain the contents of the `core` file if the file has been output.

The `core` file is output to one of the following directories:

- User home directory
- Current directory in which the command was executed

(c) Check the status of server processes

Use the `ps` command to check the operating status of processes.

(d) Check the operation data

For the problem that has occurred, check the operation data and record it. You need to check the following information:

- Details about the operation
- Time that the problem occurred
- Machine configuration (the version of each OS, host name, JP1/AJS3 for Cloud Service Applications, JP1/AJS3 - Manager and JP1/AJS3 - Agent configuration)
- Whether the problem is reproducible
- Login user name for the Linux host using JP1/AJS3 for Cloud Service Applications

(e) Collect error information displayed on the screen

Make hard copies of the following:

- Windows on the screen when an application error has occurred
- Error message dialog box (and display the displayed information when a details button (if there is one) is clicked)

8.5 Troubleshooting

This section describes how to solve problems when using JP1/AJS3 for Cloud Service Applications.

8.5.1 Troubleshooting SSL communications

(1) The login screen cannot be displayed when using SSL

The following factors may be the cause.

- Your Web browser may not be configured to use SSL. Configure the Web browser to use SSL.
- Server secret key and the secret key of SSL server certificate may not match. Recreate the server secret key, Certificate Signing Request (CSR), and SSL server certificate, then restart the JP1/AJS3 CSA HTTP Server service.

(2) Errors with event source is crypt32 and event ID is 8 are output to event logs on the client machine

This error may occur when a certificate issued by a certificate authority that is not registered as a trusted root certification authority is used for SSL communication and when automatic updates by trusted root certification authority is enabled on the client machine.

This is occurring because the client machine is trying to automatically update the certificate of a trusted root certificate authority and is failing to communicate with Microsoft's Windows Update.

Take one of the following actions.

- Verify that the client machine can communicate with Windows Update provided by Microsoft.
- Disable the automatic update of the certificate by trusted root certification authority.

For information on how to disable the automatic update of the certificate by trusted root certification authority, see the Microsoft website.

8.5.2 Troubleshooting Web Browser Problems

(1) The screen is not displayed, or the display is corrupted

Make sure that you are using the operating system and Web browser that are required.

Check that the magnification of the Web browser is set to 100%.

8.5.3 Troubleshooting failures of jobs and linked cloud services

By linking a job (generation) executed on JP1/AJS3 and the linked cloud service, the following conditions can be checked.

- Check the status of the linked cloud service when a job terminates abnormally.

- Check the status of the linked cloud service while a job is running.
- Check the status of a job when the status of the linked cloud service is abnormal.

The following describes how to link a job and a cloud service:

(1) Check the status of the linked cloud service when a job terminates abnormally

Check the status of the corresponding history on the linked cloud service based on the information that the job terminated abnormally. Check the status when a job is terminated due to the time limit of job definition.

Job information to be checked

- Execution result details
- Job definition information
- Job execution information

Means to check job information

- JP1/AJS3 - View or JP1/AJS3 - Web Console
- `ajsshow` command or `ajsprint` command

(2) Check the status of the linked cloud service while a job is running

Check the status of the corresponding history on the linked cloud service based on the information of the job that is running.

Job information to be checked

- Job start date and time

Means to check job information

- JP1/AJS3 - View or JP1/AJS3 - Web Console
- `ajsshow` command

If the status cannot be identified using these means, check the status of the corresponding history on the linked cloud service based on the information output to the service linkage jobs log for a job executed by host (JP1/AJS3 - Manager host or JP1/AJS3 - Agent host) For more information about the service linkage job log, see [8.2.5 Service Linkage Job Log](#).

Service Linkage Job Log information to be checked

- CLI command run history (command line information)
- CLI start time

Means to check the service linkage job log information

- Login to job execution host (JP1/AJS3 - Manager host or JP1/AJS3 - Agent host), collect logs to check the information

(3) Check the status of a job when the status of the linked cloud service is abnormal

Check that the history corresponding to the job based on the information of the history corresponding to the linked cloud service. Check the following two items of information:

Information 1

Information on the cloud service to be checked

- Run start time
- Run finish time
- "Request IP address (job execution host)" of the corresponding request in the cloud operation logs

Means to check information on the cloud service

- Management screen of the linked cloud service

Information 2

Contents of message KNBB3034-I output to server job log

- Manager host name
- Scheduler service name
- Unit full name
- Execution ID
- Job ID

Means to check the service linkage job log information

Collect and check logs after login to JP1/AJS3 for Cloud Service Applications



Note

It is recommended that the following items be entered based on the definition of the service linkage job so that Information 1 and Information 2 can be linked, and the job can be identified from the information on the linked cloud service.

- Name of the service to be linked
- Overview of the linking process

(4) Recommended settings for service linkage job

The following settings are recommended when designing a service linkage job in order to link the job and the history of the linked cloud service.

(a) Settings of the linked cloud service

Enable the activity trace function in the linked cloud service to secure information, such as cloud operation logs.

(b) Definition of service linkage execution information

- Set the CLI command line to be output to the job's standard error output as the execution history of the CLI command. By default, the setting is to output this information.
- If the linked cloud service has an interface that enables you to specify and check arbitrary character strings, specify these strings as the information to be linked.

Specifically, the following environment variables are used.

- AJS_CSL_JOB_UUID (UUID set by the service linkage job)
- AJSHOST (Manager host name)
- AJS_AJSCONF (Scheduler service name)

- AJSJOBNAME (Job name (unit full name))
- AJSEXECID (Execution ID)
- JP1JobID (Job ID)

When specifying the manager host name, scheduler service name, job name, execution ID, and job ID, make sure that they are character strings that can be specified as CLI arguments for the linked cloud service. Pay particular attention to the value and the length of character string. For details on these environment variables, see the description of the environment variables which are configured when executing the job by JP1/AJS3 in the manual *JP1/Automatic Job Management System 3 Command Reference*.

- If there is information that can be used to identify the history on the linked cloud service side, specify that it will be output to standard error output.

Specifically, the following information should be output.

- Values that are unique to the linked cloud service (e.g., the identifier that was executed)
- URL that can refer to the status of the linked cloud service
- Information on the start time, end time, and status of the linked cloud service

8.5.4 Troubleshooting for service linkage jobs

(1) An unexpected value was returned as the return value for the command defined on the JP1/AJS3 for Cloud Service Applications server

The cause might be the following:

- The command does not exist in the server.
If the command is not installed, install the command.
If the command path is not set by the PATH environment variable, set the command path.
- The user executing the job might not have the permission to execute the command.
If the user does not have permission to execute the command, execute the service linkage job as a user who has permission. Alternatively, change the permission required to execute the command so that the user executing the service linkage job can execute the job.
- If Windows is the OS of the execution host for the service linkage job, the command line might be too long.
Check the length of the command line and make sure that it is around 8,000 characters in length.

(2) In a Linux environment, the service linkage job was forcibly terminated unexpectedly

The size of the standard output and standard error output for the command defined for the JP1/AJS3 for Cloud Service Application server might be too large.

Check the syslog. The kernel might have stopped due to insufficient memory for the `ajscsaexec` process.

We recommend a total size of about 3 MB for the standard output and standard error output of commands defined on the JP1/AJS3 for Cloud Service Applications server. Configure the command line so that the size is not too large.

If the standard output and standard error output of commands defined on the JP1/AJS3 for Cloud Service Applications server are not required, consider specifying the command line to output to `/dev/null`.

9

Messages

This chapter describes the messages that are issued by JP1/AJS3 for Cloud Service Applications.

9.1 JP1/AJS3 for Cloud Service Applications Messages

This section describes messages which output by JP1/AJS3 for Cloud Service Applications with message IDs.

9.1.1 Message format

Each message consists of a message ID, followed by the message text. Messages are output in one of the following formats:

Messages beginning with KNBB:

```
KNBBnnnn-Z message text
```

9.1.2 Message ID

The message ID consists of the following content:

K

System identifier

NBB

Indicates a message relating to a JP1/AJS3 for Cloud Service Applications.

nnnn

Message serial number

Z

Message type, as one of the following:

E	Error message. Processing is canceled.
I	Information message. Reports information to the user.
Q	Query message. Prompts the user to respond.
W	Warning message. Processing continues after message output.

9.1.3 Format of message explanations

Messages are explained in the following format in this manual. Characters in italic vary each time the system displays a message.

The format is as follows; however, messages with maintenance information (such as verbose error codes or file names) may be displayed without *maintenance-information* even if the message text contains *maintenance-information* in the manual.

Message ID

Message text: *message text*

Explanation of the output message text.

(S)

System action

(O)

Operator action at message output

9.2 List of output destinations for messages

This section lists the output destinations of the messages that are output by JP1/AJS3 for Cloud Service Applications.

9.2.1 Output destinations of messages beginning with KNBB

Messages whose message ID begins with KNBB are messages about JP1/AJS3 - for Cloud Service Applications. The tables in the following subsections list the output destinations for each type of message.

(1) KNBB1601 to KNBB1700 (messages about the JP1/AJS3 for Cloud Service Applications installer)

The table below lists the output destinations of messages about the JP1/AJS3 for Cloud Service Applications installer. The table uses the following abbreviations for the output destinations:

Legend:

Dialog: Message dialog box

syslog: syslog

Event log: Windows event log

App log: Application server log or application server common log

Cmd log: Command log

HNTRLib2: Integrated trace log

stdout: Standard output

stderr: Standard error output

API: API response

Web: Display on the web browser

Linkage job log: Service linkage job log

Server job log: Server job log

Y: Is output.

--: Is not output.

Table 9–1: Output destinations of messages about the JP1/AJS3 for Cloud Service Applications installer

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB1601 - KNBB1610	Y	--	--	--	--	--	--	--	--	--	--	--
KNBB1621 - KNBB1622	Y	--	--	--	--	--	--	--	--	--	--	--
KNBB1631 - KNBB1633	Y	--	--	--	--	--	--	--	--	--	--	--
KNBB1671 - KNBB1672	Y	--	--	--	--	--	--	--	--	--	--	--

(2) KNBB2001 to KNBB2500 (Web GUI messages)

Web GUI messages are displayed on a web browser.

(3) KNBB2501 to KNBB3000 (messages about JP1/AJS3 for Cloud Service Applications commands)

The table below lists the output destinations of messages about JP1/AJS3 for Cloud Service Applications commands. The table uses the following abbreviations for the output destinations:

Legend:

Dialog: Message dialog box

syslog: syslog

Event log: Windows event log

App log: Application server log or application server common log

Cmd log: Command log

HNTRLib2: Integrated trace log

stdout: Standard output

stderr: Standard error output

API: API response

Web: Display on the web browser

Linkage job log: Service linkage job log

Server job log: Server job log

Y: Is output.

--: Is not output.

Table 9–2: Output destinations of messages about JP1/AJS3 for Cloud Service Applications commands

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB2501	--	--	--	--	Y	--	--	--	--	--	--	--
KNBB2502	--	Y	Y	--	Y	Y	Y	--	--	--	--	--
KNBB2503	--	Y	Y	--	Y	Y	--	Y	--	--	--	--
KNBB2504 - KNBB2505	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2506	--	--	--	--	Y	--	--	--	--	--	--	--
KNBB2507	--	Y	Y	--	Y	Y	Y	--	--	--	--	--
KNBB2511 - KNBB2516	--	--	--	--	Y	--	--	--	--	--	--	--
KNBB2517 - KNBB2519	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2520 - KNBB2521	--	--	--	--	Y	--	Y	--	--	--	--	--

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB2522 - KNBB2525	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2526	--	--	--	--	Y	--	--	--	--	--	--	--
KNBB2528 - KNBB2529	--	--	--	--	Y	--	--	--	--	--	--	--
KNBB2551 - KNBB2552	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2554	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2556	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2558 - KNBB2559	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2601	--	Y	Y	--	Y	--	--	Y	--	--	--	--
KNBB2602 - KNBB2603	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2651 - KNBB2655	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2657 - KNBB2660	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2701	--	--	--	--	--	--	Y	--	--	--	--	--
KNBB2702	--	--	--	--	Y	--	Y	--	--	--	--	--
KNBB2703	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2707	--	--	--	--	--	--	--	Y	--	--	--	--
KNBB2708	--	--	--	--	Y	Y	--	Y	--	--	--	--
KNBB2709 - KNBB2710	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2712	--	--	--	--	Y	--	--	Y	--	--	--	--
KNBB2714 - KNBB2715	--	--	--	--	Y	--	--	Y	--	--	--	--

(4) KNBB3001 to KNBB3999 (messages about the web application server)

The table below lists the output destinations of messages about the web application server. The table uses the following abbreviations for the output destinations:

Legend:

Dialog: Message dialog box

syslog: syslog

Event log: Windows event log

App log: Application server log or application server common log

Cmd log: Command log

HNTRLib2: Integrated trace log

stdout: Standard output

stderr: Standard error output

API: API response

Web: Display on the web browser

Linkage job log: Service linkage job log

Server job log: Server job log

Y: Is output.

--: Is not output.

Table 9–3: Output destinations of messages about the web application server

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB3001 - KNBB3006	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3026 - KNBB3031	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3033	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3034	--	--	--	--	--	--	--	--	--	--	--	Y
KNBB3051 - KNBB3052	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3054 - KNBB3056	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3059 - KNBB3064	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3102	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3103 - KNBB3106	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3151 - KNBB3153	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3201	--	--	--	Y	--	--	--	--	Y	--	--	--
KNBB3202	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3203	--	--	--	Y	--	--	--	--	Y	--	--	--
KNBB3204	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3206 - KNBB3208	--	--	--	Y	--	--	--	--	Y	--	--	--
KNBB3212	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3216	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3238 - KNBB3240	--	--	--	Y	--	--	--	--	Y	--	--	--
KNBB3290	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3291	--	--	--	Y	--	--	--	--	Y	--	--	--
KNBB3609	--	--	--	Y	--	--	--	--	Y	Y	--	--

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB3669	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3689	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3801 - KNBB3806	--	--	--	Y	--	--	--	--	--	--	--	--
KNBB3807 - KNBB3808	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3901 - KNBB3903	--	--	--	Y	--	--	--	--	Y	Y	--	--
KNBB3905	--	--	--	Y	--	--	--	--	--	--	--	--

(5) KNBB4000 to KNBB4500 (messages about the Service linkage job definitions window)

Messages about the **Service linkage job definitions** window are displayed on the dialog box of JP1/AJS3 - View.

(6) KNBB4501 to KNBB5000 (messages about the service linkage job definitions commands)

The table below lists the output destinations of messages about the service linkage job definitions commands. The table uses the following abbreviations for the output destinations:

Legend:

Dialog: Message dialog box

syslog: syslog

Event log: Windows event log

App log: Application server log or application server common log

Cmd log: Command log

HNTRLib2: Integrated trace log

stdout: Standard output

stderr: Standard error output

API: API response

Web: Display on the web browser

Linkage job log: Service linkage job log

Server job log: Server job log

Y: Is output.

--: Is not output.

Table 9–4: Output destinations of messages about the JP1/AJS3 for Cloud Service Applications commands

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB4501	--	--	--	--	--	--	Y	--	--	--	--	--
KNBB4502 - KNBB4509	--	--	--	--	--	--	--	Y	--	--	--	--
KNBB4511 - KNBB4514	--	--	--	--	--	--	--	Y	--	--	--	--
KNBB4515	--	--	--	--	--	--	Y	--	--	--	--	--
KNBB4516 - KNBB4526	--	--	--	--	--	--	--	Y	--	--	--	--

(7) KNBB6000 to KNBB7000 (messages about the service linkage job execution programs)

The table below lists the output destinations of messages about the service linkage job execution programs. The table uses the following abbreviations for the output destinations:

Legend:

- Dialog: Message dialog box
- syslog: syslog
- Event log: Windows event log
- App log: Application server log or application server common log
- Cmd log: Command log
- HNTRLib2: Integrated trace log
- stdout: Standard output
- stderr: Standard error output
- API: API response
- Web: Display on the web browser
- Linkage job log: Service linkage job log
- Server job log: Server job log
- Y: Is output.
- : Is not output.

Table 9–5: Output destinations of messages about the service linkage job execution programs

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB6000 - KNBB6003	--	--	--	--	--	--	--	--	--	--	Y	--
KNBB6004	--	--	--	--	--	--	--	Y#	--	--	Y#	--
KNBB6100 - KNBB6101	--	--	--	--	--	--	--	Y	--	--	Y	--

Message ID	Output destination											
	Dialog	syslog	Event log	App log	Cmd log	HNTRLib2	stdout	stderr	API	Web	Linkage job log	Server job log
KNBB6200 - KNBB6204	--	--	--	--	--	--	--	Y	--	--	Y	--
KNBB6205	--	--	--	--	--	--	--	--	--	--	Y	--
KNBB6300 - KNBB6305	--	--	--	--	--	--	--	Y	--	--	Y	--
KNBB6400 - KNBB6401	--	--	--	--	--	--	--	Y	--	--	Y	--
KNBB6450	--	--	--	--	--	--	--	Y	--	--	Y	--
KNBB6451 - KNBB6452	--	--	--	--	--	Y	--	Y	--	--	Y	--

#:

Output only if you check **Output the executed command lin** in **Trace information settings** in JP1/AJS3 for Cloud Service Applications.

9.3 List of messages

This section lists messages which output by JP1/AJS3 for Cloud Service Applications with message IDs.

9.3.1 Messages beginning with KNBB

This section explains the messages that begin with KNBB (messages about JP1/AJS3 for Cloud Service Applications).

(1) List of messages that begin with KNBB (messages about the JP1/AJS3 for Cloud Service Applications installer)

The following is a list of messages that begin with KNBB (messages about the JP1/AJS3 for Cloud Service Applications installer):

KNBB1601-E

This platform is not supported. Installation stops.

The installation was interrupted because an attempt was made to install a JP1/AJS3 product on a platform that does not meet the applicable operating system requirements. The JP1/AJS3 product cannot be installed on this platform.

(S)

The system aborts the installation.

(O)

Check the applicable operating system for the JP1/AJS3 product and install it on that OS.

For information on the applicable operating system, see the *release notes*.

KNBB1603-E

The Hitachi Integrated Installer disc might be corrupted. Installation cannot continue.

Installation was interrupted because an error occurred during installation.

The following factors may have caused the problem.

- Disc defect of Hitachi Integrated Installer
- If you are using the Hitachi Integrated Installer copied to a local disc, copying has failed.

(S)

The system aborts the installation.

(O)

If you have another Hitachi Integrated Installer disc, install JP1/AJS3 again using this disc.

If you are using the Hitachi Integrated Installer copied to a local disc, copy it again and install JP1/AJS3. Or, install JP1/AJS3 using the Hitachi Integrated Installer disc.

If the problem persists, collect the following data and contact your system administrator.

- Details of the operation performed
- Dialog displayed on the screen

- Installation log

If overwriting the installation or upgrading the installation, collect the following data as well.

- Execution results of the data collection tool

KNBB1604-E

Setting of license management information failed. The installation will stop.(maintenance-information)

The installation was interrupted because the license management information failed to be set.

(S)

The system aborts the installation.

(O)

Collect the following data and contact your system administrator.

- Details of the operation performed
- Dialog displayed on the screen
- Installation log

If overwriting the installation or upgrading the installation, collect the following data as well.

- Execution results of the data collection tool

KNBB1606-E

The user who executed the installation is not an administrator. An administrator is required to install this product.

The installation could not be performed because the user who performed the installation does not have administrative privileges.

(S)

The system aborts the installation.

(O)

A user who has administrative privileges should install JP1/AJS3 products.

KNBB1607-E

An internal error occurred during AJS3 setup. (maintenance-information)

An error occurred during the setup that JP1/AJS3 automatically performs during installation.

The following factors may be the cause:

- The port number used by JP1/AJS3 for Cloud Service Applications is already being used by another program.
- Insufficient capacity on the system drive (%systemdrive%).
- Insufficient capacity on the destination drive for the installation.

(S)

The system aborts the installation.

(O)

Eliminate the cause and reinstall JP1/AJS3.

If the problem persists, collect the following data and contact your system administrator.

- Details of the operation performed
- Hard copy of the dialog box displayed on the screen
- Installation log

If overwriting the installation or upgrading the installation, collect the following data as well.

- Execution results of the data collection tool

KNBB1608-E

Error occurred at opening file .Installation stops. (maintenance-information)

The installation was interrupted because the file used in the installation could not be opened.

The following factors may be the cause:

- Insufficient capacity on the system drive (%systemdrive%)
- The folder set in the system environment variable TEMP does not have write or read permissions.

Note: The file name that caused the error is output to maintenance information.

(S)

The system aborts the installation.

(O)

Eliminate the cause and reinstall JP1/AJS3.

If the problem persists, collect the following data and contact your system administrator.

- Details of the operation performed
- Dialog displayed on the screen
- Click **Properties** and **Security** of the folder set in the system environment variable TEMP, and make a hard copy of the Security screen.
- Installation log

If overwriting the installation or upgrading the installation, collect the following data as well.

- Execution results of the data collection tool

KNBB1609-E

Error occurred at reading file. Installation stops. (maintenance-information)

The installation was interrupted because the file used in the installation could not be read.

The following factors may be the cause:

- The folder set in the system environment variable TEMP does not have read permissions.

Note: The file name that caused the error is output to maintenance information.

(S)

The system aborts the installation.

(O)

Eliminate the cause and reinstall JP1/AJS3.

If the problem persists, collect the following data and contact your system administrator.

- Details of the operation performed
- Dialog displayed on the screen
- Click **Properties** and **Security** of the folder set in the system environment variable TEMP, and make a hard copy of the Security screen.
- Installation log

If overwriting the installation or upgrading the installation, collect the following data as well.

- Execution results of the data collection tool

KNBB1610-E

An internal error occurred during AJS3 unsetup. (maintenance-information)

An error occurred during the unsetup process automatically performed by JP1/AJS3 during uninstallation.

The following factors may be the cause:

- An invalid value is set in the preferences file.
- Files required for uninstallation have been deleted.

(S)

The system aborts the installation.

(O)

If an invalid value is set in the preferences file, enter the correct value. Otherwise, overwrite the installation once and uninstall again.

If the problem persists, collect the following data and contact your system administrator.

- Details of the operation performed
- Make a hard copy of the dialog box displayed on the screen
- Execution results of the data collection tool

KNBB1621-E

JP1/Base is not installed. Install JP1/Base, and then install AJS3.

Installation failed because JP1/Base is not installed.

(S)

The system aborts the installation.

(O)

Install JP1/Base version meets the prerequisites, and then restart the installation of AJS3. For the required JP1/Base version, see the *release notes*.

KNBB1622-E

The version of the installed JP1/Base is old. Please install after installing *JP1/Base-version-information* or later.

The installation was interrupted because the version of JP1/Base installed does not meet the prerequisite requirements of the product.

(S)

The system aborts the installation.

(O)

Install JP1/Base version meets the prerequisites, and then restart the installation of AJS3. For the required JP1/Base version, see the *release notes*.

KNBB1671-Q

The Hitachi Integrated Installer disc could not be found. Insert the disc into the drive.

The system checks for files on the Hitachi Integrated Installer disc that cannot be found.

(S)

The system waits for the response.

(O)

If you wish to continue the installation, select **Yes** after inserting the Hitachi Integrated Installer disc into the drive.

If you do not wish to continue the installation, select **No** to terminate the installation.

If the problem persists after inserting the Hitachi Integrated Installer disc, collect the following data and contact your system administrator.

- Details of the operation performed
- Dialog displayed on the screen
- Installation log

If overwriting the installation or upgrading the installation, collect the following data as well.

- Execution results of the data collection tool

KNBB1672-Q

This platform is not an applicable OS. Do you want to stop the installation?

The system confirms that the product installation is on a platform that meets the applicable OS requirements.

(S)

The system waits for the response.

(O)

Click the **Yes** button to finish the installation.

(2) List of messages that begin with KNBB (Web GUI messages)

The following is a list of messages that begin with KNBB (Web GUI messages):

KNBB2001-E

Specify *field-name*.

field-name is not specified.

(S)

The system aborts the process.

(O)

Enter the value in *field-name* and try again.

KNBB2003-E

Enter the values *minimum-value - maximum-value* in *field-name*.

The value was entered incorrectly in *field-name*.

(S)

The system aborts the process.

(O)

Re-enter the value of *minimum-value - maximum-value* in *field-name*.

KNBB2004-E

The *field-name* is specified incorrectly.

Incorrect format value is specified in *field-name*.

(S)

The system aborts the process.

(O)

Re-enter the correct format value in *field-name*.

KNBB2005-E

Duplicate variable name (*variable-name*).

The registration of the definition failed because the variable name is duplicated.

(S)

The system aborts the process.

(O)

Remove the duplicate variable name and click the **Register** button.

KNBB2006-E

Invalid import file format.

The import failed because the format of the definition file to be imported is invalid. If a value that cannot be entered is specified for the JSON key that corresponds to the input or specified value on each screen, the text field shows the values that can be read[#] and the checkbox or radio button shows the default value.

[#]: If the file contains characters that cannot be read properly by the Web browser, the characters will be garbled and displayed on the screen.

(S)

The system aborts the process.

- (O)
- Check that the file specified below is the exported file from the relevant definition screen and import it.
- The file must be in JSON format.
 - The file must be the one exported from the relevant definition screen.

KNBB2007-E

The maximum number (*maximum-value*) of variables that can be set for *item-name* was exceeded.

The registration of the definition failed because the variable exceeded the maximum value.

- (S)
- The system aborts the process.

- (O)
- Delete the variable and click the **Register** button.
- The maximum values of variables that can be registered are as follows:
- Custom input items for JP1/AJS3 - View
15 items
 - Environment variables for the execution host
32 items

KNBB2008-E

The user name or password is invalid.

Login failed because the value entered for the JP1 username or password was invalid.

- (S)
- The system aborts the process.

- (O)
- Make sure that the value entered is valid, and enter the JP1 username and password registered on the Access Control Server to which it is connected, and then log in.

KNBB2101-E

Cannot connect to the Server.

This message reports that access to the JP1/AJS3 for Cloud Service Applications server application failed. The following factors may be the cause.

- An error occurred during the communication process with the HTTP server or application server.
- The HTTP server or application server is not running.
- The HTTP server or application server is busy.
- The HTTP server or application server is not ready to connect the network.

- (S)
- The system aborts the process.

(O)

- An error occurred during the communication process with the HTTP server or application server.
Eliminate the cause of the errors and log in to JP1/AJS3 for Cloud Service Applications.
- The HTTP server or application server is not running.
Check either the JP1/AJS3 CSA HTTP Server service or JP1/AJS3 CSA Web Application Server service is running. If it is stopped, restart it and log in again.
- The HTTP server or the application server is busy.
It may be connected by retrying the connection.
- The network connection to the HTTP server or application server is not available.
Check the network environment with the HTTP server or application server. If there is a firewall between the HTTP server or the application server, check the firewall settings. If the session has been terminated, log in again.

KNBB2401-Q

Are you sure you want to log out?

The system confirms that you want to log out from JP1/AJS3 for Cloud Service Applications.

(S)

The system waits for the response.

(O)

Click the **OK** button to log out or click the **Cancel** button to cancel.

KNBB2402-Q

Are you sure you want to delete the *definition-type "definition-name"*?

The system confirms that you will delete the definition *definition-name*.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

(O)

Click the **OK** button to delete or click the **Cancel** button to cancel.

KNBB2407-Q

This is a definition (*definition-type "definition-name"*) that has a job execution history. Do you want to update it?

The system confirms whether to continue updating the definition if a service linkage job using the definition to be updated has been executed by JP1/AJS3 - Manager.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

(O)

Click the **OK** button to update or click the **Cancel** button to cancel.

To identify JP1/AJS3 - Manager jobs, use the following method:

- Identify the job that uses the target definition from KNBB3034-I in the server jobs log of JP1/AJS3 for Cloud Service Applications.
- From the unit definition of JP1/AJS3 - Manager that defines the service linkage job, identify the job by checking either of the following parameters that indicate the service linkage job definition name or the authentication definition name.
 - env="AJS_CSA_DEFINFNAME=*service-linkage-job-definition-name*" ;
 - env="AJS_CSA_AUTHINFNAME=*authentication-definition-name*" ;

KNBB2408-Q

This is a definition (*definition-type "definition-name"*) that has a job execution history. Do you want to delete it?

A service linkage job using the definition to be updated has been executed by JP1/AJS3 - Manager.

The system confirms whether you really want to delete the file or not, since deleting it may affect JP1/AJS3 - Manager jobs.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

(O)

Click the **OK** button to delete or click the **Cancel** button to cancel.

To identify JP1/AJS3 - Manager jobs, use the following method:

- Identify the job that uses the target definition from KNBB3034-I in the server jobs log of JP1/AJS3 for Cloud Service Applications.
- From the unit definition of JP1/AJS3 - Manager that defines the service linkage job, identify the job by checking either of the following parameters that indicate the service linkage job definition name or the authentication definition name.
 - env="AJS_CSA_DEFINFNAME=*service-linkage-job-definition-name*" ;
 - env="AJS_CSA_AUTHINFNAME=*authentication-definition-name*" ;

KNBB2409-Q

This is the definition (*definition-type "definition-name"*) used in the service linkage job definition. Do you want to update it?

This definition is used for the service linkage job definitions for JP1/AJS3 for Cloud Service Applications. The system confirms whether you really want to update the definition or not, since deleting it may affect the running job.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

(O)

Click the **OK** button to update or click the **Cancel** button to cancel.

To confirm the operation using the definition, check the contents from the definition screen of the Service linkage job definitions.

KNBB2410-Q

This is the definition (*definition-type "definition-name"*) used in the service linkage job definition. Do you want to delete it?

This definition is used for the service linkage job definitions for JP1/AJS3 for Cloud Service Applications. The system confirms whether you really want to delete the file or not, since deleting it may affect the job running.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

(O)

Click the **OK** button to delete or click the **Cancel** button to cancel.

To confirm the operation using the definition, check the contents from the definition screen of the Service linkage job definitions.

KNBB2411-E

definition-type "definition-name" already exists.

The registration of the definition failed because the definition type has already been registered.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

The system aborts the process.

(O)

Change the definition name and click the **Register** button again.

KNBB2412-I

definition-type "definition-name" was registered.

The definition was registered successfully.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

KNBB2413-I

definition-type "definition-name" was deleted.

The definition was deleted successfully.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

Waits for a response.

KNBB2414-E

The session you logged in to is disabled. Export the definition being created and then log in again as needed.

The logged-in session is already invalid. If necessary, export the definitions to temporarily save the definitions being created, then log in again.

The exported definitions can be imported to the screen by the import function of the corresponding definition screen.

(S)

The system aborts the process.

(O)

If necessary, export the definitions temporarily to save it being created, then log in again and retry the operation.

KNBB2415-E

No authority for *definition-type* "*definition-name*".

The operation failed because there is insufficient permission for the operation-target definition of the definition type.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

The system aborts the process.

(O)

Check the JP1 resource group settings of the operation-target definition, add the permissions, and then perform the operation.

KNBB2416-W

Registration was not performed by using the registered value because the definition was deleted. Check the value of the item for which "Protect" is specified. (Item name: *item-name*)

After opening a registered authentication definition from the Home screen, it was deleted before registration. Since the previous value that had been registered has been deleted, input items that do not select **Update Value** will be registered as if they had not been entered.

Enter the original values, check the **Update Value** checkbox, and then confirm that the registration is ready.

(S)

The system continues.

(O)

Please confirm the value that was entered in the item that has been checked in **Protect** and register again.

KNBB2417-E

definition-type "*definition-name*" has already been deleted.

Deletion and loading of the definition failed because the definition of the registered definition type has already been deleted.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition
- authentication definition

(S)

The system aborts the process.

(O)

Refresh the screen to display the latest definition list screen and then perform the operation.

(3) List of messages beginning with KNBB (messages about JP1/AJS3 for Cloud Service Applications commands)

The following is a list of messages beginning with KNBB (messages about JP1/AJS3 for Cloud Service Applications commands):

KNBB2501-I

The service (*service*) will now start.

Start Service (*service*).

(S)

Continues processing.

KNBB2502-I

The service (*service*) started.

Service started successfully.

(S)

The system outputs the fact that the service has started to the log.

KNBB2503-E

The service (*service*) failed to start.

The start failed because an error occurred during the service startup process.

(S)

The system aborts the service startup process.

(O)

Before this message is displayed, the message indicating the error is output to the command log or the application server log. Take action according to the message that was output immediately before this message.

KNBB2504-W

The service (*service*) is already running.

This message is output when the service attempting to start has already been started. Skip the startup process of the service that has already started and continue the process.

(S)

Continues processing.

KNBB2505-W

The service (*service*) is not running.

This message is output when the service attempting to stop has already been stopped. Skip the stop process of the service that has already stopped and continue the process.

(S)

Continues processing.

KNBB2506-I

The service (*service*) will now stop.

The system stops the service.

(S)

Continues processing.

KNBB2507-I

The service (*service*) has terminated.

Service is terminated.

(S)

The system outputs to the log that the service has been terminated.

KNBB2511-I

Setup of CSA started.

The system started the setup of JP1/AJS3 for Cloud Service Applications.

(S)

Continues processing.

KNBB2512-I

Setup of CSA ended successfully.

The system successfully completed the setup of JP1/AJS3 for Cloud Service Applications.

(S)

Continues processing.

KNBB2513-E

Failed to set up CSA

The system failed to setup JP1/AJS3 for Cloud Service Applications.

- (S) The system aborts command execution.
- (O) Before this message is displayed, the message indicating the error is output to the command log. Take action according to the message that was output immediately before this message.

KNBB2514-I

Unsetup of CSA started.

The system started the unsetup of JP1/AJS3 for Cloud Service Applications.

- (S) Continues processing.

KNBB2515-I

Unsetup of CSA ended successfully.

The system failed the unsetup of JP1/AJS3 for Cloud Service Applications.

- (S) Continues processing.

KNBB2516-E

Failed to perform unsetup of CSA.

The system failed the unsetup of JP1/AJS3 for Cloud Service Applications.

- (S) The system aborts command execution.
- (O) Before this message is displayed, the message indicating the error is output to the command log. Take action according to the message that was output immediately before this message.

KNBB2517-E

A system error has occurred. : maintenance-information

A system error occurred during processing. There may be a problem with the execution environment of the JP1/AJS3 CSA Web Application Server service.

- (S) The system aborts the process in which the error occurred.

(O)

Use the data collection tool to collect data, and then contact the system administrator.

KNBB2518-E

Insufficient memory occurred. : maintenance-information-1 maintenance-information-2 maintenance-information-3 maintenance-information-4

Insufficient memory was detected in the execution environment of the JP1/AJS3 CSA Web Application Server service.

(S)

The system aborts the process in which the error occurred.

(O)

Check the physical memory usage of the host where the JP1/AJS3 CSA Web Application Server service is running. If the capacity of the available physical memory is insufficient, terminate unnecessary applications to increase the size of available physical memory. (For details of the required capacity of physical memory of JP1/AJS3 for Cloud Service Applications, see the *release notes*.)

KNBB2519-E

Unexpected error occurred in CSA. :maintenance-information-1 maintenance-information-2 maintenance-information-3 maintenance-information-4

An unexpected error occurred during processing. There may be a problem with the execution environment of the JP1/AJS3 CSA Web Application Server service.

(S)

The system aborts the process in which the error occurred.

(O)

Use the data collection tool to collect data, and then contact the system administrator.

KNBB2520-I

Output of settings data will now start.

The system starts outputting settings data.

(S)

Continues processing.

KNBB2521-I

Output of settings data ended.

The system finished outputting settings data.

(S)

Continues processing.

KNBB2522-E

A timeout occurred while the service(*service*) was being started. (maintenance information = maintenance-information-1)

The startup process of the service failed because a timeout occurred during the startup process.

(S)

The system aborts the service startup process.

(O)

Eliminate the cause of the timeout, such as system startup or a temporarily high load, and execute the process again.

KNBB2523-E

A timeout occurred while the service(*service*) was being stopped. (maintenance information = maintenance-information-1, maintenance-information-2)

The stop process of the service failed because a timeout occurred during its stop process.

(S)

The system aborts the service stop processing.

(O)

Eliminate the cause of the timeout, such as system startup or a temporarily high load, and execute the process again.

KNBB2524-E

An error occurred while the service (*service*) was being started. (maintenance information = maintenance-information-1, maintenance-information-2)

The startup process of the service failed because an error occurred during the startup process. The following may be the cause.

- There is an error in the definition file.
- Timeout occurred.
- JP1/AJS3 CSA HTTP Server was started twice (when the service is operated by JP1/AJS3 CSA HTTP Server).

(S)

The system aborts the service startup process.

(O)

Eliminate the cause of the error and execute the process again.

KNBB2525-E

An error occurred while the service (*service*) was being stopped. (maintenance information = maintenance-information-1, maintenance-information-2, maintenance-information-3, maintenance-information-4)

The stop process of the service failed because an error occurred during its stop process. The following may be the cause.

- There is an error in the definition file.
- Timeout occurred.

(S)

The system aborts the service stop processing.

(O)

Eliminate the cause of the error and execute the process again.

KNBB2526-I

SERVICE : maintenance-information

This message is to report the progress of the service startup and stop processes.

(S)

The system outputs the progress of service startup and stop processes to the log.

KNBB2528-W

Setup of the CSA ended with warning.

This message is output when the initialization of the log, which is output by the setup process, has failed.

(S)

Continues processing.

(O)

The log may not be output during the setup process, but no action is required because the setup is complete.

KNBB2529-W

Unsetup of the CSA ended with warning.

This message is output when the initialization of the log, which is output by the unsetup process, has failed.

(S)

Continues processing.

(O)

The log may not be output during the unsetup process, but no action is required because the unsetup is complete.

KNBB2551-E

Failed to load the environment configuration file.

The process was aborted because loading of the environment configuration file failed.

(S)

The system aborts the process in which the error occurred.

(O)

Make sure that the environment configuration file has the privilege to be loaded. If not, change the setting and execute again.

If the failure occurred when starting the service, stop the JP1/AJS3 CSA HTTP Server service, restart the JP1/AJS3 CSA Web Application Server service, and then start the JP1/AJS3 CSA HTTP Server service.

KNBB2552-E

The environment configuration file contains incorrect specifications. (*detailed-information*)

The process was aborted because an incorrect specification was made in the environment configuration file.

(S)

The system aborts the process in which the error occurred.

(O)

Set the environment configuration file correctly. If not, change the setting and execute again.

Make sure that the environment configuration file has the privilege to be loaded. If not, change the setting and execute again.

If the failure occurred when starting the service, stop the JP1/AJS3 CSA HTTP Server service, restart the JP1/AJS3 CSA Web Application Server service, and then start the JP1/AJS3 CSA HTTP Server service.

KNBB2554-E

The shared directory is specified incorrectly. (*shared-directory*)

There is an incorrect setting in the logical host. The following may be the cause.

- The configured shared directory does not exist.
- The length of the name of the configured shared directory exceeds the maximum value.

(S)

The system aborts the process in which the error occurred.

(O)

Confirm that the configured shared directory is available.

KNBB2556-E

The same command cannot be executed redundantly.

The process was interrupted because commands were executed concurrently.

(S)

The system aborts the process in which the error occurred.

(O)

An error may occur when commands are executed at the same time. If an error occurs, execute the process again.

KNBB2558-E

I/O error occurred. (*file-name*) : maintenance-information-1 maintenance-information-2 maintenance-information-3 maintenance-information-4

An error occurred during file input or output. The following may be the cause.

- The user does not have access privileges to the file.
- The file is being used by another process.

(S)

The system aborts the process in which the error occurred.

(O)

Eliminate the cause of the error and execute the process again.

KNBB2559-E

Length of the host name exceeds maximum length. (*host-name*)

The length of the host name exceeds the maximum length.

(S)

The system aborts the process in which the error occurred.

(O)

Specify the host name correctly.

KNBB2601-E

The log output processing could not be initialized. Detailed information (*detailed-information-1, detailed-information-2, detailed-information-3, detailed-information-4*)

The initialization of the integrated trace log and command log failed.

(S)

The system aborts the startup process for the JP1/AJS3 CSA Web Application Server service on Windows. Otherwise, the system continues the process.

(O)

If an error message related to the environment configuration file has been output before this message is displayed, take action according to the error message. Otherwise, collect the data by using the data collection tool and contact your system administrator.

KNBB2602-W

The log could not be output. Detailed information (*detailed-information-1, detailed-information-2, detailed-information-3, detailed-information-4*)

Output of the integrated trace log failed. There may be a problem with the integrated trace function.

(S)

The system aborts the output of the integrated trace log and continues the process.

(O)

Use the data collection tool to collect data, and then contact the system administrator.

KNBB2603-W

Log output processing failed to complete. Detailed information (*detailed-information-1, detailed-information-2, detailed-information-3, detailed-information-4*)

Completion of the integrated trace log output process failed.

(S)

Continues processing.

(O)

Use the data collection tool to collect data, and then contact the system administrator.

KNBB2651-E

Illegal option (*option*) exists.

An inappropriate option is specified.

(S)

The system aborts command execution.

(O)

Specify the correct option and rerun the command.

KNBB2652-E

Value for option (*option*) is not specified.

A value was not specified for an option that requires a value.

(S)

The system aborts command execution.

(O)

Specify the value of the option and rerun the command.

KNBB2653-E

Invalid value for option (*option*).

The value of the option was specified incorrectly.

(S)

The system aborts command execution.

(O)

Specify the value of the option and rerun the command.

KNBB2654-E

Option (*option*) appears twice or more.

The same option is specified twice or more.

(S)

The system aborts command execution.

(O)

Correct the option specified twice or more to only once and rerun the command.

KNBB2655-E

The specified argument is incorrect.

The incorrect argument is specified.

(S)

The system aborts command execution.

(O)

Correct the argument and rerun the command.

KNBB2657-E

Failed to access shared directory.

Access to the shared directory failed.

(S)

The system aborts command execution.

(O)

Check whether the specified shared directory exists. If it exists, check whether there are the reference privilege and the update privilege in the specified shared directory.

KNBB2658-E

Failed to create shared directory (*directory-name*).

The creation of the shared directory failed.

(S)

The system aborts command execution.

(O)

Check that the `jp1ajs3csa` directory, which is displayed in the message, does not exist.

Windows:

`specified-shared-directory-name\jp1ajs3csa`

UNIX:

`specified-shared-directory-name/jp1ajs3csa`

If the `jp1ajs3csa` directory exists, confirm that the specified shared directory name is correct. If it is correct, confirm that the `jp1ajs3csa` directory is unnecessary, and delete it, then rerun the command (do not delete the shared directory).

If there is no `jp1ajs3csa` directory, confirm that the specified shared directory has update privileges.

KNBB2659-E

Logic host (*logical-host*) is not found.

The process was aborted because the logical host could not be found.

(S)

The system aborts command execution.

(O)

Check whether the specified logical host is defined in JP1/Base.

KNBB2660-E

Only super user or administrator can execute.

A user without superuser or administrator privileges tried to run the command.

(S)

The system aborts command execution.

(O)

A user with superuser or administrator privileges must run the command.

If the UAC function is enabled on Windows, a user with administrator privilege should rerun the command.

KNBB2701-I

The command (*command*) started.

Start processing the command (*command*).

(S)

Continues processing.

KNBB2702-I

The command (*command*) ended normally.

The processing of the command (*command*) has ended normally.

(S)

The system outputs to the log that the command has ended normally.

KNBB2703-E

The command (*command*) ended abnormally.

The processing of the command (*command*) has ended abnormally.

(S)

The system outputs to the log that the command has ended abnormally.

(O)

Before this message is displayed, the message indicating the error is output to the standard error output. Investigate the cause based on those messages.

KNBB2707-E

An error occurred during command (*command*) processing. : maintenance-information-1

An error occurred while running command (*command*).

(S)

The system aborts command execution.

KNBB2708-E

The expiration of the time limit. CSA

The evaluation version has exceeded its expiration date.

(S)

The system aborts the process of starting the JP1/AJS3 CSA Web Application Server service.

KNBB2709-E

CSA service is set up already.

The setup process of JP1/AJS3 for Cloud Service Applications was not performed because its service has already been set up.

(S)

The system terminates the setup process.

(O)

Make sure that the JP1/AJS3 for Cloud Service Applications service has been set up.

KNBB2710-E

An error occurred during installing CSA service. : maintenance-information-1 maintenance-information-2 maintenance-information-3 maintenance-information-4

An error occurred during the setup of the JP1/AJS3 for Cloud Service Applications service. There may be a problem with the execution environment of the JP1/AJS3 for Cloud Service Applications service.

(S)

The system terminates the setup process.

(O)

Run the setup command as an OS user with Administrator privileges. If the UAC function is enabled on Windows, a user with administrator privilege should rerun the command. There might be insufficient memory or disc capacity. Terminate unnecessary applications and rerun the setup command.

KNBB2712-E

An error occurred during removing CSA service. :maintenance-information-1 maintenance-information-2 maintenance-information-3 maintenance-information-4

An error occurred during the setup of the JP1/AJS3 for Cloud Service Applications service.

(S)

The system terminates the setup process.

(O)

Run the setup command as an OS user with Administrator privileges. There might be insufficient memory or disc capacity. Terminate unnecessary applications and rerun the setup command.

KNBB2714-E

Setup cannot be performed because the service (*service*) is active.

The service is running, so you cannot perform set up.

(S)

The system terminates the setup process.

(O)

Check if the JP1/AJS3 for Cloud Service Applications service is stopped.

KNBB2715-W

The command(*command*) ended warning.

The command (*command*) process has ended with warning.

(S)

The system outputs that to the log the command has been terminated with warning.

(O)

Before this message is displayed, the message indicating the cause of the warning is output to the command log. Investigate the cause according to the log immediately before this message and take action as necessary.

Note that the command may output this message and stop the JP1/AJS3 CSA Web Application Server service even though no error or warning message is output. In this case, there is no action required for this message. This message is generated because some internal processes were already stopped, and it indicates that the process of terminating the JP1/AJS3 CSA Web Application Server service has been completed normally.

(4) List of messages beginning with KNBB (messages about the web application server)

The following is a list of messages beginning with KNBB (messages about the web application server):

KNBB3001-I

The CSA Web Application Server service will now start.

This message reports that the startup process of the JP1/AJS3 CSA Web Application Server service has started.

(S)

The system has output to the log that the startup process of the JP1/AJS3 CSA Web Application Server service has started.

KNBB3002-I

The CSA Web Application Server service will now start.

This message reports that the JP1/AJS3 CSA Web Application Server service has been started.

(S)

The system has output to the log that the JP1/AJS3 CSA Web Application Server service has been started.

KNBB3003-E

An error occurred in the processing to start the CSA Web Application Server service.

This message reports that an error has occurred during the startup process of the JP1/AJS3 CSA Web Application Server service.

(S)

The system has output to the log that an error has occurred during the startup process of the JP1/AJS3 CSA Web Application Server service.

(O)

Before this message is displayed, the message indicating the error is output to the application server log. Take action according to the message that was output immediately before this message.

KNBB3004-E

An unexpected error occurred in the processing to start the CSA Web Application Server service.

An unexpected error occurred during the startup process of the JP1/AJS3 CSA Web Application Server service.

(S)

The system aborts the process.

(O)

The configuration of JP1/AJS3 for Cloud Service Applications may be corrupt. Perform a recovery installation.

KNBB3005-I

The CSA Web Application Server service will now stop.

This message reports that the stop process of the JP1/AJS3 CSA Web Application Server service has started.

(S)

The system has output to the log that the JP1/AJS3 CSA Web Application Server service has been stopped.

KNBB3006-I

The CSA Web Application Server service stopped.

This message reports that the JP1/AJS3 CSA Web Application Server service has been stopped.

(S)

The system has output to the log that the JP1/AJS3 CSA Web Application Server service has been stopped.

KNBB3026-I

API processing will now start. (api type=*API-type*)

This message reports that the API process has started.

(S)

The system has output to the log that the API process has been started.

KNBB3027-I

API processing ended. (api type=*API-type*)

This message reports that the API process has completed.

(S)

The system has output to the log that the API process has been completed normally.

KNBB3028-E

An error occurred in the API processing. (api type=*API-type*)

This message reports that an error has occurred during the API process.

(S)

The system has output to the log that an error has occurred during the API process.

(O)

Take action according to the messages that were output before and after this message.

KNBB3029-I

exception-class-information

This message indicates where the exception occurred.

(S)

The system has output to the log an indication of the location where the exception occurred.

KNBB3030-I

stack-trace-information

This message shows the stack trace information.

The stack trace information is output according to the language type set in the OS.

(S)

The system has output the stack trace information to the log.

KNBB3031-I

API-input-information

This message shows the API input information.

(S)

The system has output the API input information to the log.

KNBB3033-I

API-execution-information

This message shows the API execution information.

(S)

The system has output the API execution information to the log.

KNBB3034-I

```
UUID-set-by-the-service-linkage-jobΔJP1-user-name-when-the-job-is-runΔagent-host-nameΔmanager-host-nameΔscheduler-service-nameΔfull-unit-nameΔexecution-IDΔjob-ID Δservice-linkage-job-definition-nameΔauthentication-definition-nameΔlinkage-target-service-nameΔlinkage-process-overviewΔcommand-line-of-execution-start-processΔJP1-resource-group-name
```

Legend:

Δ: Tab symbol

This message shows the information of the request source to get the information of the service linkage job.

(S)

The system has output the execution information of the service linkage job to the log.

KNBB3051-W

```
The file was not found. Processing will continue by using the default values. (file=file-name)
```

The file is not found.

(S)

The system assumes default value and continues processing.

KNBB3052-E

```
Failed to read the file. (file =file-name, maintenance information=maintenance-information)
```

An error occurred during the file input process for *file-name*. The following may be the cause.

- Unacceptable characters are specified for the file name or folder name.
- The length of the file name, folder name, or file path is incorrect.
- Insufficient capacity on the disc.
- Editing is in progress in another program.

(S)

The system aborts the process.

(O)

Eliminate the cause of errors and stop the JP1/AJS3 CSA HTTP Server service. Then, restart the JP1/AJS3 CSA Web Application Server service and start the JP1/AJS3 CSA HTTP Server service.

KNBB3054-E

```
An error occurred while the file was being accessed. (file =file-name, maintenance information=maintenance-information)
```

An error occurred during the file input process for *file-name*. The following may be the cause.

- Unacceptable characters are specified for the file name or folder name.

- The length of the file name, folder name, or file path is incorrect.
- There are no access rights for files and folders that store files.
- Insufficient capacity on the disc.
- Editing is in progress in another program.

(S)

The system aborts the process.

(O)

Eliminate the cause of errors and stop the JP1/AJS3 CSA HTTP Server service. Then, restart the JP1/AJS3 CSA Web Application Server service and start the JP1/AJS3 CSA HTTP Server service.

KNBB3056-E

The specified file is incorrect. (file = *file-name*, line=*line-number*)

The process was aborted because an incorrect specification was made in the file.

(S)

The system aborts the process.

(O)

Set the environment configuration file correctly. Change the settings and stop the JP1/AJS3 CSA HTTP Server service. Then, restart the JP1/AJS3 CSA Web Application Server service and start the JP1/AJS3 CSA HTTP Server service.

In *line-number*, the approximate location of the incorrect description will be output. If there is no error in *line-number*, review the descriptions before and after the *line-number*.

KNBB3059-I

configuration-definition-information

This message reports the configuration definition that has been loaded into memory.

(S)

The system has output the configuration definition that has been loaded into memory to the log.

KNBB3060-W

FILE RETRY WAITING ERR (maintenance information=maintenance-information-1, maintenance-information-2)

This message reports the failure to wait for file access retry.

(S)

The system has output to the log that there was a failure to wait for file access retry.

KNBB3061-W

FILE CLOSE ERR (maintenance information=maintenance-information-1, maintenance-information-2)

This message reports that the file close process failed.

(S)

The system has output to the log that the file close process has failed.

KNBB3062-I

The file (*file-name*) was read.

This message reports that the file has been read successfully.

(S)

The system has output to the log that the file has been loaded successfully.

KNBB3063-E

Failed to write the file. (file = *file-name*, maintenance information=*maintenance-information*)

An error occurred during the file output process for *file-name*. The following may be the cause.

- Unacceptable characters are specified for the file name or folder name.
- The length of the file name, folder name, or file path is incorrect.
- There are no access rights for files and folders that store files.
- Insufficient capacity on the disc.
- Editing is in progress in another program.

(S)

The system aborts the process.

(O)

Eliminate the cause of the error and try the operation again.

KNBB3064-I

The file was written. (file=*file-name*)

This message reports that the that the file has been written successfully.

(S)

The system has output to the log that the file was written successfully.

KNBB3102-E

The session that you are logged in to is no longer valid. Log in again.

The logged-in session is already invalid. Log in again.

(S)

The system aborts the process.

(O)

Log in again and try the operation again.

KNBB3103-W

The session that you are logged in to is no longer valid.

The logged-in session is already invalid.

(S)

The system has output to the log that the logged-in session is already invalid.

KNBB3104-I

Session created. (maintenance information=maintenance-information)

The logged-in session is already invalid.

(S)

The system has output to the log that a session has been created.

KNBB3105-I

The session timed out. (maintenance information=maintenance-information)

This message reports that a session timed out.

(S)

The system has output to the log that a session timed out.

KNBB3106-I

The session deleted. (maintenance information=maintenance-information)

This message reports that a session was deleted.

(S)

The system has output to the log that a session was deleted.

KNBB3151-E

The log output processing could not be initialized. (detailed information=*detailed-information-1, detailed-information-2, detailed-information-3, detailed-information-4, detailed-information-5, detailed-information-6*)

An error occurred during the initialization of the log output process. The following may be the cause.

- The user does not have access privileges to the files at the lower level of the log folder.
- Insufficient capacity on the disc.

(S)

The system aborts the process.

(O)

Eliminate the cause of the error. If the problem cannot be solved, the configuration of JP1/AJS3 for Cloud Service Applications may be corrupt. Perform a recovery installation.

KNBB3152-W

The log could not be output. (detailed information=*detailed-information-1, detailed-information-2, detailed-information-3, detailed-information-4, detailed-information-5, detailed-information-6, detailed-information-7*)

An error occurred during the log output process. The following may be the cause.

- The user does not have access privileges to the files at the lower level of the log folder.
- Insufficient capacity on the disc.

(S)

Continues processing.

(O)

Eliminate the cause of the error. If the problem cannot be solved, the configuration of JP1/AJS3 for Cloud Service Applications may be corrupt. Perform a recovery installation.

KNBB3153-W

Log output processing failed to complete. (detailed information=*detailed-information-1, detailed-information-2, detailed-information-3, detailed-information-4, detailed-information-5, detailed-information-6, detailed-information-7*)

An error occurred during the end processing of the log output process. The following may be the cause.

- The user does not have access privileges to the files at the lower level of the log folder.
- Insufficient capacity on the disc.

(S)

Continues processing.

(O)

Eliminate the cause of the error. If the problem cannot be solved, the configuration of JP1/AJS3 for Cloud Service Applications may be corrupt. Perform a recovery installation.

KNBB3201-E

Specify the *item-name*.

The following may be the cause.

- *item-name* is not specified.
- Null was specified for *item-name*.
- An array with element number 0 (zero) is specified for *item-name*, or there is an element containing null in the array.
- An empty string was specified for *item-name*.

(S)

Cancels processing.

(O)

Eliminate the cause of the error and try the operation again.

- If *item-name* is not specified, specify a value for *item-name*.

- If null was specified for *item-name*, specify a valid value other than null for *item-name*.
- If an array with element number 0 (zero) is specified for *item-name*, specify an array with the element number 1 or higher. Also, specify a valid value other than null for a valid array element.
- If an empty string is specified for *item-name*, specify a valid value other than an empty string for *item-name*.

KNBB3202-E

Enter a value in the range *numeric - numeric* (bytes) for the *item-name*.

The specification displayed in *item-name* is exceeding limits.

(S)

Cancels processing.

(O)

Specify a value for the item within the length displayed in *numeric* (bytes).

KNBB3203-E

Specify a value in the range *minimum-value - maximum-value* for the *item-name*. (*specified-value*)

The value specified in *item-name* is exceeding limits.

(S)

Cancels processing.

(O)

Specify a value of *minimum-value - maximum-value* in *item-name*.

KNBB3204-E

The *item-name* contains an invalid character. (*specified-value*)

The specification displayed in *item-name* contains characters that cannot be used.

(S)

Cancels processing.

(O)

Specify the item using characters that can be used.

KNBB3206-E

The *item-name* is specified incorrectly. (*specified-value*)

Incorrect format value specified in *item-name*.

(S)

Cancels processing.

(O)

Specify the item correctly.

KNBB3207-E

The *item-name* cannot be omitted if the comparison method is *match-method*.

The *item-name* or comparison method is incorrectly specified.

(S)

Cancels processing.

(O)

Specify a value for *item-name* or change the *match-method*.

KNBB3208-E

The definition does not exist.

The definition does not exist.

(S)

Cancels processing.

(O)

The definition does not exist. Register it again.

KNBB3212-E

The user name or password is invalid.

Login failed because the JP1 username or password was invalid.

(S)

Cancels processing.

(O)

Enter the JP1 username and password registered on the Access Control Server to which it is connected and then log in.

KNBB3216-E

The request is incorrect.

The process was aborted because the request was incorrectly specified.

(S)

Cancels processing.

(O)

Use the data collection tool to collect data, and then contact the system administrator.

KNBB3238-E

The message body of the request is incorrect. (line=*line-number*)

There is an error in the description of the message body of the request.

(S)

Cancels processing.

(O)

Describe the message body of the request correctly.

In *line-number*, the approximate location of the incorrect description will be output. If there is no error in *line-number*, review the descriptions before and after the *line-number*.

KNBB3239-E

Specify a request header (*request-header*).

request-header is not specified.

(S)

Cancels processing.

(O)

Specify the *request-header*.

KNBB3240-E

The request header (*request-header*) is incorrect.

The value in *request-header* is incorrect.

(S)

Cancels processing.

(O)

Specify correct value for *request-header*.

KNBB3290-W

Failed to save the execution history. (maintenance information=maintenance-information-1, maintenance-information-2)

Failed to save execution history.

(S)

Continues processing.

KNBB3291-E

definition-type "*definition-name*" does not exist.

The specified definition name does not exist.

A *definition-type* displays one of the following:

- service linkage job definition
- connection definition
- execution definition

- authentication definition

(S)

Cancels processing.

(O)

Refresh the web screen to confirm that the definition exists, and then select it again.

KNBB3609-E

An error occurred in the Access Control Server at the connection destination.
(maintenance information=maintenance-information)

Login or connection could not be established because an error occurred on JP1/Base at the connection destination during the user authentication process. The following may be the cause.

- The host name of the Access Control Server is incorrectly specified in the settings of JP1/Base at the connection destination.
- If the error message "KAVS1005-E Cannot connect to Access Control Server." is displayed in the Windows event log or syslog of the connection destination, the Access Control Server has not started.

(S)

Cancels processing.

(O)

Eliminate the cause of the error and try the operation again.

If the connection destination is UNIX and the Authorized Server is specified as local host, the settings for JP1/Base are required to start as the Access Control Server. For the setting method, see the description of specifying the Access Control Server in the *JP1/Base User's Guide*.

KNBB3669-E

The system could not connect to the Access Control Server at the connection destination.

Processing cannot start because the connection destination cannot connect to the Access Control Server.

(S)

Cancels processing.

(O)

Check whether the specified Access Control Server on JP1/Base at the connection destination is running or not.

KNBB3689-W

An attempt to release the login information failed. (maintenance information=maintenance-information-1, maintenance-information-2)

This message reports that the release process of login information failed.

(S)

The system has output to the log that the release process of login information failed.

KNBB3801-I

The database was backed up.

Backup of the database file has been completed.

(S)

Continues processing.

KNBB3802-W

An error occurred during backup of the database. (maintenance information=maintenance-information)

An error occurred during the database file backup.

The following factors may be the cause.

- The database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service.
- The database file has been destroyed.

(S)

Continues processing.

(O)

Check whether the database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service. If it is used by another process and this error message is not output at the next definition operation, no action is required. If this error message is output at the next definition operation, even if the database file is not used by other processes, restart the JP1/AJS3 CSA Web Application Server service. After the restart, if still this error message is output, collect the data and contact your system administrator.

KNBB3803-I

Database maintenance was performed.

Database maintenance has been completed.

(S)

Continues processing.

KNBB3804-W

An error occurred during maintenance of the database. (maintenance information=maintenance-information)

An error occurred during database maintenance.

The following factors may be the cause.

- The database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service.
- The database file has been destroyed.

(S)

Continues processing.

(O)

Check whether the database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service. If it is used by another process and this error message is not output at the next definition operation, no action is required. If this error message is output at the next definition operation, even if the database file is not used by other processes, restart the JP1/AJS3 CSA Web Application Server service. After the restart, if still this error message is output, collect the data and contact your system administrator.

KNBB3805-I

Maintenance of the execution history table was performed.

Maintenance of the execution history table has been completed.

(S)

Continues processing.

KNBB3806-W

An error occurred during maintenance of the execution history table. (maintenance information=maintenance-information)

An error occurred during maintenance of the execution history table.

The following factors may be the cause.

- The database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service.
- The database file has been destroyed.

(S)

Continues processing.

(O)

Check whether the database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service. If it is used by another process and this error message is not output at the next definition operation, no action is required. If this error message is output at the next definition operation, even if the database file is not used by other processes, restart the JP1/AJS3 CSA Web Application Server service. After the restart, if still this error message is output, collect the data and contact your system administrator.

KNBB3807-E

No authorization.

The operation-target definition does not have the required operation permissions.

(S)

The system aborts the process.

(O)

Review whether the JP1 user who is operating has the required operation permissions for the JP1 resource group name that is set in the operation-target definition. If the permissions are insufficient, grant the required privileges before starting the operation.

KNBB3808-E

An error occurred during the accessing of the database at the connection destination.
(maintenance information=maintenance-information)

An error occurred during access to the database file.

The following factors may be the cause.

- The database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service.
- The database file has been destroyed.

(S)

The system aborts the process.

(O)

Check whether the database file is being used by a process other than the JP1/AJS3 CSA Web Application Server service. If it is being used by another process, check that the operation that caused this error is performed correctly after ending the process. If the operation is not performed correctly, try it again. If the same operation is performed again and the same error still occurs, restart the JP1/AJS3 CSA Web Application Server service. If the same error occurs even after restarting the JP1/AJS3 CSA Web Application Server service, restore the backed-up database file. If the same error occurs even after restoring the database file, collect the data and contact your system administrator.

KNBB3901-E

An unexpected error occurred during processing. (maintenance information=maintenance-information-1, maintenance-information-2)

An unexpected error occurred during processing. The following may be the cause.

- The configuration of JP1/AJS3 for Cloud Service Applications is corrupted.
- The API being processed was forcibly discarded because JP1/AJS3 for Cloud Service Applications was stopped or restarted.

(S)

The system aborts the process.

(O)

If the configuration of JP1/AJS3 for Cloud Service Applications has been changed, perform a recovery installation. If the JP1/AJS3 for Cloud Service Applications was stopped or restarted, check to what extent the API processing has been reflected.

Otherwise, eliminate the cause of the error. If the problem cannot be solved, collect the data and contact your system administrator.

KNBB3902-E

An system error occurred during processing. (maintenance information=maintenance-information)

A system error occurred during processing. There may be a problem with the execution environment of the JP1/AJS3 CSA Web Application Server service.

(S)

The system aborts the process.

(O)

Eliminate the cause of the error. If the problem cannot be solved, collect the data and contact your system administrator.

KNBB3903-E

Memory became insufficient during processing. (maintenance information=maintenance-information)

Insufficient memory was detected in the execution environment of the JP1/AJS3 CSA Web Application Server service.

(S)

The system aborts the process.

(O)

Check the physical memory usage of the host where the JP1/AJS3 CSA Web Application Server service is running. If the capacity of the available physical memory is insufficient, terminate unnecessary applications to increase the size of available physical memory.

For details of required capacity of memory of JP1/AJS3 for Cloud Service Applications, see the *release notes*.

KNBB3905-E

An unexpected error occurred during processing. (maintenance information=maintenance-information-1, maintenance-information-2)

This message reports that an unexpected error has occurred during the process.

(S)

Continues processing.

(O)

The configuration of JP1/AJS3 for Cloud Service Applications may be corrupt. Perform a recovery installation. If the problem cannot be solved, collect the data and contact your system administrator.

(5) List of messages beginning with KNBB (messages about the Service linkage job definitions window)

The following is a list of messages beginning with KNBB (messages about the Service linkage job definitions window):

KNBB4000-W

The following items have been initialized due to an incorrect definition.

(Field name):

corresponding-field-name

corresponding-field-name

This message reports that there is an unacceptable input in *corresponding-field-name* because the job definition is invalid.

(S)

The system initializes the value in *corresponding-field-name*.

KNBB4001-E

Enter the correct value for *(field-name)*.

The value was entered incorrectly in *field-name*.

(S)

The system aborts the process.

(O)

Re-enter the correct value in *field-name*.

KNBB4002-E

System error has occurred in the definition program. (func= *API-name*,err=*error-maintenance-information*-)

An unexpected error occurred during the definition program.

(S)

The system aborts the process.

(O)

This may be a temporary error. Close the Service Linkage Job Definition screen, and then reopen the screen to define the job.

If the same error occurs, the folder (*system-drive\temp*) required for the custom job definition linkage may be missing. See the description of the KAVV801-E message in the manual, *JP1/Automatic Job Management System 3 Messages* and take action. If the problem persists, collect the data by using the data collection tool and contact your system administrator.

KNBB4003-E

The service linkage definition information file could not be read correctly.

The service linkage definition information file could not be loaded correctly.

(The file may not exist, may not be opened, or the contents may be incorrect.)

(S)

The system aborts the process.

(O)

Recreate the service linkage definition information file and register the service linkage job again.

KNBB4004-E

Enter the *(field-name)*.

No value was entered in *field-name*.

(S)

The system aborts the process.

(O)

Enter a value in *field-name*.

KNBB4009-E

Make sure that the total size of the input values for all items does not exceed *bytes* bytes.

The total size of the input value has exceeded the limit.

(S)

The system aborts the process.

(O)

Review the input values if there are any unnecessary values or values that can be shortened and click the **OK** button again.

(6) List of messages beginning with KNBB (messages about the service linkage job definitions commands)

The following is a list of messages beginning with KNBB (messages about the service linkage job definitions commands).

KNBB4501-I

The service linkage job has been registered. (*service-linkage-job-name*)

The service linkage job is registered successfully.

KNBB4502-E

Specify the required option.

Required options are not specified.

(S)

The system aborts the process.

(O)

Specify required options and rerun the command.

KNBB4503-E

An invalid option is specified. (*option-name*)

You specified unavailable options.

(S)

The system aborts the process.

(O)

Specify the available option and rerun the command.

KNBB4504-E

Specify a value for the option. (*option-name*)

No value was specified for the option.

(S)

The system aborts the process.

(O)

Specify the value of the option and rerun the command.

KNBB4505-E

A value is specified for an option that does not require a value. (*option-name*)

A value has been specified for an option that does not require a value.

(S)

The system aborts the process.

(O)

Correct the command format and rerun the command.

KNBB4506-E

Specify the correct value for the option. (*option-name*)

The format of the option value is incorrect.

(S)

The system aborts the process.

(O)

Specify the correct value of the option and rerun the command.

KNBB4507-E

Option (*option-name*) appears twice or more.

The same option is specified twice or more.

(S)

The system aborts the process.

(O)

Correct the option specified twice or more to only once and rerun the command.

KNBB4508-E

custom-job-name-user-specified already exists.

You specified a custom job name that already exists.

(S)

The system aborts the process.

(O)

Specify a job name that is not registered in JP1/AJS3 - View and rerun the command.

KNBB4509-E

The file could not be accessed. (*file-path-user-specified*)

You cannot access the specified file.

(S)

The system aborts the process.

(O)

Correct the access rights and existence of the file and rerun the command.

KNBB4511-E

The contents of the service linkage definition information file are invalid. (*path-of-service-linkage-definition-information-file, detailed-information*)

The contents of the service linkage definition information file are invalid.

(S)

The system aborts the process.

(O)

Export the definition information file from JP1/AJS3 for Cloud Service Applications again and rerun the command.

KNBB4512-E

The service linkage job cannot be registered because the maximum number of custom jobs has been exceeded.

The maximum number of custom jobs that View can hold has been exceeded.

(S)

The system aborts the process.

(O)

Delete the unused custom job and rerun the command or register the jobs on another View host.

KNBB4513-E

You cannot execute a command while the Register Custom Job dialog box is open or the service linkage job operation command is being executed.

The command has run while the Register Custom Job screen was open or while the Import, List display, or Delete command is running.

(S)

The system aborts the process.

(O)

If the Register Custom Job dialog box is opened, close it and rerun the command.

If another service linkage job operation command is running, rerun the command after the operation command has completed.

KNBB4514-W

The service linkage job is not registered.

The service linkage job is not registered.

KNBB4515-I

The service linkage job has been deleted. (*deleted-service-linkage-job-name*)

The service linkage job was deleted successfully.

KNBB4516-E

Cannot specify these options together.

An option that cannot be specified at the same time has been specified.

(S)

The system aborts the process.

(O)

Check the specified option and rerun the command with a combination of options that can be specified at the same time.

KNBB4517-E

The specified service linkage job cannot be deleted because it does not exist. (*specified-service-linkage-job-name*)

You specified a custom job name that does not exist or a custom job name other than a service linked job.

(S)

The system aborts the process.

(O)

Check the service linkage job name you want to delete and rerun the command.

KNBB4518-E

You cannot perform operations on custom job registration information.

- Read and write permissions have not been set for the files at lower level of the custom job registration information folder[#]
- The files at lower level of the custom job registration information folder[#] are being edited by another program.

[#]: The following folders:

View_Data_Path\custom.dir\

View_Data_Path: JP1/AJS3 - View data folder

(S)

The system aborts the process.

(O)

Eliminate the cause of the error.

KNBB4519-E

You cannot perform operations on service linkage job-specific information.

- Read and write permissions have not been set for the folders[#] containing the service linkage job-specific information and its lower-level files.
- The files at lower level of the folders[#] containing the service linkage job-specific information are being edited by another program.

#: Either of the following folders:

- *View_Path*\image\custom
- *View_Data_Path*\csadef

View_Path: JP1/AJS3 - View installation folder

View_Data_Path: JP1/AJS3 - View data folder

(S)

The system aborts the process.

(O)

Eliminate the cause of the error.

KNBB4520-E

A system error occurred in the service linkage job operation command. (*func = API name, err = error-maintenance-information*)

An unexpected error occurred during the service linkage job operation command.

(S)

The system aborts the process.

(O)

Collect the data by using the data collection tool and contact your system administrator.

KNBB4521-E

Failed to initialize log output processing. (*detailed-information-1, detailed-information-2*)

An error occurred during the initialization of the log output process.

(S)

The system aborts the process.

(O)

The user does not have access privileges to the files at the lower level of the log folder or there might be insufficient memory or disc capacity.

Eliminate the cause of the error. If the problem cannot be solved, the configuration of JP1/AJS3 - View may be corrupted. Perform a recovery installation.

KNBB4522-E

Failed to output log information. (*detailed-information-1, detailed-information-2*)

An error occurred during the log output process. The following may be the cause.

- The user does not have access privileges to the files at the lower level of the log folder.
- Insufficient capacity on the disc.

The location of the log folder is as follows:

```
%ALLUSERSPROFILE%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2V\log
```

The default for %ALLUSERSPROFILE% is *system-drive*\ProgramData.

(S)

The system aborts the process.

(O)

Eliminate the cause of the error.

KNBB4523-E

An unexpected error occurred during the startup process. (Detailed information: *maintenance-information-1, maintenance-information-2*)

An unexpected error occurred during the start processing of service linkage job operation command.

(S)

The system aborts the process.

(O)

There might be insufficient memory or disc capacity. Terminate unnecessary applications and rerun the command. If the problem cannot be solved, the configuration of JP1/AJS3 - View may be corrupted. Perform a recovery installation.

KNBB4524-E

Failed to start the service linkage job operation command. (Detailed information: *maintenance-information*)

The system failed to start the service linkage job command.

(S)

The system aborts the process.

(O)

The following factors may be the cause.

- There might be insufficient memory or disc capacity. Terminate unnecessary applications and rerun the command.
- JP1/AJS3 - View is installed in the root of the drive. Install JP1/AJS3 - View in a location other than the root of the drive.

If the problem cannot be solved, the configuration of JP1/AJS3 - View may be corrupted. Perform a recovery installation.

KNBB4525-E

No authority to execute the service linkage job operation command.

The user who tried to run the command does not have the required command operation permissions.

(S)

The system aborts the process.

(O)

Rerun the command on a command prompt running with administrator privileges.

KNBB4526-W

The folder specified in the environment variable `AJS_CSA_VIEW_CUSTOMJOBDIR` does not exist. The default folder will be used.

The folder specified in the environment variable `AJS_CSA_VIEW_CUSTOMJOBDIR` does not exist.

Use the default custom job registration information folder^{#1} and folders^{#2} containing the service linkage job-specific information.

#1: *View_Data_Path*^{#3}\custom.dir

#2: *View_Data_Path*^{#3}\csadef

#3: *View_Data_Path*: JP1/AJS3 - View data folder

KNBB4527-E

custom-job-name cannot be registered because a custom job other than a service linkage job of the same name exists.

Forced overwrite option was specified for a custom job other than a service linkage job.

(S)

The system aborts the process.

(O)

Specify another custom job name and rerun the registration command.

KNBB4528-E

The command line parameter is too long.

The command line parameters specified for the command are too long. The command cannot be started.

(S)

Cancels processing.

(O)

Correctly specify the command line parameters, and then re-execute the command.

(7) List of messages beginning with KNBB (messages about the service linkage job execution programs)

The following is a list of messages beginning with KNBB (messages about the service linkage job execution programs).

KNBB6000-I

The service linkage job will now start.

The service linkage job will be started.

(S)

Continues processing.

KNBB6001-I

The service linkage job will now end.

The service linkage job will be ended.

(S)

Continues processing.

KNBB6002-I

Communication with the CSA server will now start.

The communication with the JP1/AJS3 for Cloud Service Applications server will be started.

(S)

Continues processing.

KNBB6003-I

Communication with the CSA server ended.

The communication with the JP1/AJS3 for Cloud Service Applications server ends.

(S)

Continues processing.

KNBB6004-I

process-name

This message reports the name and command line of the process to be executed from now.

The command line for the processing name will be output in the next line.

(S)

Continues processing.

KNBB6100-E

The acquired value is incorrect. (maintenance-information)

An environment variable or CSA definition item has an error in one of the following:

- Required value has no value
- Character count
- Format (character string, numeric, etc.)

The environment variable name or maintenance information is output in Maintenance information.

(S)

The system aborts the process.

(O)

Specify the following values correctly and then rerun the command.

- Environment variable
 - AJS_CSA_AUTHINFNAME
 - AJS_CSA_DEFINFNAME
 - AJS_CSA_ENV_ *variable-value*
- CSA definition

KNBB6101-E

The environmental setting parameter is invalid. (*parameter-name*)

The specification of environment setting parameter is invalid.

(S)

The system aborts the process.

(O)

Redefine the environment definition as necessary.

KNBB6200-E

Failed to read the connection configuration file. (*connection-configuration-file-name*)

The loading of the connection configuration file of the service linkage job failed.

(S)

The system aborts the process.

(O)

Check the following possible causes.

1. There is no connection configuration file.
2. The path to the connection configuration file is incorrect.
3. You do not have permission to access the connection configuration file.

Take the following actions and try again.

1. Set the connect configuration file.

2. Enter the correct path to the connect configuration file.
3. Set access privileges to the connection configuration file.

KNBB6201-E

The syntax of the connection configuration file is incorrect. (maintenance-information-1, maintenance-information-2)

There is an error in the syntax of connection configuration file for the service linkage job.

The following factors may be the cause.

- A value is not specified.
- The length of the value is invalid.
- The value is not one of the available values.
- Out of the range of available values.
- Required specifications are not satisfied.
- Unknown item name is specified.

(S)

The system aborts the process.

(O)

Correct the connection configuration file and try again.

KNBB6202-E

An error occurred during communication with the CSA server. (maintenance-information)

An error occurred during the communication with the JP1/AJS3 for Cloud Service Applications server.

The following causes for the job execution host can be considered.

- The settings of connection configuration file are incorrect.
- The environment is not capable of communicating with the JP1/AJS3 for Cloud Service Applications server.
- JP1/AJS3 for Cloud Service Applications server host and JP1/AJS3 for CSA are stopped.
- A network failure has occurred.
- The SSL communication settings do not match the JP1/AJS3 for Cloud Service Applications server.

(S)

The system aborts the process.

(O)

Eliminate the cause of the error and try again.

- CSAServerName
- CSAConnectProtocol
- CSAConnectPortNumber
- ProxyAddr

- CAFile

If the problem cannot be solved, collect the data by using the data collection tool and contact your system administrator.

KNBB6203-E

An error occurred on the CSA server. (maintenance-information)

An error occurred on the JP1/AJS3 for Cloud Service Applications server.

The probable causes are as follows:

- The connection configuration file for the job execution host is configured incorrectly.
- The user does not have permission for the definitions on the JP1/AJS3 for Cloud Service Applications server.
- The definition does not exist on the JP1/AJS3 for Cloud Service Applications server.

(S)

The system aborts the process.

(O)

Check the message from the JP1/AJS3 for Cloud Service Applications server.

In addition, check that the following are correct, and specify the correct values.

- The connection configuration file and the following for the job execution host:
 - CSAServerName
 - CSAConnectProtocol
 - CSAConnectPortNumber
 - ProxyAddr
 - CAFile
- The service-linkage job definition is specified, and the definition name on the JP1/AJS3 Cloud Service Applications server.
- The JP1 user name for executing the service linkage job, and the permissions level on the JP1/AJS3 for Cloud Service Applications server for that JP1 user name.
- The resource group name for the definition on the JP1/AJS3 for Cloud Service Applications server.

KNBB6204-E

The host name of the CSA server (*JP1/AJS3 for Cloud Service Applications-server-name*) cannot be resolved. (*agent-host-name*)

The IP address could not be resolved from the host name *JP1/AJS3 for Cloud Service Applications-server-name* of the JP1/AJS3 for Cloud Service Applications server.

(S)

The system aborts the process.

(O)

On *agent-host-name*, in order to resolve the IP address of the host name *JP1/AJS3 for Cloud Service Applications-server-name* of the JP1/AJS3 for Cloud Service Applications server, correct the settings of the `hosts` file,

jp1hosts file, jp1hosts2 file, or DNS. Then, confirm that the IP address of the host name of JP1/AJS3 for Cloud Service Applications server is set correctly. After that, try again.

If the above measures do not solve the problem, collect the data by using the data collection tool and contact your system administrator.

KNBB6205-W

An attempt to communicate with the CSA server will be retried because an error occurred during communication with the CSA server. (maintenance-information)

An error occurred during the communication with the JP1/AJS3 for Cloud Service Applications server. Retry the request to the JP1/AJS3 for Cloud Service Applications server according to the settings for retry interval and retry count. After this message is output, wait for the retry interval and then retry. If an error occurs even after reaching the maximum retry count, the KABB6202-E message will be output.

- (S)
Continues processing.
- (O)
Check whether the JP1/AJS3 for Cloud Service Applications server host and JP1/AJS3 for Cloud Service Applications are running.

KNBB6300-E

The format of the information obtained from CSA is invalid. (*host-name-of-connect-target-JP1/AJS3 for Cloud Service Applications, port-number-of-connect-target-JP1/AJS3 for Cloud Service Applications*)

The format of the information obtained from JP1/AJS3 for Cloud Service Applications is invalid. The information may be corrupted due to a communication problem with JP1/AJS3 for Cloud Service Applications.

- (S)
The system aborts the process.
- (O)
Check whether the host name and port number of the JP1/AJS3 for Cloud Service Applications at the connection destination are correct.
If the problem cannot be solved, collect the following data and contact your system administrator.
 - Log information of the JP1/AJS3 for Cloud Service Applications at the connection destination
 - Log information of the host where the job is executed

KNBB6301-E

The command executed from the service linkage job ended abnormally. (*process-name, return-value-of-CLI-command, maintenance-information*)

The command executed by the service linkage job ended abnormally.

- (S)
The system aborts the process when an error occurred during the connection processing. If an error occurred in a command executed by a subsequent service linkage job, then the system continues the job output and subsequent processes.

(O)

Check the following and try again.

- If KNBB6004-I was output immediately before, there is no error in the command executed by the service linkage job.
- The input information of the command executed by the service linkage job is appropriate.
- The abnormal end setting is as designed.

KNBB6302-E

The job will end abnormally because it did not meet the defined conditions. (*process-name, value-of-variable-specified-in-the-processing-condition*)

The job will be end abnormally if either of the following conditions did not match.

- The value of the variable specified for the process normal end condition and the value of the process normal end condition
- The value of the variable specified for the process continuation condition, and both of the value of the process normal end condition and the value of the retry condition for the process continuation condition

(S)

The system continues the job output and subsequent processes.

(O)

The service executed by the cloud service may be in an abnormal state. Check the status and eliminate the cause.

KNBB6303-E

The number of repetitions specified in the continuation condition has been exceeded. (*process-name, value-of-variable-specified-in-the-processing-condition*)

The process exceeded the number of repeat count specified in the continuation condition.

(S)

The system continues the job output and subsequent processes.

(O)

The service executed by the cloud service may be in an abnormal state. Check the status and eliminate the cause.

KNBB6304-E

Failed to execute the command from the service linkage job. (*maintenance-information*)

The command could not run from the service linkage job.

The OS environment might not be configured correctly (for example, the PATH environment variable is specified incorrectly).

(S)

The system aborts the process.

(O)

Check that the OS environment is configured correctly (for example, whether the PATH environment variable is specified incorrectly by the job execution host).

If you cannot solve the problem, use the data collection tool to collect data, and then contact the system administrator.

KNBB6305-E

The command executed from the service linkage job was ended by a signal. (maintenance-information)

The command run by a service linkage job was terminated because of a signal.

(S)

The system aborts the process when an error occurred during the connection processing. If an error occurred in a command executed by a subsequent service linkage job, then the system continues the job output and subsequent processes.

(O)

Check whether the command run by the service linkage job was not terminated forcibly.

KNBB6400-E

Failed to acquire an environment variable. (*environment-variable-name*, maintenance-information-1, maintenance-information-2)

The acquisition of the environment variable failed.

(S)

The system aborts the process.

(O)

Check whether the length of the value of environment variable specified for the variable is not too long. If the problem cannot be solved, collect the data by using the data collection tool and contact your system administrator.

KNBB6401-E

An attempt to obtain the environment-setting-parameter (*environment-setting-parameter*) failed. (*logical-host-name*)

The system failed to acquire the environment setting parameter. For physical host, JP1_DEFAULT is output to *logical-host-name*.

(S)

The system aborts the process.

(O)

Set the value output to the *environment-setting-parameter* correctly in the environment where the job is executed. For the output item name, see the manual.

KNBB6450-E

Memory became insufficient. (maintenance-information)

Out of memory has occurred.

(S)

The system aborts the process.

(O)

Check the output volume of the execution results (standard output, standard error output) of the command run by the service linkage job. If the volume of output is too great, adjust it with the options of the command executed by the service linkage job so that unnecessary information is not output.

In other cases, see 3. *Estimates* in the *JP1/Automatic Job Management System 3 System Design (Configuration) Guide* and check whether the amount of memory required to run JP1/AJS3 is secured.

KNBB6451-E

A system error has occurred. (maintenance-information)

A system error occurred.

(S)

The system aborts the process.

(O)

Collect the data by using the data collection tool and contact your system administrator.

KNBB6452-E

An unexpected error occurred. (maintenance-information)

An unexpected error occurred.

(S)

The system aborts the process.

(O)

Collect the data by using the data collection tool and contact your system administrator.

Appendixes

A. Files and Directories

This appendix lists the files and directories for the JP1/AJS3 for Cloud Service Applications.

A.1 In Windows

The following table lists the files and folders for the Windows version of JP1/AJS3 for Cloud Service Applications.

Supplementary note

For the tables listing log files and directories, see [8.2.6 List of log files and directories](#).

How to read the tables

The tables listing files and directories use the following abbreviations:

Abbreviation	Folder indicated by the abbreviation
<i>CSA_Path</i>	JP1/AJS3 for Cloud Service Applications installation folder ^{#1}
<i>Csa_Data_Path</i>	The value is different depending on the installation folder. If the installation folder is the default installation folder or is in a folder protected by the system: %ALLUSERSPROFILE% ^{#2} \Hitachi\JP1\JP1_DEFAULT\JP1AJS3CSA A folder protected by the system is the path to a folder in any of the following: <ul style="list-style-type: none">• <i>system-drive</i>\Windows• <i>system-drive</i>\Program Files If the installation folder is other than the above: <i>JP1/AJS3 for Cloud Service Applications installation folder</i>
<i>Mgr_Path</i>	JP1/AJS3 - Manager installation folder ^{#3}
<i>Mgr_Data_Path</i>	JP1/AJS3 - Manager data folder ^{#3}
<i>Agt_Path</i>	JP1/AJS3 - Agent installation folder ^{#4}
<i>Agt_Data_Path</i>	JP1/AJS3 - Agent data folder ^{#4}
<i>View_Path</i>	JP1/AJS3 - View installation folder ^{#5}
<i>View_Data_Path</i>	JP1/AJS3 - View data folder ^{#5}

#1

By default, *CSA_Path* is *system-drive*\Program Files\HITACHI\JP1AJS3CSA.

#2

The default value for %ALLUSERSPROFILE% is *system-drive*\ProgramData.

#3

For details, see the description of *JP1/AJS3 - Manager files and directories* in the manual *JP1/Automatic Job Management System 3 Troubleshooting*.

#4

For details, see the description of *JP1/AJS3 - Agent files and directories* in the manual *JP1/Automatic Job Management System 3 Troubleshooting*.

#5

For details, see the description of *JP1/AJS3 - View files and directories* in the manual *JP1/Automatic Job Management System 3 Troubleshooting*.

Table A–1: List of the files and folders (In Windows)

Item	File or folder name	
	Normal configuration	Cluster configuration
Product folder	<i>Csa_Path</i> \	--
Executable file storage folder	<i>Csa_Path</i> \bin	--
Environment-settings file	<i>Csa_Path</i> \conf\ajs3csaweb.conf	<i>Shared-folder</i> \jplajs3csa\conf\ajs3csaweb.conf
Environment-settings model file	<i>Csa_Path</i> \conf\ajs3csaweb.conf.model	--
System files folder for Web interface	<i>Csa_Path</i> \sys\	<i>Shared-folder</i> \jplajs3csa\sys\
Configuration definition file	<i>Csa_Path</i> \sys\ajscsasetup.conf	--
Execution log of the JP1/AJS3 Web Application Server service	<i>Csa_Path</i> \sys\service.log	--
User information storage folder	<i>Csa_Path</i> \sys\user\	<i>Shared-folder</i> \jplajs3csa\sys\user\
Tool files storage folder	<i>Csa_Path</i> \tools\	--
Option definition file for J2EE server	<i>Csa_Path</i> \uCP SB\CC\server\usrconf\ejb\ajs3csa\usrconf.cfg	--
User property file for J2EE server	<i>Csa_Path</i> \uCP SB\CC\server\usrconf\ejb\ajs3csa\usrconf.properties	--
System property file for server management commands	<i>Csa_Path</i> \uCP SB\CC\admin\usrconf\usrconf.properties	--
Web server definition file	<i>Csa_Path</i> \uCP SB\httpsd\conf\httpsd.conf	--
Server private key	<i>Csa_Path</i> \uCP SB\httpsd\conf\ssl\server\httpsdkey.pem	--
SSL server certificate	<i>Csa_Path</i> \uCP SB\httpsd\conf\ssl\server\httpsd.pem	--
Application directory	<i>Csa_Path</i> \webapps\ajs3csa\	--
Product folder	<i>Csa_Data_Path</i> \	<i>Shared-folder</i> \jplajs3csa\
Environment-settings file storage folder	<i>Csa_Data_Path</i> \conf\	<i>Shared-folder</i> \jplajs3csa\conf\
Root certificate storage folder	<i>Csa_Data_Path</i> \conf\ssl\rootcer\	<i>Shared-folder</i> \jplajs3csa\conf\ssl\rootcer
Database storage folder	<i>Csa_Data_Path</i> \database\	<i>Shared-folder</i> \jplajs3csa\database
Communication configuration file for JP1/AJS3 - Agent (sample file)	<i>Agt_Data_Path</i> \conf\ajscsajob_network.conf.model	<i>Shared-folder</i> \jplajs2\conf\ajscsajob_network.conf.model
Communication configuration file for JP1/AJS3 - Manager (sample file)	<i>Mgr_Data_Path</i> \conf\ajscsajob_network.conf.model	<i>Shared-folder</i> \jplajs2\conf\ajscsajob_network.conf.model
Service linkage job operation command (registration)	<i>View_Path</i> \bin\ajscsajobreg.exe	--

Item	File or folder name	
	Normal configuration	Cluster configuration
Service linkage job operation command (listing)	<i>View_Path</i> \bin\ajscsajoblist.exe	--
Service linkage job operation command (deletion)	<i>View_Path</i> \bin\ajscsajobdel.exe	--
Service linkage definition information file storage folder	<i>View_Data_Path</i> \csadef	--

Legend:

--: Not applicable.

A.2 In Linux

The following table lists the files and folders for the Linux version of JP1/AJS3 for Cloud Service Applications.

Table A–2: List of the files and folders (In Linux)

Item	File or folder name	
	Normal configuration	Cluster configuration
Product directory	/opt/jplajs3csa/	--
Executable file storage directory	/opt/jplajs3csa/bin/	--
Environment-settings file	/etc/opt/jplajs3csa/conf/ajscsaweb.conf	<i>Shared-directory</i> /jplajs3csa/conf/ajscsaweb.conf
Environment-settings model file	/etc/opt/jplajs3csa/conf/ajscsaweb.conf.model	--
System files directory for Web interface	/var/opt/jplajs3csa/sys/	<i>Shared-directory</i> /jplajs3csa/sys/
Configuration definition file	/var/opt/jplajs3csa/sys/ajscsasetup.conf	--
User information storage directory	/var/opt/jplajs3csa/sys/user/	<i>Shared-directory</i> /jplajs3csa/sys/user/
Tool files storage directory	/opt/jplajs3csa/tools/	--
Option definition file for J2EE server	/opt/jplajs3csa/uCPSB/CC/server/usrconf/ejb/ajscsa/usrconf.cfg	--
User property file for J2EE server	/opt/jplajs3csa/uCPSB/CC/server/usrconf/ejb/ajscsa/usrconf.properties	--
System property file for server management commands	/opt/jplajs3csa/uCPSB/CC/admin/usrconf/usrconf.properties	--
Web server definition file	/opt/jplajs3csa/uCPSB/httpsd/conf/httpsd.conf	--
Server private key	/opt/jplajs3csa/uCPSB/httpsd/conf/ssl/server/httpsdkey.pem	--
SSL server certificate	/opt/jplajs3csa/uCPSB/httpsd/conf/ssl/server/httpsd.pem	--

Item	File or folder name	
	Normal configuration	Cluster configuration
Application directory	/opt/jp1ajs3csa/webapps/ajs3csa/	--
Product directory	/etc/opt/jp1ajs3csa/	--
Environment-settings file storage directory	/etc/opt/jp1ajs3csa/conf/	<i>Shared-directory</i> /jp1ajs3csa/conf/
Root certificate storage directory	/etc/opt/jp1ajs3csa/conf/ssl/rootcer/	<i>Shared-directory</i> /jp1ajs3csa/conf/ssl/rootcer
Database storage directory	/var/opt/jp1ajs3csa/database	<i>Shared-directory</i> /jp1ajs3csa/database/
Communication configuration file for JP1/AJS3 - Agent (sample file)	/etc/opt/jp1ajs2/conf/ajscsajob_network.conf.model	<i>Shared-directory</i> /jp1ajs2/conf/ajscsajob_network.conf.model
Communication configuration file for JP1/AJS3 - Manager (sample file)	/etc/opt/jp1ajs2/conf/ajscsajob_network.conf.model	<i>Shared-directory</i> /jp1ajs2/conf/ajscsajob_network.conf.model

Legend:

--: Not applicable.

B. Limitations

For details about limits on JP1/AJS3 for Cloud Service Applications, see the *Release Notes*.

C. Estimation

For details about the resources required for operations on JP1/AJS3 for Cloud Service Applications (the required memory size and disk utilization), see the *Release Notes*.

D. Port number to be set

This section explains the port number to be set and the direction through the firewall.

You can change the port number according to the user environment.

The protocol used is TCP/IP.

The following table shows the protocol number used in JP1/AJS3 for Cloud Service Applications.

Table D–1: Port number used in JP1/AJS3 for Cloud Service Applications

Purpose	Port number	Direction
Communication for transmitting or receiving HTTP requests or HTTP responses that occur as a result of operations on a Web browser ^{#1}	Non-SSL communication: 22265 SSL communication: 22266	Web browsers → JP1/AJS3 CSA HTTP Server service
Communication that occurs inside the JP1/AJS3 for Cloud Service Applications server and that occurs with an application server ^{#2}	22267	JP1/AJS3 CSA HTTP Server service → JP1/AJS3 CSA Web Application Server service
Communication ports for internal JP1/AJS3 for Cloud Service Applications server	22268	None.
Port for communication from a server management command to an application server ^{#2}	22269	Server management command → JP1/AJS3 CSA Web Application Server service
Communication for authenticating login requests ^{#1}	20240	JP1/Base → JP1/Base
Communication for transmitting or receiving HTTP requests or HTTP responses that occur as a result of execution of service linkage jobs ^{#1}	Non-SSL communication: 22265 SSL communication: 22266	Service linkage jobs → JP1/AJS3 CSA HTTP Server service

#1: When setting the firewall, specify the "Source port number" as "ANY".

#2: Communication within the same machine.

E. JP1/AJS3 Environment Setting Parameters

This section provides information about a list of environment setting parameters configured on JP1/AJS3 installed on the host that runs service linkage jobs of JP1/AJS3 for Cloud Service Applications. This section also provides information about definition of the environment setting parameters. For details on other environment setting parameters of the JP1/AJS3, see the description of *Environment Setting Parameters* in the manual *JP1/Automatic Job Management System 3 Configuration Guide*.

E.1 Format of the environment setting parameters

This section describes the format of the definition keys and environment setting parameters used in this manual.

(1) Format of the definition keys

Definition keys are written in the following format:

```
[name-of-definition-key]
```

- The name of each definition key name is enclosed in square brackets ([]).
- In the {JP1_DEFAULT | *logical-host-name*} part, enter JP1_DEFAULT for the physical host, and enter the name of a logical host for *logical-host-name*.

(2) Format of the environment setting parameters

Environment setting parameters are written in the following format:

```
"name-of-environment-setting-parameter"=definition
```

- The name of an environment setting parameter is enclosed in double quotation marks (").
- If a string is specified for a definition, the definition is enclosed in double quotation marks. If a numeric value is specified for a definition, `dword:` precedes the value.
- If multiple values are allowed for the definition of an environment setting parameter, the values are separated by a colon (:). Note that you must specify at least one value.

Example:

If the definition key is {backup:export:name:print:schedule:show:rgexport:release}, you can specify more than one of the following values:

backup, export, name, print, schedule, show, rgexport, and release

E.2 List of Environment Setting Parameters

The following table shows environment setting parameters of the JP1/AJS3 for Cloud Service Applications.

Table E–1: Environment setting parameters of the JP1/AJS3 for Cloud Service Applications

No	Definition key	Environment setting parameter	Definition	Applicable OS	Applicable product
1	[{JP1_DEFAULT <i>logical-host-name</i> } \\JP1AJS2\CSA\CSAJ OBAGENT\AJSCSAEXE C]#	CSACONNECTCO NFIG	Specify the file name of the connection configuration file with JP1/AJS3 for Cloud Service Applications server	Windows Linux	M, A
2		JOBLOGSIZE	Specify the size of the service linkage job log file	Windows Linux	M, A

Legend:

M: JP1/AJS3 - Manager

A: JP1/AJS3 - Agent

#:

Specify JP1_DEFAULT for the physical host. For *logical-host-name*, specify the name of a logical host.

Parameters that are not described here are used for maintenance purposes. Do not change the values of those parameters.

E.3 Details of the environment setting parameters

This subsection describes details of the environment setting parameters of the JP1/AJS3 for Cloud Service Applications.

Note that the default of an environment setting parameter means the value that is assumed when the environment setting parameter is omitted.

(1) CSACONNECTCONFIG

Specify the file name of the connection configuration file containing connection information with JP1/AJS3 for Cloud Service Applications server.

Format

"CSACONNECTCONFIG"="*file-name-of-the-connection-configuration-file-with-JP1/AJS3 for Cloud Service Applications server*"

Specifiable values

A character string of no more than 255 bytes

Default value

In Windows

- Physical host:
JP1/AJS3 installation-folder\conf\ajscsajob_network.conf
- Logical host:
shared-folder\jplajs2\conf\ajscsajob_network.conf

In Linux

- Physical host:
/etc/opt/jplajs2/conf/ajscsajob_network.conf
- Logical host:
shared-directory/jplajs2/conf/ajscsajob_network.conf

Recommended value

Set the value appropriate for the operating environment.

When the setting takes effect

The next time running a service linkage job

Cautionary note

During cluster setup (`jaajs_setup_cluster` execution) in JP1/AJS3, the value of the physical host does not take over to the logical host. After cluster setup, review the setting of this parameter.

(2) JOBSIZE

Specify the size of the service linkage job log file.

Format

`"JOBSIZE"=dword: size-of-the-service-linkage-job-log-file`

Specifiable values

A hexadecimal value (in KB) from 00006400 to 0001B800 (25,600 to 112,640 in decimal)

Default value

`dword:00006400` (25,600 in decimal)

Recommended value

Set the value appropriate for the operating environment.

When the setting takes effect

The next time running a service linkage job

Cautionary note

During cluster setup (`jaajs_setup_cluster` execution) in JP1/AJS3, the value of the physical host takes over to the logical host

F. Service linkage job information definition files

This section explains the files that define the service linkage job information of JP1/AJS3 for Cloud Service Applications.

The service linkage job information definition files come in the following three types:

- Connection definition file (`slcondefExport.txt`)
- Execution definition file (`sldefExport.txt`)
- Service linkage job definition file (`sljobdefExport.txt`)

F.1 Connection definition file

The connection definition file can be downloaded by clicking **Export** on the Connection definitions screen or the Home screen where a connection definition was selected. If a connection definition file is specified by clicking **Import** on the Connection definitions screen and the connection definition file is specified, service linkage connection information can be imported to JP1/AJS3 for Cloud Service Applications.

The details of the connection definition file are as follows:

(1) Default connection definition file name

When **Export** is clicked on the Connection definitions screen

```
slcondefExport.txt
```

When **Export** is clicked on the Home screen where a connection definition was selected

```
entered_slcondefExport.txt
```

(2) Format of connection definition file

```
{
  "name": "Definition name of connection definition information"
  "comment": "Description",
  "jplresource": "JPI resource group name",
  "productVersion": "Version information",
  "definitionKind": "CONNECTINFO",
  "callKind": "Call type of cloud service",
  "schemaVersion": "Schema version",
  "start": {
    "cli": {
      "commandLine": "Command line to be executed during connection start processing",
      "envValue": [
        {
          "name": "Environment variable name",
          "value": "Value of environment variable"
        }, ...
      ]
    },
    "resultVariable": "Variable name at setting destination of passing information",
    "abendInfo": {
      "condition": "Relational operator of abnormal end judgment condition"
    }
  }
}
```

```

tion",
    "value": Value of abnormal end judgment condition,
    "returnValue": Return value of job in case of abnormal end
  },
  "traceInfo": {
    "logFileOut": {
      "cliCommandLine": Whether trace information needs to be output to the CLI command line,
      "cliStdOut": Whether trace information needs to be output to the CLI command standard output,
      "cliStdErr": Whether trace information needs to be output to the CLI command standard error
    },
    "stderrOut": {
      "cliCommandLine": Whether trace information needs to be output to the CLI command line,
      "cliStdOut": Whether trace information needs to be output to the CLI command standard output,
      "cliStdErr": Whether trace information needs to be output to the CLI command standard error
    }
  }
},
"end": {
  "cli": {
    "commandLine": "Command line to be executed",
    "envValue": [
      {
        "name": "Environment variable name",
        "value": "Value of environment variable"
      },...
    ]
  },
  "abendInfo": {
    "condition": "Relational operator for abnormal end judgment condition",
    "value": Value of abnormal end judgment condition,
    "returnValue": Return value of job in case of abnormal end
  },
  "traceInfo": {
    "logFileOut": {
      "cliCommandLine": "Whether the CLI command line needs to be output",
      "cliStdOut": "Whether trace information needs to be output to the CLI command standard output",
      "cliStdErr": "Whether trace information needs to be output to the CLI command standard error output"
    },
    "stderrOut": {
      "cliCommandLine": "Whether trace information needs to be output to the CLI command line",
      "cliStdOut": "Whether trace information needs to be output to the CLI command standard output",
      "cliStdErr": "Whether trace information needs to be output to the CLI command standard error output"
    }
  }
},
},

```



```

"parameters": [
  {
    "name": "Variable name",
    "type": "exec",
    "exec": {
      "type": "env",
      "value": "Value of variable"
    }
  },...
],
"overallEnvValue": [
  {
    "name": "Environment variable name",
    "value": "Value of environment variable"
  },...
]
}

```

Legend:

...: Repetition of items enclosed "{" and "}" immediately before

(3) Items of connection definition file

The details of each item of the connection definition file are shown in the table below.

Table F–1: Items of connection definition file

Item				Description
name				Definition name of connection definition information
comment				Description of connection definition information
jplresource				JP1 resource group of connection definition information
productVersion				Version information of JP1/AJS3 for Cloud Service Applications
definitionKind				Fixed to "CONNECTINFO"
callKind				Call type of cloud service
schemaVersion				Schema version of connection definition
start	cli	commandLine		Command line to be executed during connection start processing
		envValue	name	Environment variable name during connection start processing
			value	Value of environment variable name during connection start processing
	resultVariable			Variable name at setting destination of passing information during connection start processing
	abendInfo	condition		Relational operator of abnormal end judgment condition during connection start processing
		value		Value of abnormal end judgment condition during connection start processing
		returnValue		Return value of job in case of abnormal end during connection start processing
	traceInfo	logFileOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the log file during connection start processing

Item				Description
start	traceInfo	logFileOut	cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the log file during connection start processing
			cliStdErr	Whether trace information needs to be output to the CLI command standard error when it is to be output to the log file during connection start processing
	stdErrOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the standard error output during connection start processing	
		cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the standard error output during connection start processing	
		cliStdErr	Whether trace information needs to be output the CLI command standard error output during connection start processing	
end	cli	commandLine		Command line to be executed during connection start processing
		envValue	name	Environment variable name during connection termination processing
			value	Value of environment variable during connection termination processing
	abendInfo	condition		Relational operator for abnormal end judgment condition during connection termination processing
		value		Value of abnormal end judgment condition during connection termination processing
		returnValue		Return value of job in case of abnormal end during connection termination processing
	traceInfo	logFileOut	cliCommandLine	Whether the CLI command line needs to be output when trace information is to be output to the log file during connection termination processing
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is output to the log file during connection termination processing
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the log file during connection termination processing
		stdErrOut	cliCommandLine	Whether the CLI command line needs to be output when trace information is to be output to the log file during connection termination processing
cliStdOut			Whether trace information needs to be output to the CLI command standard output when it is output to the log file during connection termination processing	
cliStdErr			Whether trace information needs to be output to the CLI command standard error output when it is to be output to the log file during connection termination processing	
parameters	name			Variable name for variable definition
	type			Fixed to "exec"
	exec	type		Fixed to "env"
		value		Value of variable
overallEnvValue	name			Environment variable name common to the whole
	value			Value of environment variable common to the whole

F.2 Execution definition file

The execution definition file can be downloaded by clicking **Export** on the Execution definition screen or the Home screen where an execution definition was selected. If the execution definition file is specified by clicking **Import** on the Execution definition screen, service linkage execution information can be imported to JP1/AJS3 for Cloud Service Applications.

The details of the execution definition file are as follows:

(1) Default execution definition file name

When **Export** is clicked on the Execution definitions screen

```
slexecdefExport.txt
```

When **Export** is clicked on the Home screen where an execution definition was selected

```
entered_slexecdefExport.txt
```

(2) Format of execution definition file

```
{
  "name": "Definition name of execution information",
  "comment": "Description",
  "jplresource": "JPI resource group name",
  "productVersion": "Version information",
  "definitionKind": "EXECINFO",
  "callKind": "Call type of cloud service",
  "schemaVersion": "Schema version",
  "exec": {
    "cli": {
      "commandLine": "Command line to be executed",
      "envValue": [
        {
          "name": "Environment variable name",
          "value": "Value of environment variable"
        }, ...
      ]
    },
    "resultVariable": "Setting destination variable name of passing information",
    "abendInfo": {
      "condition": "Relational operator for abnormal end judgment condition",
      "value": "Value of abnormal end judgment condition",
      "execAbendProc": "Whether abnormal end processing needs to be executing",
      "returnValue": "Return value of job in case of abnormal end"
    },
    "procCondition": {
      "comparisonSource": "Comparison source variable name",
      "normalEndCondition": [
        "Comparison destination of processing condition, ..."
      ],
      "abendSetting": {
        "execAbendProc": "Whether abnormal end processing needs to be executing",
        "returnValue": "Return value of job in case of abnormal end"
      }
    }
  }
}
```

```

    }
  },
  "traceInfo": {
    "logFileOut": {
      "cliCommandLine": Whether trace information needs to be output to CLI command line,
      "cliStdOut": Whether trace information needs to be output to the CLI command standard output,
      "cliStdErr": Whether trace information needs to be output to the CLI command standard error output
    },
    "stderrOut": {
      "cliCommandLine": Whether trace information needs to be output to the CLI command line,
      "cliStdOut": Whether trace information needs to be output to the CLI command standard output,
      "cliStdErr": Whether trace information needs to be output to the CLI command standard error output
    }
  }
},
"endJudgement": {
  "cli": {
    "commandLine": Command line to be executing,
    "envValue": [
      {
        "name": Environment variable name,
        "value": Value of environment variable
      },...
    ]
  },
  "resultVariable": Setting destination variable name of passing information,
  "abendInfo": {
    "condition": Relational operator of abnormal end judgment condition,
    "value": Value of abnormal end judgment condition,
    "execAbendProc": Whether abnormal end processing needs to be executed in case of abnormal end,
    "returnValue": Return value of job in case of abnormal end
  },
  "procCondition": {
    "comparisonSource": Comparison source variable name of processing condition,
    "normalEndCondition": [
      Comparison destination of processing condition,...
    ],
    "continuing": {
      "continuingCondition": [
        Comparison destination of continuation condition,...
      ],
      "repeatInterval": Comparison destination of continuation condition,
      "numOfRepeat": Number of repetitions of continuation condition,
      "execAbendProc": Whether execution of abnormal end processing needs to be executed,
      "returnValue": Return value of job when number of repetition
    }
  }
}

```

```

s of continuation condition is exceeded
    },
    "abendSetting": {
        "execAbendProc": "Whether abnormal end processing needs to b
e executed",
        "returnValue": "Return value of job in case of abnormal end
    }
},
"traceInfo": {
    "logFileOut": {
        "cliCommandLine": "Whether trace information needs to be out
put to the CLI command line",
        "cliStdOut": "Whether trace information needs to be output t
o the CLI command standard output",
        "cliStdErr": "Whether trace information needs to be output t
o the CLI command standard error output"
    },
    "stderrOut": {
        "cliCommandLine": "Whether trace information needs to be out
put to the CLI command line",
        "cliStdOut": "Whether trace information needs to be output t
o the CLI command standard output",
        "cliStdErr": "Whether trace information needs to be output t
o the CLI command standard error output"
    }
}
},
"normalEndProc": {
    "cli": {
        "commandLine": "Command line to be executed",
        "envValue": [
            {
                "name": "Environment variable name",
                "value": "Value of environment variable"
            },...
        ]
    },
    "resultVariable": "Setting destination variable name of passing info
rmation",
    "abendInfo": {
        "condition": "Relational operator of abnormal end judgment condi
tion",
        "value": "Value of abnormal end judgment condition",
        "returnValue": "Return value of job in case of abnormal end
    },
    "traceInfo": {
        "logFileOut": {
            "cliCommandLine": "Whether trace information needs to be out
put to the CLI command line",
            "cliStdOut": "Whether trace information needs to be output t
o the CLI command standard output",
            "cliStdErr": "Whether trace information needs to be output t
o the CLI command standard error output"
        },
        "stderrOut": {
            "cliCommandLine": "Whether trace information needs to be out
put to the CLI command line",
            "cliStdOut": "Whether trace information needs to be output t

```

```

o the CLI command standard output",
      "cliStdErr": "Whether trace information needs to be output t
o the CLI command standard error output"
    }
  },
  "abendProc": {
    "cli": {
      "commandLine": "Command line to be executing",
      "envValue": [
        {
          "name": "Environment variable name",
          "value": "Value of environment variable"
        },...
      ]
    },
    "traceInfo": {
      "logFileOut": {
        "cliCommandLine": "Whether trace information needs to be out
put to the CLI command line",
        "cliStdOut": "Whether trace information needs to be output t
o the CLI command standard output",
        "cliStdErr": "Whether trace information needs to be output t
o the CLI command standard error output"
      },
      "stderrOut": {
        "cliCommandLine": "Whether trace information needs to be out
put to the CLI command line",
        "cliStdOut": "Whether trace information needs to be output t
o the CLI command standard output",
        "cliStdErr": "Whether trace information needs to be output t
o the CLI command standard error output"
      }
    }
  },
  "outputResult": {
    "stdout": "Information to output the output of the execution result
as the standard output of a job",
    "stderrOut": "Information to output the output of the execution resu
lt as the standard error output of a job"
  },
  "parameters": [
    {
      "name": "Variable name of variable definition",
      "type": "Resolution type of variable",
      "gui": {
        "fieldName": "Label name",
        "controlType": "textBox"
        "textBoxSettings": {
          "lengthChar": Character string length,
          "invalidChar": "Characters prohibited from being input"
        }
      },
      "exec": {
        "type": "env",
        "value": "Value of variable"
      }
    },...
  ]
}

```

```

]
}

```

Legend:

. . . : Repetition of items enclosed "{" and "}" immediately before

(3) Items of execution definition file

The details of each item of the execution definition file are shown in the table below.

Table F-2: Items of execution definition file

Item		Description		
name		Definition name of execution information		
comment		Description of execution information		
jplresource		JPI resource group name of execution information		
productVersion		Version information of JPI/AJS3 for Cloud Service Applications		
definitionKind		Fixed to "EXECINFO"		
callKind		Call type of cloud service		
schemaVersion		Schema version of execution definition		
exec	cli	commandLine		Command line to be executed during execution processing
		envValue	name	Environment variable name during execution processing
			value	Value of environment variable during execution processing
	resultVariable		Setting destination variable name of passing information during execution processing	
	abendInfo	condition		Relational operator for abnormal end judgment condition during execution processing
		value		Value of abnormal end judgment condition during execution processing
		returnValue		Return value of job in case of abnormal end during execution processing
	procCondition	comparisonSource		Comparison source variable name during execution processing
		normalEndCondition		Comparison destination of processing condition during execution processing
		abendSetting	execAbendProc	Whether abnormal end processing needs to be executing during abnormal end processing
			returnValue	Return value of job in case of abnormal end
	traceInfo	logFileOutput	cliCommandLine	Whether trace information needs to be output to CLI command line when it is to be output to the log file during execution processing
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is output to the log file during execution processing
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the log file during execution processing

Item				Description
exec	traceInfo	stdErrOut	cliComman dLine	Whether trace information needs to be output to the CLI command line when it is to be output to the standard error output during execution processing
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the standard output during execution processing
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the standard error output during execution processing
endJudgem ent	cli	commandLine		Command line to be executing during end judgment processing
		envValue	name	Environment variable name during end judgment processing
			value	Value of environment variable during end judgment processing
	resultVariable			Setting destination variable name of passing information during end judgment processing
	abendInfo	condition		Relational operator of abnormal end judgment condition during end judgment processing
		value		Value of abnormal end judgment condition during end judgment processing
		execAbendProc		Whether abnormal end processing needs to be executed in case of abnormal end during end judgment processing
		returnValue		Return value of job in case of abnormal end during end judgment processing
	procCondi tion	comparisonSource		Comparison source variable name of processing condition during end judgment processing
		normalEndCondition		Comparison destination of processing condition during end judgment processing
		continuin g	continuin gConditio n	Comparison destination of continuation condition during end judgment processing
			repeatInt erval	Repetition interval of continuation condition during end judgment processing
			numOfRepe at	Number of repetitions of continuation condition during end judgment processing
			execAbend Proc	Whether execution of abnormal end processing needs to be executed during end judgment processing
			returnVal ue	Return value of job when number of repetitions of continuation condition is exceeded during end judgment processing
		abendSett ing	execAbend Proc	Whether abnormal end processing needs to be executed during end judgment processing
			returnVal ue	Return value of job in case of abnormal end during end judgment processing
traceInfo		logFileOu t	cliComman dLine	Whether trace information needs to be output to the CLI command line when it is to be output to the log file during end judgment processing
	cliStdOut		Whether trace information needs to be output to the CLI command standard output when it is to be output to the log file during end judgment processing	

Item				Description	
endJudgement	traceInfo	logFileOut	cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the log file during end judgment processing	
		stdErrOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the standard error output during end judgment processing	
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the standard error output during end judgment processing	
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output standard error output during end judgment processing	
normalEndProc	cli	commandLine		Command line to be executed during normal end processing	
		envValue	name	Environment variable name during normal end processing	
			value	Value of environment variable during normal end processing	
	resultVariable			Setting destination variable name of passing information during normal end processing	
	abendInfo	condition		Relational operator of abnormal end judgment condition during normal end processing	
		value		Value of abnormal end judgment condition during normal end processing	
		returnValue		Return value of job in case of abnormal end during normal end processing	
	traceInfo	logFileOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the log file during normal end processing	
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the log file during normal end processing	
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the log file during normal end processing	
		stdErrOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the standard error output during normal end processing	
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the standard error output during normal end processing	
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the standard error output during normal end processing	
abendProc			Command line to be executing during abnormal end processing		
cli			envValue	name	Environment variable name during abnormal end processing
				value	Value of environment variable during abnormal end processing
traceInfo	logFileOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the log file during abnormal end processing		
		cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the log file during abnormal end processing		

Item				Description	
abendProc	traceInfo	logFileOut	cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the log file during abnormal end processing	
		stdErrOut	cliCommandLine	Whether trace information needs to be output to the CLI command line when it is to be output to the standard error output during abnormal end processing	
			cliStdOut	Whether trace information needs to be output to the CLI command standard output when it is to be output to the standard error output during abnormal end processing	
			cliStdErr	Whether trace information needs to be output to the CLI command standard error output when it is to be output to the standard error output during abnormal end processing	
outputResult	stdOut		Information to output the output of the execution result as the standard output of a job		
	stdErrOut		Information to output the output of the execution result as the standard error output of a job		
parameters	name		Variable name of variable definition		
	type		Resolution type of variable. Either of the following values: <ul style="list-style-type: none"> "gui": Resolved on Detailed definition screen of JP1/AJS3 - View "exec": Resolved during execution of a job 		
	gui	fieldName		Label name of the input field in the case of resolution on the Detailed definition screen of JP1/AJS3 - View	
		controlType		Fixed to "textBox"	
		textBoxSettings	lengthChar	Character string length of the text box in the case of resolution on the Detailed definition screen of JP1/AJS3 - View	
			invalidChar	Characters prohibited from being input to the text box in the case of resolution on the Detailed definition screen of JP1/AJS3 - View	
	exec	type		Fixed to "exec"	
		value		Value of variable in the case of resolution during job execution	

F.3 Service linkage definition file

The service linkage job definition file can be downloaded by clicking **Export** on the Service linkage job definitions screen or the Home screen where a service linkage job definition was selected. When a service linkage job definition file is specified by clicking **Import** on the Service linkage job definition screen, service linkage job information can be imported to JP1/AJS3 for Cloud Service Applications.

The details of the service linkage job definition file are as follows:

(1) Default service linkage job definition file

When **Export** is clicked on the Service linkage job definition screen

`sljobdefExport.txt`

When **Export** is clicked on the Home screen where a service linkage job definition was selected

`entered_sljobdefExport.txt`

(2) Format of service linkage job definition file

```

{
    "name": "Definition name of service linkage job information",
    "comment": "Description",
    "jplresource": "JPI resource group name",
    "productVersion": "Version information",
    "definitionKind": "DEFINITIONINFO",
    "callKind": "Call type of cloud service",
    "schemaVersion": "Schema version",
    "slJobInfo": {
        "serviceName": "Linkage destination service name",
        "summary": "Overview of processing to be performed as linkage de
stination service",
        "execInfoName": "Definition name of execution information",
        "connectInfoName": "Definition name of connection information"
    }
}

```

(3) Items of service linkage job definition file

The details of each item of the service linkage definition file are shown in the table below.

Table F–3: Items of service linkage job definition file

Item	Description	
name	Definition name of service linkage job information	
comment	Description of service linkage job information	
jplresource	JPI group name of service linkage job information	
productVersion	Version information of JP1/AJS3 for Cloud Service Applications	
definitionKind	Fixed to "DEFINITIONINFO"	
callKind	Call type of cloud service	
schemaVersion	Schema version of service linkage job definition	
slJobInfo	serviceName	Linkage destination service name of service linkage job
	summary	Overview of processing to be performed as linkage destination service
	execInfoName	Definition name of execution information the format of " <i>/Execution-information-definition-name</i> "
	connectInfoName	Definition name of connection information in the format of " <i>/Connection-definition-name</i> "

G. Reference Material for This Manual

G.1 Related publications

This manual is part of a related set of manuals. The manuals in the set are listed below (with the manual numbers):

About JP1/AJS3:

- *JP1 Version 13 Job Management: Getting Started (Job Scheduler)* (3021-3-L41(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Overview* (3021-3-L42(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 System Design (Configuration) Guide* (3021-3-L43(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 System Design (Work Tasks) Guide* (3021-3-L44(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Configuration Guide* (3021-3-L45(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Administration Guide* (3021-3-L46(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Troubleshooting* (3021-3-L47(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Operator's Guide* (3021-3-L48(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Command Reference* (3021-3-L49(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Linkage Guide* (3021-3-L50(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Messages* (3021-3-L51(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 for Enterprise Applications Description, User's Guide and Reference* (3021-3-L54(E))

About JP1:

- *JP1 Version 13 JP1/Base User's Guide* (3021-3-L09(E))
- *JP1 Version 13 JP1/Base Messages* (3021-3-L10(E))
- *JP1 Version 13 JP1/Base Function Reference* (3021-3-L11(E))

G.2 Conventions: Fonts and symbols

The following table explains the text formatting conventions used in this manual:

Text formatting	Convention
Bold	<p>Bold characters indicate text in a window, other than the window title. Such text includes menus, menu options, buttons, radio box options, or explanatory labels. For example:</p> <ul style="list-style-type: none">• From the File menu, choose Open• Click the Cancel button• In the Enter name entry box, type your name.
<i>Italic</i>	<p>Italic characters indicate a placeholder for some actual text to be provided by the user or system. For example:</p> <ul style="list-style-type: none">• Write the command as follows: <code>copy source-file target-file</code>• The following message appears: A file was not found. (file = <i>file-name</i>) <p>Italic characters are also used for emphasis. For example:</p>

Text formatting	Convention
<i>Italic</i>	<ul style="list-style-type: none"> Do not delete the configuration file.
Monospace	<p>Monospace characters indicate text that the user enters without change, or text (such as messages) output by the system. For example:</p> <ul style="list-style-type: none"> At the prompt, enter <code>dir</code>. Use the <code>send</code> command to send mail. The following message is displayed: <pre>The password is incorrect.</pre>

The following table explains the symbols used in this manual:

Symbol	Convention
*	Multiplication sign
/	Division sign
↑ ↑	<p>The calculation result is rounded up to the next whole number.</p> <p>Example: The result of $\uparrow 34 / 3 \uparrow$ is 12.</p>
MAX	<p>Choose the largest of the calculation results.</p> <p>Example: The result of MAX (3 * 6, 4 + 7) is 18.</p>

G.3 Use of folder names and directory names

If a Windows folder name is the same as a UNIX directory name, they are treated as folder names in principle.

G.4 Conventions: Abbreviations for product names

This manual uses the following abbreviations for product names:

Abbreviation			Full name or meaning
JP1/AJS	JP1/AJS3	JP1/AJS3 - Manager	JP1/Automatic Job Management System 3 - Manager
		JP1/AJS3 - Agent	JP1/Automatic Job Management System 3 - Agent
		JP1/AJS3 - View	JP1/Automatic Job Management System 3 - View
	JP1/AJS2	JP1/AJS2 - Manager	JP1/Automatic Job Management System 2 - Manager
		JP1/AJS2 - Agent	JP1/Automatic Job Management System 2 - Agent
		JP1/AJS2 - View	JP1/Automatic Job Management System 2 - View
JP1/AJS3 - Web Console			JP1/Automatic Job Management System 3 - Web Console
JP1/AJS3 - Definition Assistant			JP1/Automatic Job Management System 3 - Definition Assistant
JP1/AJS3 for Enterprise Applications			JP1/Automatic Job Management System 3 for Enterprise Applications

Abbreviation		Full name or meaning	
JP1/AJS3 for Cloud Service Applications		JP1/Automatic Job Management System 3 for Cloud Service Applications	
JP1/AJS3 for CSA			
JP1/AJS3 CSA			
CSA			
Firefox	Firefox ESR	Mozilla(R) Firefox(R) Extended Support Release	
Linux	Linux 7	Red Hat Enterprise Linux(R) Server 7.1	
	Linux 8	Red Hat Enterprise Linux(R) Server 8	
	Linux 9	Red Hat Enterprise Linux(R) Server 9	
	Oracle Linux	Oracle Linux 7	Oracle Linux(R) Operating System 7
		Oracle Linux 8	Oracle Linux(R) Operating System 8
		Oracle Linux 9	Oracle Linux(R) Operating System 9
	SUSE Linux	SUSE Linux 12	SUSE Linux(R) Enterprise Server 12
SUSE Linux 15		SUSE Linux(R) Enterprise Server 15	

G.5 Conventions: Acronyms

This manual also uses the following acronyms:

Acronym	Full name or meaning
CLI	Command Line Interface
CN	Common Name
DNS	Domain Name System
GUI	Graphical User Interface
NAT	Network Address Translator
NAPT	Network Address Port Translation
OS	Operating System
PC	Personal Computer
PEM	Privacy Enhanced Mail
SAN	Subject Alternative Name
SSL	Secure Socket Layer
TLS	Transport Layer Security
TCP/IP	Transmission Control Protocol/Internet Protocol

G.6 Conventions: KB, MB, GB, and TB

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes.
- 1 MB (megabyte) is 1,024² bytes.
- 1 GB (gigabyte) is 1,024³ bytes.
- 1 TB (terabyte) is 1,024⁴ bytes.

H. Glossary

This section explains the meaning of technical terms related to JP1/AJS3 for Cloud Service Applications. If you wish to read the JP1/AJS glossary, refer to the *Glossary* in the manual *JP1/Automatic Job Management System 3 Overview*.

A

Authentication definition

Definition of cloud service linkage authentication information.

C

Cloud computing

A computing model that provides computer resources as services by taking advantage of computer resources distributed over computer networks (such as the internet). This computing model can simply be referred to as a cloud.

Cloud service

A service that adopts cloud computing and is provided to users.

Cloud service linkage authentication information

Authentication information required for the interface to establish connection to a cloud service. This information can also be referred to as service linkage authentication information or authentication information.

Cloud service linkage connection information

Information about the interface for connecting to a cloud service. This information can also be referred to as service linkage connection information or connection information.

Cloud service linkage execution information

Information about the interface that enables the use of a cloud service after connection is established to the cloud service. This information can also be referred to as service linkage execution information or execution information.

Connection definition

Definition of cloud service linkage connection information.

E

Execution definitions

Definition of cloud service linkage execution information.

J

JP1/AJS

A generic name for JP1/Automatic Job Management System 3.

JP1/AJS is a program that automates work tasks.

In JP1/AJS, you can define sequences of tasks to execute at regular intervals, or have certain processing start when a specific event occurs.

JP1/AJS3

An abbreviation of JP1/Automatic Job Management System 3.

JP1/AJS3 - Manager

An abbreviation of JP1/Automatic Job Management System 3 - Manager.

JP1/AJS3 - View

An abbreviation of JP1/Automatic Job Management System 3 - View.

JP1/AJS3 - Web Console

An abbreviation of JP1/Automatic Job Management System 3 - Web Console.

JP1/AJS3 for Cloud Service Applications

An abbreviation of JP1/Automatic Job Management System 3 for Cloud Service Applications.

JP1/Base

A program that provides the event service function. JP1/Base allows you to control the order in which services start, and it lets you send and receive JP1 events. JP1/Base is a prerequisite program for JP1/IM and JP1/AJS3. When JP1/IM is deployed in a system with JP1/AJS3, JP1/Base provides functionality for restricting operations by JP1 users.

O

On-premises

A computing model in which software is installed and run on devices (for example, servers) installed in facilities or equipment managed by users.

On-premises environment

A computing environment that adopts the on-premises model.

S

Service linkage authentication information

This is the same as cloud service linkage authentication information.

Service linkage connection information

This is the same as cloud service linkage connection information.

Service linkage definition information file

A file that defines the following: (1) items that the user should enter in the Detailed Definition window of JP1/AJS3 - View, and (2) information required for execution of a service linkage job (for example, the host name of the JP1/AJS3 for Cloud Service Applications server).

You can output this file from JP1/AJS3 for Cloud Service Applications and import the file when registering a service linkage job in JP1/AJS3 - View.

The service linkage definition information file can also be referred to as a file for recording a custom job.

Service linkage execution information

This is the same as cloud service linkage execution information.

Service linkage job

A custom job that runs in tandem with a service provided by JP1/AJS3 for Cloud Service Applications. Service linkage jobs can be defined in JP1/AJS3 - View.

Service linkage job information

A series of information parts that are created from a set of information required for connecting to, authenticating, and executing a cloud service. Service linkage job information consists of the following three types of information: cloud service linkage connection information, cloud service linkage authentication information, and cloud service linkage execution information.

W

Web GUI

The Web GUI is the client terminal interface used to define information about service linkage jobs for JP1/AJS3 for Cloud Service Applications. You must establish a connection from a client terminal to the JP1/AJS3 for Cloud Service Applications server to display the Web GUI on your web browser.

Index

A

- [ajscsajobdel](#) 183
- [ajscsajoblist](#) 181
- [ajscsajobreg](#) 179
- [ajscsasetup](#) 159
- [Application Server Common Logs](#) 187
- [Application Server Logs](#) 189
- [argument](#) 156
- [Authentication definitions window](#) 150
 - [Additional information item](#) 152
 - [ID/user](#) 151
 - [Security information/password](#) 151
- [authentication information](#) 17

B

- [Backing up](#) 83
- [Backing up and recovering the entire system](#) 85
- [Backup and recovery](#) 83

C

- [CAFile](#) 78
- [Changing the settings during operation](#) 51
- [cloud service linkage authentication information](#) 17
- [cloud service linkage connection information](#) 17
- [cloud service linkage execution information](#) 17
- [Collecting data for troubleshooting](#) 201
- [Collecting data for troubleshooting in Linux](#) 203
- [Collecting data for troubleshooting in Windows](#) 201
- [COM_LOG_LANG](#) 60
- [COM_LOG_LEVEL](#) 59
- [COM_LOG_NUM](#) 59
- [COM_LOG_SIZE](#) 59
- [command](#)
 - [ajscsajobdel](#) 183
 - [ajscsajoblist](#) 181
 - [ajscsajobreg](#) 179
 - [ajscsasetup](#) 159
 - [jajs_csa](#) 163
 - [jajs_csa_stop](#) 165
 - [jajs_log](#) 167
 - [jajs_log.bat](#) 173
- [command description format](#) 156
- [Command Log](#) 189
- [commands](#)
 - [how to specify](#) 156

- [Commands](#) 155
- [Common display items](#) 115
- [Configuration file](#) 54
- [Configuration in cluster system](#) 31
- [Connection configuration file](#) 75
- [connection definition file](#)
 - [format](#) 287
 - [items](#) 289
- [Connection definition file](#) 287
- [Connection definitions window](#) 140
 - [Common environment variable settings](#) 141
 - [Connection termination processing](#) 146
 - [Setting variables dialog box](#) 148
 - [Variable settings](#) 142
- [Connection definition window](#)
 - [Connection processing](#) 143
- [connection information](#) 17
- [ConnectTimeout](#) 77
- [Considering the method for managing authentication information corresponding to the commands to be executed](#) 90
- [Consider system configuration](#) 21
- [CSAConnectPortNumber](#) 76
- [CSAConnectProtocol](#) 76
- [CSAConnectRetryCount](#) 78
- [CSAConnectRetryInterval](#) 78
- [CSAServerName](#) 76

D

- [data collection tool](#) 167, 173
- [Data to be collected when a problem occurs](#) 197
- [Data to collect](#) 197
- [Definition flow of a service linkage job](#) 93
- [Definition items of service linkage job information](#) 94
- [Definition items of service linkage jobs](#) 98
- [Description format of unit definition parameters of service linkage jobs](#) 103
- [Designing and Building the System](#) 34
- [Designs and definitions of service linkage job](#) 88
- [Designs of service linkage jobs](#) 89
- [Details of service linkage jobs](#) 107
- [Details of setting items of the environment setting file \(ajs3csaweb.conf\)](#) 54

Details of the unit definition parameters of service linkage jobs [103](#)
Details on the settings in the HTTP server definition file (httpspd.conf) [64](#)

E

environment setting parameter
 CSACONNECTCONFIG [285](#)
 JOBLOGSIZE [286](#)
Environment variables for command execution [107](#)
Escaping a command line for cloud service linkage information [95](#)
Estimation [282](#)
execution definition file [291](#)
 format [291](#)
 items [295](#)
Execution definitions window [121](#)
 Job output processing [137](#)
 Linkage processing settings [124](#)
 Setting variables dialog box [137](#)
 Variable settings [122](#)
execution information [17](#)
Execution of service linkage jobs [106](#)
Execution results of service linkage jobs [107](#)

F

Features of JP1/AJS3 for Cloud Service Applications [16](#)
Files and Directories [277](#)
Format of message explanations [211](#)

H

HNTR_LOG_LANG [57](#)
HNTR_LOG_LEVEL [57](#)
Home window [116](#)
how to collect data when a problem occurs [201](#)
how to solve [205](#)

I

Icon of service linkage jobs [100](#)
Installation
 Linux [36](#)
 windows [35](#)

J

jajs_csa [163](#)

jajs_csa_stop [165](#)
jajs_log [167](#)
jajs_log.bat [173](#)
JP1/AJS3 Environment Setting Parameters [284](#)
JP1/AJS3 for Cloud Service Applications database file [80](#)

K

Killing of service linkage jobs [108](#)

L

Limitations [281](#)
List of log files and directories [191](#)
List of messages [220](#)
 Messages beginning with KNBB [220](#)
List of output destinations for messages [213](#)
 Output destinations of messages beginning with KNBB [213](#)
Login window [114](#)
logs
 types and storage location [187](#)

M

Management operation of service linkage jobs [105](#)
Message format [211](#)
Message ID [211](#)
Messages [210](#)

N

Notes on execution of service linkage jobs [110](#)
Notes on service linkage jobs [101](#)
Notes on Web GUI [154](#)
Notes when running anti-virus software [86](#)

O

Operation in disaster-recovery configuration [33](#)
option [156](#)
Option definition file for J2EE server [70](#)

P

Port number to be set [283](#)
Prerequisites of cluster system [31](#)
ProxyAddr [77](#)

R

- Recovering 85
- Return codes of service linkage jobs 109

S

- SERVER_LOG_APP_LEVEL 60
- SERVER_LOG_APP_NUM 61
- SERVER_LOG_APP_SIZE 60
- SERVER_LOG_JOB_NUM 62
- SERVER_LOG_JOB_SIZE 61
- SERVER_LOG_LANG 61
- SERVER_SESSION_TIMEOUT 63
- SERVERJOB_LOG_JOB_LEVEL 62
- Server Job Logs 189
- service linkage authentication information 17
- service linkage connection information 17
- service linkage definition file 298
- service linkage execution information 17
- service linkage job 16
- service linkage job definition file
 - format 299
 - items 299
- Service linkage job definition window 118
 - Output definition file dialog box 120
- service linkage job information 16
- Service linkage job information definition files 287
- Service Linkage Job Log 190
- Setting
 - Setting up the JP1/AJS3 for Cloud Service Applications server 40
- Setting automatic startup and termination of the JP1/AJS3 for Cloud Service Applications service 52
- Setup 40
 - Cluster environment 47
 - Execution host for a service linkage job 49
 - Service linkage jobs 40
 - SSLcommunication environment 41
- Status of service linkage jobs 107
- storage
 - location of logs 187
- symbols used for command syntax explanations 157
- SYS_LOG_LANG 58
- SYS_LOG_LEVEL 58
- system configuration 19
- System property file for server management commands 72

T

- Timeout 78
- Troubleshooting 185
- Troubleshooting 205
- Troubleshooting for service linkage jobs 208
- Troubleshooting procedure 186

U

- Uninstallation 38
 - Linux 38
 - Windows 38
- Unit definition parameters of service linkage jobs 103
- USED_DEF_LIMIT 62
- Use in cloud environment 25
- Use in on-premises environment 21
- User property file for J2EE server 68
- usrconf.cfg 70
- usrconf.properties 68, 72

V

- Variables used for the definition of service linkage job information 94

W

- Web browser settings 112
- Window transitions 113

 **Hitachi, Ltd.**

6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8280 Japan
