

**JP1 Version 12**

**JP1/Automatic Job Management System 3 - Print  
Option Description and User's Guide**

**3021-3-D32-10(E)**

## Notices

### ■ Relevant program products

*JP1/Automatic Job Management System 3 - View (For Windows)*

P-2A12-34CL JP1/Automatic Job Management System 3 - View version 12-50

The above product includes the following:

P-CC2A12-44CL JP1/Automatic Job Management System 3 - View version 12-50 (For Windows Server 2019, Windows Server 2016, Windows 10, Windows 8.1, Windows Server 2012, Windows 8, and Windows 7)

P-CC2A12-3MCL JP1/Automatic Job Management System 3 - Print Option version 12-50 (For Windows Server 2019, Windows Server 2016, Windows 10, Windows 8.1, Windows Server 2012, Windows 8, and Windows 7)

*JP1/Automatic Job Management System 3 - Manager (For Windows)*

P-2A12-3KCL JP1/Automatic Job Management System 3 - Manager version 12-50

The above product includes the following:

P-CC2A12-4KCL JP1/Automatic Job Management System 3 - Manager version 12-50 (For Windows Server 2019, Windows Server 2016 and Windows Server 2012)

P-CC2A12-3NCL JP1/Automatic Job Management System 3 - Print Option Manager version 12-50 (For Windows Server 2019, Windows Server 2016 and Windows Server 2012)

*JP1/Automatic Job Management System 3 - Manager (For HP-UX)*

P-1J12-3KCL JP1/Automatic Job Management System 3 - Manager version 12-50

The above product includes the following:

P-CC1J12-4KCL JP1/Automatic Job Management System 3 - Manager version 12-50 (For HP-UX(IPF))

P-CC1J12-3NCL JP1/Automatic Job Management System 3 - Print Option Manager version 12-50 (For HP-UX(IPF))

*JP1/Automatic Job Management System 3 - Manager (For Solaris)*

P-9D12-3KCL JP1/Automatic Job Management System 3 - Manager version 12-50

The above product includes the following:

P-CC9D12-4KCL JP1/Automatic Job Management System 3 - Manager version 12-50 (For Solaris)

P-CC9D12-3NCL JP1/Automatic Job Management System 3 - Print Option Manager version 12-50 (For Solaris)

*JP1/Automatic Job Management System 3 - Manager (For AIX)*

P-1M12-3KCL JP1/Automatic Job Management System 3 - Manager version 12-50

The above product includes the following:

P-CC1M12-4KCL JP1/Automatic Job Management System 3 - Manager version 12-50 (For AIX)

P-CC1M12-3NCL JP1/Automatic Job Management System 3 - Print Option Manager version 12-50 (For AIX)

*JP1/Automatic Job Management System 3 - Manager (For Linux)*

P-8112-3KCL JP1/Automatic Job Management System 3 - Manager version 12-50

The above product includes the following:

P-CC8112-4KCL JP1/Automatic Job Management System 3 - Manager version 12-50 (For Linux 8, Linux 7, Linux 6(x64), Oracle Linux 6(x64), Oracle Linux 7, Oracle Linux 8, CentOS 6(x64), CentOS 7, CentOS 8, SUSE Linux 12, and SUSE Linux 15)

P-CC8112-3NCL JP1/Automatic Job Management System 3 - Print Option Manager version 12-50 (For Linux 8, Linux 7, Linux 6(x64), Oracle Linux 6(x64), Oracle Linux 7, Oracle Linux 8, CentOS 6(x64), CentOS 7, CentOS 8, SUSE Linux 12, and SUSE Linux 15)

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## ■ Microsoft product screen shots

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## ■ Microsoft product name abbreviations

This manual uses the following abbreviations for Microsoft product names.

Abbreviation	Full name or meaning
Microsoft .NET	Microsoft(R) .NET
Microsoft Excel	Microsoft(R) Excel
	Microsoft(R) Office Excel

Abbreviation		Full name or meaning
Microsoft Office		Microsoft(R) Office
Windows 7	Windows 7(x86)	Microsoft(R) Windows(R) 7 Enterprise (32-bit)
		Microsoft(R) Windows(R) 7 Professional (32-bit)
		Microsoft(R) Windows(R) 7 Ultimate (32-bit)
	Windows 7(x64)	Microsoft(R) Windows(R) 7 Enterprise (64-bit)
		Microsoft(R) Windows(R) 7 Professional (64-bit)
		Microsoft(R) Windows(R) 7 Ultimate (64-bit)
Windows 8	Windows 8(x86)	Windows(R) 8 (32-bit)
		Windows(R) 8 Enterprise (32-bit)
		Windows(R) 8 Pro (32-bit)
	Windows 8(x64)	Windows(R) 8 (64-bit)
		Windows(R) 8 Enterprise (64-bit)
		Windows(R) 8 Pro (64-bit)
Windows 8.1	Windows 8.1(x86)	Windows(R) 8.1 (32-bit)
		Windows(R) 8.1 Enterprise (32-bit)
		Windows(R) 8.1 Pro (32-bit)
	Windows 8.1(x64)	Windows(R) 8.1 (64-bit)
		Windows(R) 8.1 Enterprise (64-bit)
		Windows(R) 8.1 Pro (64-bit)
Windows 10	Windows 10(x86)	Windows(R) 10 Home (32-bit)
		Windows(R) 10 Enterprise (32-bit)
		Windows(R) 10 Pro (32-bit)
	Windows 10(x64)	Windows(R) 10 Home (64-bit)
		Windows(R) 10 Enterprise (64-bit)
		Windows(R) 10 Pro (64-bit)
Windows Server 2012	Windows Server 2012	Microsoft(R) Windows Server(R) 2012 Datacenter
		Microsoft(R) Windows Server(R) 2012 Standard
	Windows Server 2012 R2	Microsoft(R) Windows Server(R) 2012 R2 Datacenter
		Microsoft(R) Windows Server(R) 2012 R2 Standard
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* is sometimes used generically, referring to Windows Server 2019, Windows Server 2016, Windows 10, Windows 8.1, Windows Server 2012, Windows 8, and Windows 7.

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## Summary of amendments

The following table lists changes in this manual (3021-3-D32-10(E)) and product changes related to this manual.

Changes	Location
Supported Windows Server 2019, Linux 8, Oracle Linux 8, CentOS 8, and SUSE Linux 15.	<a href="#">2.1.1</a> , <a href="#">2.1.2</a> , <a href="#">3.4.2</a> , <a href="#">3.4.4</a> , <a href="#">3.4.5(2)(a)</a> , <a href="#">3.5</a> , <a href="#">7.2</a> , <a href="#">Chapter 8</a> , <a href="#">10.3.2(1)</a> , <a href="#">Appendix G.2</a>
Added the following programs as prerequisite programs: <ul style="list-style-type: none"> <li>Microsoft Office 2019 32-bit (Microsoft Excel 2019 32-bit)</li> <li>Microsoft Office 2019 64-bit (Microsoft Excel 2019 64-bit)</li> <li>Microsoft .NET Framework 4.8</li> </ul>	<a href="#">2.1.2</a>
Added following commands: <ul style="list-style-type: none"> <li>jprmpflw</li> <li>jprajsmkkey</li> <li>jprwebcollect</li> </ul>	<a href="#">2.1.2</a> , <a href="#">3.4.6</a> , <a href="#">3.5</a> , <a href="#">3.6</a> , <a href="#">Chapter 8</a> , <a href="#">10.3.2</a> , <a href="#">10.4.2(3)</a> , <a href="#">Appendix D.1</a>
Added the following messages: KAVR4012-E, KAVR4013-E, KAVR4014-E, KAVR4015-E, KAVR4016-E, KAVR4017-E, KAVR4018-E, KAVR4019-E, KAVR4020-E, KAVR4021-E, KAVR4022-E, KAVR4023-E, KAVR4024-E, KAVR4100-E, KAVR4101-E, KAVR4102-E, KAVR4103-E, KAVR4104-E, KAVR4105-E, KAVR4106-E, KAVR4107-E, KAVR4108-E, KAVR4109-E, KAVR4110-I, KAVR4111-I, KAVR4112-I, KAVR4200-E, KAVR4201-W, KAVR4202-E, KAVR4203-E, KAVR4204-E, KAVR4205-E, KAVR4206-E, KAVR4207-E, KAVR4208-E, KAVR4209-E, KAVR4210-E, KAVR4211-E, KAVR4212-E, KAVR4213-E, KAVR4214-E, KAVR4215-E, KAVR4216-E	<a href="#">9.2</a> , <a href="#">9.3</a>
Added the icon for JP1/CPA Option for AJS3 linked jobs as standard custom jobs.	--

In addition to the above changes, minor editorial corrections were made.

# Preface

This manual describes the functions and the operations of JP1/Automatic Job Management System 3 - Print Option (abbreviated hereafter to *JP1/AJS3 - Print Option*) and JP1/Automatic Job Management System 3 - Print Option Manager (abbreviated hereafter to *JP1/AJS3 - Print Option Manager*).

## ■ Intended readers

This manual is intended for users who want to use JP1/AJS3 to print information about job activity in the system, including jobnet definitions, execution schedules, and execution results.

## ■ Organization of this manual

This manual is organized into the following chapters and appendixes. The manual is a common reference for all supported operating systems. Any platform-dependent differences in functionality are noted in the manual.

### 1. Overview of JP1/AJS3 - Print Option

This chapter provides an overview of the functionality provided by JP1/AJS3 - Print Option.

### 2. System Configuration of JP1/AJS3 - Print Option

This chapter describes the operating environment and system configuration of JP1/AJS3 - Print Option.

### 3. Installation and Setup

This chapter describes how to install and set up the programs (JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager) that make up JP1/AJS3 - Print Option.

### 4. Collecting Job Operation Information

This chapter describes how information about job operation is collected.

### 5. Transferring Job Operation Information

This chapter describes how to transfer information about job operation.

### 6. Outputting Job Operation Information to Documents

This chapter describes how to output information about job operation in document form.

### 7. Windows

This chapter describes the display items and definition items used in JP1/AJS3 - Print Option.

### 8. Commands

This chapter describes the syntax of the commands used with JP1/AJS3 - Print Option.

### 9. Messages

This chapter describes the messages output by JP1/AJS3 - Print Option.

### 10. Troubleshooting

This chapter describes what to do if a problem occurs while using JP1/AJS3 - Print Option.

#### *A. List of Supported Column Items*

This appendix lists the column items you can specify when List is specified as the basic style of a document in the Format Definition window. It also lists the items you can specify in the Jobnet Flow Format Definition Settings window.

#### *B. List of Column Items in Daily and Monthly Documents*

This appendix lists the column items you can specify in the Format Definition window for the daily and monthly basic formats.

#### *C. List of Symbols in Daily and Monthly Documents*

This appendix lists the symbols used when JP1/AJS3 - Print Option display detailed column information as symbols in a document whose basic style is Daily or Monthly.

#### *D. Product File Information*

This appendix lists the files and directories associated with JP1/AJS3 - Print Option.

#### *E. List of Processes*

This appendix lists the processes associated with JP1/AJS3 - Print Option.

#### *F. Version Revisions*

This appendix describes the changes in each version of the program.

#### *G. Reference Material for This Manual*

This appendix provides reference material for this manual, including a list of related manuals and a description of the conventions used by the writer.

#### *H. Glossary*

This appendix explains the terminology used in JP1/AJS3 - Print Option.

## ■ Conventions: Version numbers

The version numbers of Hitachi program products are usually written as two sets of two digits each, separated by a hyphen. For example:

- Version 1.00 (or 1.0) is written as 01-00.
- Version 2.05 is written as 02-05.
- Version 2.50 (or 2.5) is written as 02-50.
- Version 12.25 is written as 12-25.

The version number might be shown on the spine of a manual as *Ver. 2.00*, but the same version number would be written in the program as *02-00*.

# Contents

Notices 2

Summary of amendments 6

Preface 7

## **1 Overview of JP1/AJS3 - Print Option 13**

- 1.1 Features of JP1/AJS3 - Print Option 14
- 1.2 Documenting definition information 15
- 1.3 Documenting execution schedules and results 16
- 1.4 Customizing documents 17

## **2 System Configuration of JP1/AJS3 - Print Option 18**

- 2.1 Checking the operating environment 19
  - 2.1.1 OS prerequisites 19
  - 2.1.2 Prerequisite programs 19
- 2.2 System configuration 21

## **3 Installation and Setup 22**

- 3.1 Installation (in Windows) 23
- 3.2 Installation (in UNIX) 24
  - 3.2.1 Using the Hitachi Program Product Installer 24
- 3.3 Uninstallation 26
  - 3.3.1 Uninstallation (in Windows) 26
  - 3.3.2 Uninstallation (in UNIX) 26
- 3.4 Setup 27
  - 3.4.1 Setting port numbers 27
  - 3.4.2 JP1/AJS3 - View setup 28
  - 3.4.3 Starting and stopping services 29
  - 3.4.4 Notes on changing IP addresses 32
  - 3.4.5 Setting up multi-user remote operation 33
  - 3.4.6 Setting up JP1/AJS3 - Web Console 35
- 3.5 Files to back up 37
- 3.6 Notes on using JP1/AJS3 - Print Option with antivirus software 40

## **4 Collecting Job Operation Information 42**

- 4.1 Collecting information about job operation 43
- 4.2 Collecting job operation information in the Collecting Job Operation Information window 47
  - 4.2.1 Displaying the Collecting Job Operation Information window from the Start menu 47

4.2.2	Displaying the Collecting Job Operation Information window from JP1/AJS3 - View	48
4.3	Using the jprcollect command to collect job operation information	51
<b>5</b>	<b>Transferring Job Operation Information</b>	<b>52</b>
5.1	Transferring job operation information	53
<b>6</b>	<b>Outputting Job Operation Information to Documents</b>	<b>54</b>
6.1	Outputting job operation information as documents	55
6.2	Displaying the Job Operation Document Output window	56
6.3	Outputting documents	58
6.4	Changing formats	60
6.5	Defining custom document formats	64
6.6	Page settings	66
6.7	Changing the displayed range	68
6.8	Outputting definitions in map format	69
6.8.1	Outputting definitions to Microsoft Excel in map format	69
6.8.2	Outputting definitions to PDF files in map format	70
6.9	Jobnet flow format definitions	72
6.10	Outputting definitions in jobnet flow format	75
6.10.1	Outputting definitions to Microsoft Excel in jobnet flow format	75
6.10.2	Outputting definitions to a PDF file in jobnet flow format	76
6.11	Using the jprprint command to output job operation information	78
<b>7</b>	<b>Windows</b>	<b>79</b>
7.1	Window transitions	80
7.2	Collecting Job Operation Information window	81
7.3	Job Operation Document Output window	92
7.4	Select Job Operation Information File window	97
7.5	Jobnet Names (Release IDs) List window	98
7.6	Map Output window	99
7.7	Jobnet Flow Output window	103
7.8	Map PDF Output window	107
7.9	Jobnet Flow PDF Output window	111
7.10	Save CSV File window	116
7.11	Print Preview window	119
7.12	Print window	120
7.13	Close window	122
7.14	Exit window	123
7.15	Format Definition Settings window	124
7.15.1	Common items	124
7.15.2	Items on Unit tab	125
7.15.3	Items on Column Item tab	126

7.15.4	Items on Others tab	135
7.15.5	Notes on using the Format Definition Settings window	137
7.16	Page Settings window	140
7.17	Change Displayed Range window	142
7.18	Jobnet Flow Format Definition Settings window	143
7.19	Environment Settings window	146
7.19.1	Shared items	146
7.19.2	Displayed items on the Default Settings tab	146
7.19.3	Displayed items of the View Settings tab	148
7.19.4	Displayed items of the Map tab	150
7.19.5	Displayed items of the Jobnet Flow tab	151
7.19.6	Cautionary notes for the Environment Settings window	152
7.20	Version Information window	154

## 8 Commands 155

Command syntax conventions	156
List of commands	157
jprcollect (Windows and UNIX)	159
jrpomlstart (UNIX)	168
jrpomlstop (UNIX)	169
jprprint (Windows)	170
jprmpflw (Windows)	174
jprajsmkkey (Windows)	179
jprwebcollect (Windows)	182

## 9 Messages 189

9.1	JP1/AJS3 - Print Option messages	190
9.1.1	Message format	190
9.1.2	Message IDs	190
9.1.3	Format of message explanations	190
9.2	List of output destinations of messages	192
9.3	List of messages	195

## 10 Troubleshooting 240

10.1	Troubleshooting procedure	241
10.2	Types of log information	242
10.2.1	Common message log	242
10.2.2	Process log	242
10.3	Information to be collected when a problem occurs	243
10.3.1	Information to collect from OS log files	243
10.3.2	Information relating to JP1/AJS3 - Print Option	244
10.3.3	Status of JP1/AJS3 - Print Option processes	246
10.3.4	Operation data	246

10.3.5	On-screen error information	246
10.4	Using data collection tools to collect information	247
10.4.1	Preparing to use the data collection tools	247
10.4.2	Running the JP1/AJS3 - Print Option data collection tool	247
10.4.3	Collecting data for JP1/AJS3 - Print Option Manager (in Windows)	251
10.4.4	Collecting data for JP1/AJS3 - Print Option Manager (in UNIX)	254
10.5	Configuring dump file output and collecting dump files	258
10.5.1	Configuring dump file output	258
10.5.2	Collecting dump files	258

## **Appendixes 260**

A	List of Supported Column Items	261
B	List of Column Items in Daily and Monthly Documents	288
C	List of Symbols in Daily and Monthly Documents	289
D	Product File Information	291
D.1	Product file information for JP1/AJS3 - Print Option	291
D.2	Product file information for JP1/AJS3 - Print Option Manager	299
E	List of Processes	305
E.1	List of JP1/AJS3 - Print Option Manager processes	305
E.2	Notes on monitoring the JP1/AJS3 - Print Option Manager process by JP1/Cm2/SSO	305
F	Version Revisions	307
F.1	Revisions in 12-50	307
F.2	Revisions in 12-00	307
F.3	Revisions in 11-50	308
F.4	Revisions in 11-10	308
F.5	Revisions in 11-00	309
F.6	Revisions in 10-50	311
G	Reference Material for This Manual	313
G.1	Related publications	313
G.2	Conventions: Abbreviations for product names	313
G.3	Conventions: Acronyms	314
G.4	Conventions: KB, MB, GB, and TB	315
H	Glossary	316

## **Index 320**



# 1

## Overview of JP1/AJS3 - Print Option

JP1/AJS3 - Print Option allows you to print information about job activity including jobnet definitions, execution schedules, and execution results. This product helps to provide comprehensive documentation that is useful in day-to-day operations and maintenance.

This chapter describes the features of JP1/AJS3 - Print Option.

## 1.1 Features of JP1/AJS3 - Print Option

---

JP1/AJS3 - Print Option provides the following three features:

- Documenting definition information
- Documenting execution schedules and results
- Customizing documents

## 1.2 Documenting definition information

This feature outputs the definitions of a jobnet unit as a document in list or map format.

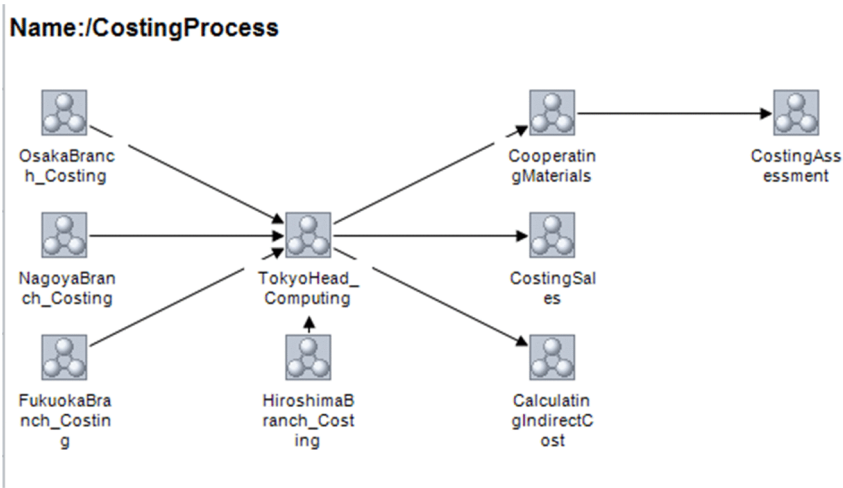
In list format, the definition items are the column labels and the units of the jobnet element are the row labels. This feature is useful for viewing definition information in detail.

Figure 1–1: Output example of document in list format

Unit name	Unit type	Script file name
(1) /CostingProcess:NagoyaBranch_Costing	Jobnet	-
(2) AssemblyProcess	PC job	c:\mog\N_KUMITA.SPT
(2) ControlConsignedGoods	Jobnet	-
(3) InventoryingConsignedGoods	PC job	c:\mog\N_ITAKUH.SPT
(2) ControlSubcontractGoods	Jobnet	-
(3) Purchasing_Inventorying	PC job	c:\mog\N_GSIIRE.SPT
(3) Shipping_Inventorying	PC job	c:\mog\N_GSYUKA.SPT
(2) CostingFuel	PC job	c:\mog\N_NENRYO.SPT
(2) CostingProducts	PC job	c:\mog\N_SGENKA.SPT
(2) CostingRawMaterials	PC job	c:\mog\N_GENRYO.SPT

Map format is a visual representation of a jobnet definition in which units are represented by icons. This allows you to see how units relate to each other at a glance.

Figure 1–2: Output example of document in map format



## 1.3 Documenting execution schedules and results

You can output a list of the jobnets registered for execution, or job execution schedules and results, as a daily or monthly report.

A daily report shows the execution schedules and results for one day.

Figure 1–3: Output example of daily report

[Daily Result]																		
Date: 2012/12/7(Fri) Base time: 00:00																		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
⌘ NagoyaBranch_Costing													○(12:08)					
													●(12:12)					
													●(12:36)					
													●(12:45)					
													●(12:53)					
⌘ ControlConsignedGoods													○(12:08)					
													●(12:11)					
													●(12:35)					
													●(12:44)					
													●(12:51)					
⊙ InventoryingConsignedGoods													○(12:08)					
													●(12:11)					
													●(12:35)					
													●(12:44)					
													●(12:51)					

A monthly report shows the execution schedules and results for one month.

Figure 1–4: Output example of monthly report

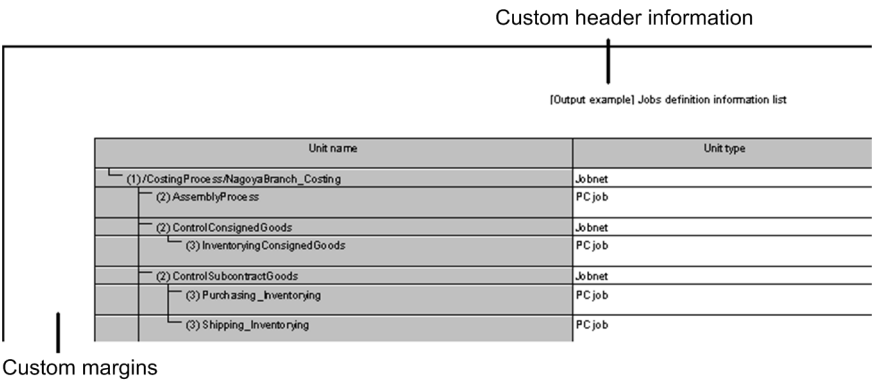
[Monthly Result]													
Month: 2012/12 Base time: 00:00													
	1 Sa	2 Su	3 Mo	4 Tu	5 We	6 Th	7 Fr	8 Sa	9 Su	10 Mo	11 Tu	12 We	13 Th
⌘ NagoyaBranch_Costing							(12:08)exec-defer	(13:01)normal					
							(12:12)normal	(13:07)interrupt					
							(12:36)normal	(13:16)normal					
							(12:45)normal						
							(12:53)normal						
⌘ ControlConsignedGoods							(12:08)exec-defer	(13:00)normal					
							(12:11)normal	(13:07)normal					
							(12:35)normal	(13:14)normal					
							(12:44)normal						
							(12:51)normal						
⊙ InventoryingConsignedGoods							(12:08)unexec	(13:00)normal					
							(12:11)normal	(13:07)normal					
							(12:35)normal	(13:14)normal					
							(12:44)normal						
							(12:51)normal						

# 1.4 Customizing documents

You can customize the layout and content of a document to suit your needs.

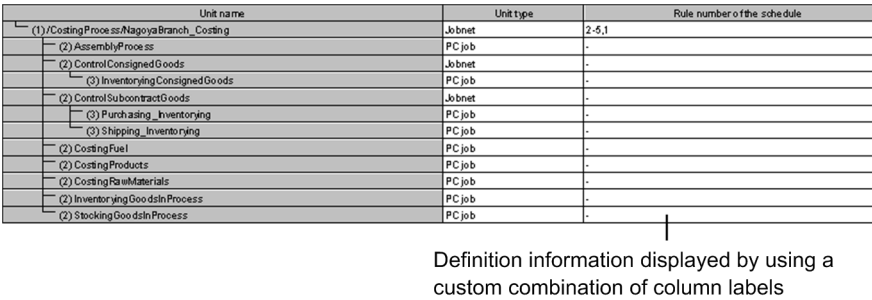
This includes changing the paper size and orientation, setting margins, and creating a custom header.

Figure 1–5: Document customization example 1



You can use column labels in any combination to display the definition information you need.

Figure 1–6: Document customization example 2



# 2

## System Configuration of JP1/AJS3 - Print Option

This chapter describes the operating environment and system configuration of AJS3 - Print Option. Review this information before deploying JP1/AJS3 - Print Option.

JP1/AJS3 - Print Option consists of two programs:

- JP1/AJS3 - Print Option Manager

This program collects information about job activity from JP1/AJS.

- JP1/AJS3 - Print Option

This program outputs the information collected by JP1/AJS3 - Print Option Manager in document form.

## 2.1 Checking the operating environment

Check the operating environment for each program that makes up JP1/AJS3 - Print Option.

### 2.1.1 OS prerequisites

The following table lists the operating system prerequisites for the programs that make up JP1/AJS3 - Print Option.

Program	Prerequisite OS
JP1/AJS3 - Print Option Manager	<ul style="list-style-type: none"><li>• Windows Server 2019</li><li>• Windows Server 2016</li><li>• Windows Server 2012</li><li>• Windows Server 2012 R2</li><li>• HP-UX(IPF)</li><li>• Solaris</li><li>• AIX</li><li>• Linux</li></ul>
JP1/AJS3 - Print Option <sup>#</sup>	<ul style="list-style-type: none"><li>• Windows Server 2019</li><li>• Windows Server 2016</li><li>• Windows 10 (x86)</li><li>• Windows 10 (x64)</li><li>• Windows 8.1 (x86)</li><li>• Windows 8.1 (x64)</li><li>• Windows Server 2012</li><li>• Windows Server 2012 R2</li><li>• Windows 8 (x86)</li><li>• Windows 8 (x64)</li><li>• Windows 7 (x86)</li><li>• Windows 7 (x64)</li></ul>

#

The use of multi-user remote operation assumes one of the following OSs:

- Windows Server 2019
- Windows Server 2016
- Windows Server 2012
- Windows Server 2012 R2

### 2.1.2 Prerequisite programs

The following table lists the prerequisite programs for each program that makes up JP1/AJS3 - Print Option.

Program	Prerequisite programs
JP1/AJS3 - Print Option Manager	<b>In Windows or Solaris:</b> JP1/AJS3 - Manager 09-00 or later <sup>#1</sup>

Program	Prerequisite programs
JP1/AJS3 - Print Option Manager	<b>In HP-UX(IPF), AIX, or Linux:</b> JP1/AJS3 - Manager 11-10 or later
JP1/AJS3 - Print Option	<ul style="list-style-type: none"> <li>JP1/Script 09-00 or later<sup>#2</sup></li> <li>JP1/AJS3 - Manager 09-50 or later, JP1/AJS3 - Agent 09-50 or later, or JP1/Script 09-00 or later<sup>#3</sup></li> <li>Microsoft Office 2019 32-bit (Microsoft Excel 2019 32-bit), Microsoft Office 2019 64-bit (Microsoft Excel 2019 64-bit), Microsoft Office 2016 32-bit (Microsoft Excel 2016 32-bit), Microsoft Office 2016 64-bit (Microsoft Excel 2016 64-bit), Microsoft Office 2013 32-bit (Microsoft Excel 2013 32-bit), Microsoft Office 2013 64-bit (Microsoft Excel 2013 64-bit), Microsoft Office 2010 32-bit (Microsoft Excel 2010 32-bit), Microsoft Office 2010 64-bit (Microsoft Excel 2010 64-bit)<sup>#4, #5</sup></li> <li>Microsoft .NET Framework 3.5, Microsoft .NET Framework 4.0, Microsoft .NET Framework 4.5, Microsoft .NET Framework 4.6, Microsoft .NET Framework 4.7, Microsoft .NET Framework 4.8<sup>#6, #7</sup></li> </ul>

#1

If the version of JP1/AJS3 - Manager in your system differs from that of JP1/AJS3 - Print Option Manager, the range of information you can collect is restricted to the information supported by whichever product has an older version installed. If there is no version of JP1/AJS3 - Print Option Manager that is equivalent to the version of JP1/AJS3 - Manager you are using, the range of information you can collect is restricted to the information supported by the last version where both products have equivalent version numbers.

Example:

If you are using JP1/AJS3 - Manager 09-10 and JP1/AJS3 - Print Option Manager License 10-00 together, because there is no JP1/AJS3 - Print Option Manager License 09-10, the range of information you can collect is restricted to the information supported by JP1/AJS3 - Print Option Manager License 09-00, the last version where both products have equivalent version numbers.

#2

Required in the same host as that of JP1/AJS3 - Print Option when performing automatic operation of job operation document output (`jprrprint` command) by using JP1/AJS, and in cases where the printer used for the printing waits for user input after displaying a prompt screen or message.

#3

Required in the same host as that of JP1/AJS3 - Print Option when performing automatic operation of job operation document output (`jprrprint` command) by using JP1/AJS, and in cases where CSV output is performed or the printer used for the printing does not wait for user input.

#4

Required to output documents in map and flow format.

#5

Required to output documents in map and flow format to a PDF file.

#6

Required to output documents in map and flow format.

In Windows Server 2019, this program requires Microsoft .NET Framework 3.5, Microsoft .NET Framework 4.7 or Microsoft .NET Framework 4.8.

In Windows Server 2016, Windows 10, this program requires Microsoft .NET Framework 3.5, Microsoft .NET Framework 4.6, Microsoft .NET Framework 4.7 or Microsoft .NET Framework 4.8.

In Windows 8.1, Windows Server 2012, and Windows 8, this program requires Microsoft .NET Framework 3.5, Microsoft .NET Framework 4.5, Microsoft .NET Framework 4.6, Microsoft .NET Framework 4.7 or Microsoft .NET Framework 4.8.

In Windows 7, this program requires Microsoft .NET Framework 3.5, Microsoft .NET Framework 4.0, Microsoft .NET Framework 4.5, Microsoft .NET Framework 4.6, Microsoft .NET Framework 4.7 or Microsoft .NET Framework 4.8.

#7

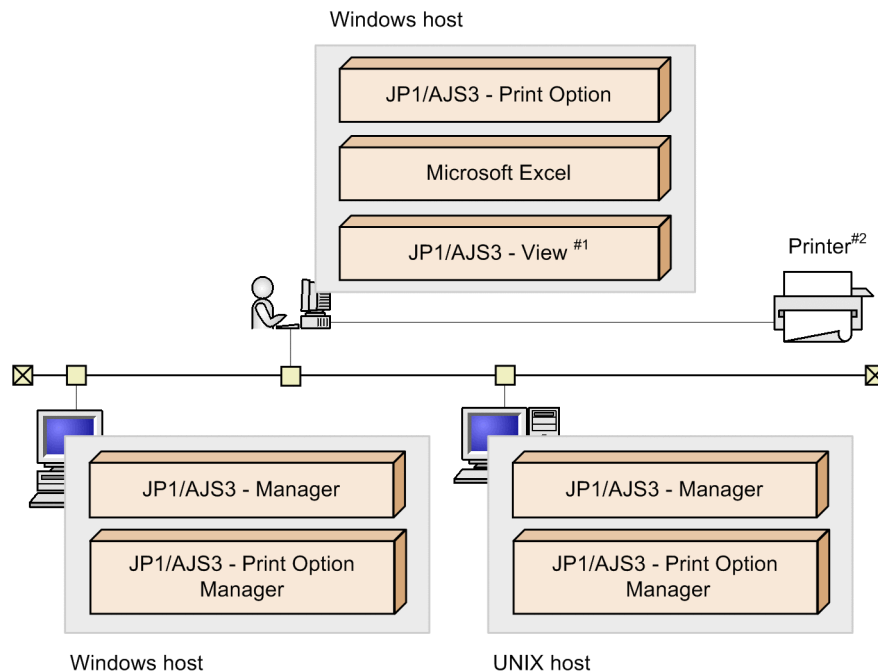
If the `jprrmpflw` command is used to output the contents of the job operation information file in map format or jobnet flow format, this program requires Microsoft .NET Framework 4.5, Microsoft .NET Framework 4.6, Microsoft .NET Framework 4.7, or Microsoft .NET Framework 4.8.



## 2.2 System configuration

The following figure shows an example of the basic configuration of a system using JP1/AJS3 - Print Option.

Figure 2–1: Example system configuration



#1

Required to collect information about job operation activity from JP1/AJS3 - View.

#2

Only the default printer can be used with the `jprprint` command.

The machines on which JP1/AJS3 - Print Option Manager and JP1/AJS3 - Print Option are installed do not need to be on the same LAN. The exchange of data between JP1/AJS3 - Print Option Manager and JP1/AJS3 - Print Option takes place by file transfer. For this reason, these programs can be run over a WAN or in an offline configuration provided that file transfer is achievable.

# 3

## Installation and Setup

This chapter describes how to install and set up the programs (JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager) that make up JP1/AJS3 - Print Option.

You need Administrators permission (in Windows) or superuser permission (in UNIX) to install these programs.

## 3.1 Installation (in Windows)

---

This section describes how to install the programs that make up JP1/AJS3 - Print Option on a Windows host.

You must have Administrators permission to install the programs.

1. Quit all programs.

Quit all programs before you install JP1/AJS3 - Print Option.

2. Insert the supplied media into the CD-ROM drive.

Install JP1/AJS3 - Print Option as prompted by the Installer.

During installation, set the following items:

- User information
- Installation folder

Do not install JP1/AJS3 - Print Option in the same folder as another product.

Notes:

- Make sure that the access permissions for the installation folder are set correctly. The program will not operate correctly if a user does not have write permission for the installation folder. Non-administrator users do not have write permission for the default installation folder. If a user without administrator permission will be using JP1/AJS3 - Print Option, grant the user write permission for the installation folder and all its subfolders.
- You can install JP1/AJS3 - Print Option in any folder. However, the total of the following must not exceed 258 bytes:
  - The installation folder path length
  - The path names of the files and folders created by each program
    - JP1/AJS3 - Print Option: 80 bytes
    - JP1/AJS3 - Print Option Manager: 20 bytes
  - If you are installing the products in a folder you created, the path name of that folder
- If you install JP1/AJS3 - Print Option as a non-Administrator in an environment with User Account Control (UAC) enabled, promote the account to administrator status before you begin.
- For details on the folders and files created by the installation process and cautionary notes, see [D. Product File Information](#).

## 3.2 Installation (in UNIX)

---

This section describes how to install JP1/AJS3 - Print Option Manager on a UNIX host.

1. Quit all programs.

Quit all programs before installing JP1/AJS3 - Print Option Manager.

2. Run the Hitachi Program Product Installer.

Install JP1/AJS3 - Print Option Manager as prompted by the Hitachi Program Product Installer.

For details on how to use the Hitachi Program Product Installer, see [3.2.1 Using the Hitachi Program Product Installer](#).

Note:

If installation fails and you see a message or other indication that installation failed while using the Hitachi Program Product Installer, check the `/etc/.hitachi/.hitachi.log` file. Because this file is overwritten every time you start the Hitachi Program Product Installer, we recommend that you back up the file as needed.

### 3.2.1 Using the Hitachi Program Product Installer

The Hitachi Program Product Installer is stored on the JP1/AJS3 - Print Option Manager distribution media. This section describes how to:

- Start the Hitachi Program Product Installer
- Use the Hitachi Program Product Installer to install JP1/AJS3 - Print Option Manager
- Use the Hitachi Program Product Installer to delete JP1/AJS3 - Print Option Manager
- Use the Hitachi Program Product Installer to check which versions of Hitachi products are currently installed

Note on using the Hitachi Program Product Installer

Superuser permissions are required to use the Hitachi Program Product Installer. Log in as the superuser, or execute the `su` command to switch to a superuser account.

#### (1) Starting Hitachi Program Product Installer

1. Insert the JP1/AJS3 - Print Option Manager distribution media into the drive.

2. Mount the CD-ROM drive.

Execute the command as shown below. The command differs according to your OS. You can skip this step in Solaris. In Linux, the drive will be automatically mounted in some environments.

In HP-UX:

```
/usr/sbin/mount -F cdfs -r device-special-file-name /cdrom
```

In AIX:

```
/usr/sbin/mount -r -v cdrfs device-special-file-name /cdrom
```

In Linux:

```
/bin/mount -r -t iso9660 device-special-file-name /media/cdrecorder
```

Note: `/cdrom` and `/media/cdrecorder` are the mount points for the CD-ROM device special file. If there is no mount point directory, create one. The device special file name and the mount point vary depending on your environment.

3. Execute the following command to install and start the Hitachi Program Product Installer:

In Linux:

```
/media/cdrecorder/XXXX/setup /media/cdrecorder
```

In systems other than Linux:

```
/cdrom/XXXX/setup /cdrom
```

XXXX differs according to your operating system, as follows:

In HP-UX (IPF): IPFHPUX

In Solaris: SOLARIS

In AIX: AIX

In Linux: LINUX

## (2) Installing JP1/AJS3 - Print Option Manager

The following describes how to install JP1/AJS3 - Print Option Manager using the Hitachi Program Product Installer.

The initial window appears when you start the Installer.

Enter **I** in this window to see a list of the software that you can install. Move the cursor to the program you want to install, and then press the space bar to select that program. Enter **I** again to install JP1/AJS3 - Print Option Manager. When the installation has finished, enter **Q** to return to the initial window.

## (3) Deleting JP1/AJS3 - Print Option Manager

Execute the following command to start the Hitachi Program Product Installer.

```
/etc/hitachi_setup
```

The initial window appears.

Enter **D** in this window to see a list of software that can be deleted. Move the cursor to the program you want to delete, and then press the space bar to select that program. Enter **D** again to delete the software. When the software has been deleted, enter **Q** to return to the initial window.

## (4) Displaying version information

Execute the following command to start the Hitachi Program Product Installer.

```
/etc/hitachi_setup
```

The initial window appears.

Enter **L** in this window to see a list of installed Hitachi program products.

## 3.3 Uninstallation

---

This section describes how to uninstall the programs that make up JP1/AJS3 - Print Option (JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager).

You need Administrators permission (in Windows) or superuser permission (in UNIX) to uninstall the programs.

### 3.3.1 Uninstallation (in Windows)

This section describes how to uninstall the programs that make up JP1/AJS3 - Print Option from a Windows host.

1. Quit all programs.

Quit all programs before you uninstall JP1/AJS3 - Print Option.

2. Uninstall the programs by choosing Add/Remove Programs in the Windows Control Panel.

To uninstall a program, select the program you want to uninstall in the Add/Remove Programs section of the Control Panel.

3. Delete user files.

When you uninstall JP1/AJS3 - Print Option, definition files and log files that were created after the program was installed are not deleted.

To delete these files, use Windows Explorer to delete the folder in which JP1/AJS3 - Print Option was installed.

Sample format definition files, sample jobnet flow format definition files, environment settings files, and page settings files are deleted even if they have been modified by a user. Back up these files as needed.

Note:

If you uninstall JP1/AJS3 - Print Option as a non-Administrator in an environment with User Account Control (UAC) enabled, promote the account to administrator status before you begin.

### 3.3.2 Uninstallation (in UNIX)

This section describes how to uninstall JP1/AJS3 - Print Option Manager from a UNIX host.

1. Quit all programs.

Quit all programs before uninstalling JP1/AJS3 - Print Option Manager.

2. Run the Hitachi Program Product Installer.

Uninstall JP1/AJS3 - Print Option Manager as prompted by the Hitachi Program Product Installer.

For details on how to use the Hitachi Program Product Installer, see [3.2.1\(3\) Deleting JP1/AJS3 - Print Option Manager](#).

3. Confirm that the files have been deleted.

After uninstalling JP1/AJS3 - Print Option Manager, check whether the following directory has been deleted. Delete the directory if it still exists.

```
/opt/jp1ajs2pom
```

## 3.4 Setup

This section describes how to set up the programs that make up JP1/AJS3 - Print Option (JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager).

### 3.4.1 Setting port numbers

This section provides a list of port numbers that need to be set, and describes the direction in which data passes through the firewall.

The port numbers used by JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager are set by default when the product ships. You can change the port numbers to suit the environment in which the product is being used. JP1/AJS3 - Print Option communicates using the TCP/IP protocol.

If you start JP1/AJS3 - Print Option from the JP1/AJS3 - View window, the program sends the job operation information collection request to servers installed with JP1/AJS3 - Print Option Manager. It then receives the job operation information file as a result and displays the information on the window. This communication uses port numbers.

For details about starting JP1/AJS3 - Print Option from the JP1/AJS3 - View window, see [3.4.2 JP1/AJS3 - View setup](#) and [4.2.2 Displaying the Collecting Job Operation Information window from JP1/AJS3 - View](#).

The port numbers set in the Services file and the direction in which data passes through the firewall are shown below.

#### (1) Port numbers

##### (a) Port number used by JP1/AJS3 - Print Option

The following table shows the port number used by JP1/AJS3 - Print Option.

Table 3–1: Port number used by JP1/AJS3 - Print Option

Service name	Port number	Used for
jp1ajs2poml	24201	Collecting information about job activity

##### (b) Port numbers used by JP1/AJS3 - Print Option Manager

The following table shows the port number used by JP1/AJS3 - Print Option Manager.

Table 3–2: Port number used by JP1/AJS3 - Print Option Manager

Service name	Port number	Used for
jp1ajs2poml	24201	Collecting information about job activity

#### (2) Direction in which data passes through the firewall

The following table shows the direction in which data passes through the firewall. JP1/AJS3 - Print Option supports address conversion by packet filtering and NAT (static mode).

Table 3–3: Direction in which data passes through the firewall

Program that requires firewall setting	Service name	Port number	Direction in which data passes through the firewall
JP1/AJS3 - Print Option JP1/AJS3 - Print Option Manager	jp1ajs2poml	24201	JP1/AJS3 - Print Option → JP1/AJS3 - Print Option Manager

Legend:

→: Communication data goes in one direction (from left to right).

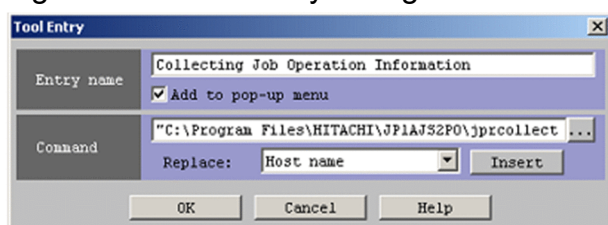
Note:

If you change the port number used by JP1/AJS3 - Print Option or JP1/AJS3 - Print Option Manager, edit the service file so that the port numbers used by JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager are identical and then restart the JP1/AJS3 - Print Option Manager service.

## 3.4.2 JP1/AJS3 - View setup

To link JP1/AJS3 - Print Option with JP1/AJS3 - View, enter the following information in the Tool Entry dialog box.

Figure 3–1: Tool Entry dialog box of JP1/AJS3 - View



In the **Command** field, enter the following command:

```
"C:\Program Files\Hitachi\JP1AJS2PO#1\jprcollect_cl.exe" -h (HOST_NAME)
-s (SERVICE_NAME) -c (CHAR_CODE) -u (UNIT_NAME) -6#2
```

#1

Specify the folder where you installed JP1/AJS3 - Print Option.

#2

You must specify the `-6` option if either of the following applies:

- The host where JP1/AJS3 - View and JP1/AJS3 - Print Option are installed uses an IPV6 address
- The host from which job operation information is being collected (the host where JP1/AJS3 - Print Option Manager is installed) uses an IPv6 address

Note that only Windows Server 2019, Windows Server 2016, Windows 10, Windows 8.1, Windows Server 2012, Windows 8, Windows 7, and Linux support the use of IPv6 addresses. If you use IPv6 addresses, you must specify the setting in the `jprpoml.ini` file. For details on how to specify the setting, see step 3 in [3.4.4 Notes on changing IP addresses](#).

Enter the variable portions of the command, such as `(HOST_NAME)`, as they appear above. For details on the character strings that replace each variable, see the *JP1/Automatic Job Management System 3 Operator's Guide*.



Note:

- Communication between JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager is not encrypted. Take either of the following procedures:
  - Use linkage with JP1/AJS3 - View in a network environment where security measures are taken.
  - Using, for example, an FTP to which security mode is set, transfer a job operation information file that has been output by JP1/AJS3 - Print Option Manager to JP1/AJS3 - Print Option, and then output a document.
- Use alternate strings, such as (HOST\_NAME) or (SERVICE\_NAME), without specifying the actual name of a host or service. If the actual name is specified, the program cannot collect job operation information properly.
- A command must be entered in the **Command** field. We do not guarantee the proper operation of the command if it is run manually or as a script.

### 3.4.3 Starting and stopping services

This section describes how to start and stop the JP1/AJS3 - Print Option Manager service.

The JP1/AJS3 - Print Option Manager service receives the collection request for job operation information from JP1/AJS3 - View and collects job operation information.

#### (1) In Windows

When JP1/AJS3 - Print Option Manager is installed on a Windows host, you can start and stop the JP1/AJS3 - Print Option Manager service by choosing **Services** in the Windows Control Panel, or by choosing **Administrative Tools** and then **Services**.

Furthermore, you can start and stop the service by executing the `net start JP1_AJS2_POML` and `net stop JP1_AJS2_POML` commands.

JP1/AJS3 - Print Option Manager provides the following service:

Table 3–4: Service provided by JP1/AJS3 - Print Option Manager

Service name	Description	Startup type	Account
JP1/AJS3 POM	Collects information about job activity in response to requests received from JP1/AJS3 - View.	Automatic	System

Notes:

If you set the JP1/AJS3 environment setting parameter `ADMACLIMIT` to `yes`, and then collect job operation information from JP1/AJS3 - View, implement either of the following depending on the account that is operating the JP1/AJS3 - Print Option Manager service.

1. If you are operating the JP1/AJS3 - Print Option Manager service using a local system account (The default account after installation is set to local system account.):  
Create a JP1 user named `system` and set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.
2. If you are operating the JP1/AJS3 - Print Option Manager service using a user account:  
Create a JP1 user with the same name as the user account and set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.

For details about the JP1 permission levels that are required to execute the `ajsprint` command and the `ajsshow` command, see the documentation for JP1/AJS3.

If you are operating the JP1/AJS3 - Print Option Manager service using a user account, set the service logon account using the procedure described below.

You need Administrator permission to set a service logon account.

<Procedure for setting the service logon account>

1. From the Windows **Start** menu, select **Administrative Tools**, then **Services** to display the Services window.
2. Select **JP1/AJS3 POM** and then from the menu bar, select **Action**, and then **Properties** to display the JP1/AJS3 POM Properties window.
3. On the **Log On** tab, select **This account** to activate the **Browse** button.
4. In the **This account** box, input the account name<sup>#</sup> you use to execute the service.  
You can input the account name from the dialog box displayed when you click the **Browse** button.
5. Input the password in the **Password** and **Confirm password** boxes, and then click the **OK** button.

#

Set an account with the following permissions for the service execution account name:

- Administrators permission
- Allow log on locally
- Log on as a service
- Replace a process level token
- Adjust memory quota for a process

## (2) In UNIX

The following describes how to configure the JP1/AJS3 - Print Option Manager service to start and stop automatically on a UNIX host.

Notes:

If you set the JP1/AJS3 environment setting parameter `ADMACLIMIT` to `yes`, and then collect job operation information from JP1/AJS3 - View, implement either of the following depending on the method for starting the JP1/AJS3 - POM service.

1. If starting the JP1/AJS3 - POM service (daemon) automatically:  
If you have set the JP1/AJS3 - POM service to automatically start up when the OS starts up, create a JP1 user named `root` and set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.
2. If starting the JP1/AJS3 - POM service using the `jprpomlstart` command:  
After you log in to the OS, as a user that has superuser permission, execute the `jprpomlstart` command and start the JP1/AJS3 - POM service, and then create a JP1 user named `root` and set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.

For details about the JP1 permission levels that are required to execute the `ajsprint` command and the `ajsshow` command, see the documentation for JP1/AJS3.

### (a) Configuring the JP1/AJS3 - POM service to start automatically

To configure the JP1/AJS3 - POM service (daemon) to start automatically when the system starts:

If your OS is AIX, you need to perform from step 1 to step 5. If your OS is not AIX, you need to perform from step 1 to step 4.

1. Stop the JP1/AJS3 - POM service.

Execute the following command to stop all processes of the JP1/AJS3 - POM service.

```
/opt/jplajs2pom/bin/jprpomlstop
```

2. Open the following file in an editor such as vi.

```
/etc/opt/jplajs2pom/jprpoml_start
```

3. Delete the underlined part of the following line from the file (automatic startup shell script).

```
:# /opt/jplajs2pom/bin/jprpomlstart >/dev/null 2>/dev/null
```

Check that the line is specified correctly before deleting these characters.

4. If needed, change the value of the LANG environment variable in the file (automatic startup shell script).

```
LANG=XXXXXX
```

The value of XXXXXX depends on your operating system.

Specify the encoding used by JP1/AJS3 - Manager.

If your OS is AIX, you also need to perform step 5.

5. If your OS is AIX, you need to perform the following methods:

Use the mkitab command to add a startup entry for the JP1/AJS3 - POM service to the /etc/inittab file.

```
mkkitab -i jplajs2 " jplajs2pom:2:wait:/etc/opt/jplajs2pom/jprpoml_start"
```

Use the lsitab command to check the setting:

```
lsitab -a
```

Make sure that a startup entry for the JP1/AJS3 - POM service appears in the file after those for JP1/AJS3 - Manager.

```
init:2:initdefault:
brc::sysinit:/sbin/rc.boot 3 >/dev/console 2>&1 # Phase 3 of system boot
:
:
hntr2mon:2:once:/opt/hitachi/HNTRLlib2/etc/D002start
jplbase:2:wait:/etc/opt/jplbase/jbs_start
jplajs2:2:wait:/etc/opt/jplajs2/jajs_start
jplajs2pom:2:wait:/etc/opt/jplajs2pom/jprpoml_start
```

Note:

In the LANG environment variable in the automatic startup or automatic shutdown script, specify the character encoding used by JP1/AJS3 - Manager. For details on the character encodings you can use, see *About the LANG environment variable* under [List of commands in 8. Commands](#).

Supplementary note:

You can start the JP1/AJS3 - POM service (daemon) manually by executing the jprpomlstart command. For details on the jprpomlstart command, see [jprpomlstart \(UNIX\) in 8. Commands](#).

## (b) Configuring the JP1/AJS3 - POM service to stop automatically

To configure the JP1/AJS3 - POM service (daemon) to stop automatically when the system shuts down:

If your OS is AIX, you need to perform from step 1 to step 4. If your OS is not AIX, you need to perform from step 1 to step 3.

1. Stop the JP1/AJS3 - POM service.

Execute the following command to stop all processes of the JP1/AJS3 - POM service.

```
/opt/jplajs2pom/bin/jprpomlstop
```

2. Open the following file in an editor such as vi.

```
/etc/opt/jplajs2pom/jprpoml_stop
```

3. Delete the underlined part of the following line from the file (automatic shutdown shell script).

```
:# /opt/jplajs2pom/bin/jprpomlstop >/dev/null 2>/dev/null
```

Check that the line is specified correctly before deleting these characters.

4. If your OS is AIX, you need to perform the following methods:

Open the `/etc/rc.shutdown` script in a text editor, and add the following entry:

```
test -x /etc/opt/jplajs2pom/jprpoml_stop && /etc/opt/jplajs2pom/jprpoml_stop
```

To avoid errors when automatic shutdown occurs, enter the following as the last line of the script:

```
exit 0
```

Supplementary note:

You can stop the JP1/AJS3 - POM service (daemon) manually by executing the `jprpomlstop` command. For details on the `jprpomlstop` command, see [jprpomlstop \(UNIX\) in 8. Commands](#).

### 3.4.4 Notes on changing IP addresses

If you change the IP address of a host in a system where JP1/AJS3 - Print Option is linked with JP1/AJS3 - View, take the following measures in addition to those required by JP1/Base, JP1/AJS3, and JP1/AJS3 - View:

1. Before changing the IP address, stop the following JP1/AJS3 - Print Option Manager service:  
JP1/AJS3 POM service
2. Make sure that the service has stopped, and then change the IP address.
3. If you are changing from an IPv4 address to an IPv6 address, open the `jprpoml.ini` file and add the following definition:

```
[common]  
IPv6connect = 1
```

For details on the location of the `jprpoml.ini` file, see [D.2 Product file information for JP1/AJS3 - Print Option Manager](#).

Notes:

- If you are using a non-Administrator account in a Windows Server 2019, Windows Server 2016 or Windows Server 2012 environment with User Account Control (UAC) enabled, promote the account to administrator status before editing the `jprpoml.ini` file.
- Only Windows Server 2019, Windows Server 2016, Windows 10, Windows 8.1, Windows Server 2012, Windows 8, Windows 7, and Linux support the use of IPv6 addresses.
- The default setting for `IPv6connect` in the `jprpoml.ini` file is as follows:  
In Windows Server 2019, Windows Server 2016, Windows Server 2012, and Linux:  
`IPv6connect = 1`  
In AIX, Solaris, and HP-UX(IPF):  
`IPv6connect = 0`

4. Restart the service you stopped in step 1.

5. If you changed from an IPv4 address to an IPv6 address, add the `-6` option to the startup command in JP1/AJS3 - View.

For details on setting the startup command in JP1/AJS3 - View, see [3.4.2 JP1/AJS3 - View setup](#).

If you are not linking JP1/AJS3 - Print Option with JP1/AJS3 - View, you do not need to do any of the above when you change the IP address.

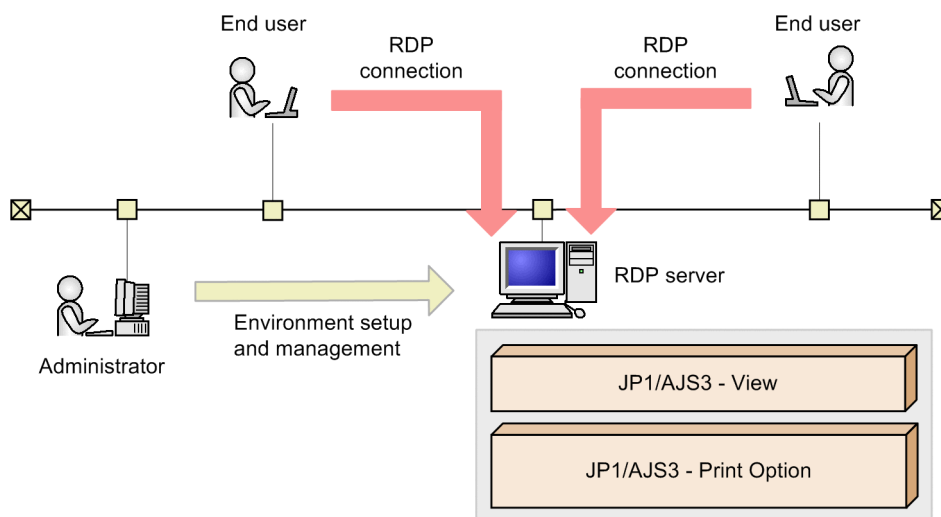
### 3.4.5 Setting up multi-user remote operation

The multi-user remote operation functionality enables multiple users to use JP1/AJS3 - Print Option at the same time through Remote Desktop (abbreviated hereafter to RDP) connections.

#### (1) System configuration

The following figure shows the configuration of a system to use multi-user remote operation with JP1/AJS3 - Print Option.

Figure 3–2: System configuration for multi-user remote operation



- JP1/AJS3 - Print Option is installed on the RDP server.
- The administrator user sets up the environment for the RDP server and manages the server.

- End users connect to the RDP server through RDP and use JP1/AJS3 - Print Option on the RDP server.

## (2) OS configuration

The following describes the OS configuration to use the multi-user remote operation functionality in JP1/AJS3 - Print Option.

### (a) Prerequisite

In JP1/AJS3 - Print Option, multi-user remote operation assumes the use of the RDP server environment. In this manual, the following platform environments are collectively called a RDP server environment:

- Windows Server 2019
- Windows Server 2016
- Windows Server 2012
- Windows Server 2012 R2

If you do not install the *Remote Desktop Services* role, you can use the multi-user remote operation.

### (b) Notes

- OS users who act as administrator users must have Administrators permissions.
- We recommend that OS users who will be end users be created as general users. If end users do not change the settings for operations, OS users could have Administrators permissions.
- All OS users who use RDP connections must have unique names even if they are in different domains.
- All OS users who use RDP connections may not have OS user names that contain any of reserved words, invalid characters, and periods or space characters, which are not allowed to be used as an OS user name in Windows. Furthermore, do not use any of the following OS user names:
  - An OS user name beginning with AJS, regardless of whether it is in uppercase or lowercase
  - An OS user name beginning with HLICLIB, regardless of whether it is in uppercase or lowercase
- Use a different JP1 user for each OS user.

In addition, each OS user must be configured to allow only one RDP session in which they can use JP1/AJS3 - Print Option.

If you install the *Remote Desktop Services* role, on **Configuration for Remote Desktop Session Host** server of the RDP server, in the **Edit Settings** area, under **General**, set **Restrict each user to a single session** to **Yes**.

## (3) Setting up JP1/AJS3 - Print Option

As an administrator user, use the following procedure to set up JP1/AJS3 - Print Option:

1. Estimate the needs for memory space.

Estimate the amount of memory space needed for a single process of JP1/AJS3 - Print Option, multiplying it by the number of users who use JP1/AJS3 - Print Option.

2. Set up JP1/AJS3 - Print Option to enable the multi-user remote operation functionality.

Open the *installation-folder\jprpo.ini* in a text editor or any other tool to enter the following:

```
[common]
MULTI_USERS=Y
```

If you cannot find the `jprpo.ini` file there, then copy the `jprpo.ini.model` file and rename it to `jprpo.ini`.

Note:

We recommend that end users have only read permissions on the `jprpo.ini` file so that they cannot change settings in this file.

### 3. Enable multiple users to use format definition files.

Make sure that files with the extension `.model` (hereafter called Standard file)<sup>#2</sup> are stored in the default format definition folder<sup>#1</sup>.

### 4. Restart JP1/AJS3 - Print Option.<sup>#3</sup>

#1

```
%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Format
```

#2

During the execution of step 4, sample multi-user format definition files are created based on the Standard files in the default format definition folder.

The destination where the sample multi-user format definition files are placed is as follows (hereafter called multi-user format definition folder):

```
%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Users\OS-user-name\Format
```

Placing Standard files manually:

Compressed Standard files exist in `english_sample_set.exe` (e.g. `job.jof.model`) under the `%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO` folder. Decompress it for use.

#3

If you perform step 4 under the situation where no Standard file exists in the default format definition folder, no format definition file is created in the multi-user format definition folder, and hence JP1/AJS3 - Print Option initiated by multiple users will fail in an error (KAVR2000-E) because no format definition file is given.

In this case, restart JP1/AJS3 - Print Option after manually placing an arbitrary format definition file in the created multi-user format definition folder.

For details on the destination to place the format definition file and on how to set a format definition file, see [D.1 Product file information for JP1/AJS3 - Print Option](#).



#### Note

The parameter `MULTI_USERS` in the `jprpo.ini` file can have either of the following values:

`MULTI_USERS=Y`

The multi-user remote operation functionality is enabled.

`MULTI_USERS=N`

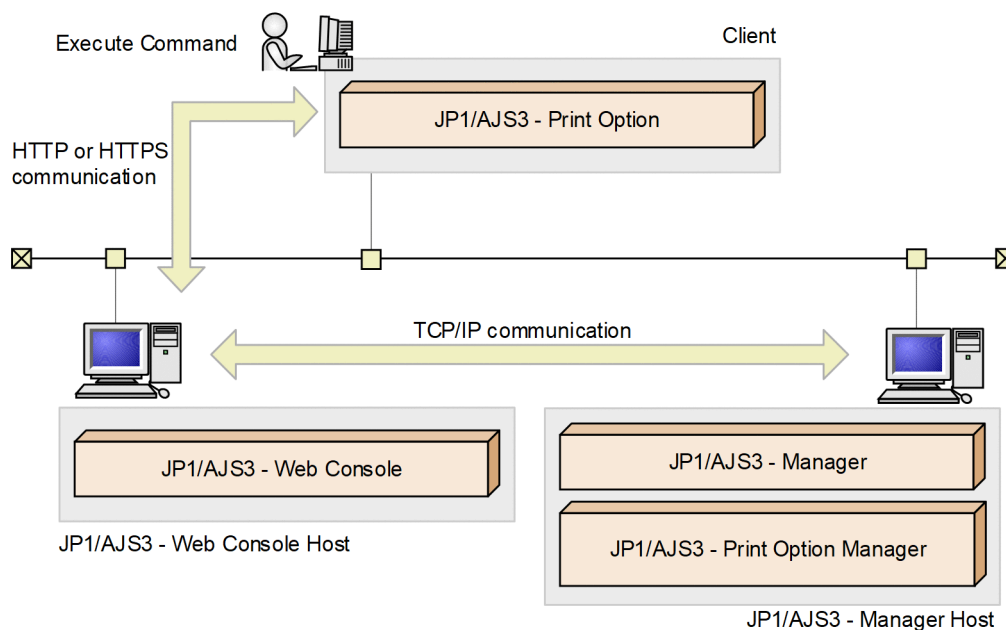
The multi-user remote operation functionality is disabled (default).

## 3.4.6 Setting up JP1/AJS3 - Web Console

Linking with JP1/AJS3 - Web Console allows clients to get the job operation information file by using the `jprwebcollect` command of JP1/AJS3 - Print Option to let JP1/AJS3 - Print Option Manager collect job operation information via JP1/AJS3 - Manager.

The following figure shows an example of the system configuration for linkage with JP1/AJS3 - Web Console.

Figure 3–3: Example system configuration for linkage with JP1/AJS3 - Web Console



For the login information for JP1/AJS3 - Manager from which the information is collected, use the `jprajsmkkey` command to create the authentication information file. Create the authentication information file by executing the `jprajsmkkey` command before executing the `jprwebcollect` command.

Communication between JP1/AJS3 - Print Option and JP1/AJS3 - Web Console as well as JP1/AJS3 - Web Console and JP1/AJS3 - Manager can be encrypted.

For details on the communication settings between JP1/AJS3 - Web Console and JP1/AJS3 - Manager, see the manual of JP1/AJS3.

**Cautionary note:**

To use this function, the versions of JP1/AJS3 - Print Option, JP1/AJS3 - Print Option Manager, JP1/AJS3 - Manager, and JP1/AJS3 - Web Console must be all 12-50 or later.



## 3.5 Files to back up

If you are performing an upgrade installation or migrating the system environment, first back up the definition files as needed, then upgrade the product or install the environment in the migration target. After installation, restore the backed-up definition files.

### <Files to back up for JP1/AJS3 - Print Option>

After installing JP1/AJS3 - Print Option, restore the backed-up definition files.

If the migration source and migration target have different OSs, the location for storing the restored files may vary. See the table below to check the location for storing the files before executing the restoration.

The following table lists the files of JP1/AJS3 - Print Option that need to be backed up.

Table 3–5: JP1/AJS3 - Print Option files to back up

File name	Contents
<i>installation-folder\jprpo.ini</i>	Operation settings file for management
<i>PATH\JOP000dft00.ini</i>	Environment settings file
<i>PATH\JOP000dft01.ini</i>	Paper settings file
<i>PATH\Format\job.jof#1</i> <i>PATH\Format\jobnet.jof#1</i> <i>PATH\Format\unit.jof#1</i> <i>PATH\Format\full_path.jof#1</i> <i>PATH\Format\monthly_result.jof#1</i> <i>PATH\Format\monthly_schedule.jof#1</i> <i>PATH\Format\exec_order.jof#1</i> <i>PATH\Format\daily_result.jof#1</i> <i>PATH\Format\daily_schedule.jof#1</i> <i>PATH\Format\schedule_result.jof#1</i>	Default format definition files
<i>folder-specified-in-format-definition-field-in-environment-settings-window\name-of-user-created-file.jof</i>	Format definition files created by users
<i>PATH\Map\FlowFormat\JobFlow.fof#2</i>	The default jobnet flow format definition file
<i>PATH\Profiles\jprpo_user.profile#5</i>	Authentication information file
<i>file-name-specified-in-jobnet-flow-format-definition-field-in-environment-settings-window</i>	Jobnet flow format definition files created by users
<i>PATH\Users\OS-user-name\Format\job.jof#3</i> <i>PATH\Users\OS-user-name\Format\jobnet.jof#3</i> <i>PATH\Users\OS-user-name\Format\unit.jof#3</i> <i>PATH\Users\OS-user-name\Format\full_path.jof#3</i> <i>PATH\Users\OS-user-name\Format\monthly_result.jof#3</i> <i>PATH\Users\OS-user-name\Format\monthly_schedule.jof#3</i> <i>PATH\Users\OS-user-name\Format\exec_order.jof#3</i> <i>PATH\Users\OS-user-name\Format\daily_result.jof#3</i> <i>PATH\Users\OS-user-name\Format\daily_schedule.jof#3</i>	Sample format definition files created based on the Standard files in non-Japanese language OS environment (when using multi-user remote operation)

File name	Contents
<i>PATH</i> \Users\OS-user-name\Format\schedule_result.jof <sup>#3</sup>	Sample format definition files created based on the Standard files in non-Japanese language OS environment (when using multi-user remote operation)
<i>folder-specified-in-format-definition-field-in-environment-settings-window</i> \file-name-created-by-OS-users.jof	Format definition files created by OS users (when using multi-user remote operation)
<i>PATH</i> \Users\OS-user-name\Map\FlowFormat\JobFlow.fof <sup>#4</sup>	Sample jobnet flow format definition file created based on the Standard file (when using multi-user remote operation)
<i>PATH</i> \Users\OS-user-name\Profiles\jprpo_user.profile <sup>#5</sup>	Authentication information file (when using multi-user remote operation)

Note:

- The default value of *installation-folder* is *system-drive*:\Program Files\Hitachi\JP1AJS2PO.

In the 64-bit version of Windows, read Program Files as Program Files (x86).

- Replace *PATH* with %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO. The default value of %allusersprofile% is *system-drive*:\ProgramData.

#1

In cases of 11-50 or later versions, an English default format definition file will be automatically provided at the time of installation. Back up the format definition file if you have changed it from its default state.

#2

Back up the jobnet flow format definition file if you have changed it from its default state.

#3

Back up the format definition file if you have changed it from its default state in non-Japanese language OS environment using multi-user remote operation.

#4

Back up the jobnet flow format definition file if you have changed it from its default state using multi-user remote operation.

#5

Back up the authentication information file if you have linked the program with JP1/AJS3 - Web Console to get the job operation information file.

### <Files to back up for JP1/AJS3 - Print Option Manager>

After installing JP1/AJS3 - Print Option Manager, restore the backed-up definition files.

If the migration source and migration target have different OSs, the location for storing the restored files may vary. See the table below to check the location for storing the files before executing the restoration.

The following table shows the backed-up files for JP1/AJS3 - Print Option Manager.

Table 3–6: JP1/AJS3 - Print Option Manager backed-up files

File name	Contents
(In Windows) <i>POM_DATA_PATH</i> <sup>#1</sup> \jprpom1.ini	Environment settings information file <sup>#2</sup>
(In UNIX) /opt/jplajs2pom/jprpom1.ini	

#1

When new installation, the value of *POM\_DATA\_PATH* 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%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2POM
- If the installation folder is other than the above:  
JP1/AJS3 - Print Option Manager installation folder

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)

The default value of %allusersprofile% is *system-drive*:\ProgramData.

#2

This information is required if you use an IPv6 address. You do not need to set it if you do not use an IPv6 address.

Only Windows Server 2019, Windows Server 2016, Windows Server 2012, and Linux support an IPv6 address.

## 3.6 Notes on using JP1/AJS3 - Print Option with antivirus software

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Some antivirus software might place an exclusive lock on a file or folder used by JP1/AJS3 - Print Option. This can cause issues like the following:

- JP1/AJS3 - Print Option fails to start.  
JP1/AJS3 - Print Option might fail to start if antivirus software places an exclusive lock on a definition file that JP1/AJS3 - Print Option references at startup.
- The JP1/AJS3 - Print Option Manager service fails to start.  
The JP1/AJS3 - Print Option Manager service might fail to start if antivirus software places an exclusive lock on a definition file that the service references at startup.
- An attempt to change a definition fails.  
An attempt to add or modify a format definition or environment settings might fail if antivirus software places an exclusive lock on a definition file used by JP1/AJS3 - Print Option.
- JP1/AJS3 - Print Option cannot output log information.  
An attempt to output log data might fail if antivirus software places an exclusive lock on a log file associated with JP1/AJS3 - Print Option. This can hinder efforts to troubleshoot problems.
- A command associated with JP1/AJS3 - Print Option terminates abnormally.  
A command associated with JP1/AJS3 - Print Option might terminate abnormally if antivirus software places an exclusive lock on a file used by the command.
- JP1/AJS3 - Print Option cannot perform CSV output, map output, or jobnet flow output.  
An attempt to output CSV, map, or jobnet flow data might fail if antivirus software places an exclusive lock on the file to which JP1/AJS3 - Print Option outputs the data.

If your antivirus software scans for viruses while JP1/AJS3 - Print Option is running, exclude the following files and folders from scanning. If you conduct a virus scan while JP1/AJS3 - Print Option is stopped, make sure scanning of the following files and folders has finished before you start JP1/AJS3 - Print Option.

### In Windows

- Log files and folders for JP1/AJS3 - Print Option  
For details on the log files and folders associated with JP1/AJS3 - Print Option, see [10.3.2\(1\) In Windows](#).
- Log files and folders for JP1/AJS3 - Print Option Manager  
For details on the log files and folders associated with JP1/AJS3 - Print Option Manager, see [10.3.2\(1\) In Windows](#).
- The folder in which customized format definitions are saved
- The folder in which customized jobnet flow format definitions are saved
- The folder to which CSV files are output by the `jprprint` command, or the output folder specified in the Save CSV File window
- Output folders specified in an argument of the `jprcollect` command, and in the Collecting Job Operation Information window
- Output folder for a map output save file or jobnet flow output save file specified in an argument of the `jprmpflw` command
- Output folders specified in the Collecting Job Operation Information window
- Output folder for Map Output files
- Output folder for Jobnet Flow Output files

- Output folder for Map PDF Output files
- Output folder for Jobnet Flow PDF Output files
- %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO#

#

If you have configured the system to not show hidden files and folders, the %allusersprofile% folder is not displayed. You can display the folder by configuring the system to show all files. For details on how to do so, see the Help for the operating system.

The default value of %allusersprofile% is *system-drive*: \ProgramData.

Note:

Before the multi-user remote operation functionality is used, exclude the files and folders listed above, which are used by all users, from scanning.

In UNIX

- Log files and directories associated with JP1/AJS3 - Print Option Manager  
For details on the log files and folders associated with JP1/AJS3 - Print Option Manager, see [10.3.2\(2\) In UNIX](#).
- Directories specified in arguments of the `jprcollect` command

If you intend to use the data collection tool (`PO_ras.bat` and `POM_ras.bat` in Windows, and `POM_ras.sh` in UNIX) while a virus scan is in progress, exclude the following files and folders from scanning, in addition to those listed above.

- The folder to which the results of the data collection tool are output
- Files required for troubleshooting

In Windows:

- Log information output by the OS that needs to be collected when a problem occurs in JP1/AJS3 - Print Option
- Log information output by the OS that needs to be collected when a problem occurs in JP1/AJS3 - Print Option Manager

For details on these files, see [10.3.1 \(1\) In Windows](#), [10.4.2\(3\) Data collected by the JP1/AJS3 - Print Option data collection tool](#), and [10.4.3\(3\) Data collected by JP1/AJS3 - Print Option Manager data collection tool \(in Windows\)](#).

In UNIX:

- Log information output by the OS that needs to be collected when a problem occurs in JP1/AJS3 - Print Option Manager

For details on these files, see [10.3.1 \(2\) In UNIX](#) and [10.4.4\(3\) Data collected by the JP1/AJS3 - Print Option Manager data collection tool \(in UNIX\)](#).

# 4

## Collecting Job Operation Information

This chapter describes how information about job operation is collected.

## 4.1 Collecting information about job operation

The collection of job operation information involves taking the job information managed by JP1/AJS3 - Manager and recording it in a *job operation information file*. Job operation information files have the extension `.aoi`. The information in these files is the basis for the documents output by JP1/AJS3 - Print Option.

If you intend to collect job operation information on a regular basis, you can use the `jprcollect` command to automate the process. If you want to check the current status of job activity to assist tasks like system design, you can collect job information from the user interface by opening the Collecting Job Operation Information window.

JP1/AJS3 - Print Option Manager collects jobnet definitions, jobnets registered for execution, execution schedules, and execution results. This information is collected by the `ajspri` and `ajsshow` commands provided by JP1/AJS.

You can make sure that JP1/AJS3 - Print Option Manager only collects the information you need by specifying criteria that define the range of information to be collected. You can limit collected information to specific units, or a specific time period.

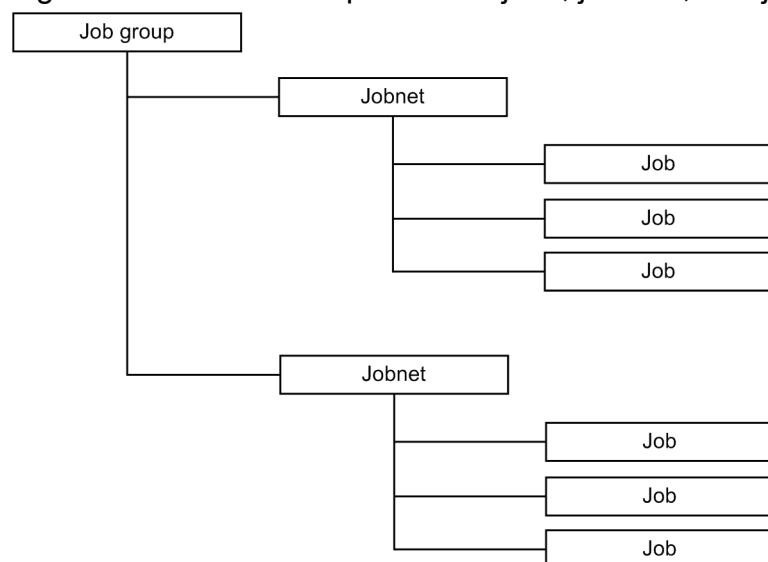
To collect jobnet execution schedules and execution results, specify a time period by entering a start date and end date. If you do not specify a time period, JP1/AJS3 - Print Option Manager only collects jobnet definitions, not execution schedules and execution results.

To limit collection to specific units, specify the name of the job, jobnet, or job group whose information you want to collect. To explain the concept of units, an overview of jobnet definitions in JP1/AJS is given below.

Processing in JP1/AJS is defined by combining and correlating related processes. Individual processes are defined as jobs, and a collection of jobs to be executed in a defined order is defined as a jobnet. You can also create job groups that you can use to group jobnets by category.

The following figure shows the relationship between jobs, jobnets, and job groups.

Figure 4–1: Relationship between jobs, jobnets, and job groups



Among the jobs you can define in JP1/AJS are those that define processing, send and receive events, and evaluate processing results against specified conditions. You can also register user-defined processing as a job.

In a jobnet, you can define post-processing to perform when a job terminates abnormally, additional jobnets, and other elements in addition to jobs. You can define all manner of jobnets by combining and correlating jobs.

Units such as jobnets and job groups used in jobnet definitions are called *unit*.

The following table lists and describes each type of unit.

**Table 4–1: Unit types and descriptions**

Unit		Description
Generic name	Individual name	
Job group	Root job group	The highest-level job group. A root job group is always defined in JP1/AJS. The name of the scheduler service serves as the root job group name. The default job group name is /.
	Nested job group	A job group defined under the root job group.
	Planning group	A planning group can only be created directly under a job group. You can then switch between the root jobnets created under the planning group.
Jobnet	Root jobnet	The highest-level jobnet in a job group.
	Nested jobnet	A jobnet defined in a root jobnet.
	Remote jobnet	A jobnet that is registered for execution on another host when the jobnet starts.
Job		A collection of elements such as commands, shell scripts, and Windows executable files.
Manager unit	Manager job group	A unit that links job groups or jobnets defined in JP1/AJS3 - Manager on a remote host.
	Manager jobnet	

The information you can collect depends on the type of unit specified, as shown in the following table. JP1/AJS3 - Print Option Manager collects information for all units defined under the specified unit.

**Table 4–2: Collected job operation information**

Unit specified for collection		Information that can be collected
Generic name	Individual name	
Job group	Root job group	<ul style="list-style-type: none"> <li>Definition information</li> <li>Execution schedules and execution results<sup>#1, #2</sup></li> </ul>
	Nested job group	<ul style="list-style-type: none"> <li>Definition information</li> <li>Execution schedules and execution results<sup>#1, #2</sup></li> </ul>
	Planning group	<ul style="list-style-type: none"> <li>Definition information</li> <li>Execution schedules and execution results<sup>#1, #2</sup></li> </ul>
Jobnet	Root jobnet <sup>#3</sup>	<ul style="list-style-type: none"> <li>Definition information</li> <li>Execution schedules and execution results<sup>#1</sup></li> </ul>
	Other than root jobnet	<ul style="list-style-type: none"> <li>Definition information</li> <li>Execution schedules and execution results<sup>#1</sup></li> </ul>
Job		<ul style="list-style-type: none"> <li>Definition information</li> </ul>





#### Legend:

- — · — : The range of information collected when you specify *Job group 1*. JP1/AJS3 - Print Option Manager collects information for all units.
- — — : The range of information collected when you specify *Planning group*.
- ..... : The range of information collected when you specify *Job group 2*.
- — · — : The range of information collected when you specify *Jobnet 6*.

When units are defined under a planning group, JP1/AJS3 - Print Option Manager collects information not just for running units (Jobnet 1 in the figure), but also for units that are not running (Jobnet 2 and Jobnet 3 in the figure).

You cannot output job operation information for more than the maximum number of units to a single document. When collecting information for a document, make sure that the number of units for which data is being collected does not exceed the maximum.

You can set the maximum number of units in the Environment Settings window, in a range from 32,000 to 150,000. For details on how to set this parameter, see [7.19 Environment Settings window](#).

When JP1/AJS3 - Manager is operating in a cluster environment, collect job operation information from the active node. When doing so, specify the name of the scheduler service on the logical host as the service name.

## 4.2 Collecting job operation information in the Collecting Job Operation Information window

In Windows, you can use the Collecting Job Operation Information window to collect job operation information.

### 4.2.1 Displaying the Collecting Job Operation Information window from the Start menu

To display the Collecting Job Operation Information window from the Windows Start menu:

1. From the Windows Start menu, choose **Programs, JP1\_Automatic Job Management System 3 - Print Option Manager**, and then **Collecting Job Operation Information**.

The Collecting Job Operation Information window appears. Figure 4-3 shows an example of information entered in the Collecting Job Operation Information window. For a description of the window items and the values you can specify, see [7.2 Collecting Job Operation Information window](#).

2. In the Collecting Job Operation Information window, enter the criteria (collection target, collection period, and other parameters) for the information you want to collect, and the file to which to output the information.

Figure 4–3: Example of information entered in Collecting Job Operation Information window

The screenshot shows the 'AJ53 - Print Option Manager Collecting Job Operation Information' window. It has a title bar with a close button. The window is divided into several sections. The 'Collection target' section has a 'Unit name' text box containing '/net1' and a 'Service name' text box. Below these is a checkbox labeled 'Collects all units under the root node'. The 'Collection period' section has a 'Specify period' dropdown menu set to 'Date specification'. Below this are two radio buttons: 'Calendar date' (selected) and 'Execution date'. A 'Period' section contains two date pickers, both showing '3/ 7/2016', separated by a hyphen. Below the period section are two unchecked checkboxes: 'Collects the last update time' and 'Collects the release IDs'. The 'Job operation information output file name' section has a text box containing 'C:\temp\net1.aoi' and a 'Browse...' button. At the bottom of the window are two buttons: 'Output' and 'Close'.

3. Click **Output**.

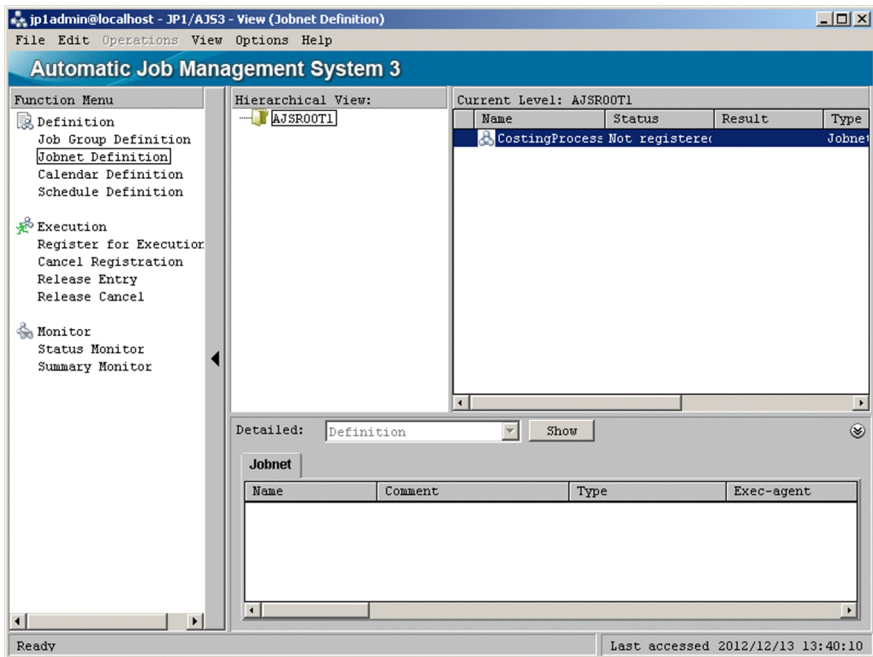
A job operation information file is created at the specified location. The **Output** button becomes available when information has been entered in the **Unit name** and **Job operation information output file name** fields.

# 4.2.2 Displaying the Collecting Job Operation Information window from JP1/AJS3 - View

To collect job operation information by displaying the Collecting Job Operation Information window from JP1/AJS3 - View:

- 1. Start JP1/AJS3 - View.  
In the JP1/AJS3 - View window, select the unit (job, jobnet, or job group) for which you want to collect job operation information.

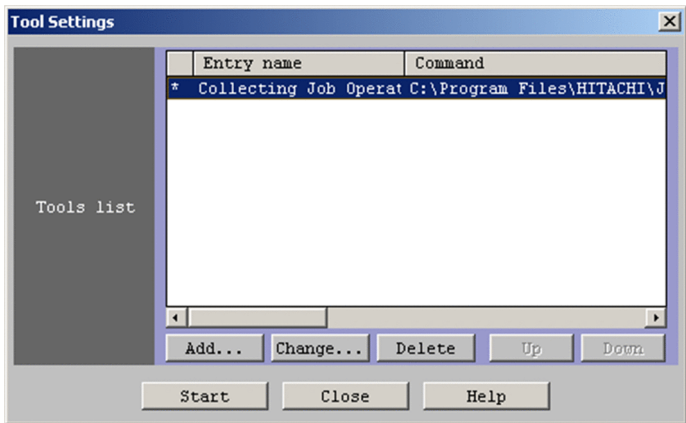
Figure 4–4: Unit selection



Then, perform step 2 or step 3.

- 2. From the **Options** menu, choose **Set Tools**.  
The Tool Settings window appears.

Figure 4–5: Tool Settings window

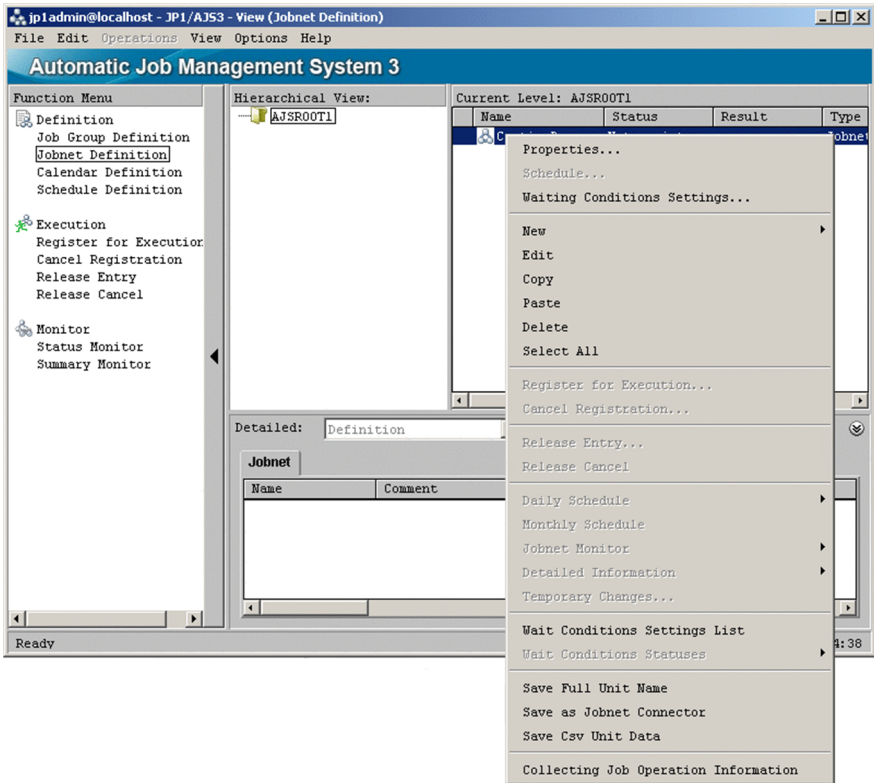


Select **Collecting Job Operation Information<sup>#</sup>** and click **Start**. The Collecting Job Operation Information window appears.

- 3. Right-click the unit in the JP1/AJS3 - View window.

A right-click menu appears.

Figure 4–6: Choosing Collecting Job Operation Information# from the menu



When you select **Collecting Job Operation Information**<sup>#</sup>, the Collecting Job Operation Information window appears.

<sup>#</sup> The Tool Settings window displays the entry name you specified in the Tool Entry dialog box in JP1/AJS3 - View. For details, see [3.4.2 JP1/AJS3 - View setup](#).

- 4. In the Collecting Job Operation Information window, enter the criteria (collection period and other parameters) for the information you want to collect, and the file to which to output the information.

Figure 4–7: Example of information entered in Collecting Job Operation Information window

AJS3 - Print Option Collecting Job Operation Information

Collection target

Host name: localhost

Unit name: /CostingProcess

☐ Collects all units under the root node

Service name: AJSROOT1

Character code: C

Collection period

Specify period: Date specification

☒ Calendar date ☐ Execution date

Period

3/ 7/2016 - 3/ 7/2016

☐ Collects the last update time

☐ Collects the release IDs

Job operation information output file name

C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\JP1AJS2I Browse...

Output Close

5. Click **Output**.

The **Output** button becomes available when information is entered in the **Job operation information output file name** field. When you click the **Output** button, a job operation information file is created at the specified location, and the information appears in the Job Operation Document Output window.

## 4.3 Using the jprcollect command to collect job operation information

---

This section describes how to use the `jprcollect` command to collect job operation information. For a description of the options you can specify and details of the command syntax, see [7.2 Collecting Job Operation Information window](#) and [8. Commands](#).

Example of executing `jprcollect` command in Windows:

```
jprcollect -b 2003/03/21 -e 2003/04/20 /group1/net1 C:\Temp\file1
```

Example of executing `jprcollect` command in UNIX:

```
jprcollect -b 2003/03/21 -e 2003/04/20 /group1/net1 /tmp/file1
```

When you execute the `jprcollect` command as shown in the examples above, the command collects operation information and schedule information for jobnet `/group1/net1` from March 21st, 2003 to April 20th, 2003, and records the information in the file `file1.aoi`.

# 5

## Transferring Job Operation Information

This chapter describes how to transfer information about job operation.



## 5.1 Transferring job operation information

---

The following describes how to manually transfer information about job operations (job operation information files) collected on the JP1/AJS3 - Manager host to the host that outputs the job operation information to a document (machine with JP1/AJS3 - Print Option installed).

When JP1/AJS3 - Manager is on a Windows host:

- Copy the information between networked computers using Windows Explorer
- Use a floppy disk or other storage media
- Send the information as an email attachment

When JP1/AJS3 - Manager is on a UNIX host:

- Transfer the information using FTP commands

The information must be transferred in *ASCII mode*. If you transfer the information in binary mode, documents based on the information will not be output correctly.

By using JP1/File Transmission Server/FTP, you can manage the history of file transfers and automate the file transfer process.

Cautionary note:

To prevent information leaks, transfer files by using an FTP to which security mode is set, for example.

# 6

## Outputting Job Operation Information to Documents

This chapter describes how to output information about job operations to documents.

## 6.1 Outputting job operation information as documents

---

After you have transferred the information about job operation from the JP1/AJS3 - Manager host where the information was collected (in the form of job operation information files), you can output the information on the host where JP1/AJS3 - Print Option is installed.

In describing the procedure, this chapter refers to the sample job operation information file supplied with JP1/AJS3 - Print Option. For details on the specifications of each window in the user interface, see [7. Windows](#).

Note:

When outputting job operation information to a document, the user operating JP1/AJS3 - Print Option must have the write permission for all subfolders of the JP1/AJS3 - Print Option installation folder.

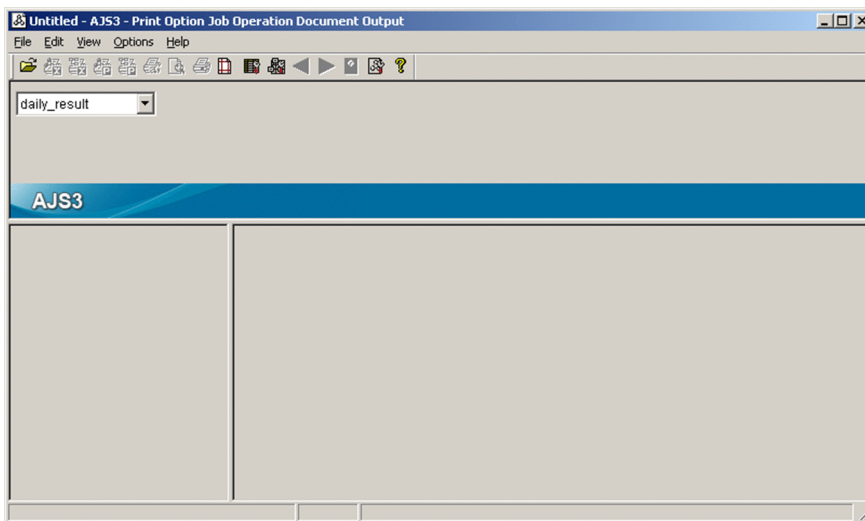
Grant the write permission for these folders before the user uses JP1/AJS3 - Print Option.

## 6.2 Displaying the Job Operation Document Output window

1. From the Windows Start menu, choose **Programs, JP1\_Automatic Job Management System 3 - Print Option**, and then **Job Operation Document Output**.

The Job Operation Document Output window appears.

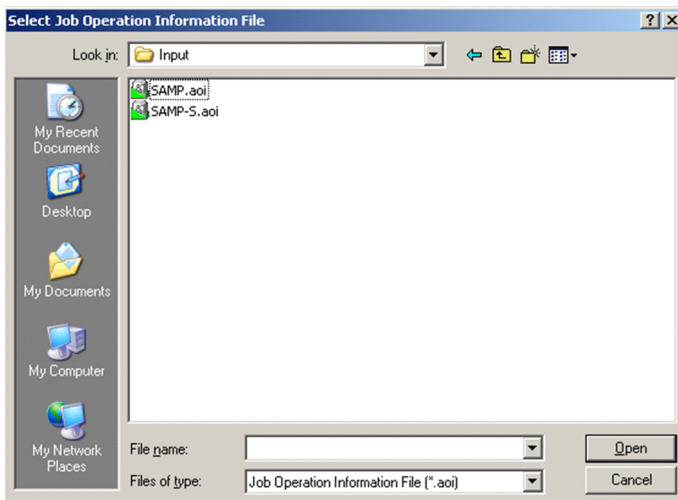
Figure 6–1: Initial state of Job Operation Document Output window



2. In the Job Operation Document Output window, from the **File** menu, choose **Open**.

The Select Job Operation Information File window appears.

Figure 6–2: Select Job Operation Information File window



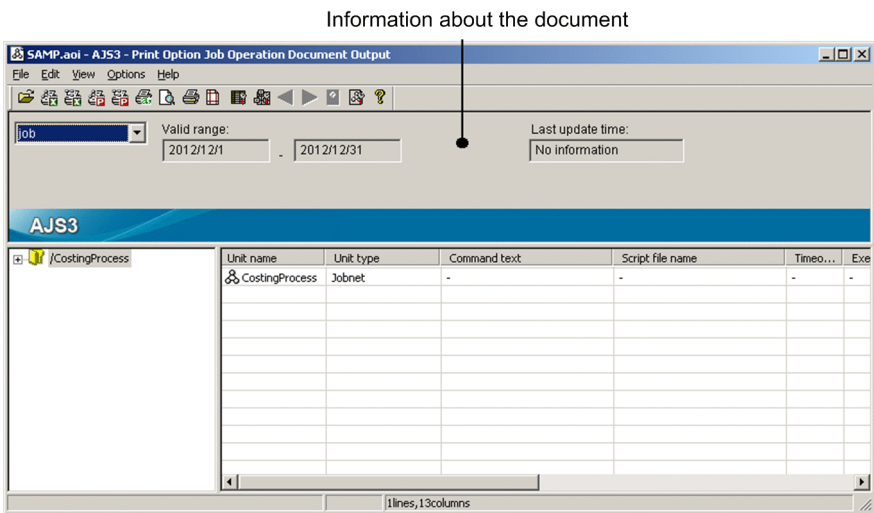
3. In the Select Job Operation Information File window, select a job operation information file.

In this example, we will select the sample file supplied with JP1/AJS3 - Print Option. The sample file is *JP1/AJS3 - Print Option-installation-folder\Input\SAMP.aoi*.

4. Click **Open**.

The information in the job operation information file you selected appears in the Job Operation Document Output window.

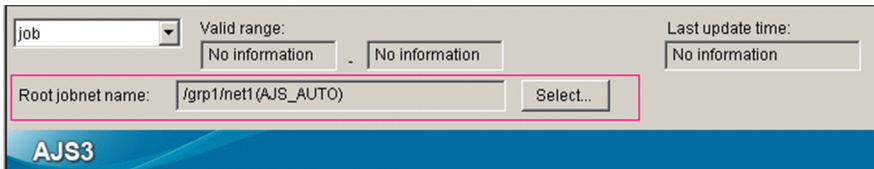
Figure 6–3: Job Operation Document Output window with file open



Note:

If the job operation information file you selected contains information for a release ID, the path of the root jobnet whose information is currently being displayed appears in the Job Operation Document Output window, as shown in the figure below.

Figure 6–4: Information about root jobnet

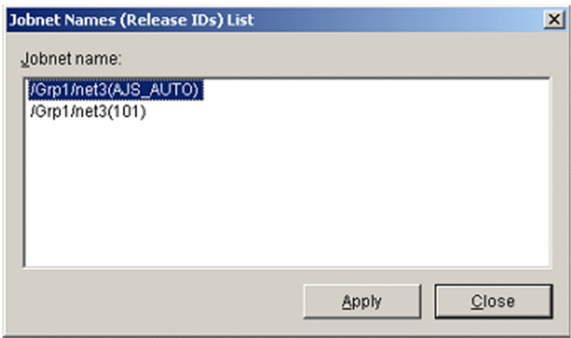


To display the information for a root jobnet associated with another release ID:

1. Click **Select**.

The Jobnet Names (Release IDs) List window appears.

Figure 6–5: Jobnet Names (Release IDs) List window



The **Jobnet name** area lists the root jobnet paths associated with other release IDs.

2. In the **Jobnet name** area, select the root jobnet whose information you want to display.
3. Click **Apply**.

Information for the root jobnet you selected appears in the Job Operation Document Output window.

For details on release IDs, see the description of the jobnet release functionality in the manual *JP1/Automatic Job Management System 3 Overview*.

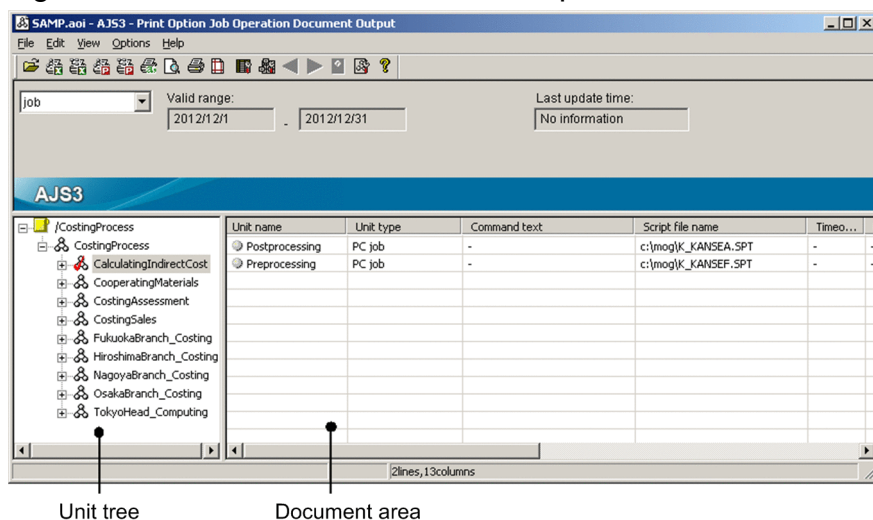
## 6.3 Outputting documents

The unit tree area on the left side of the Job Operation Document Output window shows the hierarchy of units in the selected job operation information file.

In the unit tree, select the unit whose information you want to output as a document. JP1/AJS3 - Print Option will output information for the selected unit and all its subordinate units.

Select **Calculating Indirect Cost**. A representation of the document appears in the document area.

Figure 6–6: Select unit for which to output information



To output the information displayed in the document area to a printer, from the **File** menu, choose **Print**.

The following limits apply to document formats:

Total number of lines	Cannot exceed the maximum number of units <sup>#1</sup>
Total number of column items	No more than 30 cells
Total data amount per cell	No more than 32,000 bytes (including automatically generated control characters such as linefeed codes) <sup>#2</sup>
Number of lines per cell	No more than 2,000 <sup>#2</sup>
Number of characters per unit of data in cell	No more than 4,000 bytes (including automatically generated control characters such as linefeed codes) <sup>#3</sup>

#1

If the maximum number of units is exceeded, an error message is output and the document is not displayed. You can set the maximum number of units in the Environment Settings window, in the range from 32,000 to 150,000. For details, see [7.19 Environment Settings window](#).

#2

If a cell contains more than 32,000 bytes or 2,000 lines (when outputting information for multiple generations) of data, take measures such as splitting the data or changing the collection parameters. Cells containing an excessive amount of data can place an undue burden on system resources (such as CPU and memory), and take a long time to process. Depending on the resources available, the system might not be able to output all the information in the document. For details on the types of data that might exceed this limit, see [A. List of Supported Column Items](#).

#### Supplementary note:

If you exceed this limit, a log entry that contains the name and attributes of the unit that caused the limit to be exceeded and information about the violation is output to a log file (*installation-folder-name*\Log\ajs2po.log or %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJSP0\Log\ajs2po.log).

#3

If one piece of data in a cell (one generation of information for an item) exceeds 4,000 bytes, a cross (×) and the text The data has too many characters to display appear on screen and in the resulting document.

#### Note:

Lower limits might be imposed if memory usage is high.

When a document is longer than one page, the page break occurs between cells.

If you set a column width that is larger than the document area, the scroll box might occupy the entire scroll bar. Because the position of the first column (showing the unit name) is fixed, the scroll bar can become unusable if you allow the unit name column to be wider than the document area. This will not affect the contents of previews and printed documents.

You can also save a document as a file in CSV format. To save a document in CSV format, choose **Save CSV file** from the **File** menu.

You can use the following equation to determine how much memory is required to output a document.

Keep in mind that a certain amount of leeway is built into this equation.

Many of the factors governing memory usage depend on individual user settings. These include the length of unit names, the depth of the hierarchy, the position of the specified unit in the hierarchy, and the numbers of relation lines and schedule rules. For this reason, the result of the equation does not always reflect actual memory usage.

#### Equation:

Number of units in job operation information file x 5 KB  
+ Number of generations in job operation information file x 4 KB  
+ Number of rows in document area x number of columns x 100 bytes  
+ 12 MB

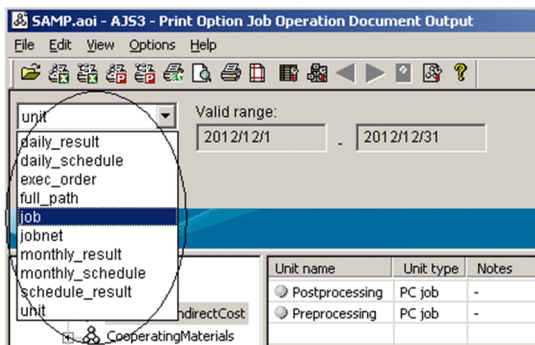
#### Note:

- Kerning-related differences between on-screen (print preview) and printed documents  
The kerning applied by some printers can cause irregularities in the width of character strings. That is, a line break might appear in a printed document despite the character string fitting the column in the print preview.
- If memory usage reaches the OS's upper limit (2 GB) for a single process, the process fails in the insufficient memory error (KAVR0002-E) even when the machine capacity allows more.  
In such a case, perform (1), (2), or both below in order to divide the job operation information file into smaller parts.  
(1) In order to make the number of target units smaller, choose a unit name from the lower level and specify it in the Collecting Job Operation Information window or for the `jprcollect` command.  
(2) In order to make the volume of collecting schedule information smaller, specify a shorter collection period in the Collecting Job Operation Information window or for the `jprcollect` command.
- In cases where multi-user remote operation is enabled, the required amount of memory space is given by multiplying the amount needed for a single process of JP1/AJS3 - Print Option by the number of users who use JP1/AJS3 - Print Option.

# 6.4 Changing formats

You can output documents in a variety of formats. To select the format for your document, use the format combo box in the Job Operation Document Output window.

Figure 6–7: Format combo box



The figures below show examples of on-screen and printed documents for each option in the format combo box.

Figure 6–8: Example of document output in unit format

Unit name	Unit type	Notes
Postprocessing	PC job	-
Preprocessing	PC job	-

Figure 6–9: Example of printed document in unit format

Unit name	Unit type	Notes
(1) CalculatingIndirectCost	Jobnet	-
(2) Postprocessing	PC job	-
(2) Preprocessing	PC job	-

Figure 6–10: Example of document output in job format

Unit name	Unit type	Command text	Script file name
Postprocessing	PC job	-	c:\mog\K_KANSEA.SPT
Preprocessing	PC job	-	c:\mog\K_KANSEF.SPT

...

Figure 6–11: Example of printed document in job format

Unit name	Unit type	Command text
(1) CalculatingIndirectCost	Jobnet	-
(2) Postprocessing	PC job	-
(2) Preprocessing	PC job	-

...

Figure 6–12: Example of document output in jobnet format

Unit name	Unit type	Execution start date	Execution start time	Delayed sta...
CalculatingIndirectCost	Jobnet	1, Monday	1-5, <relative time> 10:00	-
		2, Tuesday		
		3, Wednesday		
		4, Thursday		
		5, Friday		

...



Figure 6–13: Example of printed document in jobnet format

Unit name	Unit type	Execution start date
(1) CostingProcess	Jobnet	1, registered day
(2) CalculatingIndirectCost	Jobnet	1, Monday 2, Tuesday 3, Wednesday 4, Thursday 5, Friday
(2) CooperatingMaterials	Jobnet	1, <relative day> end of the month -02 2, <relative day> end of the month -01 3, <relative day> end of the month

...

Figure 6–14: Example of document output in exec\_order format

Unit name	Unit type	Comment	Relating execution order
Postprocessing	PC job	-	-
Preprocessing	PC job	-	-

Figure 6–15: Example of printed document in exec\_order format

Unit name	Unit type	Comment	Relating execution order
(1) CalculatingIndirectCost	Jobnet	-	Preceding unit name = Preprocessing, succeeding unit name = Postprocessing, <sequential relationship>
(2) Postprocessing	PC job	-	-
(2) Preprocessing	PC job	-	-

Figure 6–16: Example of document output in full\_path format

Unit name	Permission mode	JP1 user name	JP1 resource group name	Unit type
Postprocessing	-	jp1admin	-	PC job
Preprocessing	-	jp1admin	-	PC job

Figure 6–17: Example of printed document in full\_path format

Unit name	Permission mode	JP1 user name	JP1 resource group name	Unit type
CalculatingIndirectCost	-	jp1admin	-	Jobnet
CalculatingIndirectCost.Postprocessing	-	jp1admin	-	PC job
CalculatingIndirectCost.Preprocessing	-	jp1admin	-	PC job

Figure 6–18: Example of document output in monthly\_schedule format

[Monthly Schedule]	1	2	3	4	5	6	7	8	9	10
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo
NagoyaBranch_Costing							■	■	■	■
							■	■		
							■			
							■			
ControlConsignedGoods							■	■	■	■
							■	■		
							■			
							■			

...

Figure 6–19: Example of printed document in monthly\_schedule format

[Monthly Schedule]	1	2	3	4	5	6	7	8	9
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
(1) AccountingProcess/CoatingProcess/NagoyaBranch_Costing							■	■	■
							■	■	■
							■	■	■
(2) Control Consigned Goods							■	■	■
							■	■	■
							■	■	■
(2) Inventorying Consigned Goods							■	■	■
							■	■	■

...

Figure 6–20: Example of document output in monthly\_result format

[Monthly Result] Month: 2012/12 Base time: 00:00	1 Sa	2 Su	3 Mo	4 Tu	5 We	6 Th	7 Fr	8 Sa	9 Su
NagoyaBranch_Costing							(12:08)exec-deffer (12:12)normal (12:36)normal (12:45)normal (12:53)normal	(13:01)normal (13:07)interrupt (13:16)normal	
ControlConsignedGoods							(12:08)exec-deffer (12:11)normal (12:35)normal (12:44)normal (12:51)normal	(13:00)normal (13:07)normal (13:14)normal	

...

Figure 6–21: Example of printed document in monthly\_result format

[Monthly Result] Month: 2012/12 Base time: 00:00	1 Sa	2 Su	3 Mo	4 Tu	5 We	6 Th	7 Fr	8 Sa	9 Su
(1)AccountingProcessCostingProcessNagoyaBranch_Costing							(12:08)exec-deffer (12:12)normal (12:36)normal (12:45)normal (12:53)normal	(13:01)normal (13:07)interrupt (13:16)normal	
(2) Control Consigned Goods							(12:08)exec-deffer (12:11)normal (12:35)normal (12:44)normal (12:51)normal	(13:00)normal (13:07)normal (13:14)normal	
(2) Inventorying Consigned Goods							(12:08)exec-deffer (12:11)normal (12:35)normal (12:44)normal (12:51)normal	(13:00)normal (13:07)normal (13:14)normal	
(2) Control Subcontracted Goods							(12:08)exec-deffer (12:12)normal (12:36)normal (12:45)normal (12:53)normal	(13:01)normal (13:07)normal (13:16)normal	

...

Figure 6–22: Example of document output in daily\_schedule format

[Daily Schedule] Date: 2012/12/7(Fri) Base time: 00:00	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NagoyaBranch_Costing													■(12:08) ■(12:09) ■(12:35) ■(12:44) ■(12:51)			
ControlConsignedGoods													■(12:08) ■(12:10) ■(12:35) ■(12:44) ■(12:51)			
InventoryingConsignedGoods													■(12:08) ■(12:11) ■(12:35)			

...

Figure 6–23: Example of printed document in daily\_schedule format

[Daily Schedule] Date: 2012/12/7(Fri) Base time: 00:00	0	1	2	3	4	5	6	7	8	9	10	11	12	13
(1)AccountingProcessCostingProcessNagoyaBranch_Costing													■(12:08) ■(12:09) ■(12:35) ■(12:44) ■(12:51)	
(2) Control Consigned Goods													■(12:08) ■(12:10) ■(12:35) ■(12:44) ■(12:51)	
(2) Inventorying Consigned Goods													■(12:08) ■(12:11) ■(12:35)	

...

Figure 6–24: Example of document output in daily\_result format

[Daily Result] Date: 2012/12/7(Fri) Base time: 00:00	0	1	2	3	4	5	6	7	8	9	10	11	12	13
NagoyaBranch_Costing													□(12:08) ■(12:12) ■(12:36) ■(12:45) ■(12:53)	
ControlConsignedGoods													□(12:08) ■(12:11) ■(12:35) ■(12:44) ■(12:51)	

...

Figure 6–25: Example of printed document in daily\_result format

[Print Result] Date: 2012/12/17 7: Base time: 00:00		0	1	2	3	4	5	6	7	8	9	10	11	12	13
(1) AccountingProcessContingProcessMajorBranch_Coding														√(12/07)	
														√(12/12)	
														√(12/08)	
														√(12/09)	
														√(12/07)	
(2) ControlConsignedGoods														√(12/08)	
														√(12/11)	
														√(12/08)	
														√(12/07)	
														√(12/07)	
(3) InventoryingConsignedGoods														√(12/08)	
														√(12/11)	
														√(12/08)	
														√(12/07)	
														√(12/07)	

Figure 6–26: Example of document output in schedule\_result format

Unit name	Unit type	Scheduled execution end date and time ...	Date and time when jobnet or job execut...
Purchasing_Inventorying	PC job	2012/12/07 12:08	2012/12/07 12:08
		2012/12/07 12:12	2012/12/07 12:12
		2012/12/07 12:36	2012/12/07 12:36
		2012/12/07 12:45	2012/12/07 12:45
		2012/12/07 12:52	2012/12/07 12:52
		2012/12/08 13:01	2012/12/08 13:01
		2012/12/08 13:15	2012/12/08 13:15
		2012/12/09 13:15	****/**** **,**
		2012/12/10 13:15	****/**** **,**
		2012/12/11 13:15	****/**** **,**
		2012/12/14 13:15	****/**** **,**

Note:

If the job has finished executing, the **Scheduled execution end date and time obtained from a computed processing cycle** column displays the actual time the unit finished executing.

Figure 6–27: Example of printed document in schedule\_result format

Unit name	Unit type	Scheduled execution end date and time obtained from a computed processing cycle
(1) ControlSubcontractGoods	Jobnet	2012/12/07 12:08
		2012/12/07 12:12
		2012/12/07 12:36
		2012/12/07 12:45
		2012/12/07 12:52
		2012/12/08 13:01
		2012/12/08 13:15
		2012/12/09 13:15
		2012/12/10 13:15
		2012/12/11 13:15
		2012/12/14 13:15
		2012/12/15 13:15
		2012/12/16 13:15
		2012/12/17 13:15
		2012/12/18 13:15
		2012/12/19 13:15
		2012/12/20 13:15
		2012/12/21 13:15
		2012/12/22 13:15
		2012/12/23 13:15
		2012/12/24 13:15
		2012/12/25 13:15
		2012/12/26 13:15
		2012/12/27 13:15
(2) Purchasing_Inventorying	PC job	2012/12/07 12:08
		2012/12/07 12:12
		2012/12/07 12:36
		2012/12/07 12:45
		2012/12/07 12:52
		2012/12/08 13:01

For details on how to interpret the information in each column, see the documentation for JP1/AJS3.

The **Notes** column is added by the product that provided the information. In monthly and daily documents, the **Notes** column is always the last column in the document. In lists, the column appears in the location specified in the format definition.

## 6.5 Defining custom document formats

---

You can customize the layout of a document to suit your needs. The following items can be defined in a format definition:

- Basic format (monthly/daily/list)

### Monthly

A monthly document shows the execution schedules and results for one month, with each cell containing the information for one day.

### Daily

A daily document shows the execution schedules and results for one day, with each cell containing the information for one hour.

### List

A document in list format shows definition items, execution schedules, and execution results in columns.

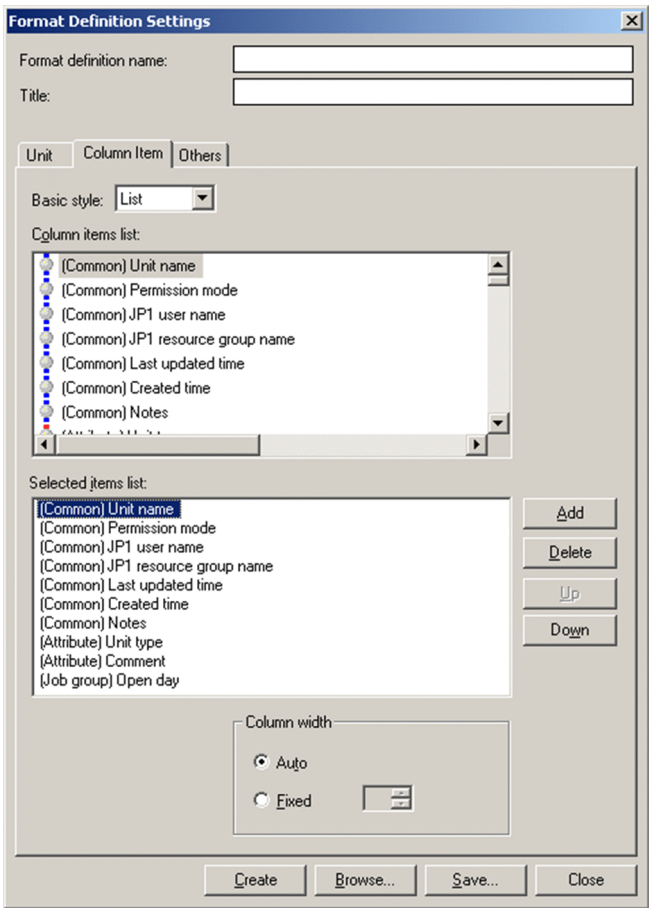
- Page settings
- Header and footer
- Types of unit to output
- Method of displaying unit names
- Maximum width of unit name column
- Column items
- Column width
- Base time
- Whether to only output information for units directly under the specified unit
- Whether to integrate duplicate lines when a cell contains more than one line
- Whether to truncate column headings
- Whether to display the time when the job operation information file was collected
- Whether to begin the time axis at the base time in daily reports
- Whether to display seconds in time data

You can save a document format as a format definition file, and make the format available for selection by registering it in the format combo box.

To output a document with a customized layout:

1. In the Job Operation Document Output window, from the **Edit** menu, choose **Format Definition Settings**.  
The Format Definition Settings window appears.
2. Define the document format in the Format Definition Settings window.
3. Click **Save**.  
The format definition is saved to a format definition file at the specified location.

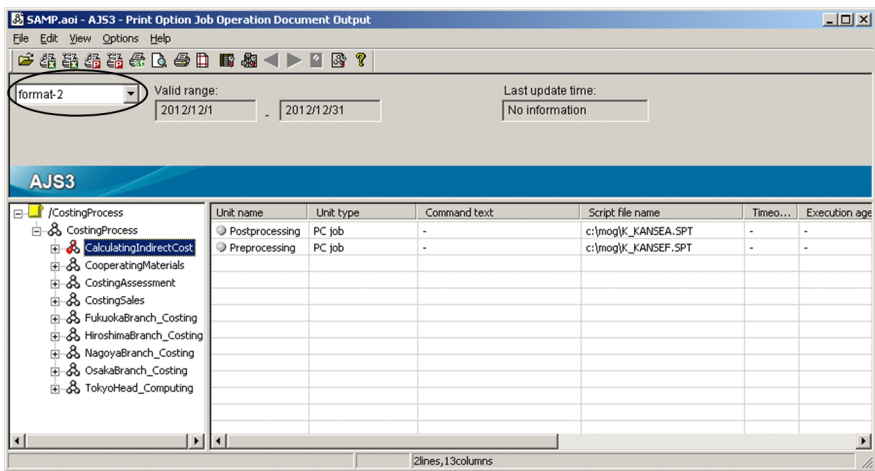
Figure 6–28: Format Definition Settings window



4. In the Job Operation Document Output window, from the **Options** menu, choose **Environment Settings**.  
The Environment Settings window appears.
5. In the Environment Settings window, click the **Browse** button in the **Format definition** area, and change the default folder to the folder that contains the format definition files you want to display.

After changing the folder, choose **Refresh** from the **View** menu. The format combo box will now display the format definition information stored in the format definition folder you selected in the Environment Settings window. When you select an item in the format combo box, a representation of the document appears in the layout you created.

Figure 6–29: Application of customized layout



## 6.6 Page settings

This section describes how to define page settings for output documents. You can define a maximum of 5 page settings.

The following items can be defined in page settings:

- Paper size
- Orientation
- Data font
- Header font
- Footer font
- Margins
- Header position and contents
- Footer position and contents
- Whether to print column names on the first page only

Note that some page settings are ignored by certain models of printer.

To define page settings:

1. In the Job Operation Document Output window, from the **Edit** menu, choose **Page Settings**.

The Page Settings window appears.

Figure 6–30: Page Settings window

The screenshot shows the 'Page Settings' dialog box with the 'Paper No.' tab selected. The 'Paper size' is set to 'A4'. Under 'Orientation', 'Portrait' is selected. The 'Font' section shows 'Data', 'Header', and 'Footer' fonts all set to 'Arial' with a size of '7'. The 'Margin (mm)' section shows 'Top', 'Bottom', 'Left', and 'Right' margins all set to '20', and 'Header' and 'Footer' margins set to '10'. The 'Header' and 'Footer' sections show 'Left', 'Center', and 'Right' positions all set to 'None'. A checkbox at the bottom is labeled 'Prints column names in only first page.' and is currently unchecked. 'Apply' and 'Close' buttons are at the bottom right.

2. In the Page Settings window, select a paper number.

The page settings you define are assigned to the paper number you select. You can create a maximum of five sets of page settings.

3. Select the page settings (such as paper size and orientation) according to your needs.

4. Click **Apply**.

The value selected in **Adoption** applies to all paper numbers. You cannot choose a different setting for different paper numbers. If you select **Format definition** from the **Adoption** drop-down list, JP1/AJS3 - Print Option uses the value specified in **Paper number** in the Format Definition window. If you select **Always 1**, the system ignores the value specified in **Paper number**, and uses the page settings for paper number 1.

The paper settings for documents in map and flow format must be defined in Microsoft Excel.

## 6.7 Changing the displayed range

You can change the range of information output to documents whose basic format is Monthly or Daily by setting a time period.

To change the range of information output in a monthly or daily report:

1. In the Job Operation Document Output window, display a preview of the document by selecting a format in the format combo box whose basic format is monthly or daily.
2. In the Job Operation Document Output window, from the **View** menu, choose **Change Displayed Range**.

To display information for the next month or next day:

Select **Next Month or Next Day**.

When you select this option, the window displays the information for the next day or month.

If the date in one month's time is outside the valid period, the date is replaced with the last day of the valid period.

To display information for the previous month or previous day:

Select **Previous Month or Previous Day**.

When you select this option, the window displays the information for the previous day or month.

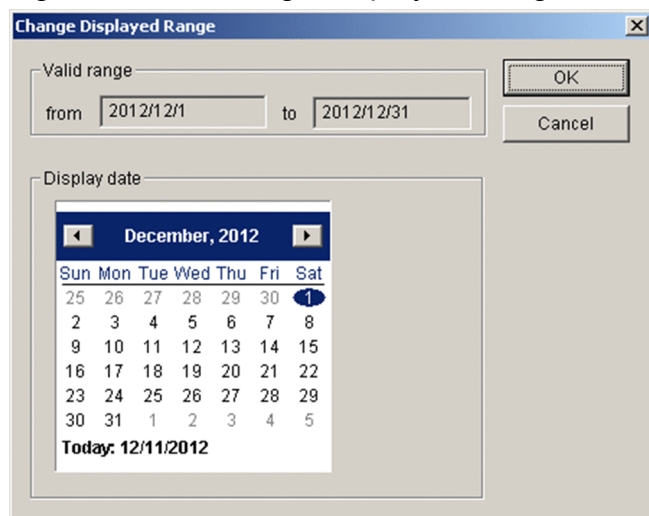
If the date one month ago is outside the valid period, the date is replaced with the first day of the valid period.

To display information for a specific date or range of dates:

Select **Specified Date**.

When you select this option, the Change Displayed Range window appears.

Figure 6–31: Change Displayed Range window



Select a date in the calendar and then click **OK**.

The resulting document will contain the data for the period displayed in the **Valid range** area.

You can specify the print range in the Print window.



## 6.8 Outputting definitions in map format

---

This section describes how to output jobnet definitions in map format.

You can display jobnet definitions in Microsoft Excel and create PDF files from the same general perspective as the Jobnet Editor window of JP1/AJS3 - View. You can then print this information using the print functionality of Microsoft Excel or your PDF reader.

- You can present jobnet definitions in a graphical format.
- You can use the flexibility of Microsoft Excel's print functionality to control the paper orientation, margin settings, header and footer, and other aspects of the printed document.
- Because the jobnet definition information is output to Microsoft Excel, the user can apply all manner of processing to the output information.

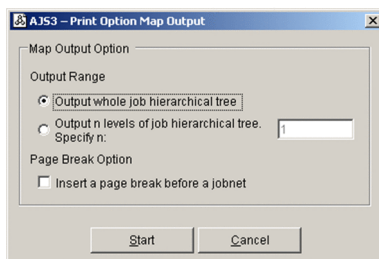
### 6.8.1 Outputting definitions to Microsoft Excel in map format

To output jobnet definitions to Microsoft Excel in map format:

1. In the unit tree in the Job Operation Document Output window, select the jobnet whose definition information you want to output.
2. From the **File** menu, choose **Map Output**.

The Map Output window appears.

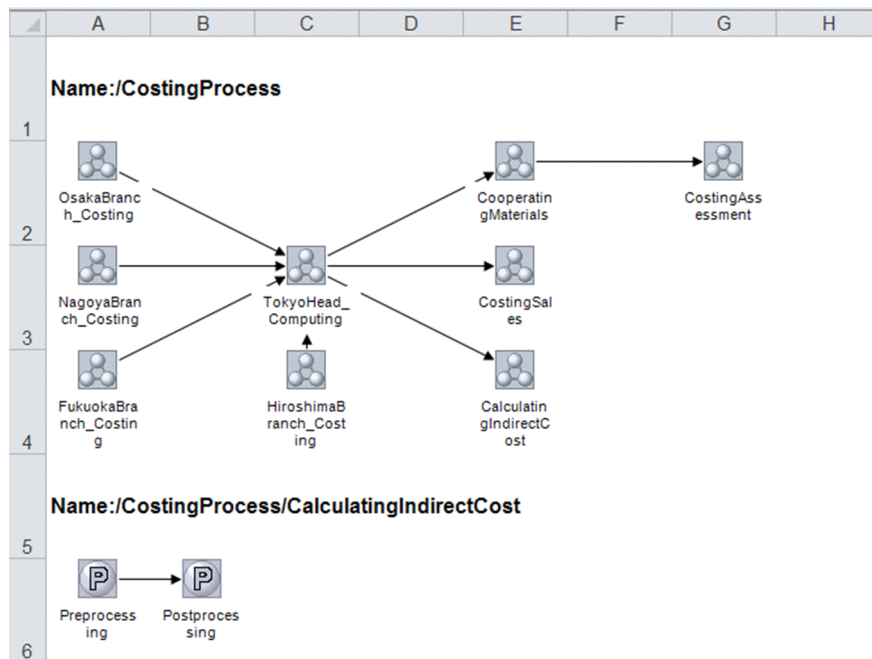
Figure 6–32: Map Output window



3. Click **Start**.

The definition information for the jobnet appears in Microsoft Excel.

Figure 6–33: Example of jobnet definition in Microsoft Excel



4. Use the print functionality of Microsoft Excel to print the jobnet definition.

## 6.8.2 Outputting definitions to PDF files in map format

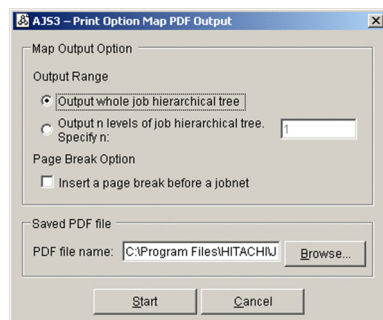
The following describes how to output jobnet definitions to a PDF file in map format.

Notes:

- You can perform map PDF output in an environment Microsoft Excel 2010 or later installed.
  - If you specify a subfolder of an installation folder such as C:\Program Files as the output destination for the PDF file, the file is redirected to a virtual folder.
  - If the jobnet definition contains a large number of jobs, the system might take a long time to convert the information to a PDF file. In this situation, consider splitting the data across two or more files.
1. In the unit tree in the Job Operation Document Output window, select the jobnet whose definition information you want to print.
  2. From the **File** menu, choose **Map PDF Output**.

The Map PDF Output window appears.

Figure 6–34: Map PDF Output window

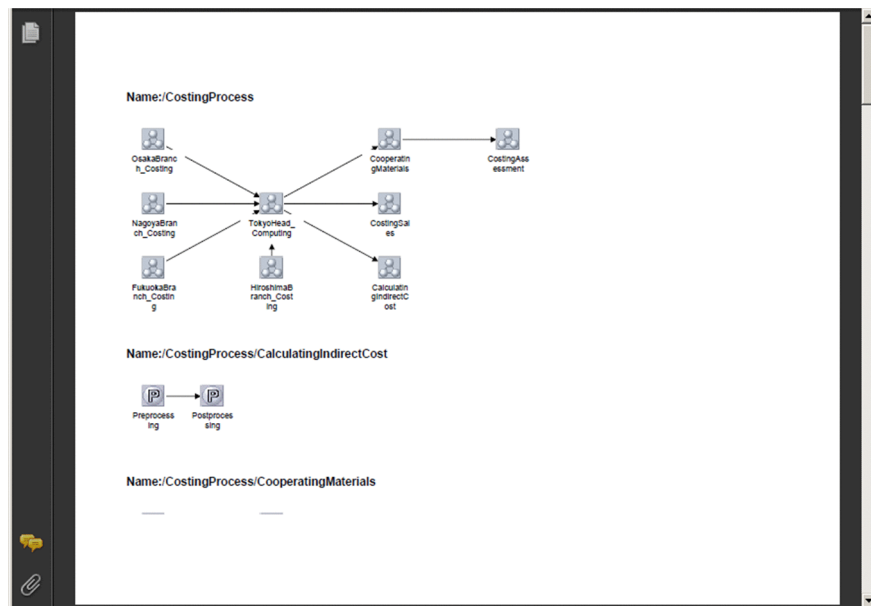


3. Change the value in **Saved PDF file** if needed.

4. Click **Start**.

A PDF file is output to the destination specified in **Saved PDF file**.

Figure 6–35: Example of PDF file output



5. Use the print functionality of your PDF viewer to print the jobnet definition.

# 6.9 Jobnet flow format definitions

This section describes how to define the format JP1/AJS3 - Print Option uses for each unit type when outputting jobnet definitions in flow format. The jobnet flow output functionality outputs the unit name and the items specified in the jobnet flow table format. You can select one column or two columns for the data layout. The default is one column.

The following is an example of the output format when the data layout is in one column.

Figure 6–36: Example of jobnet flow output 1



By using the jobnet flow output functionality, you can define the output items for each type of unit. You can select a maximum of 20 items per unit.

The largest number of items defined among the units governs the document format.

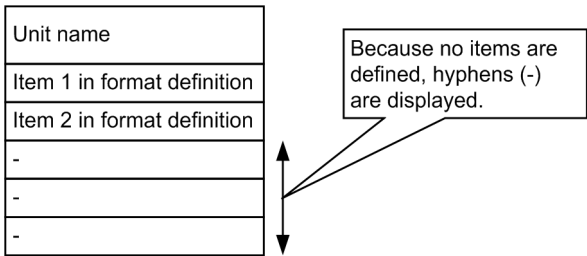
A hyphen (-) is displayed if an output item is undefined for that unit (as in the last three rows in the example below).

Example:

- 1. You set five output items for a jobnet unit.
- 2. You set three output items for the UNIX/PC job unit.
- 3. You output the data in jobnet flow format.

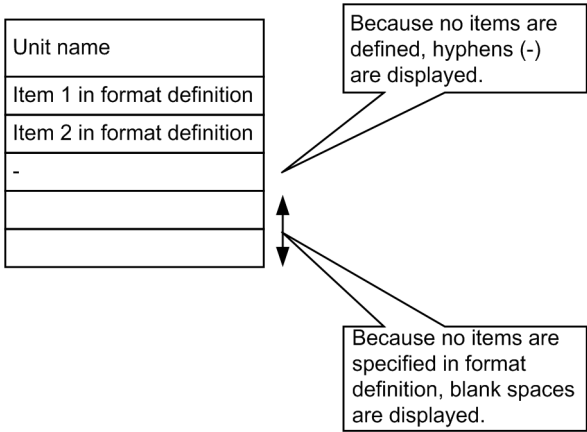
In this case, the maximum number of items is five. The following shows the jobnet output format.

Figure 6–37: Example of jobnet flow output 2 (For jobnet)



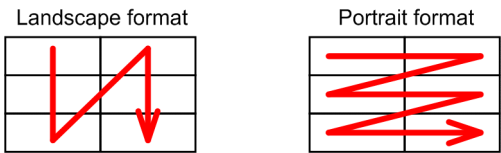
For a UNIX/PC job, there are three set items, but there are five cells to match the maximum number of items. The following shows the UNIX/PC job output format.

Figure 6–38: Example of jobnet flow output 3 (For a UNIX/PC Job)



A section where the output item is undefined (third row from the bottom in the example above) uses a hyphen (-). The two cells not designated by the format (bottom two rows in the example above) are blank spaces.

If the data layout has two columns, you can select the orientation. You can select either **Landscape format** or **Portrait format**. The default is set to **Landscape format**.



The following is an example of output when the data layout uses two columns.

- When there are five items, the data layout has two columns, and **Portrait format** is selected for the orientation

Figure 6–39: Example of jobnet flow output 4

Unit name	Item 1 in format definition
Item 2 in format definition	Item 3 in format definition
Item 4 in format definition	Item 5 in format definition

- When there are six items, the data layout has two columns, and **Landscape format** is selected for the orientation

Figure 6–40: Example of jobnet flow output 5

Unit name	Item 4 in format definition
Item 1 in format definition	Item 5 in format definition
Item 2 in format definition	Item 6 in format definition
Item 3 in format definition	

If there is an even number of items, the last cell is a blank space.

If you specify to display legends for jobnet flow output in the Environment Settings window, unit names and selected items specified in the jobnet flow format definition are output for each unit type at the top of the first page. The number of cells is the maximum number of defined items and the output format and orientation follow the format definition.

If you specify the type of unit in the jobnet flow format definition, the unit types in the legend and the data unit types can be related.

To define the format of jobnet flow information:

1. In the Job Operation Document Output window, from the **Edit** menu, choose **Jobnet Flow Format Definition Settings**.

The Jobnet Flow Format Definition Settings window appears.

2. In the Jobnet Flow Format Definition Settings window, define the jobnet flow format.

3. After defining the jobnet flow format, click **Save**.

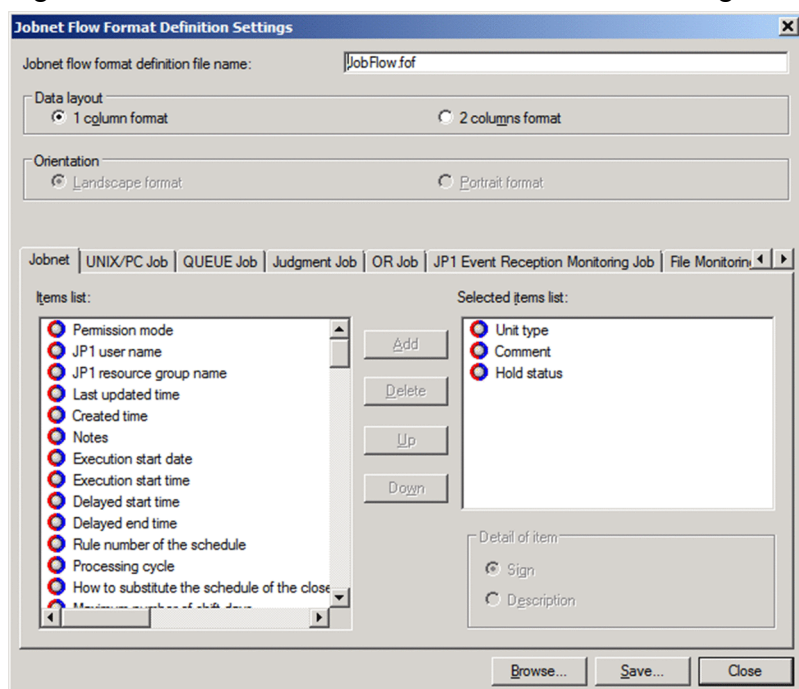
4. In the Job Operation Document Output window, from the **Options** menu, choose **Environment Settings**.

The Environment Settings window appears.

5. In the Environment Settings window, click the **Browse** button in the **Jobnet flow format definition** area, and choose the jobnet flow format definition file you want to apply.

The jobnet flow format definition file you created is set as the definition information used when outputting jobnet flow documents.

Figure 6–41: Jobnet Flow Format Definition Settings window



For details on the items you can set, see [A. List of Supported Column Items](#).

# 6.10 Outputting definitions in jobnet flow format

This section describes how to output jobnet definitions in jobnet flow format.

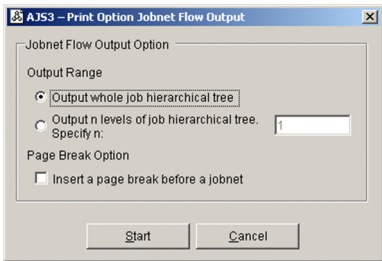
You can output jobnet definitions to Microsoft Excel or a PDF file based on the contents of a jobnet flow format definition file. You can then use the print functionality of Microsoft Excel or your PDF reader to print this information as a document.

## 6.10.1 Outputting definitions to Microsoft Excel in jobnet flow format

To output jobnet definitions to Microsoft Excel in jobnet flow format:

1. In the unit tree in the Job Operation Document Output window, select the jobnet whose definition information you want to print.
2. From the **File** menu, choose **Jobnet Flow Output**.  
The Jobnet Flow Output window appears.

Figure 6–42: Jobnet Flow Output window



3. Click **Start**.  
The definition information for the jobnet appears in Microsoft Excel.

Figure 6–43: Jobnet definition in Microsoft Excel (When the data layout has one column)

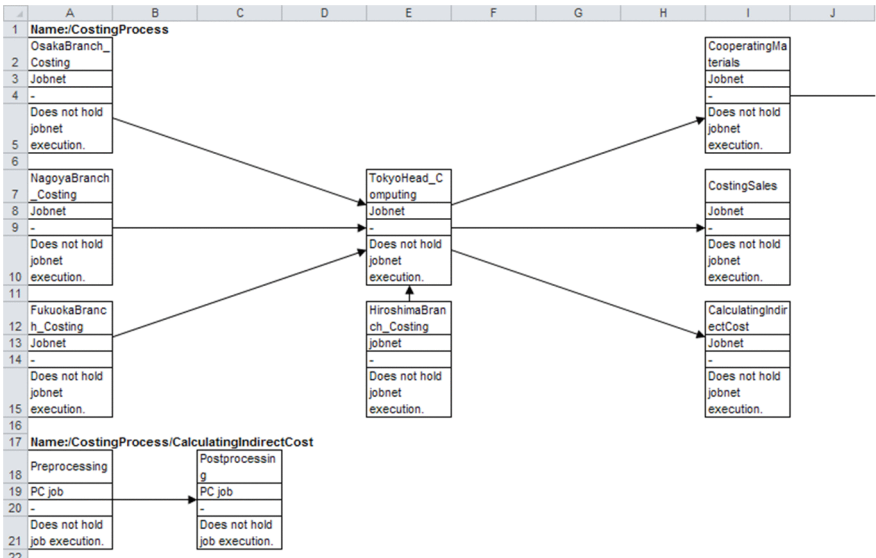
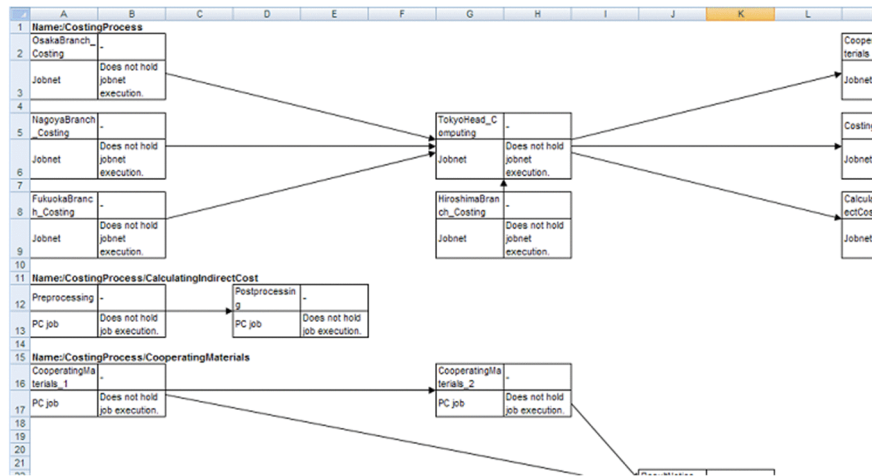


Figure 6–44: Microsoft Excel display example (When the data layout has two columns)



Use the print functionality of Microsoft Excel to print the jobnet definition.

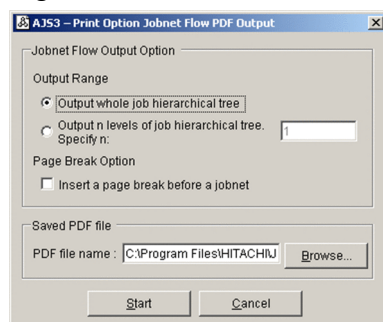
## 6.10.2 Outputting definitions to a PDF file in jobnet flow format

The following describes how to output jobnet definitions to a PDF file in jobnet flow format.

Notes:

- You can perform jobnet flow PDF output in an environment Microsoft Excel 2010 or later installed.
  - If you specify a subfolder of an installation folder such as C:\Program Files as the output destination for the PDF file, the file is redirected to a virtual folder.
  - If the jobnet definition contains a large number of jobs, the system might take a long time to convert the information to a PDF file. In this situation, consider splitting the data across two or more files.
- In the unit tree in the Job Operation Document Output window, select the jobnet whose definition information you want to print.
  - From the **File** menu, choose **Jobnet Flow PDF Output**.  
The Jobnet Flow PDF Output window appears.

Figure 6–45: Jobnet Flow PDF Output window



- Change the value in **Saved PDF file** if needed.
- Click **Start**.  
A PDF file is output to the destination specified in **Saved PDF file**.



Figure 6–46: Example of PDF file output (When the data layout has one column)

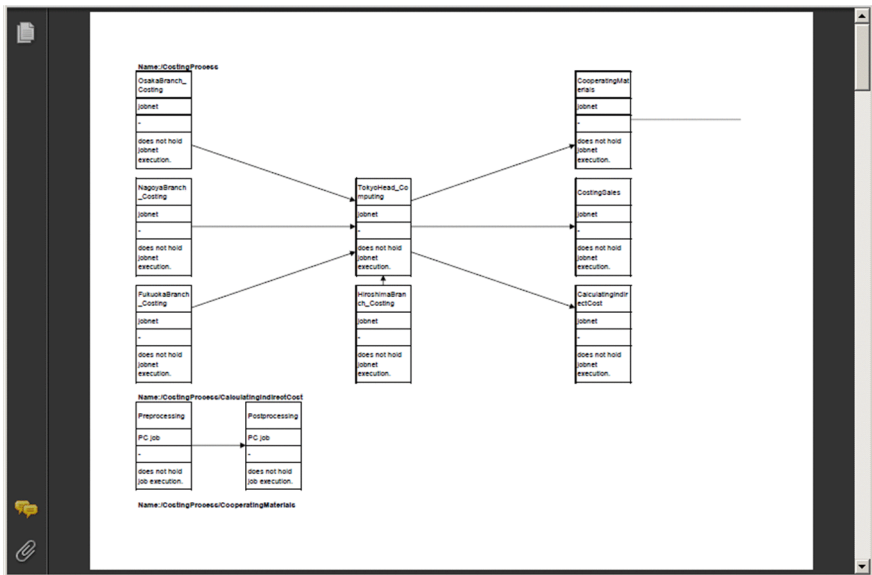
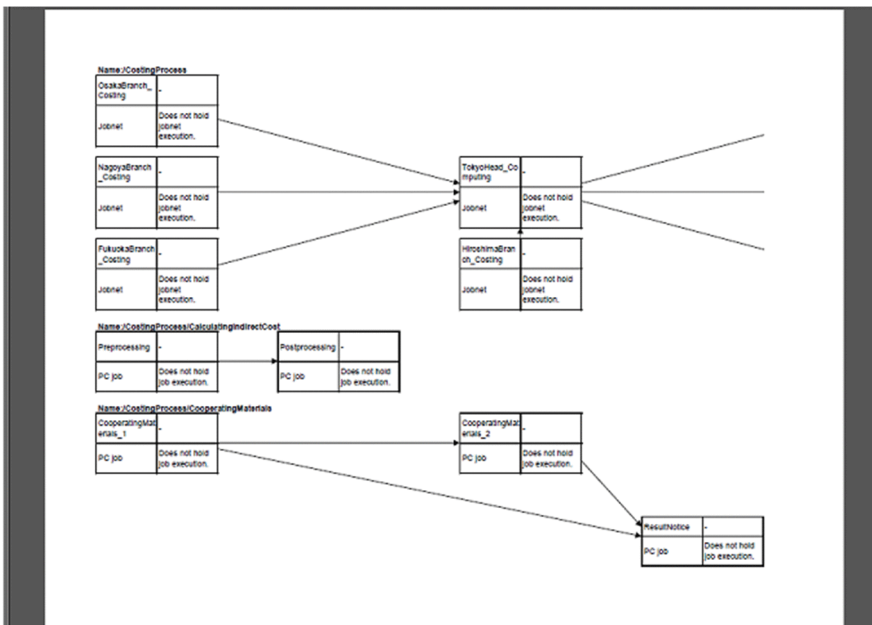


Figure 6–47: PDF file output example (When the data layout has two columns)



5. Use the print functionality of your PDF viewer to print the jobnet definition.

## 6.11 Using the jprprint command to output job operation information

---

You can use the `jprprint` command to output information about job operation.

For a detailed description of the `jprprint` command syntax, see [8. Commands](#).

Example of command execution:

```
jprprint C:\JP1AJS2PO\Input\SAMP.aoi C:\JP1AJS2PO\Format\unit.jof
```

When you execute the `jprprint` command as shown in the example above, the command outputs the information in the job operation information file `C:\JP1AJS2PO\Input\SAMP.aoi` to the default printer in the format defined in the format definition file `C:\JP1AJS2PO\Format\unit.jof`.

# 7

## Windows

This chapter describes the display items and definition items used in JP1/AJS3 - Print Option.

# 7.1 Window transitions

The figures below show the window transitions in JP1/AJS3 - Print Option.

Figure 7–1: Window transitions in JP1/AJS3 - Print Option Manager (for Windows)

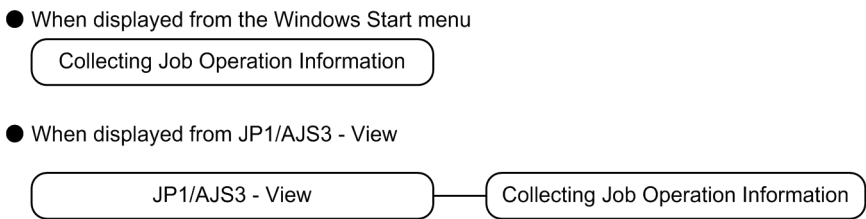
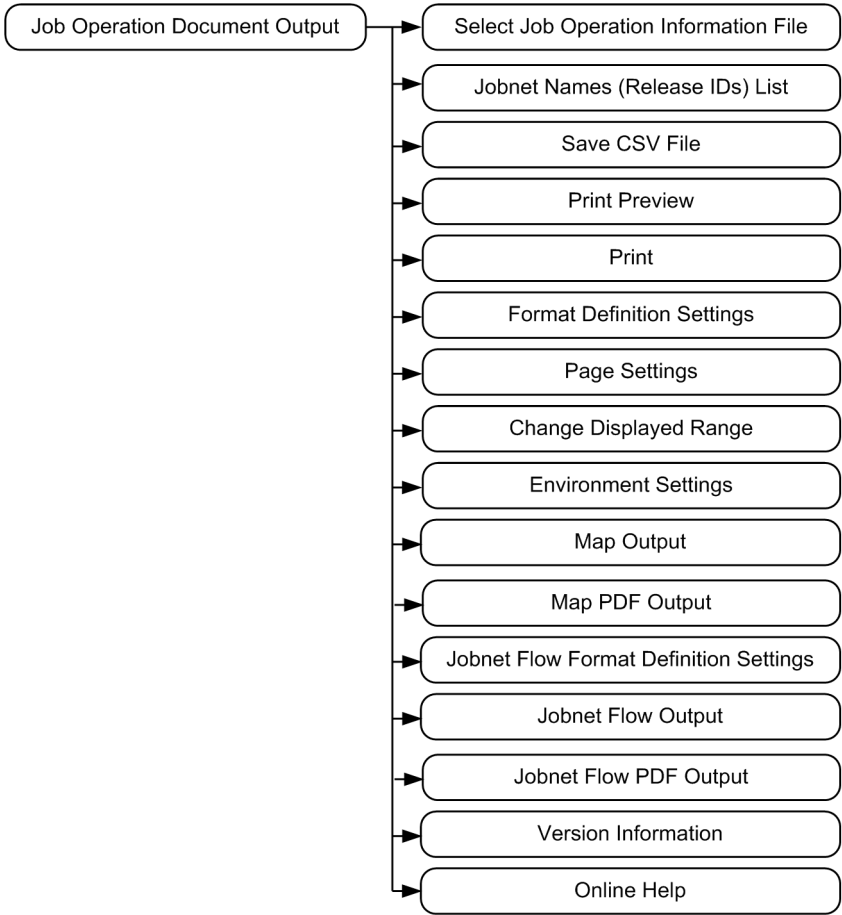


Figure 7–2: Window transitions in JP1/AJS3 - Print Option (for Windows)



## 7.2 Collecting Job Operation Information window

This section describes the Collecting Job Operation Information window and settings for the Windows (GUI-based) edition. Because the available functionality is identical to the `jprcollect` command and used in the same manner, also refer to the description of the `jprcollect` command in [8. Commands](#).

In the Collecting Job Operation Information window, you can collect job operation information from JP1/AJS and generate job operation information files.

Figure 7–3: Collecting Job Operation Information window

- When displayed from the Windows Start menu

AJS3 - Print Option Manager Collecting Job Operation Information

Collection target

Unit name: /net1

☐ Collects all units under the root node

Service name:

Collection period

Specify period: Date specification

☒ Calendar date ☐ Execution date

Period: 3/ 7/2016 - 3/ 7/2016

☐ Collects the last update time

☐ Collects the release IDs

Job operation information output file name: C:\temp\net1.aoi [Browse...]

[Output] [Close]

- When displayed from JP1/AJS3 - View

AJS3 - Print Option Collecting Job Operation Information

Collection target

Host name: localhost

Unit name: /CostingProcess

☐ Collects all units under the root node

Service name: AJSROOT1

Character code: C

Collection period

Specify period: Date specification

☒ Calendar date ☐ Execution date

Period: 3/ 7/2016 - 3/ 7/2016

☐ Collects the last update time

☐ Collects the release IDs

Job operation information output file name: C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\JP1AJS2I [Browse...]

[Output] [Close]

The following explains the displayed items.

### Host name

Displays the name of the connection-destination host.

This item is unavailable when you display the Collecting Job Operation Information window from JP1/AJS3 - View.

## Unit name

Specify the name of the unit whose job operation information you want to collect. JP1/AJS3 - Print Option collects information for the specified unit and all its subordinate units. You cannot leave this field blank.

This field does not accept wildcards (such as \* and ?).

If you specify more than one unit name in the **Unit name** field, an error occurs when you attempt to output a job operation document. This item is unavailable when you display the Collecting Job Operation Information window from JP1/AJS3 - View.

You cannot display the Collecting Job Operation Information window from JP1/AJS3 - View if the name of the selected unit contains any of the following characters:

" & ' \* < > ? [ \ ] ^ ` { | } ~ \$

## Collects all units under the root node

If you select this check box, you can specify a root job group in the **Unit name** field.

You cannot specify a root job group in **Unit name** when this check box is cleared.

If you select **Collects all units under the root node** and specify a root job group in **Unit name**, JP1/AJS3 - Print Option collects information for all units under the root job group.

This item is unavailable when you display the Collecting Job Operation Information window from JP1/AJS3 - View.

## Service name

Specify the name of the JP1/AJS scheduler service. You can leave this field blank. If you do not specify a service name, JP1/AJS3 - Print Option uses the scheduler service set in JP1/AJS.

This item is unavailable when you display the Collecting Job Operation Information window from JP1/AJS3 - View.

## Character code

Displays the character encoding used by the scheduler service to which the unit belongs.

This item is unavailable when you display the Collecting Job Operation Information window from JP1/AJS3 - View.

## Collection period

Specify how you wish to define the collection period for execution schedules and execution results, and enter the period for which to collect information. The collection period lasts from the base time on the start date until 23 hours, 59 minutes, and 59 seconds after the base time on the end date.

## Specify period

Select **Date specification**, **Monthly specification**, **Relative month specification**, **Daily specification**, or **Not specified**. **Date specification** is selected by default.

Also, select **Calendar date** or **Execution date** as the base period. **Calendar date** is selected by default.

However, **Execution date** can be specified for collection only in JP1/AJS3 - Print Option Manager 11-10 or later.

## Date specification

Select this option when you want to define the collection period for execution schedules and results by specifying a start date and end date.

The figure below shows the contents of the **Period** area when you select this option.

Initially, the date on which you open the Collecting Job Operation Information window is set as the start date and end date.

## Period

Specify the start date and end date of the collection period for execution schedules and results.

The earliest date you can specify is January 1st, 1994, and the latest is December 31st, 2036.

## Monthly specification

Select this option when you want to define the collection period for execution schedules and results by month.

The figure below shows the contents of the **Period** area when you select this option.

By default, **This month** is selected.

## Period

Specify the collection period for execution schedules and results. Select one or more of **Last month**, **This month**, and **Next month**.

JP1/AJS3 - Print Option collects execution schedules and results from the first day to the last day of the selected months.

You cannot click the **Output** button if only **Last month** and **Next month** are selected.

- **Last month**

When selected, the execution schedules and results for the previous month are collected.

- **This month**

When selected, the execution schedules and results for the current month are collected.

- **Next month**

When selected, the execution schedules and results for next month are collected.

## Relative month specification

Select this option when you want to define the collection period for execution schedules and results as a month relative to the current month.

The figure below shows the contents of the **Period** area when you select this option.

The default is **From this month for xx months**.

Collection period

Specify period Relative month specification

☒ Calendar date ☐ Execution date

Period

☐ From  months ago for  months

☒ From this month for  months

☐ From  months later for  months

## Period

Specify the month from which to begin collecting execution schedules and results, and the number of months for which to collect the information.

You can specify the current month, a month in the past, or a future month as the start of the collection period.

JP1/AJS3 - Print Option collects execution schedules and results for the specified number of months, starting from the first day of the first month in the collection period.

- **From xx months ago for xx months**

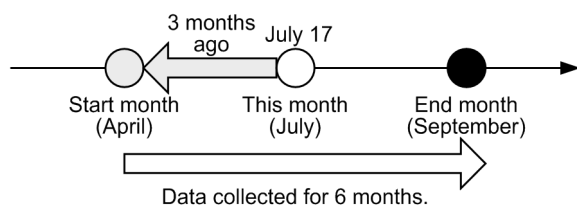
Select this option to start the collection period in a past month. In the first field, specify the first month of the collection period as a number of months prior to the current month. In the second field, specify the number of months for which to collect information.

You can specify a value from 1 to 12 in each field.

You must specify a value in both fields.

Example:

Suppose that on July 17th, you specify **From 3 months ago for 6 months**:



JP1/AJS3 - Print Option collects execution schedules and results for the period from April 1st to September 30th.

- **From this month for xx months**

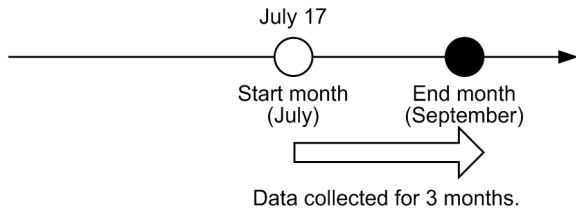
Select this option to use the current month as the start of the collection period. Specify the number of months for which to collect execution schedules and results, starting from the current month.

You can specify a value from 1 to 12. You cannot leave the field blank.

Example

Suppose that on July 17th, you specify **From this month for 3 months**:





JP1/AJS3 - Print Option collects execution schedules and results for the period from July 1st to September 30th.

- **From xx months later for xx months**

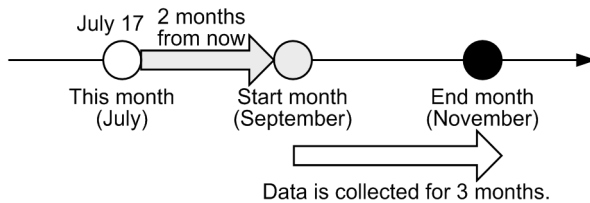
Select this option to use a future month as the start of the collection period. In the first field, specify the first month of the collection period as a number of months in the future. In the second field, specify the number of months for which to collect the information.

You can specify a value from 1 to 12 in each field.

You must specify a value in both fields.

Example:

Suppose that on July 17th, you specify **From 2 months later for 3 months**:



JP1/AJS3 - Print Option collects execution schedules and results for the period from September 1st to November 30th.

### Daily specification

Select this option when you want to define the collection period for execution schedules and results by **Daily**.

The figure below shows the contents of the **Period** area when you select this option.

By default, **Today** is selected.

### Period

Specify the collection period for execution schedules and results. Select one or more of **Last Day**, **Today**, and **Next Day**.

You cannot click the **Output** button if only **Last Day** and **Next Day** are selected.

- **Last Day**

When selected, the execution schedules and results for the previous day are collected.

- **Today**

When selected, the execution schedules and results for the today are collected.

- **Next Day**

When selected, the execution schedules and results for next day are collected.

**Not specified**

Select this option if you do not want to collect execution schedules and results.

**Collects the last update time**

Select this check box to collect information about the last update times for the specified unit and its subordinate units. You can only collect last update times from JP1/AJS3 - Manager version 09-00 or later.

If this check box is cleared, JP1/AJS3 - Print Option does not collect last update times.

**Collects the release IDs**

Select this check box to collect jobnet information for each release ID when the registration information for the specified unit includes jobnet release information. If the unit has several release schedules, information is output for all release IDs. You can only collect information for specific release IDs from JP1/AJS3 - Manager version 09-00-04 or later.

For details on jobnet release, see the description of the jobnet release functionality in the manual *JP1/Automatic Job Management System 3 Overview*.

**Job operation information output file name**

Specify the name of the job operation information file to which to output the collected job operation information. You cannot leave this field blank.

If you display the Collecting Job Operation Information window from JP1/AJS3 - View, the default file name appears in this field. The path of the default file name is the value specified in the **Saved job operation information file linking with View** field in the Environment Settings window, and the file name is the date and time when the Collecting Job Operation Information window was displayed (in the format *YYYYMMDDhhmmss<sup>#</sup>*). The extension is *.aoi*.

#

*YYYY*: four-digit year; *MM*: Month (01 to 12), *DD*: Day (01 to 31), *hh*: Hour (00 to 23), *mm*: minutes (00 to 59), *ss*: seconds (00 to 59)

Include the extension (*.aoi*) when you specify the file name. Do not use machine-dependent characters or any of the following symbols in the file name.

\ / : \* ? " < > | \$ ` -

If you use a hyphen (-), you can specify other than top of the file path name.

If you specify a file name but not a folder, the file is created in the installation folder. If you displayed the Collecting Job Operation Information window from JP1/AJS3 - View, the file is created in the JP1/AJS3 - View installation folder.

File names must be no more than 63 bytes, and the entire path must be no more than 255 bytes.

If you display the Collecting Job Operation Information window from JP1/AJS3 - View, the folder path must be no more than 194 bytes.

**Browse**

Click this button to select the output file for job operation information from an Open File dialog box.

**Output**

Starts the collection of job operation information.

Close

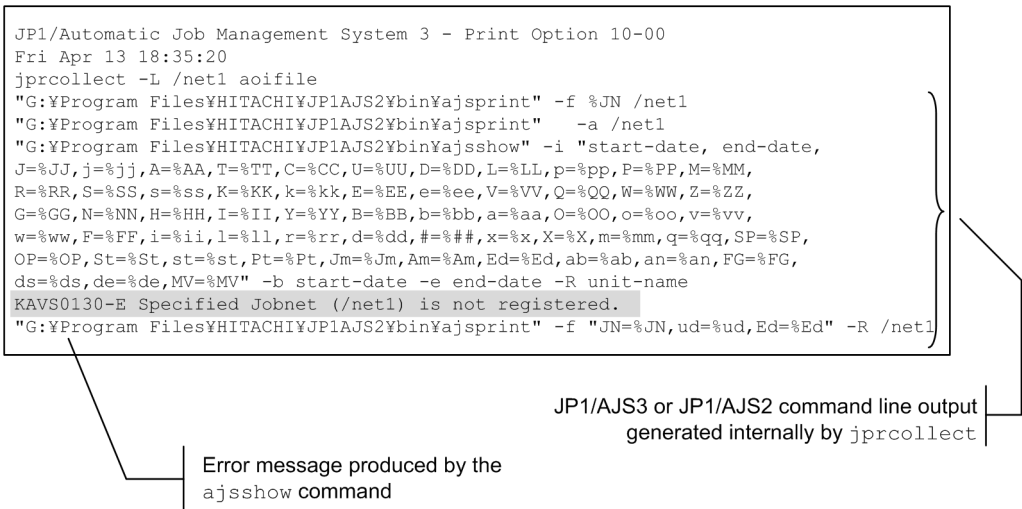
Closes the window.

Supplementary note: Execution logs for job operation information collection

Each time you collect job operation information, JP1/AJS3 - Print Option creates a file containing execution log information for the collection process. The file name is the same as the file name specified in **Job operation information output file name**, but with the extension **.log**.

JP1/AJS3 - Print Option collects job operation information by executing the `ajspri` and `ajsshow` commands provided by JP1/AJS. Execution log information consists of the execution results of these commands. If the collection process fails, you can use the contents of this file to find out why.

The following figure shows the contents of an execution log file:



Supplementary note: Location of execution log files

- If you display the Collecting Job Operation Information window from the Windows **Start** menu:  
The execution log file is created in the same folder as the job operation information file.
- If you display the Collecting Job Operation Information window from JP1/AJS3 - View:  
No execution log file is created if the job operation information is output without any issues. If an error occurs, an execution log file is created in the following folder or directory:

In Windows

`JP1/AJS3-Print-Option-Manager-installation-folder\Tmp`

In UNIX

`/opt/jp1ajs2pom/tmp`

Supplementary note: How the **Calendar date** and **Execution date** options work differently

The following describes how the **Calendar date** and **Execution date** options work differently during collection:

Example 1: If **Calendar date** is selected in the Collecting Job Operation Information window to collect schedules on May 25, 2016:

Monthly schedule in 48-hour view: The schedule that is defined for PC job F at 00:30 on May 26, which extends over two days, is not collected.

[Monthly Schedule]																										
Month: 2016/5 Base time: 00:00																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th
☉ PC-jobC																									■(23:55)	
☉ PC-jobD																									■(23:55)	
☉ PC-jobF																										

Example 2: If **Execution date** is selected in the Collecting Job Operation Information window to collect schedules on May 25, 2016:

Monthly schedule in 48-hour view: The schedule that is defined for PC job F at 00:30 on May 26, which extends over two days, is collected because the jobnet is scheduled to run on May 25.

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Month: 2016/5 Base time: 00:00		Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th
PC-jobC																											
PC-jobD																											
PC-jobF																											

Example 3: If **Calendar date** is selected in the Collecting Job Operation Information window to collect schedules on June 14, 2016:

Monthly schedule in 48-hour view: The schedule that is defined for PC job F at 00:30 on June 14, which extends over two days, is collected even though the jobnet is scheduled to run on June 13.

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Month: 2016/6 Base time: 00:00		We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo
PC-jobC																					
PC-jobD																					
PC-jobF																					

Example 4: If **Execution date** is selected in the Collecting Job Operation Information window to collect schedules on June 14, 2016:

Monthly schedule in 48-hour view: The schedule that is defined for PC job F at 00:30 on June 14, which extends over two days, is not collected because the jobnet is scheduled to run on June 13.

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Month: 2016/6 Base time: 00:00		We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo
PC-jobC																					
PC-jobD																					
PC-jobF																					

Example 5: If **Calendar date** is specified in the Collecting Job Operation Information window to collect schedules of **Today**:

When the collection is executed on December 8, 2017, the information of the job that is scheduled at 00:05 on December 9 and extends over two days is not collected.

	..	December 8	December 9	...
/net	..	23:45		...
/net/PCjob1	..	23:45		...
/net/PCjob2	..	23:55		...
/net/PCjob3	..		00:05	...

Example 6: If **Execution date** is specified in the Collecting Job Operation Information window to collect schedules of **Today**:

When the collection is executed on December 8, 2017, the information of the job that is scheduled at 00:05 on December 9 and extends over two days is collected because the upper-level jobnet is scheduled to run on December 8.

	..	December 8	December 9	...
/net	..	23:45		...
/net/PCjob1	..	23:45		...
/net/PCjob2	..	23:55		...
/net/PCjob3	..		00:05	...

#### Cautionary notes:

- A job whose execution schedule and execution results exist within the range of the specified collection period is output. For a job whose execution started within the range of the collection period but ended beyond the range of the collection period, if you collect job operation information after the end of its execution, you can obtain the execution result data within the range of the collection period. You cannot obtain the execution result data beyond the range of the collection period.
- When JP1/AJS3 - Manager is operating in a cluster environment, collect job operation information from the active node. To do so, specify the name of the scheduler service on the logical host as the service name.
- If you select **Monthly specification** or **Relative month specification**, the collection period is determined based on the system time of the physical host, not the local time of the scheduler service. If the local time of the scheduler service is different from the system time of the physical host, select the **Date specification** option and specify a collection period based on the local time.
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, displays the Collecting Job Operation Information window from JP1/AJS3 - View, and specifies a protected folder such as C:\Program Files as the output destination for job operation information, the information might be redirected and saved to each user's VirtualStore folder.

Files are redirected when the save destination is a folder in one of the following directories:

- *system-drive*: \Windows
- *system-drive*: \Program Files
- *system-drive*: \Program Files (x86) (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive*: \Users\OS-user-name\AppData\Local.

- If a non-Administrator user displays the Collecting Job Operation Information window from the **Start** menu in a Windows Server 2019, Windows Server 2016 or Windows Server 2012 environment with UAC enabled, an error occurs if a protected folder such as C:\Program Files is specified as the output destination for job operation information. In this scenario, open the Collecting Job Operation Information window from an account with Administrator privileges.
- JP1/AJS3 - Print Option uses the following information acquired by the JP1/AJS command `ajsshow` to determine the schedule information for jobs in the collection period:
  - Scheduled execution start date and time obtained from a computed processing cycle
  - Scheduled execution end date and time obtained from a computed processing cycle

If a job has finished executing, JP1/AJS3 - Print Option outputs the actual execution start and end times for the job, as shown in the example below.

Figure 7–4: Example of monthly schedule information (with timestamps) output after acquiring operation information for Feb 1 to 28 at 12:00 on Feb 16

[Monthly Schedule]	...	14 Sa	15 Su	16 Mo	17 Tu	18 We	...
● Daily calculation processing	...	■(17:01) #	■(17:02) #	■(17:00)	■(17:00)	■(17:00)	...

#  
Execution record for an executed job.

You can make sure that a document does not include actual execution histories by specifying a future date as the start date of the collection period.

- If you display the Collecting Job Operation Information window from the Windows **Start** menu and collect job operation information with the JP1/AJS3 environment setting parameter `ADMACLIMIT` set to `yes`, the KAVR1000-E or KAVR5010-E error might occur. In that case, log on to the OS, create a JP1 user with the same name as the user account name that displayed the Collecting Job Operation Information window from the Windows **Start** menu, and then set the JP1 permission level for the JP1 resource group of the target units for the `ajsp rint` command and the `ajssh ow` command.

For details about the JP1 permission levels that are required to execute the `ajsp rint` command and the `ajssh ow` command, see the documentation for JP1/AJS3.

- If you display the Collecting Job Operation Information window from the JP1/AJS3 - View window and collect job operation information with the JP1/AJS3 environment setting parameter `ADMACLIMIT` set to `yes`, the KAVR1000-E or KAVR5010-E error might occur. In that case, implement either of the following:

If you are operating the JP1/AJS3 - Print Option Manager service using a local system account (The default after installation is set to local system account.)

Create a JP1 user named `system` and set the JP1 permission level for the JP1 resource group of the target units for the `ajsp rint` command and the `ajssh ow` command.

If you are operating the JP1/AJS3 - Print Option Manager service using a user account

Create a JP1 user with the same name as the user account and set the JP1 permission level for the JP1 resource group of the target units for the `ajsp rint` command and the `ajssh ow` command.

- If the JP1/AJS3 environment setting parameter `AJSPRINTSORTUNITINF` is set to `yes`, the related line information is output to the job operation information file in the character code ascending order for the preceding unit and succeeding unit. If the environment setting parameter `AJSPRINTSORTUNITINF` is set to `no` or a value is not set, the related line information is output in the creation order for the preceding unit and succeeding unit. For details, see the documentation for JP1/AJS3.
- Communication between JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager is not encrypted. Take either of the following procedures:
  - Use linkage with JP1/AJS3 - View in a network environment where security measures are taken.
  - Using, for example, an FTP to which security mode is set, transfer a job operation information file that has been output by JP1/AJS3 - Print Option Manager to JP1/AJS3 - Print Option, and then output a document.
- The execution date can be specified for collection only in JP1/AJS3 - Print Option Manager 11-10 or later. When you open the Collecting Job Operation Information window from JP1/AJS3 - View, the **Calendar date** option is forced or a KAVR5024-E error occurs if the version of the destination is JP1/AJS3 - Print Option Manager 11-00 or earlier.
- When you open the Collecting Job Operation Information window from JP1/AJS3 - View, a KAVR5010-E error occurs if the version of the destination is JP1/AJS3 - Print Option Manager 11-10 or earlier and the number of months specified for the relative month exceeds 6.

- If you select Calendar date in Collection period, JP1/AJS3 - Print Option collects job operation information by executing the `ajsshow` command with `-b` and `-e` options.  
If you select Execution date in Collection period, JP1/AJS3 - Print Option collects job operation information by executing the `ajsshow` command with `-v` and `-w` options.
- If you add new a unit or change a unit name on JP1/AJS during collecting the job operation information, the job operation information file has inconsistent data and an error occurs to output job operation information as documents.

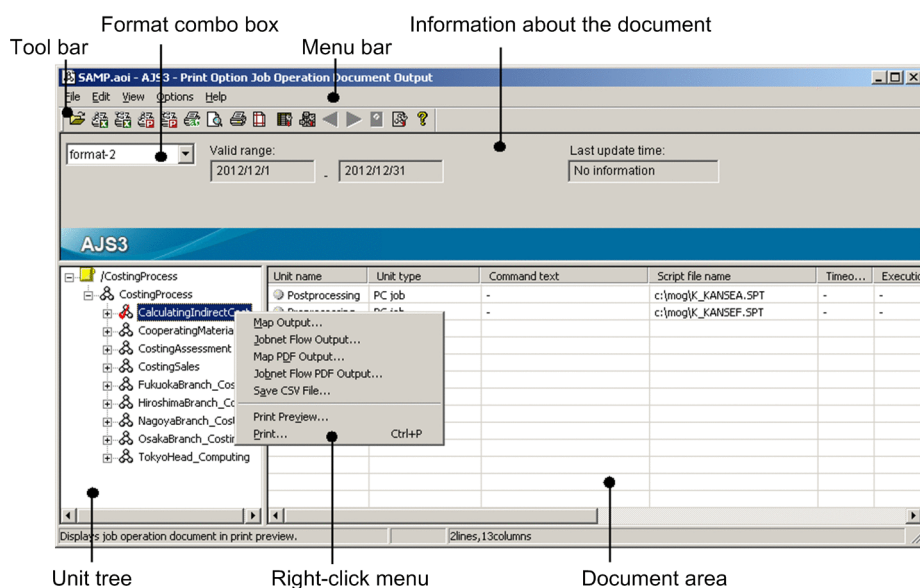


## 7.3 Job Operation Document Output window

The Job Operation Document Output window is the main window of JP1/AJS3 - Print Option.

This window displays the contents of a specific job operation information file.

Figure 7–5: Job Operation Document Output window



The following table describes the contents of the menu bar.

Table 7–1: Menu items in the Job Operation Document Output window

Menu	Command	Description
<b>File</b>	<b>Open</b>	Opens a job operation information file and creates a document from the file contents.
	<b>Map Output<sup>#1</sup></b>	Outputs a map image of the jobnet selected in the unit tree to Microsoft Excel.
	<b>Jobnet Flow Output<sup>#1</sup></b>	Outputs a jobnet flow image of the jobnet selected in the unit tree to Microsoft Excel.
	<b>Map PDF Output<sup>#2</sup></b>	Outputs a map image of the jobnet selected in the unit tree to a PDF file.
	<b>Jobnet Flow PDF Output<sup>#2</sup></b>	Outputs a jobnet flow image of the jobnet selected in the unit tree to a PDF file.
	<b>Save CSV file</b>	Saves the document displayed in the window as a CSV file. When you select a file, the displayed document is saved to that file in CSV format.
	<b>Print Preview</b>	Displays a print preview of the displayed document.
	<b>Print</b>	Prints the displayed document.
	<b>Close</b>	Closes the displayed document.
<b>Edit</b>	<b>Exit</b>	Closes the Job Operation Document Output window.
	<b>Format Definition Settings</b>	Defines the format of the document.
	<b>Page Settings</b>	Sets the page layout for the printed document.



Menu	Command	Description
<b>Edit</b>	<b>Jobnet Flow Format Definition Settings</b>	Defines the format of the jobnet flow image.
<b>View</b>	<b>Toolbar</b>	Shows or hides the toolbar.
	<b>Status bar</b>	Shows or hides the status bar.
	<b>Immediate Units</b>	When selected, the Job Operation Document Output window displays information for units immediately under the unit selected in the unit tree.
	<b>All Units</b>	When selected, the Job Operation Document Output window displays information for all subordinate units of the unit selected in the unit tree.
	<b>Change Displayed Range<sup>#3</sup></b>	<b>Next Month or Next Day<sup>#4</sup></b> Displays information for the next day or month.
		<b>Previous Month or Previous Day<sup>#5</sup></b> Displays information for the previous day or month.
		<b>Specified Date</b> Displays the Change Displayed Range window. You can use this window to change the range of information displayed.
	<b>Refresh</b>	Refreshes the information in the displayed report.
<b>Options</b>	<b>Environment Settings</b>	Displays the Environment Settings window. In this window, you can set the default folders for input and output files.
<b>Help</b>	<b>Help Contents</b>	Displays help topics for JP1/AJS3 - Print Option.
	<b>About AJS3 - Print Option</b>	Displays version information for JP1/AJS3 - Print Option.

#1

This item is unavailable if Microsoft Excel is not installed.

#2

This item is unavailable if Microsoft Excel 2010 or later is not installed.

#3

This item is unavailable unless monthly or daily is selected as the document format.

#4



This item is unavailable when the day or month being displayed is the last day or month of the valid range.  
If the date one month in the future is outside the collection period, the display changes to the last day of the valid range.





#5

This item is unavailable when the day or month being displayed is the first day or month of the valid range.  
If the date one month ago is outside the collection period, the display changes to the first day of the valid range.

The following table describes the contents of the toolbar.

Table 7–2: Toolbar items in Job Operation Document Output window

Button	Description
 <b>Open</b>	Opens a job operation information file and creates a document from the file contents.
 #1 <b>Map Output</b>	Outputs a map image of the jobnet selected in the unit tree to Microsoft Excel.

Button		Description
 #1	<b>Jobnet Flow Output</b>	Outputs a jobnet flow image of the jobnet selected in the unit tree to Microsoft Excel.
 #2	<b>Map PDF Output</b>	Outputs a map image of the jobnet selected in the unit tree to a PDF file.
 #2	<b>Jobnet Flow PDF Output</b>	Outputs a jobnet flow image of the jobnet selected in the unit tree to a PDF file.
	<b>Save CSV file</b>	Saves the document displayed in the window as a CSV file. When you select a file, the displayed document is saved to that file in CSV format.
	<b>Print Preview</b>	Displays a print preview of the displayed document.
	<b>Print</b>	Prints the displayed document.
	<b>Page Settings</b>	Sets the page layout for the printed document.
	<b>Format Definition Settings</b>	Defines the format of the document.
	<b>Jobnet Flow Format Definition Settings</b>	Defines the format of the jobnet flow image.
	<b>Previous Month or Previous Day</b> <sup>#3, #4</sup>	Changes the range of information displayed in the document. For monthly documents, this button displays the information for the previous month. For daily documents, this button displays the information for the previous day.
	<b>Next Month or Next Day</b> <sup>#3, #5</sup>	Changes the range of information displayed in the document. For monthly documents, this button displays the information for the next month. For daily documents, this button displays the information for the next day.
	<b>Change Displayed Range</b> <sup>#3</sup>	Displays the Change Displayed Range window. You can use this window to change the range of information displayed.
	<b>Environment Settings</b>	Displays the Environment Settings window. In this window, you can set the default folders for input and output files.
	<b>Help Contents</b>	Displays help topics for JP1/AJS3 - Print Option.

#1

This button is unavailable if Microsoft Excel is not installed.

#2

This button is unavailable if Microsoft Excel 2010 or later is not installed.

#3

This button is unavailable unless monthly or daily is selected as the document format.

#4

This button is unavailable when the day or month being displayed is the first day or month of the valid range.  
If the date one month ago is outside the collection period, the display changes to the first day of the valid range.

#5

This button is unavailable when the day or month being displayed is the last day or month of the valid range.  
If the date one month in the future is outside the collection period, the display changes to the last day of the valid range.

The following table describes the items that appear in the right-click menu in the unit tree area.

Table 7–3: Items in right-click menu in Job Operation Document Output window

Menu item	Description
<b>Map Output</b>	Outputs a map image of the jobnet selected in the unit tree to Microsoft Excel.
<b>Jobnet Flow Output</b>	Outputs a jobnet flow image of the jobnet selected in the unit tree to Microsoft Excel.
<b>Map PDF Output</b>	Outputs a map image of the jobnet selected in the unit tree to a PDF file.
<b>Jobnet Flow PDF Output</b>	Outputs a jobnet flow image of the jobnet selected in the unit tree to a PDF file.
<b>Save CSV file</b>	Saves the document displayed in the window as a CSV file. When you select a file, the displayed report is saved to that file in CSV format.
<b>Print Preview</b>	Displays a print preview of the displayed report.
<b>Print</b>	Prints the displayed report.

The format combo box lists the format definition files in the format definition folder defined in the Environment Settings window. Select the format to apply to the document from the format combo box. The format you select is applied to the document.

The following table describes the document-related information displayed in the Job Operation Document Output window.

Figure 7–6: Document-related information in Job Operation Document Output window

Table 7–4: Document-related information in Job Operation Document Output window

Information	Description
<b>Valid range</b>	Displays the period for which data exists in the input file.
<b>Display date</b>	For a monthly or daily document, displays the period currently being displayed.
<b>Last update time</b>	Displays the time when all of the units defined in the job operation information file were last updated.
<b>Root jobnet name</b>	<p>If the selected job operation information file contains release ID information, this item displays the path and release ID of the root jobnet currently displayed in the Job Operation Document Output window.</p> <p>When you click the <b>Select</b> button, the Jobnet Names (Release IDs) List window appears in which you can change the jobnet displayed in the Job Operation Document Output window. For details on release IDs, see the section about jobnet release in the manual <i>JP1/Automatic Job Management System 3 Overview</i>.</p>

The unit tree area lists every unit defined in the job operation information file. You can print information for the selected unit and any of its subordinate units. However, you cannot print the contents of a manager job group or manager jobnet.

The document area displays the document to be printed. If there is no applicable data, the document area displays the following according to the basic format:

Monthly	Blank
---------	-------

Daily	Blank
List	"_"

#### Cautionary notes:

- If the data in one column exceeds 259 characters, the 260th and subsequent characters do not appear in the document area. To view the data in its entirety, you can print the document, display a print preview, or output the data to a CSV file.
- If the total width of the column items exceeds 32,768 pixels, the document area does not display any column names beyond the 32,768th pixel. To view the data in its entirety, you can print the document, display a print preview, or output the data to a CSV file.

The total width of the column items is determined by the following equations:

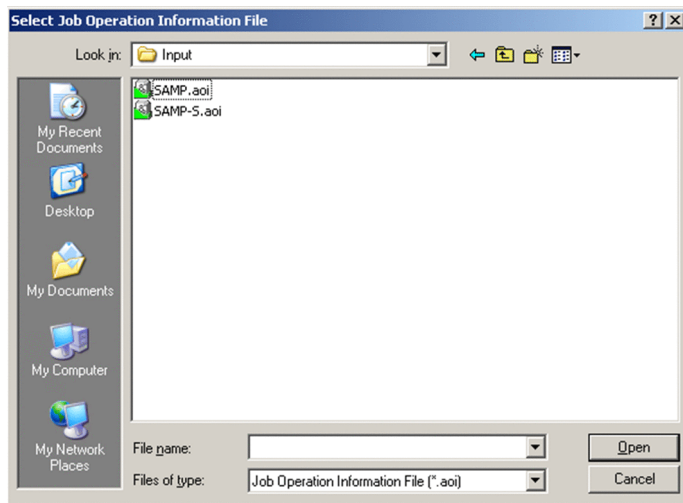
*Total column width = Width of unit name column + width of column item 1  
+ width of column item 2 ... + width of column item n*

- If **Auto** is set as the column width for the unit name and column items in the format definition:  
*Unit name column width = Current font width (in pixels)  
x Length of longest character string in unit name column  
Width of column item n = Current font width (in pixels)  
x Length of longest character string in column item n*
- If **Fixed** is set as the column width for the unit name and column items in the format definition:  
*Unit name column width = Current font width (in pixels)  
x Column width specified on Unit tab in Format Definition Settings window  
Width of column item n = Current font width (in pixels)  
x Column width specified for column item n on Column Item tab in Format Definition Settings window*
- When you collect job operation information from JP1/AJS3 - Manager 09-00 or later, the Job Operation Document Output window only displays the last update time if you configured the system to collect it.
- You cannot tell whether a jobnet has release information from its icon. A jobnet with release information has the same icon as a jobnet without release information.
- The unit types supported in new version may be not added to old version format definition file. If you use this file, unit types not added in this file are displayed to the document by default. If you do not want to display unit types added in new version, you browse this file and clear the check boxes of added unit types and save in the Format Definition Settings window.

## 7.4 Select Job Operation Information File window

In the Select Job Operation Information File window, you can select the job operation information file whose contents you want to output as a document.

Figure 7–7: Select Job Operation Information File window



The following explains the displayed items.

### Open

Selects the job operation information file to be output in document form. Make sure that the path and file name of the file do not exceed 258 bytes in total, the path does not exceed 194 bytes, and the file name does not exceed 63 bytes.

Do not use any of the following symbols in the file name.

\ / : \* ? " < > |

### Cancel

Cancels processing and closes the window.

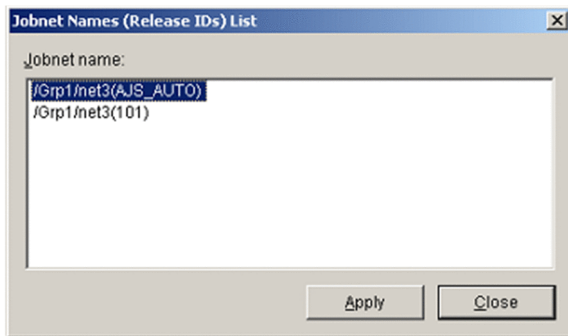
## 7.5 Jobnet Names (Release IDs) List window

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If a job operation information file contains release ID information, you can use the Jobnet Names (Release IDs) List window to select the release ID whose information you want to display in the Job Operation Document Output window.

In the Job Operation Document Output window, click the **Select** button to display the Jobnet Names (Release IDs) List window.

Figure 7–8: Jobnet Names (Release IDs) List window



The following explains the displayed items.

### Jobnet name

A list of root jobnet names associated with the release ID. Names are displayed in the *path-of-the-root-jobnet (release-ID)* format. If the jobnet name contains more than 259 bytes, the excess characters are replaced with an ellipsis (...).

### Apply

Displays the contents for the root jobnet selected in the **Jobnet name** area in the Job Operation Document Output window.

### Close

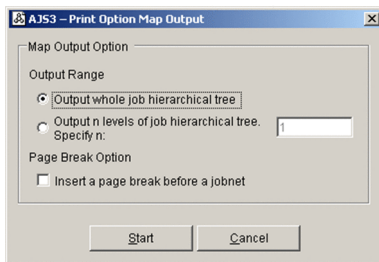
Cancels processing and closes the window.

## 7.6 Map Output window

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From the Map Output window, you can output jobnet definitions to Microsoft Excel in map form. This window uses Microsoft Excel.

Figure 7–9: Map Output window



The following explains the displayed items.

### Output whole job hierarchical tree

Select this option to output information for the specified unit and all its subordinate units.

### Output n levels of job hierarchical tree. Specify n:

Select this option to output information for a specified number of hierarchical levels below the specified unit.

Specify the number of hierarchical levels as a value from 1 to 2,147,483,647. The default is 1.

If you specify 1, the system outputs information for the units directly below the specified unit in the hierarchy.

### Insert a page break before a jobnet

Select this check box to insert a page break between jobnets.

### Start

Starts the map output process.

### Cancel

Cancels processing and closes the window.

When you click **Start** in the Map Output window, Microsoft Excel starts and the jobnet definitions are reproduced in map form in Microsoft Excel.

Figure 7–10: Example of map output (1) (using standard JP1/AJS3 - View icons)

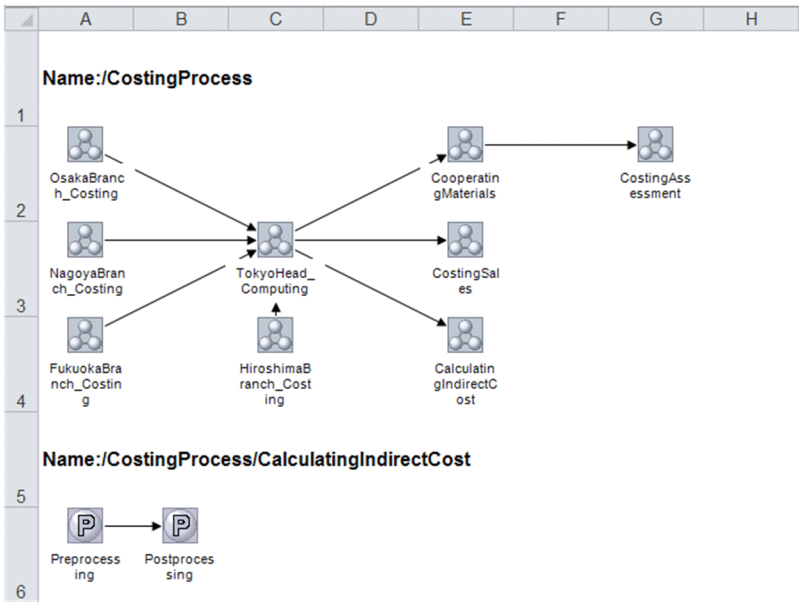


Figure 7–11: Example of map output (2) (if last update time was collected)

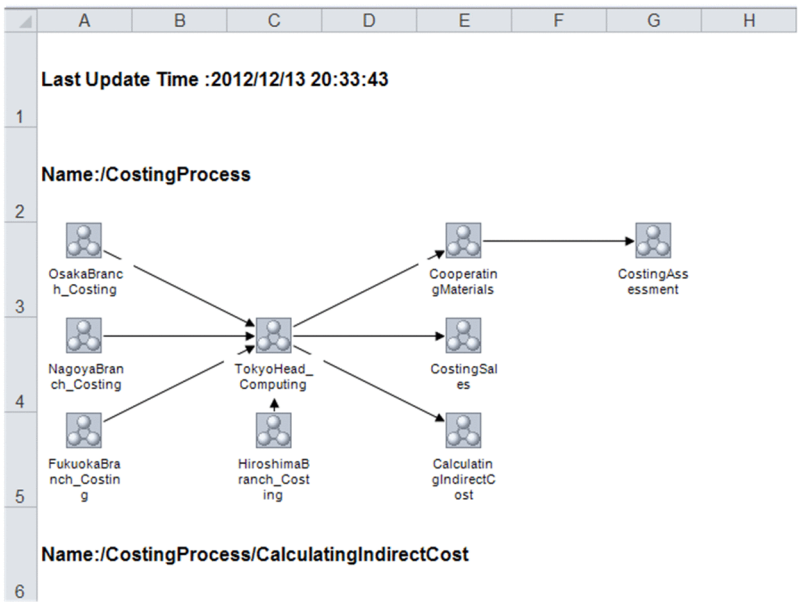
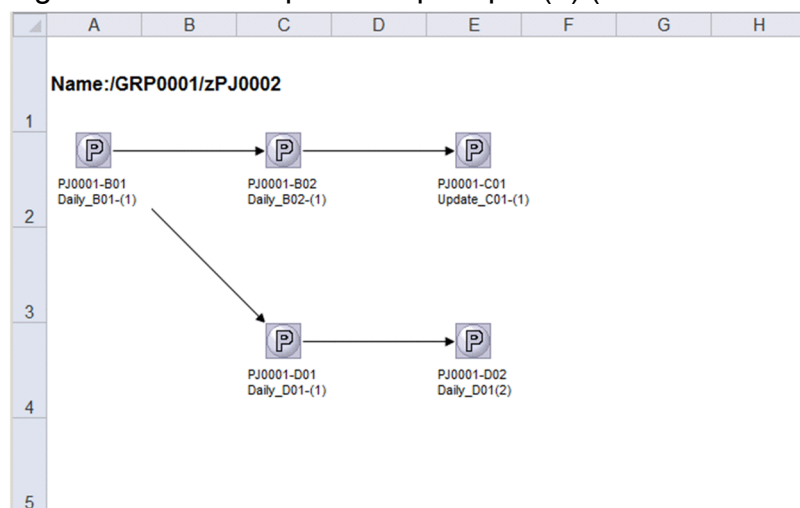




Figure 7–12: Example of map output (3) (if comments are displayed)



The map output feature outputs a map to a new Microsoft Excel workbook.

The entire map occupies one sheet in Microsoft Excel. When map output is performed for multiple jobnets, the maps cascade downward.

The name of each jobnet is displayed in full, prefixed by **Name:**.

A map of the jobnet appears after the jobnet name.

A map can contain a maximum of 100 x 100 jobs per jobnet.

When you collect job operation information from JP1/AJS3 - Manager 09-00 or later, last update time appears at the top of the map only if you configured the system to collect it.

When maps are configured in the Environment Settings window to display comments, unit names are followed by comments. For details on the settings, see [7.19 Environment Settings window](#).

Cautionary notes:

- In the following circumstances, only the full jobnet name is output:
  - There are no units to display in the jobnet
  - The unit is a root jobnet or manager jobnet

You can check the definition items in the Job Operation Document Output window or by outputting the information to a CSV file.

- Do not specify 1 for *n* in **Output n levels of job hierarchical tree. Specify n:** if you selected a job group in the unit tree in the Job Operation Document Output window. If you specify 1, nothing is output. Specify a number that includes a hierarchical level in which jobnets are defined.
- JP1/AJS3 - Print Option uses the standard icons provided by JP1/AJS3 - View 12-00. The following icon appears for units that do not have an icon in JP1/AJS3 - View:



- The amount of information the map output functionality can output depends on the maximum number of lines and columns allowed by Microsoft Excel. If the output information exceeds these limits, Microsoft Excel will terminate abnormally.

You can find out how many lines and columns Microsoft Excel allows by viewing the Help or other documentation for Microsoft Excel.

- Do not use Microsoft Excel while map output is in progress. Doing so might affect not only the map information being output, but also any other files you are working on.
- You cannot perform multiple instances of map output concurrently, or perform map output at the same time as jobnet flow output. If you attempt to do so, the tasks are processed sequentially in the order in which they were executed.
- You cannot perform map output if the default printer is unavailable.

Map output uses landscape as the page orientation when outputting information to Microsoft Excel. If the default printer is unavailable, Microsoft Excel generates an error in relation to the printer settings and map output fails.

In this situation, use one of the following workarounds:

- Make the default printer available
- Set a dummy local printer as the default printer
- Delete all printers

Note that if your default printer is a networked printer, the status of the print server will affect the availability of the printer.

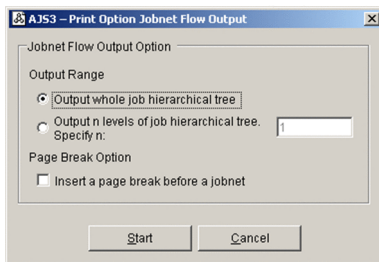
- Icons, arrows, and unit path names might become hidden behind a text box. If this occurs, adjust the height of cells or text boxes in Microsoft Excel as needed.
- You cannot tell whether a jobnet has release information from its icon. A jobnet with release information has the same icon as a jobnet without release information.
- The processing time for map output depends on the rendering performance of Microsoft Excel. Maps take longer to render as the number of units and relation lines increases. If the source information contains a large number of units or relation lines, consider splitting the units across several maps or limiting the number of hierarchical levels in the output data.
- If the unit name is not displayed fully in the print and print preview, you can extend the unit name display area to display the cutoff unit name. For details on how to extend the size of the unit name display area, see [7.19 Environment Settings window](#).
- If the arrow is hidden by the unit name's background, you can make the unit name background transparent to display the hidden arrow. For details on how to make the unit name background transparent, see [7.19 Environment Settings window](#).
- If maps are configured to display comments, but you cannot see a comment hidden under the icon due to its length, then enlarge the size of the area where the unit name is displayed, or edit the width of the cell in Microsoft Excel.
- When maps are configured not to display comments, unit names are aligned center, while when configured to display them, both unit names and comments aligned left.
- Line weights of arrows are determined according to the default setting of Microsoft Excel. Therefore, line weights might be different depending on the version of Microsoft Excel and your execution environment. In addition, they might be different from those of arrows in the Map Output file created by the `jpmpflw` command.

## 7.7 Jobnet Flow Output window

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From the Jobnet Flow Output window, you can output jobnet definitions to Microsoft Excel in flow format. This window uses Microsoft Excel.

Figure 7–13: Jobnet Flow Output window



The following describes the displayed items.

### Output whole job hierarchical tree

Select this option to output information for the specified unit and all its subordinate units.

### Output n levels of job hierarchical tree. Specify n:

Select this option to output information for a specified number of hierarchical levels below the specified unit.

Specify the number of hierarchical levels as a value from 1 to 2,147,483,647. The default is 1.

If you specify 1, the system outputs information for the units directly below the specified unit in the hierarchy.

### Insert a page break before a jobnet

Select this check box to insert a page break between jobnets.

### Start

Starts the jobnet flow output process.

### Cancel

Cancels processing and closes the window.

When you click **Start** in the Jobnet Flow Output window, Microsoft Excel starts and the jobnet definitions are reproduced in flow form in Microsoft Excel.

Figure 7–14: Example of jobnet flow output (When the data layout has one column, without a last update time)

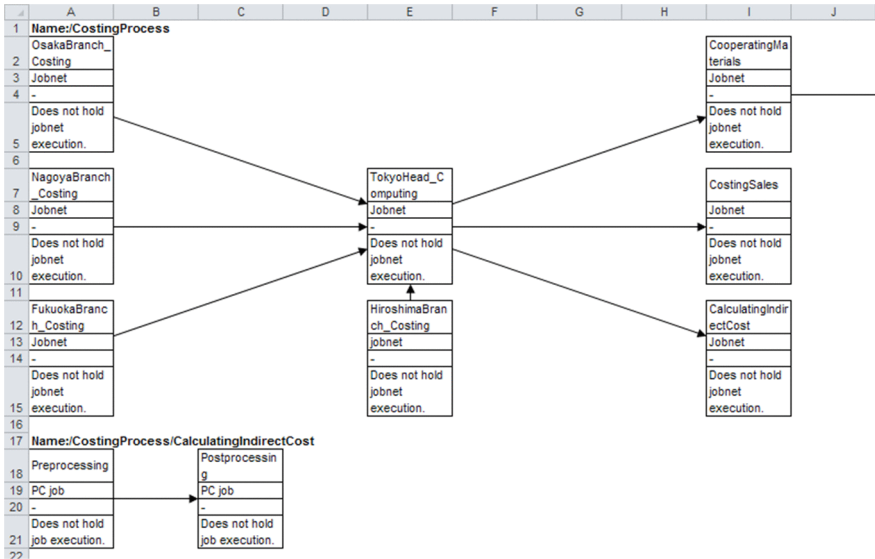


Figure 7–15: Example of jobnet flow output (When the data layout has one column, with a last update time)

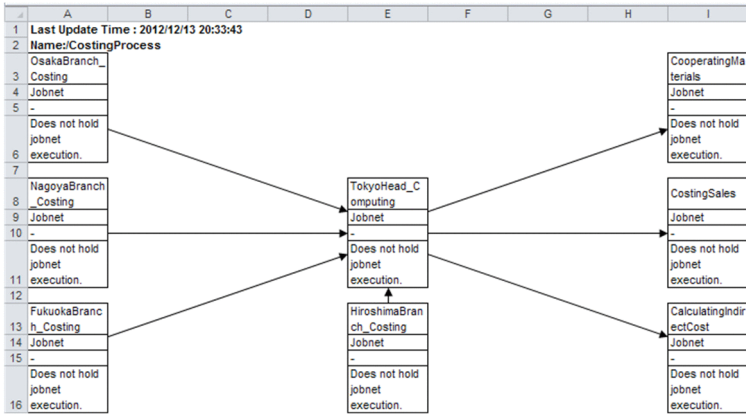


Figure 7–16: Example of jobnet flow output (When the data layout has two columns, without a last update time)

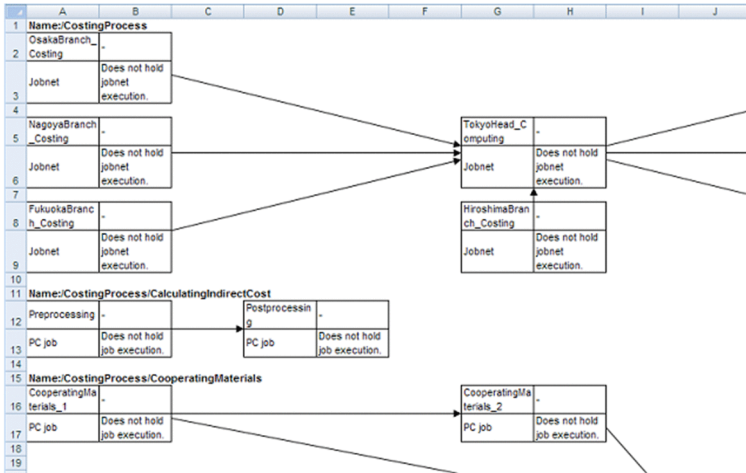
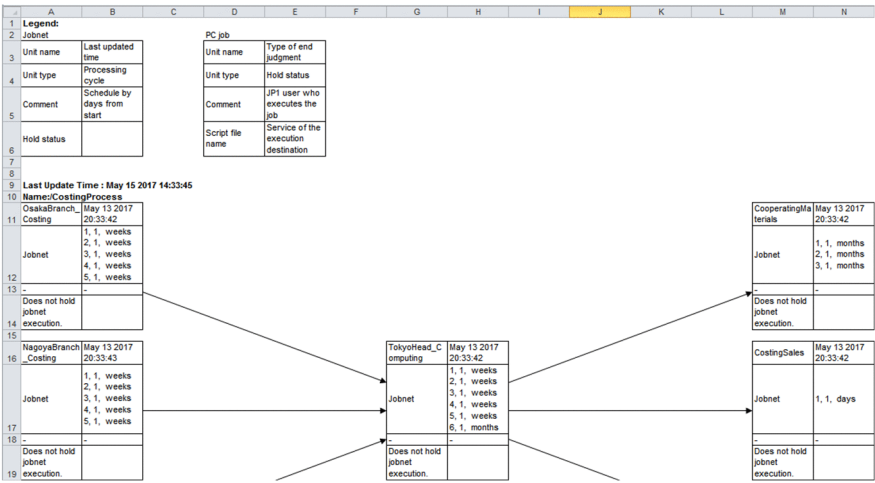


Figure 7–17: Example of jobnet flow output (with last update time and legends)



The jobnet flow output feature outputs a jobnet flow image to a new Microsoft Excel workbook.

The entire jobnet flow image occupies one sheet in Microsoft Excel. When jobnet flow output is performed for multiple jobnets, the jobnet flow images cascade downward.

The name of each jobnet is displayed in full, prefixed by **Name:**.

The jobnet flow image appears after the jobnet name.

A jobnet flow image can contain a maximum of 100 x 100 jobs per jobnet.

When you collect job operation information from JP1/AJS3 - Manager 09-00 or later, last update time appears under the legend if you have configured the system to display legends. If you have configured the system not to display legends, last update time appears at the top of the image.

Cautionary notes:

- In the following circumstances, only the full jobnet name is output:
  - There are no units to display in the jobnet
  - The unit is a root jobnet or manager jobnet
- You can check the definition items in the Job Operation Document Output window or by outputting the information to a CSV file.
- Do not specify 1 for *n* in **Output n levels of job hierarchical tree. Specify n:** if you selected a job group in the unit tree in the Job Operation Document Output window. If you specify 1, nothing is output. Specify a number that includes a hierarchical level in which jobnets are defined.
- The amount of information jobnet flow map output functionality can output depends on the maximum number of lines and columns allowed by Microsoft Excel. If the output information exceeds these limits, Microsoft Excel will terminate abnormally.

You can find out how many lines and columns Microsoft Excel allows by viewing the Help or other documentation for Microsoft Excel.
- Do not use Microsoft Excel while jobnet flow output is in progress. Doing so might affect not only the jobnet flow image being output, but also any other files you are working on.
- If jobnet flow output produces a cell in Microsoft Excel that contains more than 255 characters, ##### might appear as the cell data in Microsoft Excel.

- If a piece (generation) of data output to Microsoft Excel in a jobnet flow image exceeds 4,000 bytes, the jobnet flow output functionality outputs a cross (×) and the text The data has too many characters to display in its place. Each cell output to Microsoft Excel cannot contain more than 32,000 bytes or 255 lines of data. Data exceeding these limits is truncated, and information about the name and attributes of the unit that caused the problem are output to a log file (*installation-folder*\Log\ajs2po.log or %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO\Log\ajs2po.log). If this occurs, take action such as dividing the input data over several jobnet flow images.
- You cannot perform multiple instances of jobnet flow output concurrently, or perform jobnet flow output at the same time as map output. If you attempt to do so, the tasks are processed sequentially in the order in which they were executed.
- You cannot perform jobnet flow output if the default printer is unavailable.

Jobnet flow output uses landscape as the page orientation when outputting information to Microsoft Excel. If the default printer is unavailable, Microsoft Excel generates an error in relation to the printer settings and jobnet flow output fails.

In this situation, use one of the following workarounds:

- Make the default printer available
- Set a dummy local printer as the default printer
- Delete all printers

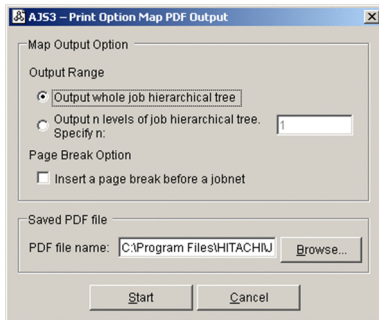
Keep in mind that if your default printer is a networked printer, the status of the print server will affect the availability of the printer.

- Jobnet flow output will fail if the jobnet flow definition file specified in the Environment Settings window cannot be found. Make sure that the file specified in the Environment Settings window exists at the specified location.
- The processing time for jobnet flow output depends on the rendering performance of Microsoft Excel. Images take longer to render as the number of units and relation lines increases. If the source information contains a large number of units or relation lines, you can split the units across several images or limit the number of hierarchical levels in the output data.
- The cell's character string might not be fully displayed. Edit the cell's height in Microsoft Excel as necessary.
- If the items are not displayed fully in the print and print preview, you can extend the display area to display the cutoff items. For details on how to extend the size of the display area, see [7.19 Environment Settings window](#).
- You can specify whether or not to display legends on the Environment Settings window. For details on how to specify the setting, see [7.19 Environment Settings window](#).
- Line weights of arrows are determined according to the default setting of Microsoft Excel. Therefore, line weights might be different depending on the version of Microsoft Excel and your execution environment. In addition, they might be different from those of arrows in the Map Output file created by the `jprmpflw` command.

## 7.8 Map PDF Output window

From the Map PDF Output window, you can output jobnet definitions to a PDF file in map form.

Figure 7–18: Map PDF Output window



The following explains the displayed items.

### Output whole job hierarchical tree

Select this option to output information for the specified unit and all its subordinate units.

### Output n levels of job hierarchical tree. Specify n:

Select this option to output information for a specified number of hierarchical levels below the specified unit.

Specify the number of hierarchical levels as a value from 1 to 2,147,483,647. The default is 1.

If you specify 1, the system outputs information for the units directly below the specified unit in the hierarchy.

### Insert a page break before a jobnet

Select this check box to insert a page break between jobnets.

### PDF file name

Specify the target file for PDF output. Note the following when specifying the PDF file name:

- Make sure that the file name does not exceed 63 bytes, and the path and file name together do not exceed 258 bytes.
- Specify .pdf as the file extension.
- Do not use machine-dependent characters or any of the following symbols in the file name.

\ / : \* ? " < > | \$ ` -

The default path and file name consists of:

The value specified in the **Saved PDF file of map and jobnet flow output** field in the Environment Settings window as the path, the date and time at which the Map PDF Output window was displayed as the file name (in the format *YYYYMMDDhhmmss*<sup>#</sup>), and the extension .pdf.

#

*YYYY*: four-digit year; *MM*: Month (01 to 12), *DD*: Day (01 to 31), *hh*: Hour (00 to 23), *mm*: minutes (00 to 59), *ss*: seconds (00 to 59)

### Start

Starts map PDF output.

### Cancel

Cancels processing and closes the window.

Figure 7–19: Example of map PDF output (1) (using standard JP1/AJS3 - View icons)

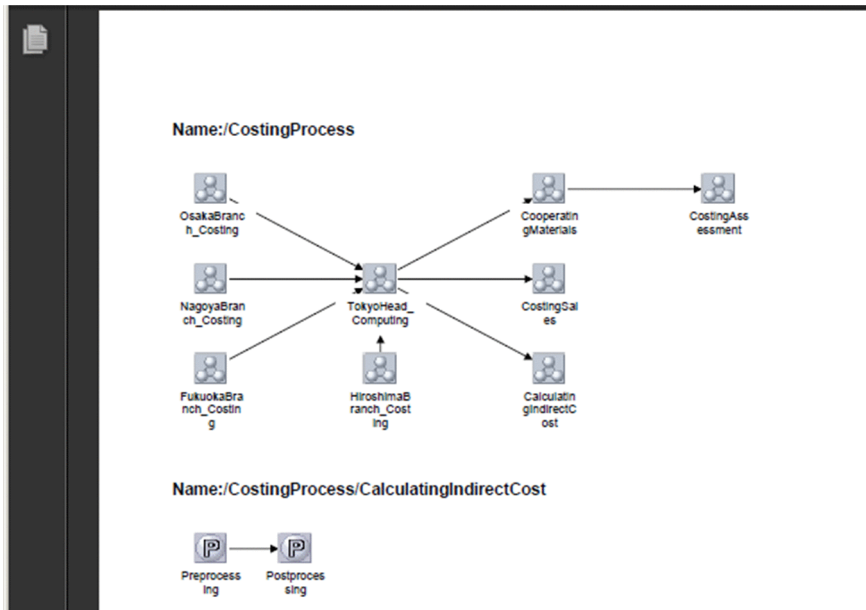
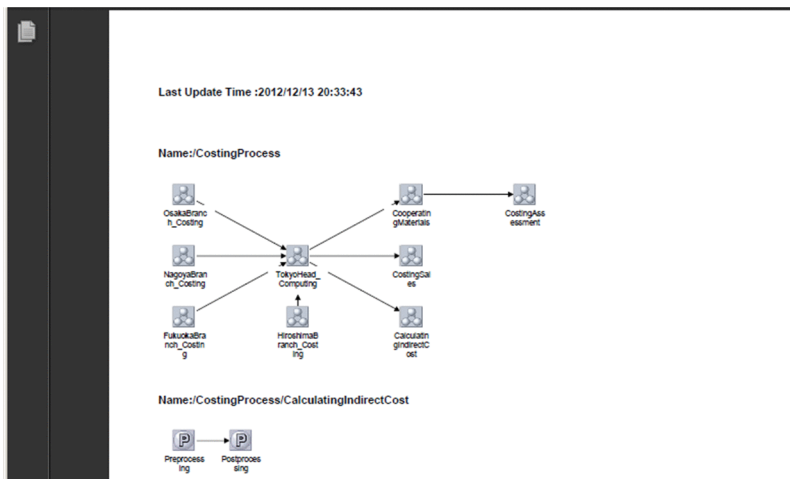


Figure 7–20: Example of map PDF output (2) (with last update time)



When map PDF output is performed for multiple jobnets, the maps cascade downward.

The name of each jobnet is displayed in full, prefixed by **Name:**.

The map appears after the jobnet name.

A map can contain a maximum of 100 x 100 jobs per jobnet.

When you collect job operation information from JP1/AJS3 - Manager 09-00 or later, last update time appears at the top of the map only if you configured the system to collect it.

Cautionary notes:

- You can perform map PDF output in an environment with Microsoft Excel 2010 or later installed.
- Even if maps are configured in the Environment Settings window to display comments, no comments are included in the map PDF output. If you want to display comments in a PDF file, enable comments in the Environment Settings window, output a map to an Excel file, and then convert it to PDF format.



- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as C:\Program Files as the output destination for the PDF file, the file might be redirected and saved to each user's VirtualStore folder.

Files are redirected when the save destination is a folder in one of the following directories:

- *system-drive*: \Windows
- *system-drive*: \Program Files
- *system-drive*: \Program Files (x86) (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive*: \Users\OS-user-name\AppData\Local.

- In the following circumstances, only the full jobnet name is output:
  - There are no units to display in the jobnet
  - The unit is a root jobnet or manager jobnet

You can check the definition items in the Job Operation Document Output window or by outputting the information to a CSV file.

- Do not specify 1 for *n* in **Output n levels of job hierarchical tree. Specify n:** if you selected a job group in the unit tree in the Job Operation Document Output window. If you specify 1, nothing is output. Specify a number that includes a hierarchical level in which jobnets are defined.
- JP1/AJS3 - Print Option uses the standard icons provided by JP1/AJS3 - View 12-00. The following icon appears for units that do not have an icon in JP1/AJS3 - View:



- The map PDF output process uses Microsoft Excel to output data to a PDF file. For this reason, the amount of information you can output depends on the maximum number of lines and columns allowed by Microsoft Excel. If the output information exceeds these limits, Microsoft Excel will terminate abnormally.

You can find out how many lines and columns Microsoft Excel allows by viewing the Help or other documentation for Microsoft Excel.

- Do not use Microsoft Excel while map PDF output is in progress. Doing so might affect not only the map information being output, but also any other files you are working on.
- You cannot perform multiple instances of map PDF output concurrently, or perform map PDF output at the same time as jobnet flow output or jobnet flow PDF output. If you attempt to do so, the tasks are processed sequentially in the order in which they were executed.
- You cannot perform map PDF output if the default printer is unavailable.

The map PDF output process uses Microsoft Excel to output data to a PDF file, and sets the page orientation to landscape when outputting information to Microsoft Excel. If the default printer is unavailable, Microsoft Excel generates an error in relation to the printer settings and map PDF output fails.

In this situation, use one of the following workarounds:

- Make the default printer available
- Set a dummy local printer as the default printer
- Delete all printers

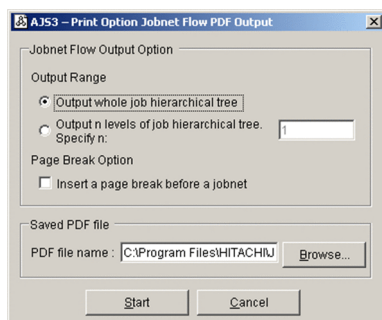
Note that if your default printer is a networked printer, the status of the print server will affect the availability of the printer.

- If a unit name contains characters outside the ASCII character set, icons, arrows, and unit path names might become hidden behind a text box.
- You cannot tell whether a jobnet has release information from its icon. A jobnet with release information has the same icon as a jobnet without release information.
- Some characters might be missing from unit names in the PDF files created by map PDF output. In this case, view the document in Microsoft Excel.
- The processing time for map PDF output depends on the rendering performance of Microsoft Excel. Maps take longer to render as the number of units and relation lines increases. If the source information contains a large number of units or relation lines, consider splitting the units across several maps or limiting the number of hierarchical levels in the output data.
- If the unit name is not displayed fully in the print and print preview, you can extend the unit name display area to display the cutoff unit name. For details on how to extend the size of the unit name display area, see [7.19 Environment Settings window](#).
- If the arrow is hidden by the unit name's background, you can make the unit name background transparent to display the hidden arrow. For details on how to make the unit name background transparent, see [7.19 Environment Settings window](#).
- Line weights of arrows are determined according to the default setting of Microsoft Excel. Therefore, line weights might be different depending on the version of Microsoft Excel and your execution environment.

## 7.9 Jobnet Flow PDF Output window

From the Jobnet Flow PDF Output window, you can output jobnet definitions to a PDF file as a jobnet flow image.

Figure 7–21: Jobnet Flow PDF Output window



The following describes the displayed items.

### Output whole job hierarchical tree

Select this option to output information for the specified unit and all its subordinate units.

### Output n levels of job hierarchical tree. Specify n:

Select this option to output information for a specified number of hierarchical levels below the specified unit.

Specify the number of hierarchical levels as a value from 1 to 2,147,483,647. The default is 1.

If you specify 1, the system outputs information for the units directly below the specified unit in the hierarchy.

### Insert a page break before a jobnet

Select this check box to insert a page break between jobnets.

### PDF file name

Specify the target file for PDF output. Note the following when specifying the PDF file name:

- Make sure that the file name does not exceed 63 bytes, and the path and file name together do not exceed 258 bytes.
- Specify .pdf as the file extension.
- Do not use machine-dependent characters or any of the following symbols in the file name.

\ / : \* ? " < > | \$ ` -

The default path and file name consists of:

The value specified in the **Saved PDF file of map and jobnet flow output** field in the Environment Settings window as the path, the date and time at which the Jobnet Flow PDF Output window was displayed as the file name (in the format *YYYYMMDDhhmmss*<sup>#</sup>), and the extension .pdf.

#

*YYYY*: four-digit year; *MM*: Month (01 to 12), *DD*: Day (01 to 31), *hh*: Hour (00 to 23), *mm*: minutes (00 to 59), *ss*: seconds (00 to 59)

### Start

Starts jobnet flow PDF output.

### Cancel

Cancels processing and closes the window.

Figure 7–22: Example of jobnet flow PDF output (When the data layout has one column, without a last update time)

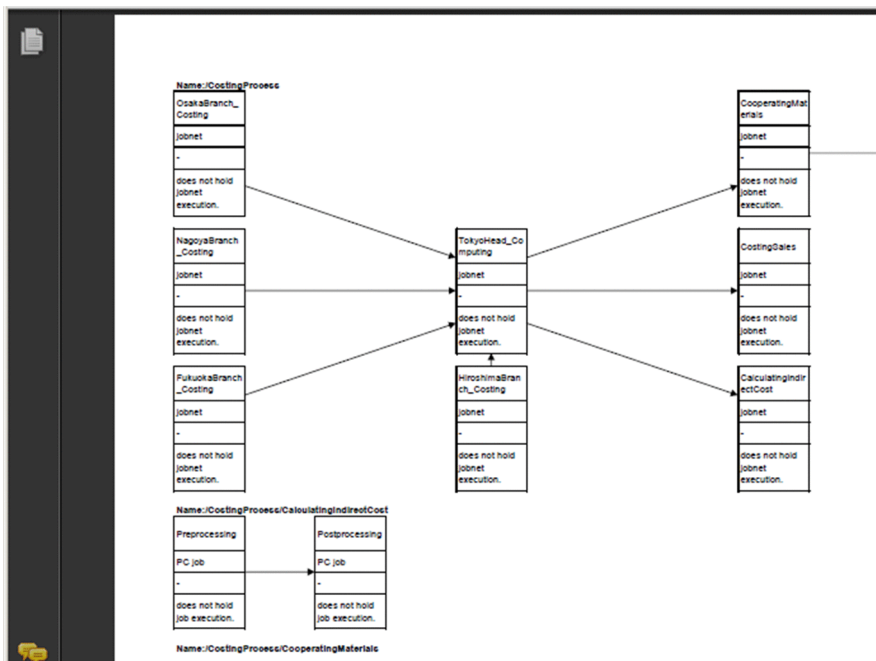


Figure 7–23: Example of jobnet flow PDF output (When the data layout has one column, with a last update time)

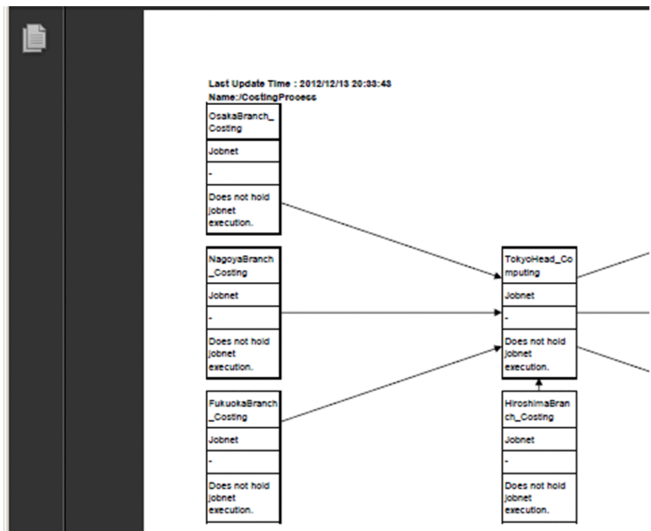
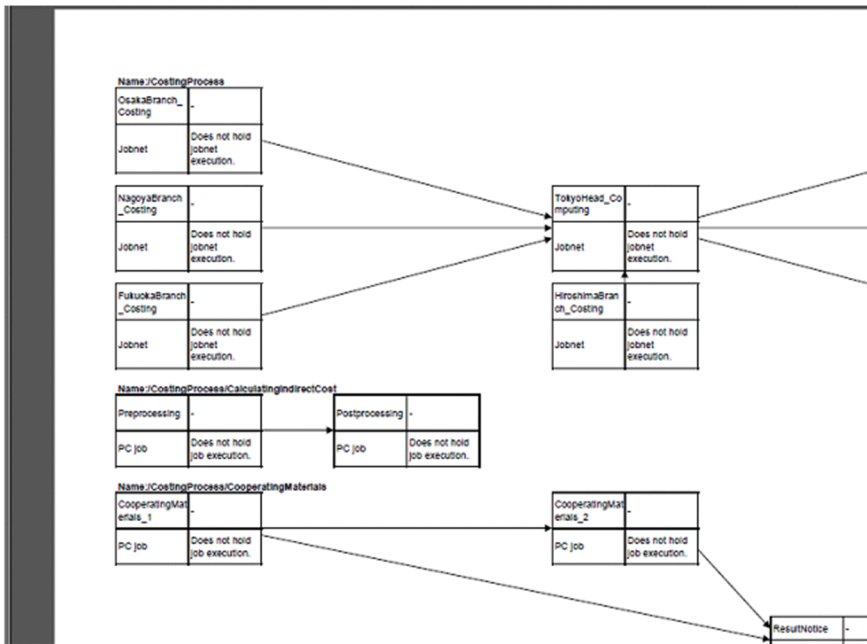


Figure 7–24: Example of jobnet flow PDF output (When the data layout has two columns, without a last update time)



When jobnet flow PDF output is performed for multiple jobnets, the jobnet flow images cascade downward.

The name of each jobnet is displayed in full, prefixed by **Name:**.

The jobnet flow image appears after the jobnet name.

A jobnet flow image can contain a maximum of 100 x 100 jobs per jobnet.

When you collect job operation information from JP1/AJS3 - Manager 09-00 or later, last update time appears at the top of the image only if you configured the system to collect it.

Cautionary notes:

- You can perform jobnet flow PDF output in an environment with Microsoft Excel 2010 or later installed.
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as C:\Program Files as the output destination for the PDF file, the file might be redirected and saved to each user's VirtualStore folder.

Files are redirected when the save destination is a folder in one of the following directories:

- *system-drive*: \Windows
- *system-drive*: \Program Files
- *system-drive*: \Program Files (x86) (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive*: \Users\OS-user-name\AppData\Local.

- In the following circumstances, only the full jobnet name is output:

- There are no units to display in the jobnet
- The unit is a root jobnet or manager jobnet

You can check the definition items in the Job Operation Document Output window, or by outputting the information to a CSV file.

- Do not specify 1 for *n* in **Output *n* levels of job hierarchical tree. Specify *n*:** if you selected a job group in the unit tree in the Job Operation Document Output window. If you specify 1, nothing is output. Specify a number that includes a hierarchical level in which jobnets are defined.
- The jobnet flow PDF output process uses Microsoft Excel to output data to a PDF file. For this reason, the amount of information you can output depends on the maximum number of lines and columns allowed by Microsoft Excel. If the output information exceeds these limits, Microsoft Excel will terminate abnormally.  
You can find out how many lines and columns Microsoft Excel allows by viewing the Help or other documentation for Microsoft Excel.
- Do not use Microsoft Excel while jobnet flow PDF output is in progress. Doing so might affect not only the jobnet flow image information being output, but also any other files you are working on.
- If jobnet flow PDF output produces a cell in Microsoft Excel that contains more than 255 characters, ##### might appear as the cell data in Microsoft Excel.
- The jobnet flow PDF output process uses Microsoft Excel to output data to a PDF file. If the process outputs a piece (generation) of data to Microsoft Excel that exceeds 4,000 bytes, the jobnet flow PDF output functionality outputs × (The data has too many characters to display.) in its place. Each cell output to Microsoft Excel cannot contain more than 32,000 bytes or 255 lines of data. Data exceeding these limits is truncated, and information about the name and attributes of the unit that caused the problem are output to a log file (*installation-folder*\Log\ajs2po.log or %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJSP2PO\Log\ajs2po.log). Take action such as dividing the input data over several jobnet flow images.
- You cannot perform multiple instances of jobnet flow PDF output concurrently, or perform jobnet flow PDF output at the same time as map output or map PDF output. If you attempt to do so, the tasks are processed sequentially in the order in which they were executed.
- You cannot perform jobnet flow PDF output if the default printer is unavailable.

The jobnet flow PDF output process uses Microsoft Excel to output data to a PDF file, and sets the page orientation to landscape when outputting information to Microsoft Excel.

If the default printer is unavailable, Microsoft Excel generates an error in relation to the printer settings and jobnet flow PDF output fails.

In this situation, use one of the following workarounds:

- Make the default printer available
- Set a dummy local printer as the default printer
- Delete all printers

Note that if your default printer is a networked printer, the status of the print server will affect the availability of the printer.

- Jobnet flow PDF output will fail if the jobnet flow definition file specified in the Environment Settings window cannot be found. Make sure that the file specified in the Environment Settings window exists at the specified location.
- Some characters might be missing from unit names in the PDF files created by jobnet flow PDF output. In this case, use the Microsoft Excel form of the document.
- The processing time for jobnet flow PDF output depends on the rendering performance of Microsoft Excel. Images take longer to render as the number of units and relation lines increases. If the source information contains a large number of units or relation lines, you can split the units across several images or limit the number of hierarchical levels in the output data.

- If the items are not displayed fully in the print and print preview, you can extend the display area to display the cutoff items. For details on how to extend the size of the display area, see [7.19 Environment Settings window](#).
- Jobnet flow PDF output does not display legends. If you want to display legends, first configure the system to display legends in the Environment Settings window and perform jobnet flow output, and then convert the output Excel file to a PDF file.
- Line weights of arrows are determined according to the default setting of Microsoft Excel. Therefore, line weights might be different depending on the version of Microsoft Excel and your execution environment.

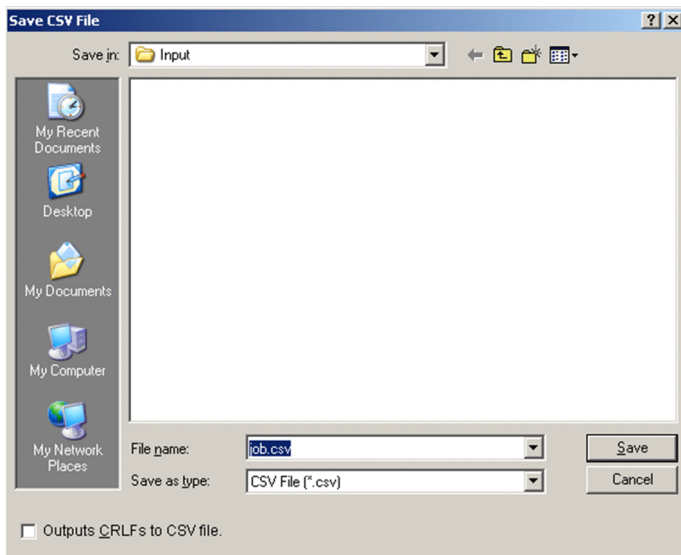
## 7.10 Save CSV File window

You can use the Save CSV File window to save the displayed document to a file in CSV format. Cells are delimited by tab character. The value of each cell is output to the CSV file enclosed in double quotation marks ("). If a cell contains a double quotation mark, it is replaced by two consecutive double quotation marks.

For documents in daily and monthly format, only the data for the day or month displayed in the Job Operation Document Output window is output to the CSV file. The start and end of the valid period do not affect the file contents.

The contents of the CSV file differ depending on whether the **Outputs CRLFs to CSV file** check box is selected.

Figure 7–25: Save CSV File window



The following describes the displayed items.

### File name

Select the CSV file from the file list, or enter the file name directly. The file name cannot contain any of the following symbols:

\ / : \* ? " < > |

The path and file name together must not exceed 258 bytes. If they exceed 258 bytes, the file name is converted automatically subject to set rules.

### Save as type

Select **CSV File** as the file type.

### Outputs CRLFs to CSV file

Specify whether to add a linefeed code when a cell contains multiple pieces of data. The default is the state of the same check box in the Environment Settings window.

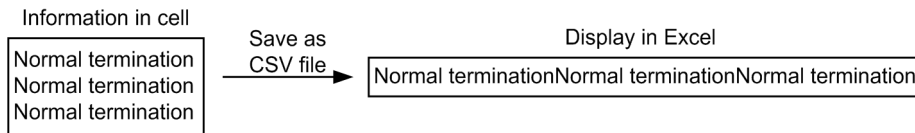
The contents of the output CSV file change according to whether this check box is selected.

- When cleared

When one cell contains multiple lines of data, this setting results in a CSV file without line feed codes. Because there are no line feeds, the data in cells that contain multiple lines of information runs together when you open the file in Microsoft Excel.



#### Example:



- When selected

When one cell contains multiple lines of data, this setting adds linefeed codes to the CSV file. When you open the file in Microsoft Excel, the data in cells that contain multiple lines of information is displayed over multiple lines.

#### Example:



### Save

Saves the CSV file.

### Cancel

Cancels the operation.

#### Supplementary note: Automatic file name conversion rules

The file names of files whose path and file name exceed 258 bytes in total are converted automatically when the file is saved. This involves converting the file name portion of the path (not counting the extension `.csv`) to a length not longer than `253 - path-length`.

The rules for automatic file name conversion are as follows:

- If the file name minus the extension exceeds `253 - path-length` bytes and the `253 - path-length` byte position is the first byte of a two-byte code, the first `252 - path-length` bytes are used as the file name.
- If the file name minus the extension is `253 - path-length` or fewer bytes, the file name is not converted.
- If the converted file name is already in use at the same path, a three character hexadecimal serial number (000 to FFF, using capital letters for alphabetic characters) is appended to the end of the converted file name. However, if the `250 - path-length` byte position is the first byte of a two-byte code, the serial number is added after the first `249 - path-length` bytes.
- The extension is always `.csv`.
- The file name is converted to ASCII encoding. Any characters that cannot be converted are replaced with hyphens (-).

#### Cautionary notes:

- JP1/AJS3 - Print Option applies UCS-2 conversion to document-related information before outputting it to a CSV file. Any characters that cannot be converted are replaced with question marks (?).
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as `C:\Program Files` as the output destination for a CSV file, the file might be redirected and saved to each user's VirtualStore folder.

Files are redirected when the save destination is a folder in one of the following directories:

- `system-drive:\Windows`
- `system-drive:\Program Files`
- `system-drive:\Program Files (x86)` (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive:\Users\OS-user-name\AppData\Local*.

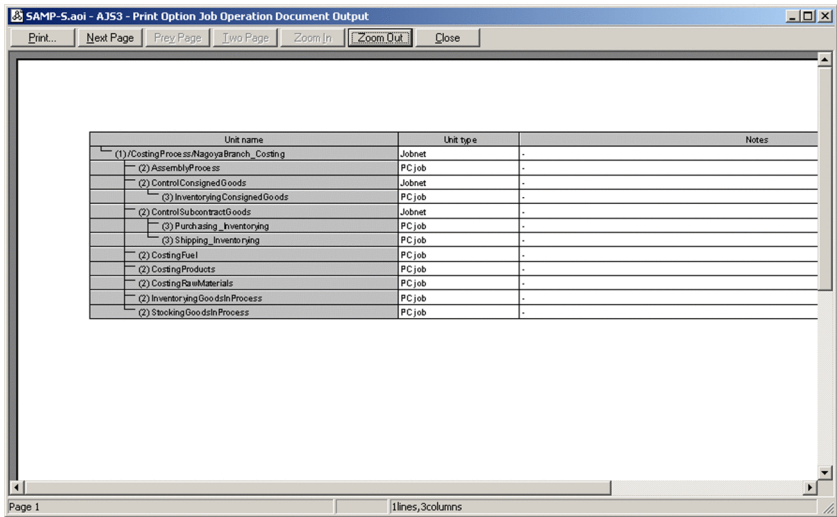
- If the length of the path (including the file name) to the CSV file created in the Save CSV File window exceeds 218 characters, an error occurs when you start Microsoft Excel to open the CSV file. If this occurs, use one of the following methods to open the file:
  - Change the name of the file to a shorter one.
  - Change the name or names of one or more folders that contain the file to shorter ones.
  - Move the file to a folder with the shorter path name.

# 7.11 Print Preview window

The Print Preview window shows how the document will look when printed.

For documents in daily and monthly format, the print preview only displays the data for the day or month displayed in the Job Operation Document Output window. The start and end of the valid period do not affect the contents of the Print Preview window.

Figure 7–26: Print Preview window



The following explains the displayed items.

## Print

Displays the Print dialog box from which you can print the previewed document.

## Next Page

Shows the next page in the document.

## Prev Page

Shows the previous page in the document.

## Two Page

Shows two pages at once.

## Zoom In

Zooms in.

## Zoom Out

Zooms out.

## Close

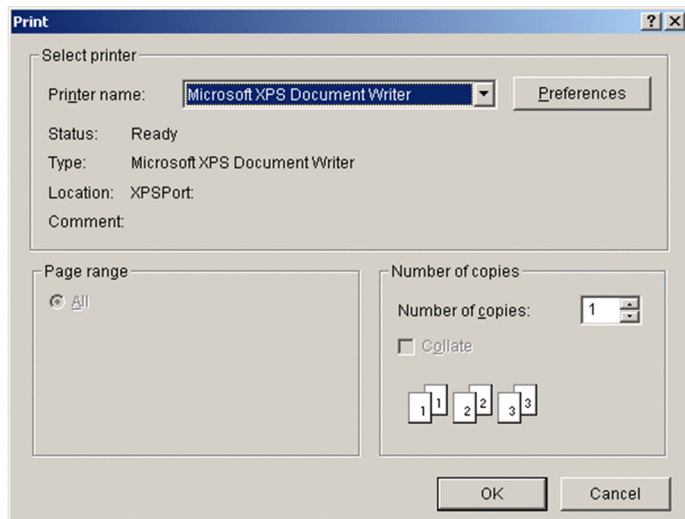
Closes the print preview.

## 7.12 Print window

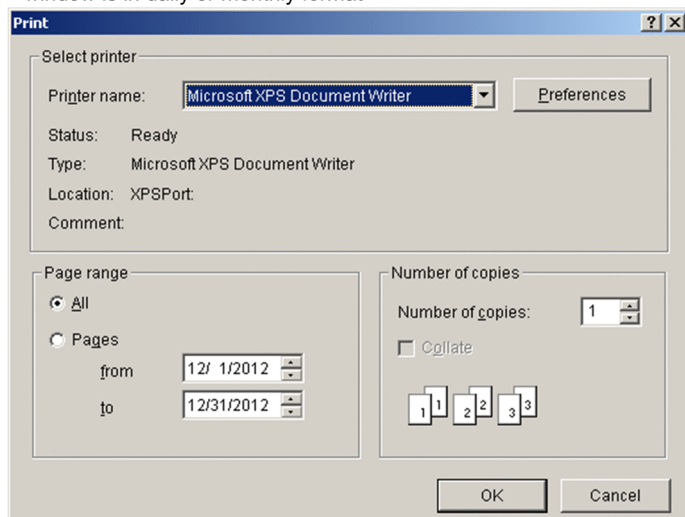
Prints the displayed document.

Figure 7–27: Print window

- When the document in the Job Operation Document Output window is in list format



- When the document in the Job Operation Document Output window is in daily or monthly format



The following explains the displayed items:

### Printer name

Displays the printer to which the document is output. You can change the printer as needed.

### Preferences

Displays the document properties.

### All

Select this option to print the entire document.

### Pages

Select this option to print information for a specific date range. Do not specify a date outside the valid period.

**Number of copies**

Specify the number of copies to print.

**Collate**

Select this check box to print copies in collated sets.

**OK**

Prints the document.

**Cancel**

Closes the window without printing the document.

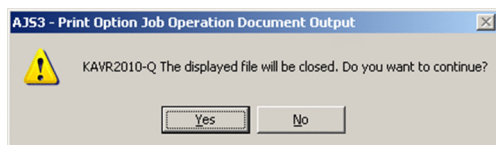
## 7.13 Close window

---

This window closes the current document.

If a document is open, the following message box appears:

Figure 7–28: Close window



The following describes the displayed items:

**Yes**

Closes the document.

**No**

Returns you to the previous window.

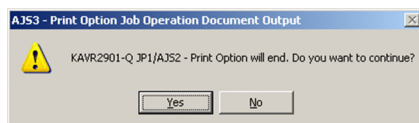
## 7.14 Exit window

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This window exits JP1/AJS3 - Print Option.

The following message box appears:

Figure 7–29: Exit window



The following explains the displayed items:

**Yes**

Exits JP1/AJS3 - Print Option.

**No**

Returns you to the previous window.

## 7.15 Format Definition Settings window

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In the Format Definition Settings window, you can define a document format.

The Format Definition Settings window contains three tabs: **Unit**, **Column Item**, and **Others**. Each tab is described in detail below.

### 7.15.1 Common items

The following items appear on each page of the Format Definition Settings window:

#### **Format definition name**

Enter the name of the format definition in 59 or fewer bytes. If you use the **Browse** button to select an existing format definition file, this field displays the file name minus the extension (.jof).

#### **Title**

Enter a title for the format definition in 64 or fewer bytes. You can display the title in the header and footer of the document.

#### **Create**

Clears the information in the Format Definition Settings window.

#### **Browse**

Displays the Select Format Definition File window. When you select a format definition file, the format information in that file appears in the Format Definition Settings window.

#### **Save**

Displays the Save Format Definition File window. The format information in the Format Definition Settings window is saved to the file you specify.

The file name cannot contain any of the following symbols:

\ / : \* ? " < > |

Do not specify a file name that is longer than 63 bytes (including the extension). Make sure that the path and file name do not exceed 258 bytes in total, and the path alone does not exceed 194 bytes.

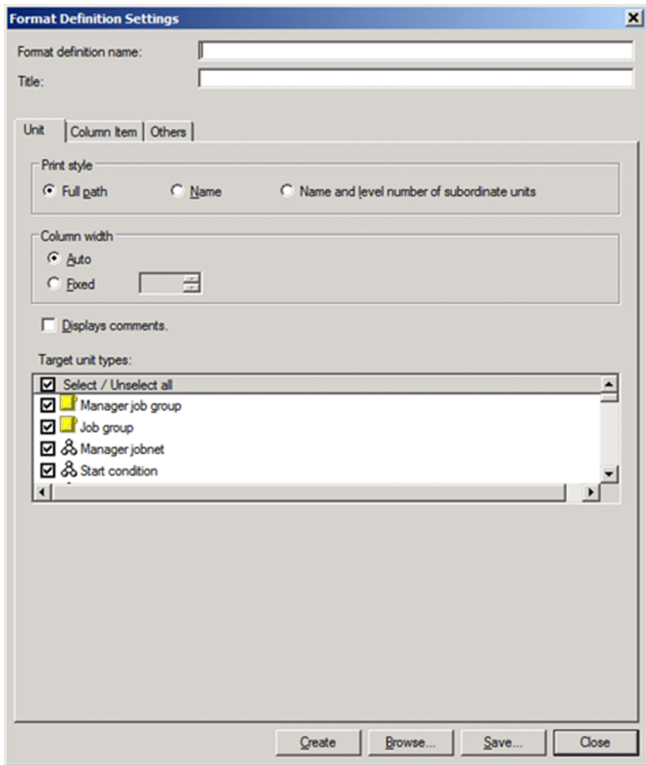
#### **Close**

Closes the Format Definition Settings window.



# 7.15.2 Items on Unit tab

Figure 7–30: Unit tab of Format Definition Settings window



The following describes the items displayed on the Unit tab:

## Print style

Select the style in which unit names appear in printed documents.

Full path	Displays unit names by full path (example: /AAA/BBB/CCC)
Name	Displays the unit name in the hierarchical structure (example:  - AAA)
Name and level number of subordinate units	Displays the unit name and its level number in the hierarchical structure (example:  - (1)AAA)

## Column width

Specify the maximum width of the unit name column (as a number of characters). If you select **Auto**, the column is sized to fit the entire unit name. If you select **Fixed**, you can specify the column width as a value from 10 to 80. If you select **Auto**, the column can become excessively wide when displaying full unit paths. For this reason, we recommend that you select **Fixed**.

## Displays comments

Specify whether to display comments alongside unit names.  
If you select this check box, the unit name is displayed in the format *unit-name [comment]*.  
Example: |- AAAA [Order Processing]  
If there is no comment for a unit, a hyphen (-) is displayed.  
Example: |- AAAA [-]

## Target unit types

Specify which unit types to include in the document.

To exclude a unit type from the document, clear the check box associated with that unit type. By default, all unit types are selected.

The unit types supported in new version may be not added to old version format definition file. If you browse this file in the Format Definition Settings window, the check boxes of added unit types in Target unit types are selected.

If you check the **Select / Unselect all** check box, all unit types will be checked. If you uncheck the check box, no unit type will be checked. Also if you uncheck any unit type check box while all unit types are specified to be checked, the **Select / Unselect all** check box will be automatically unchecked.

### 7.15.3 Items on Column Item tab

Figure 7–31: Column Item tab of Format Definition Settings window (with List selected)

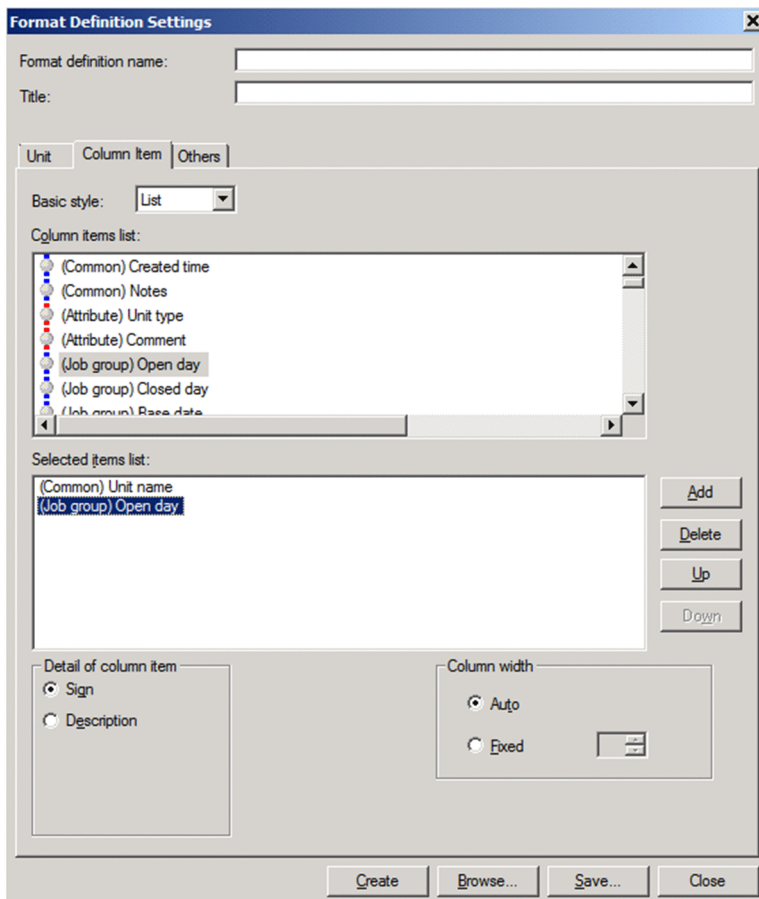


Figure 7–32: Column Item tab of Format Definition Settings window (with Monthly Schedule selected)

Format Definition Settings

Format definition name:

Title:

Unit

Column Item

Others

Basic style:

Monthly

Column items list:

(Monthly) Schedule

(Monthly) Result

Selected items list:

(Monthly) Schedule

Add

Delete

Up

Down

Detail of column item

Sign

Sign (Time)

Sign (Day Time)

Base time

0

:

0

Create

Browse...

Save...

Close

Figure 7–33: Column Item tab of Format Definition Settings window (with Monthly Result selected)

The screenshot shows the 'Format Definition Settings' window with the 'Column Item' tab selected. The window has a title bar with a close button. Below the title bar, there are two text input fields: 'Format definition name:' and 'Title:'. Below these are three tabs: 'Unit', 'Column Item' (which is active), and 'Others'. In the 'Column Item' tab, there is a 'Basic style:' dropdown menu set to 'Monthly'. Below this is a 'Column items list:' containing two items: '(Monthly) Schedule' and '(Monthly) Result'. The '(Monthly) Result' item is selected and highlighted. Below the 'Column items list' is a 'Selected items list:' containing the same '(Monthly) Result' item. To the right of the 'Selected items list' are four buttons: 'Add', 'Delete', 'Up', and 'Down'. Below the 'Selected items list' is a 'Detail of column item' section with five radio buttons: 'Sign' (selected), 'Sign (Time)', '(Time) Detail', 'Sign (Day Time)', and '(Day Time) Detail'. To the right of this section is a 'Base time' section with two input fields, both containing the number '0'. At the bottom of the window are four buttons: 'Create', 'Browse...', 'Save...', and 'Close'.

Format Definition Settings

Format definition name:

Title:

Unit Column Item Others

Basic style: Monthly

Column items list:

- (Monthly) Schedule
- (Monthly) Result

Selected items list:

- (Monthly) Result

Add

Delete

Up

Down

Detail of column item

- ☒ Sign
- ☐ Sign (Time)
- ☐ (Time) Detail
- ☐ Sign (Day Time)
- ☐ (Day Time) Detail

Base time

0 : 0

Create Browse... Save... Close

Figure 7–34: Column Item tab of Format Definition Settings window (with Daily selected)

Format Definition Settings

Format definition name:

Title:

Unit Column Item Others

Basic style:

Column items list:

- (Daily) Schedule
- (Daily) Result

Selected items list:

- (Daily) Result

Add

Delete

Up

Down

Detail of column item

☒ Sign

☐ Sign (Time)

☐ (Time) Detail

Base time

0 : 0

☐ Set base time indicates the time at which a day starts.

Create Browse... Save... Close

The following describes the items displayed on the Column Item tab:

### Basic style

Select **Monthly**, **Daily**, or **List**. Any settings you have entered are discarded if you change this setting while in the process of editing a format definition. The default is **List**.

### Column items list

This area lists the column items available with the basic style you selected.

### Selected items list

Specify the column items to include in the document, and define the order in which you want them to appear. You can add and remove column items by using the **Add** and **Delete** buttons. Use the **Up** and **Down** buttons to change the order.

### Add

Adds the column item selected in the column items list. Items are added to the bottom of the selected items list. If the basic style is *Daily* or *Monthly*, you can add one column item. If the basic style is *List*, you can add a maximum of 30 items.

### Delete

Removes the column item selected in the selected items list.

### Up

Moves the selected column item up by one position in the list.

### Down

Moves the selected column item down by one position in the list.

## Detail of column item

Select the format in which to display the data for column items.

- For items in List style  
Select **Sign** or **Description**.
- For items in Monthly Schedule  
Select **Sign**, **Sign(Time)**, or **Sign(Day Time)**.
- For items in Monthly Result  
Select **Sign**, **Sign(Time)**, **(Time)Detail**, **Sign(Day Time)**, or **(Day Time)Detail**.
- For items in Daily Schedule  
Select **Sign** or **Sign(Time)**.
- For items in Daily Result  
Select **Sign**, **Sign(Time)**, or **(Time)Detail**.

## Column width

Specify the maximum width of column items in list style documents (as a number of characters). If you select **Auto**, the column is sized to fit the largest value of the column item. If you select **Fixed**, you can specify the column width as a value from 10 to 80.

Selecting **Auto** can result in excessively wide columns when displaying full unit paths. For this reason, we recommend that you select **Fixed**.

## Base time

Specify the base time to use for monthly and daily reports. In most circumstances, this will be the same base time as JP1/AJS.

Specify an hour from 0 to 23 in the left field, and minutes from 0 to 59 in the right field.

In monthly documents, the base time serves as the boundary between columns.

Example: If the base time is 8:45, the column for the first day of the month displays information for the time period from 8:45 on the first day to 8:44:59 on the second day.

In daily documents, the 0 minute mark serves as the column boundary. However, one of the columns in which the base time occurs has an internal boundary at the base time.

Example: If the base time is 8:45 based on the 24-hour display system<sup>#</sup>, column 0 displays information for the time period from 0:00:00 to 0:59:59. Column 8 displays information for the time period from 8:45:00 to 8:59:59 of the displayed day, and 8:00:00 to 8:44:59 of the following day.

In addition, if the base time is 8:45 based on the 48-hour display system<sup>#</sup>, two columns 0 display information for the time period from 0:00:00 to 0:59:59. The first column 8 displays information for the time period from 8:45:00 to 8:59:59 of the displayed day, and 8:00:00 to 8:44:59 two days later, while the second column 8 displays information for the time period from 8:00:00 to 8:59:59 of the following day.

#

You can specify the 24-hour display system or 48-hour display system in the Environment Settings window. For details on the settings, see [7.19.3 Displayed items of the View Settings tab](#).

## Set base time indicates the time at which a day starts

Specify whether to start daily documents at the base time.

### 24-hour display system<sup>#</sup>

When you select this check box, a daily report shows data for 24 hours from the base time (column names start from the specified time on the day for which the document is being displayed, and end at the specified time on the following day).

If you clear this check box, a daily report shows data for 24 hours starting from midnight (column names are fixed as 0 to 23).

## 48-hour display system<sup>#</sup>

When you select this check box, a daily report shows data for 48 hours from the base time (dated column names start from the specified time on the day for which the document is being displayed, and end at the specified time two days later).

If you clear this check box, a daily report shows data for 48 hours starting from midnight (dated column names are fixed as 0 to 23).

#

You can specify the 24-hour display system or 48-hour display system in the Environment Settings window. For details on the settings, see [7.19.3 Displayed items of the View Settings tab](#).

## (1) Effect of Detail of column item setting

The following figures show how the option selected for **Detail of column item** on the Column Item tab affects the contents of the document.

Figure 7–35: Monthly schedule document with Sign selected

[Monthly Schedule]	1	2	3	4	5	6	7	8	9	10
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo
NagoyaBranch_Costing							■	■	■	■
							■	■		
							■	■		
							■			
							■			

Figure 7–36: Monthly schedule document with Sign(Time) selected

[Monthly Schedule]	1	2	3	4	5	6	7	8
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa
NagoyaBranch_Costing							■(12:08)	■(12:59)
							■(12:09)	■(13:07)
							■(12:35)	■(13:14)
							■(12:44)	
							■(12:51)	

Figure 7–37: Monthly results document with Sign selected

[Monthly Result]	1	2	3	4	5	6	7	8	9	10	11
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu
NagoyaBranch_Costing							○	●			
							●	×			
							●	●			
							●				
							●				

Figure 7–38: Monthly results document with Sign(Time) selected

[Monthly Result]	1	2	3	4	5	6	7	8
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa
NagoyaBranch_Costing							○(12:08)	●(13:01)
							●(12:12)	×(13:07)
							●(12:36)	●(13:16)
							●(12:45)	
							●(12:53)	

Figure 7–39: Monthly results document with (Time)Detail selected

[Monthly Result]	1	2	3	4	5	6	7	8	9
Month: 2012/12 Base time: 00:00	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
NagoyaBranch_Costing							(12:08)exec-deffer	(13:01)normal	
							(12:12)normal	(13:07)interrupt	
							(12:36)normal	(13:16)normal	
							(12:45)normal		
							(12:53)normal		

Figure 7–40: Monthly schedule document with Sign(Day Time) selected

[Monthly Schedule]	1	2	3	4	5	6	7	8	9
Month: 2003/5 Base time: 00:00	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr
NagoyaBranch_Costing							■(07 12:08)	■(08 12:59)	■(09 13:14)
							■(07 12:09)	■(08 13:07)	
							■(07 12:35)	■(08 13:14)	
							■(07 12:44)		
							■(07 12:51)		

Figure 7–41: Monthly results document with Sign(Day Time) selected

[Monthly Result]	1	2	3	4	5	6	7	8	9	10	11
Month: 2003/5 Base time: 00:00	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
NagoyaBranch_Costing							○(07 12:08)	●(08 13:01)			
							■(07 12:12)	×(08 13:07)			
							■(07 12:36)	■(08 13:16)			
							■(07 12:45)				
							■(07 12:53)				

Figure 7–42: Monthly results document with (Day Time)Detail selected

[Monthly Result]	1	2	3	4	5	6	7	8	9
Month: 2003/5 Base time: 00:00	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr
NagoyaBranch_Costing							(07 12:08)exec-deffer	(08 13:01)normal	
							(07 12:12)normal	(08 13:07)interrupt	
							(07 12:36)normal	(08 13:16)normal	
							(07 12:45)normal		
							(07 12:53)normal		

## (2) Effect of Set base time indicates the time at which a day starts setting

The following figures show how the **Set base time indicates the time at which a day starts** check box on the Column Item tab affects the contents of the document.

Figure 7–43: Daily schedule document with check box cleared and 0:0 as base time (24-hour display system)

[Daily Schedule]	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Date: 2012/12/7(Fri) Base time: 00:00																
NagoyaBranch_Costing													■(12:08)			
													■(12:09)			
													■(12:35)			
													■(12:44)			
													■(12:51)			
ControlConsignedGoods													■(12:08)			
													■(12:10)			
													■(12:35)			
													■(12:44)			
													■(12:51)			
InventorizingConsignedGoods													■(12:08)			
													■(12:11)			
													■(12:35)			



Figure 7–44: Daily schedule document with check box cleared and 12:40 as base time (24-hour display system)

[Daily Schedule]		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Date: 2012/12/7(Fri) Base time: 12:40																		
<input type="checkbox"/> NagoyaBranch_Costing														■(12:44)				
<input type="checkbox"/> ControlConsignedGoods														■(12:51)				
<input type="checkbox"/> InventoryingConsignedGoods														■(12:44)				

Figure 7–45: Daily schedule document with check box selected and 12:40 as base time (24-hour display system)

[Daily Schedule]		12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3
Date: 2012/12/7(Fri) Base time: 12:40																	
<input checked="" type="checkbox"/> NagoyaBranch_Costing	■(12:44)																
<input checked="" type="checkbox"/> ControlConsignedGoods	■(12:51)																
<input checked="" type="checkbox"/> InventoryingConsignedGoods	■(12:44)																

Figure 7–46: Daily schedule document with check box cleared and 0:0 as base time (48-hour display system)

[Daily Schedule]		23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Date: 2015/4/23(Th) Base time: 00:00																					
<input type="checkbox"/> PC-Job																			■(16:47)		
<input type="checkbox"/> PC-Job2																			■(16:57)		

Figure 7–47: Daily schedule document with check box cleared and 16:20 as base time (48-hour display system)

[Daily Schedule]		23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Date: 2015/4/23(Th) Base time: 16:20																					
<input type="checkbox"/> PC-Job																			■(16:47)		
<input type="checkbox"/> PC-Job2																			■(16:57)		

Figure 7–48: Daily schedule document with check box selected and 16:20 as base time (48-hour display system)

[Daily Schedule]		23	16	17	18	19	20	21	22	23	24	0	1	2	3	4	5	6	7	8	9	10
Date: 2015/4/23(Th) Base time: 16:20																						
<input checked="" type="checkbox"/> PC-Job	■(16:47)																					
<input checked="" type="checkbox"/> PC-Job2	■(16:57)																					

### (3) Difference in displayed contents between the 24-hour display system and the 48-hour display system

On the **View Settings** tab of the Environment Settings window, you can change the format in which to display time in monthly and daily documents between the 24-hour display system and the 48-hour display system. For details on the settings, see [7.19.3 Displayed items of the View Settings tab](#).

The following figures show how the 24-hour display system or the 48-hour display system affects the contents of the document.

Figure 7–49: Monthly schedule document with schedule extended over two days displayed (24-hour display system)

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Month: 2015/7 Base time: 00:00		We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr
net1																■(23:44)	■(10:00)	■(23:40)
PC-Job																■(23:44)	■(10:00)	■(23:40)
PC-Job2																■(23:54)	■(10:10)	■(23:50)
PC-Job3																	■(23:50)	■(00:09)
																	■(10:22)	■(00:02)

The schedule at 00:09 on July 16th for PC-Job3 is displayed at the July 16th position.

Figure 7–50: Monthly schedule document with schedule extended over two days displayed (48-hour display system)

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Month: 2015/7 Base time: 00:00		We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr
net1																■(23:44)	■(10:00)	■(23:40)
PC-Job																■(23:44)	■(10:00)	■(23:40)
PC-Job2																■(23:54)	■(10:10)	■(23:50)
PC-Job3																■(00:09)	■(10:22)	■(00:02)
																	■(00:02)	

If the scheduled date of net1 execution is July 15th, the schedule at 00:09 on July 16th for PC-Job3 is displayed at the July 15th position.

Figure 7–51: Daily schedule document displayed (24-hour display system)

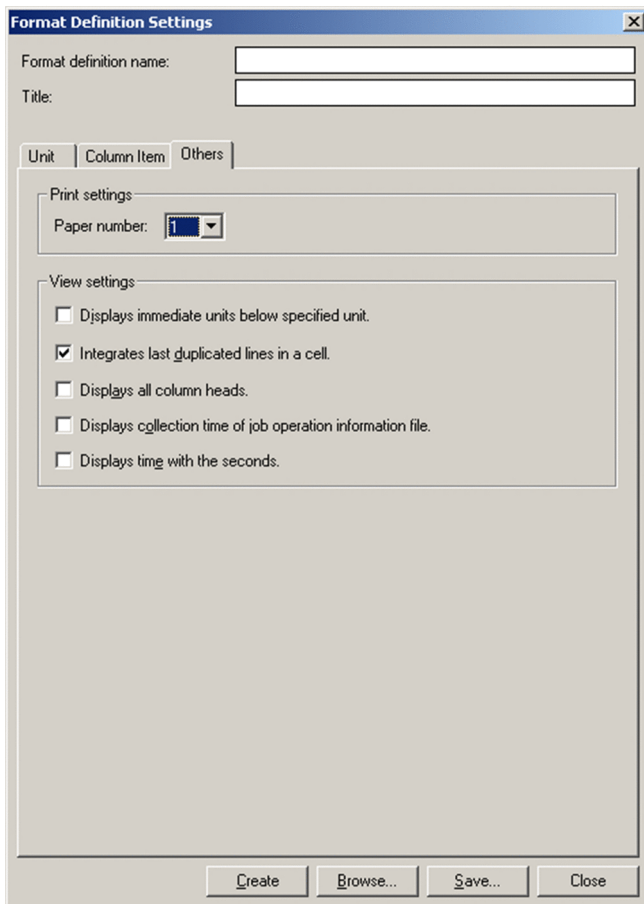
[Daily Schedule]		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Notes
Date: 2012/12/14(Fr) Base time: 00:00																										
Purchasing_Inventorying															■(13:18)											
Shipping_Inventorying															■(13:19)											

Figure 7–52: Daily schedule document displayed (48-hour display system)

[Daily Schedule]		29																								Note	
Date: 2015/4/29(Wed) Base time: 00:00		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Ⓜ_net1												■(10:00)															
③_PC-Job1												■(10:00)															
③_PC-Job2												■(10:10)															
③_PC-Job3												■(10:11)															

## 7.15.4 Items on Others tab

Figure 7–53: Others tab of Format Definition Settings window



The following describes the items displayed on the Others tab of the Format Definition Settings window.

### Paper number

Specify a paper number for the format. JP1/AJS3 - Print Option uses paper numbers when you select **Format definition** in the Page Settings window.

### Displays immediate units below specified unit

Specify whether to only display the units defined immediately below the specified unit. If you select this check box, units further down in the hierarchy are excluded from the document. In this case, the **Immediate Units** and **All Units** items in the **View** menu become unavailable, and only immediately subordinate units appear in the document.

### Integrates last duplicated lines in a cell

If you select this check box, duplicate lines are integrated when a cell contains multiple lines of data. This process applies to data that begins with a number followed immediately by a comma (,).

Example 1: Cell data with check box cleared

```
1,relative time 00:00
2,relative time 00:00
3,relative time 00:00
4,relative time 00:00
```

Example 2: Cell data with check box selected

```
1-4,relative time 00:00
```

## Displays all column heads

Specify whether to display each column header in its entirety.

If you clear this check box, the part in parentheses at the beginning of a column header is omitted.

## Displays collection time of job operation information file

Specify whether to display the time when the job operation information file was collected in the header of the unit name column. If you select this check box, the column header is displayed in the following format:

**Collection time (YYYY/MM/DD HH:MM)**  
*unit-name*

## Displays time with the seconds

When time-based display (**Sign(Time)**, **(Time)Detail**, **Sign(Day Time)**, or **(Day Time)Detail**) is selected for column items in a daily or monthly document, select whether to display times to the minute or second level.

## (1) Effect of Displays collection time of job operation information file setting

The following figures show how the **Displays collection time of job operation information file** check box on the Others tab affects how column items are displayed.

Figure 7–54: List with check box cleared

Unit name	Unit type	Notes
Postprocessing	PC job	-
Preprocessing	PC job	-

Figure 7–55: List with check box selected

Collection Time: 2012/12/24 14:15 Unit name	Unit type	Notes
Postprocessing	PC job	-
Preprocessing	PC job	-

Figure 7–56: Monthly results with check box cleared

[Monthly Result] Month: 2012/12 Base time: 00:00	1 Sa	2 Su	3 Mo	4 Tu	5 We	6 Th	7 Fr	8 Sa	9 Su
NagoyaBranch_Costing							(12:08)exec-defer (12:12)normal (12:36)normal (12:45)normal (12:53)normal	(13:01)normal (13:07)interrupt (13:16)normal	
ControlConsignedGoods							(12:08)exec-defer (12:11)normal (12:35)normal (12:44)normal (12:51)normal	(13:00)normal (13:07)normal (13:14)normal	

Figure 7–57: Monthly results with check box selected

Collection Time: 2012/12/24 14:04 [Monthly Result] Month: 2012/12 Base time: 00:00	1 Sa	2 Su	3 Mo	4 Tu	5 We	6 Th	7 Fr	8 Sa
NagoyaBranch_Costing							(12:08)exec-defer (12:12)normal (12:36)normal (12:45)normal (12:53)normal	(13:01)normal (13:07)interrupt (13:16)normal

## (2) Effect of Displays time with the seconds setting

The following figures show how the **Displays time with the seconds** check box on the Others tab affects how column items are displayed.

Figure 7–58: Daily schedule with check box cleared

[Daily Schedule]		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Date: 2012/12/7(Fri) Base time: 00:00																
NagoyaBranch_Costing														■(12:08:20)		
														■(12:09:48)		
														■(12:35:02)		
														■(12:44:02)		
														■(12:51:02)		

Figure 7–59: Daily schedule with check box selected

[Daily Schedule]		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Date: 2012/12/7(Fri) Base time: 00:00																
NagoyaBranch_Costing														■(12:08:20)		
														■(12:09:48)		
														■(12:35:02)		
														■(12:44:02)		
														■(12:51:02)		

### 7.15.5 Notes on using the Format Definition Settings window

Note the following when using the Format Definition Settings window:

- You can only specify one base time in the definition of a daily or monthly format. If you use multiple base times in JP1/AJS, take measures such as collecting job operation information separately for each base time to prevent units with different base times from appearing in the same document.
- If a root jobnet operates under a 48-hour schedule in JP1/AJS3 - Manager, data will be displayed in a monthly document according to the display format settings on the **View Settings** tab of the Environment Settings window.

The following examples show output if the scheduled date for jobnet execution is March 31<sup>st</sup>:

24-hour display system

The job executed at 25:00 on March 31<sup>st</sup> will be displayed at the April 1<sup>st</sup> position.

48-hour display system

The job executed at 25:00 on March 31<sup>st</sup> will be displayed at the March 31<sup>st</sup> position.

- In a monthly document, the base time serves as the boundary between columns. For example, if the base time is 8:45, the column with the header 1 contains data for 8:45:00 on the first of the month to 8:44:59 on the second.
- In a daily document, the 0 minute mark serves as the column boundary. However, one of the columns in which the base time falls has an internal boundary at the base time. The following shows examples if the base time is 8:45:

24-hour display system

The column with the header 0 displays information for the time period from 0:00:00 to 0:59:59. The column with the header 8 displays information for the time period from 8:45:00 to 8:59:59 of the displayed day, and 8:00:00 to 8:44:59 of the following day.

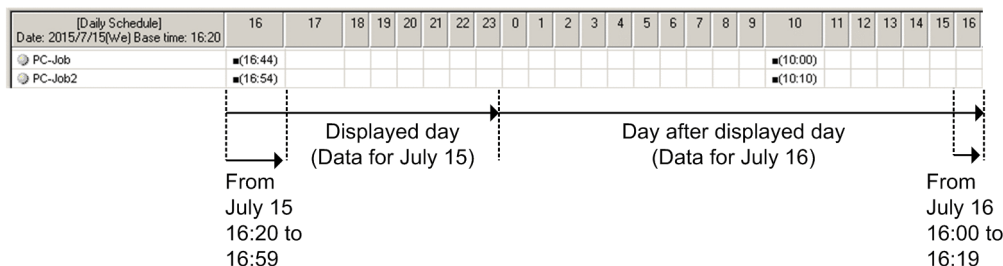
48-hour display system

Two columns with the header 0 display information for the time period from 0:00:00 to 0:59:59.

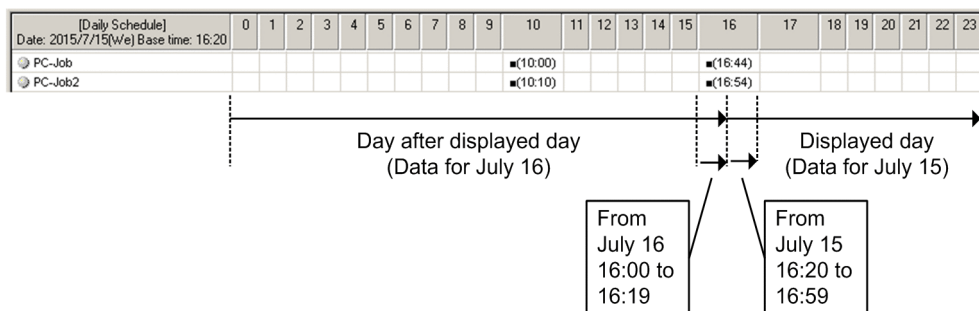
The first column with the header 8 displays information for the time period from 8:45:00 to 8:59:59 of the displayed day, and 8:00:00 to 8:44:59 two days later, while the second column with the header 8 displays information for the time period from 8:00:00 to 8:59:59 of the following day.

- If you set a base time in a daily document and the **Set base time indicates the time at which a day starts** check box is selected, the time axis in the document is linear, beginning and ending at the base time. When the check box is cleared, the time axis wraps back on itself at the base time. Examples are shown below.

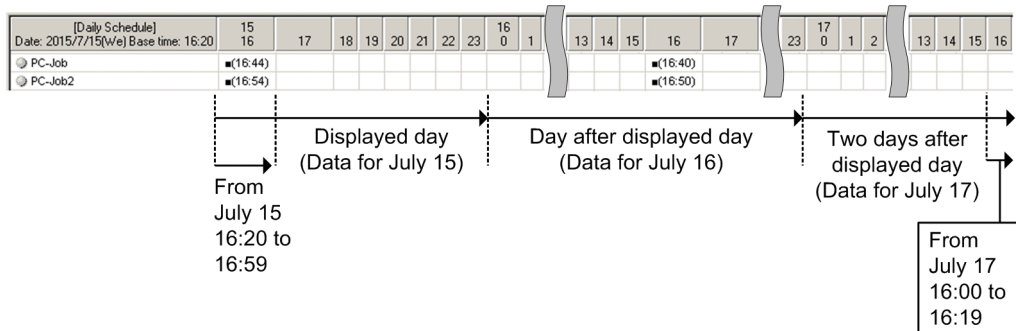
Example 1: If the base time is set to 16:20 based on the 24-hour display system, and **Set base time indicates the time at which a day starts** is selected



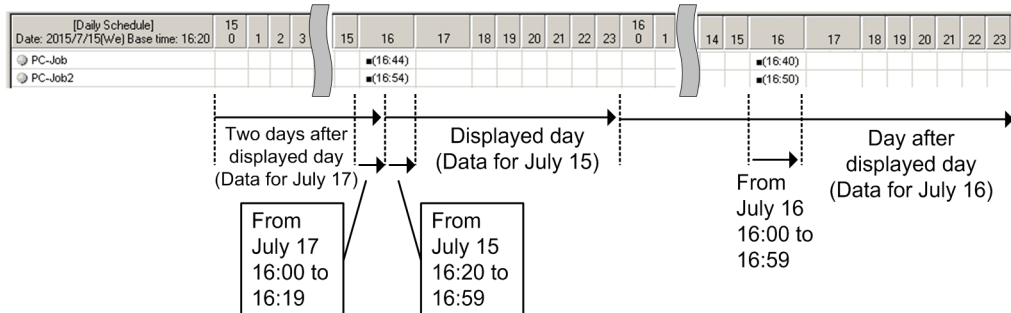
Example 2: If the base time is set to 16:20 based on the 24-hour display system, and **Set base time indicates the time at which a day starts** is not selected



Example 3: If the base time is set to 16:20 based on the 48-hour display system, and **Set base time indicates the time at which a day starts** is selected



Example 4: If the base time is set to 16:20 based on the 48-hour display system, and **Set base time indicates the time at which a day starts** is not selected



- If a format definition file contains a column item that is not supported by the version of JP1/AJS3 - Print Option you are using, the item name is displayed in red in the Format Definition Settings window. If you output the document

with the column item still in place, hyphens (-) appear indicating that there is no data for that column. If you use the **Delete** button to delete the item, you cannot add it again.

- JP1/AJS3 - Print Option applies UTF-8 conversion to format information before outputting it to a format definition file. Characters that cannot be converted are replaced with question marks (?).
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as `C:\Program Files` as the output destination for the format definition file, the file might be redirected and saved to each user's VirtualStore folder.

Files are redirected when the save destination is a folder in one of the following directories:

- *system-drive*: \Windows
- *system-drive*: \Program Files
- *system-drive*: \Program Files (x86) (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive*: \Users\OS-user-name\AppData\Local.

- If there is no relevant data, or if the unit type is not subject to column output, a blank space, a hyphen (-), or asterisks (\*\*\*) will be displayed. For unit types that are subject to column output, see the descriptions of the `ajsprint` command and `ajsshow` command in the manual *JP1/Automatic Job Management System 3 Command Reference*.



## 7.16 Page Settings window

In the Page Settings window, you can set the page layout for printed documents.

Figure 7–60: Page Settings window

The following describes the items displayed in the Page Settings window:

### Paper No.

Select the paper number to edit.

### Paper No. of format definition

Displays the paper number of the format you are currently using.

### Adoption

Select the manner in which paper numbers are applied.

You can select **Format definition** or a value from 1 to 5. If you select **Format definition**, JP1/AJS3 - Print Option uses the paper number specified in the Format Definition Settings window when printing the document.

### Paper size

Select the paper size. You can select **A4** or **A3**.

### Orientation

Select the page orientation. You can select **Landscape** or **Portrait**.

### Font (Data, Header, Footer)

Select the typeface and size.

The following typefaces are available in:

- Japanese: MS Gothic, MS Mincho, MS P Gothic, MS P Mincho
- Chinese: Arial, Times New Roman, Microsoft YaHei, SimSun
- Other languages: Arial, Times New Roman, Verdana, Palatino Linotype

You can select 6 to 12 as the point size.

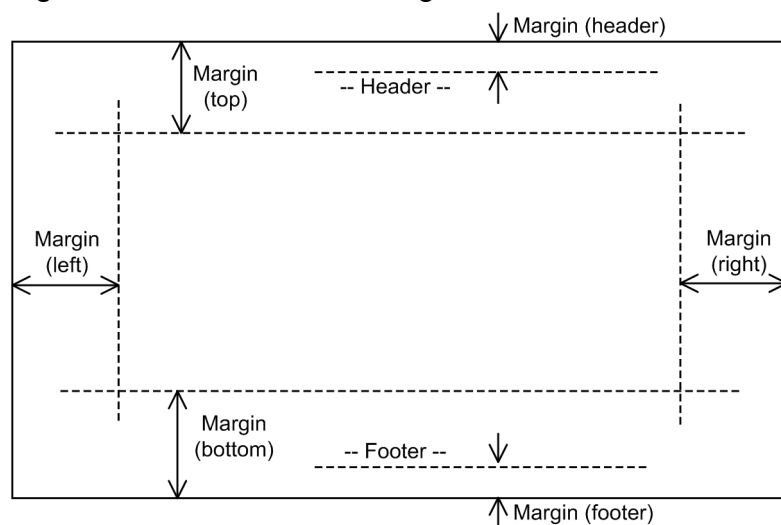


## Margin (mm) (Top, Bottom, Left, Right, Header, and Footer)

Specify the margins in millimeters (in a range from 0 to 99).

The following figure shows the position of each margin.

Figure 7–61: Position of margins



## Header (Left, Center, Right)

Select the information to appear in the document header. You can select from the following options:

<b>None</b>	Not displayed
<b>Date</b>	The date when the document was printed
<b>Page number</b>	The page number
<b>Page number/Total pages</b>	The page number and the total number of pages
<b>Date Time</b>	The date and time when the document was printed
<b>Page number - Sub page number</b>	The page and sub-page numbers
<b>Title</b>	The title defined in the Format Definition Settings window
<b>Last update time</b>	The last update time (including lower-level units)

Note 1: A sub-page is created when a page is wider than the paper size.

Note 2: Because each month or day is assigned a page number when printing monthly and daily documents, more pages might be printed than there are page numbers assigned.

Note 3: The last output time is not output if the job operation information file does not contain last update times.

## Footer (Left, Center, Right)

Select the information to appear in the document footer. The options you can select are the same as in the header.

## Prints column names in only first page

If you select this check box, column names are only printed on the first page of the document. If the check box is cleared, column names are printed on every page.

## Apply

Applies the changes and saves the page settings.

## Close

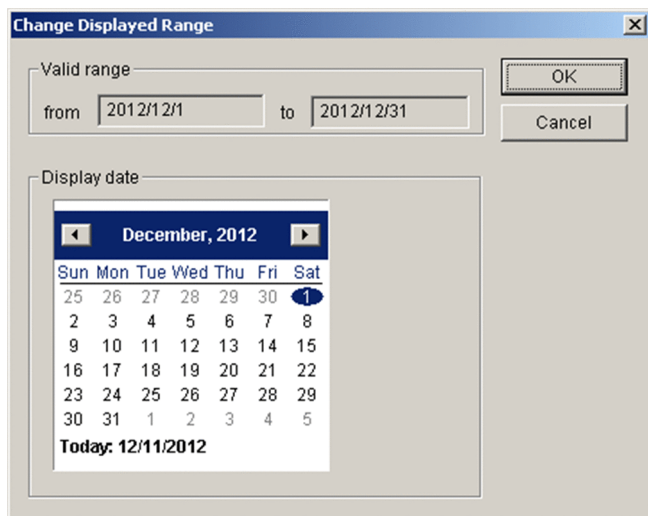
Closes the Page Settings window.

## 7.17 Change Displayed Range window

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In the Change Displayed Range window, you can change the range of information displayed in a monthly or daily document.

Figure 7–62: Change Displayed Range window



The following describes the items displayed in the Change Displayed Range window:

### Valid range

Displays the range of data in the input file being processed.

### Display date

Select a date to display in the calendar.

### OK

Saves the settings and closes the window.

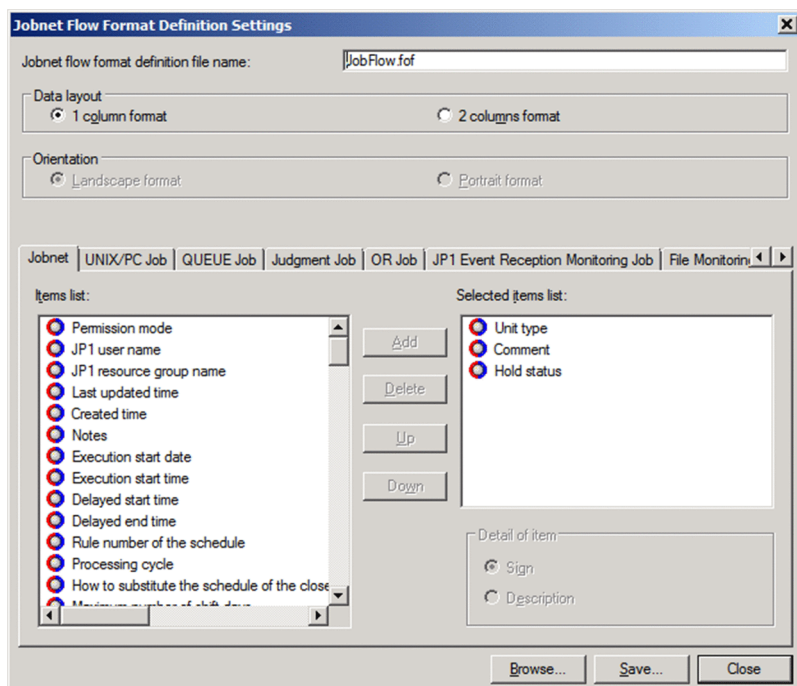
### Cancel

Discards the settings and closes the window.

## 7.18 Jobnet Flow Format Definition Settings window

In the Jobnet Flow Format Definition Settings window, you can define the format for jobnet flow output.

Figure 7–63: Jobnet Flow Format Definition Settings window



The following describes the items displayed in the Jobnet Flow Format Definition Settings window:

### Jobnet flow format definition file name

Displays the name of the jobnet flow format definition file you are viewing. Do not specify a file name containing more than 63 bytes (including the extension).

### Data layout

Designates the table's data layout. You can select either **1 column format** or **2 columns format**. The default is **1 column format**.

### Orientation

Designates the table output orientation if **2 columns format** is set for the data layout. You can select either **Landscape format** or **Portrait format**. The default is **Landscape format**.

### Unit tabs

A tab is displayed for each unit type. When you click the tab for the unit type whose format definition you want to change, the window displays the settings for that unit.

### Items list

Displays the items that are not included in the jobnet flow image.

### Selected items list

Displays the items to be included in the jobnet flow image. Items are output in the order they appear in the list. You can add a maximum of 20 items.

### Add

Adds the selected item to the **Selected items list** area.

## Delete

Deletes the selected item.

## Up

Moves the selected item up by one position.

## Down

Moves the selected item down by one position.

## Detail of item

This area becomes available when detailed information can be specified for the item selected in the **Selected items list** area.

If you select **Sign**, the sign defined in the unit definition parameters in the JP1/AJS unit definition file is used to represent the unit definition.

If you select **Description**, text-based display is used.

## Browse

Click this button to load a jobnet flow format definition from a jobnet flow format definition file.

## Save

Saves the jobnet flow format to the jobnet flow format definition file. The file name cannot contain any of the following symbols.

\ / : \* ? " < > |

Do not specify a file name that is longer than 63 bytes (including the extension). Make sure that the path and file name do not exceed 258 bytes in total, and the path does not exceed 194 bytes.

## Close

Discards the settings and closes the Jobnet Flow Format Definition Settings window.

## Cautionary notes:

- If a jobnet flow format definition file contains an item that is not supported by the version of JP1/AJS3 - Print Option you are using, the item name is displayed in red in the Jobnet Flow Format Definition Settings window. If you output a jobnet flow image with the item still in place, a hyphen (–) appears indicating that there is no data for that column. If you use the **Delete** button to remove the item, you cannot add it again.
- When using a jobnet flow format definition file defined in version 07-10 or earlier of JP1/AJS, see annotation #2 below table D-1 in *D.1 Product file information for JP1/AJS3 - Print Option*, and make the appropriate changes as described in *7.19 Environment Settings window*.
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as C:\Program Files as the output destination for the jobnet flow format definition file, the file might be redirected and saved to each user's VirtualStore folder.



Files are redirected when the save destination is a folder in one of the following directories:

- *system-drive*:\Windows
- *system-drive*:\Program Files
- *system-drive*:\Program Files (x86) (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive*:\Users\OS-user-name\AppData\Local.

- If there is no relevant data, or if the unit type is not subject to column output, a blank space, a hyphen (-), or asterisks (\*\*\*) will be displayed. For unit types that are subject to column output, see the descriptions of the `ajsprint` command and `ajsshow` command in the manual *JP1/Automatic Job Management System 3 Command Reference*.
- In the **Items list** and **Selected items list**,  is prepended with each `ajsprint` command output item and  is prepended with each `ajsshow` command output item.
- In cases where the system is configured to display legends, if you specify the type of unit in the jobnet flow format definition, the unit types in the legend and the data unit types can be related.

## 7.19 Environment Settings window

In the Environment Settings window, you can set environment settings.

The Environment Settings window has the **Default Settings** tab, the **View Settings** tab, and the **Map/Jobnet flow** tab.

### 7.19.1 Shared items

The following shows the displayed items shared for each tab on the Environment Settings window.

#### OK

Applies the settings and closes the Environment Settings window.

#### Cancel

Closes the Environment Settings window without applying the setting.

#### Apply

Applies the settings and leaves the Environment Settings window open.

### 7.19.2 Displayed items on the Default Settings tab

On the **Default Settings** tab, you can set the default folders and files used by JP1/AJS3 - Print Option.

Figure 7–64: Default Settings tab of Environment Settings window

The screenshot shows the 'Environment Settings' dialog box with the 'Default Settings' tab selected. The dialog has four tabs: 'Default Settings', 'View Settings', 'Map', and 'Jobnet Flow'. The 'Default Settings' tab contains several sections for configuring default paths and files:

- Job operation information:** A text field for 'Folder name' containing 'C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\Jf' and a 'Browse...' button.
- Save CSV File:** A text field for 'Folder name' containing 'C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\Jf' and a 'Browse...' button. Below it is a checkbox labeled 'Outputs CRLFs to CSV file' which is currently unchecked.
- Format definition:** A text field for 'Folder name' containing 'C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\Jf' and a 'Browse...' button.
- Jobnet flow format definition:** A text field for 'Folder name' containing 'C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\Jf' and a 'Browse...' button. Below it is a text field for 'File name' containing 'JobFlow.fof'.
- Saved job operation information file linking with View:** A text field for 'Folder name' containing 'C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\Jf' and a 'Browse...' button.
- Saved PDF file of map and jobnet flow output:** A text field for 'Folder name' containing 'C:\ProgramData\HITACHI\JP1\JP1\_DEFAULT\Jf' and a 'Browse...' button.

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

### Job operation information (Folder name, Browse button)

Specify the default location of the folder in which job operation information files are stored. You can use the **Browse** button to select another folder.

The default is *PO\_DATA\_PATH#*\Input, and for using the multi-user remote operation functionality, the default is *PO\_DATA\_PATH#*\Users\OS-user-name\Input.

### Save CSV file (Folder name, Browse button, Outputs CRLFs to CSV file)

Specify the default location of the folder in which CSV files are stored. You can use the **Browse** button to select another folder.

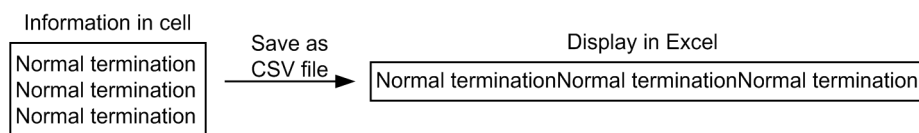
The default is *PO\_DATA\_PATH#*\Input, and for using the multi-user remote operation functionality, the default is *PO\_DATA\_PATH#*\Users\OS-user-name\Input.

The contents of CSV files differs depending on the status of the **Outputs CRLFs to CSV file** check box. The default is cleared.

- When cleared

When one cell contains multiple lines of data, this setting results in a CSV file without line feed codes. Because there are no line feeds, the data in cells that contain multiple lines of information runs together when you open the file in Microsoft Excel.

Example:



- When selected

When one cell contains multiple lines of data, this setting adds linefeed codes to the CSV file. When you open the file in Microsoft Excel, the data in cells that contain multiple lines of information is displayed over multiple lines.

Example:



### Format definition (Folder name, Browse button)

Specify the default location of the folder in which format definition files are stored.

You can use the **Browse** button to select another folder. You cannot change this setting while a document is open in JP1/AJS3 -Print Option.

Any format definition files you intend to use must be stored in the folder you specify.

The default is *PO\_DATA\_PATH#*\Format, and for using the multi-user remote operation functionality, the default is *PO\_DATA\_PATH#*\Users\OS-user-name\Format.

### Jobnet flow format definition (Folder name, Browse button, File name)

Specify the file name you entered in the **Jobnet flow format definition file name** field of the Jobnet Flow Format Definition Settings window. You can use the **Browse** button to select another file and folder.

The specified value is used in jobnet flow output and jobnet flow PDF output.

The default is *PO\_DATA\_PATH#*\Map\FlowFormat\JobFlow.fof, and for using the multi-user remote operation functionality, the default is *PO\_DATA\_PATH#*\Users\OS-user-name\Map\FlowFormat\JobFlow.fof.

### Saved job operation information file linking with View (Folder name, Browse button)

Specify the default location of the folder in which job operation information files are stored when linking with JP1/AJS3 - View. You can use the **Browse** button to select another folder.

When you specify a value in this field, the value you specify appears as the path in the **Job operation information output file** name field when you display the Collecting Job Operation Information window from JP1/AJS3 - View.

The default is *PO\_DATA\_PATH*#\Input, and for using the multi-user remote operation functionality, the default is *PO\_DATA\_PATH*#\Users\OS-user-name\Input.

### Saved PDF file of map and jobnet flow output (Folder name, Browse button)

Specify the default folder to use when outputting documents in map format or jobnet flow format to PDF files. You can use the **Browse** button to select another folder.

The value you specify appears as the path in the **Saved PDF file** field of the Map PDF Output window and Jobnet Flow PDF Output window.

The default is *PO\_DATA\_PATH*#\Input, and for using the multi-user remote operation functionality, the default is *PO\_DATA\_PATH*#\Users\OS-user-name\Input.

#

The default value of *PO\_DATA\_PATH* is %ALLUSERSPROFILE%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO.

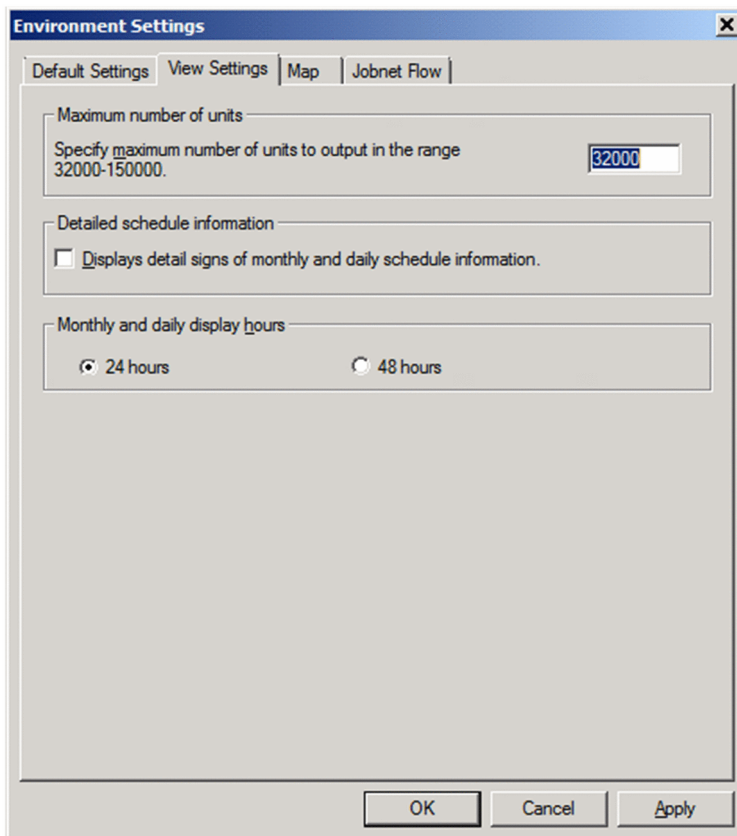
The default value of %ALLUSERSPROFILE% is *system-drive*:\ProgramData.

## 7.19.3 Displayed items of the View Settings tab

On the **View Settings** tab, you can perform display settings for document output information for job operation.



Figure 7–65: View Settings tab of Environment Settings window



### Maximum number of units

Specify the maximum number of units to display in an output document. You can specify a value from 32,000 to 150,000. The default is 32,000.

### Detailed schedule information

You can use this check box to change the symbols used in monthly and daily schedules. The default is cleared.

- When cleared  
The symbol ■ (Scheduled) is used for all units in monthly and daily schedules.
- When selected  
The symbols used in monthly and daily schedules reflect the status of the unit.  
For details on the symbols used, see [C. List of Symbols in Daily and Monthly Documents](#).

### Monthly and daily display hours

Select between 24 hours and 48 hours to display monthly and daily documents. You can select **24 hours** or **48 hours**. By default, **24 hours** is specified.

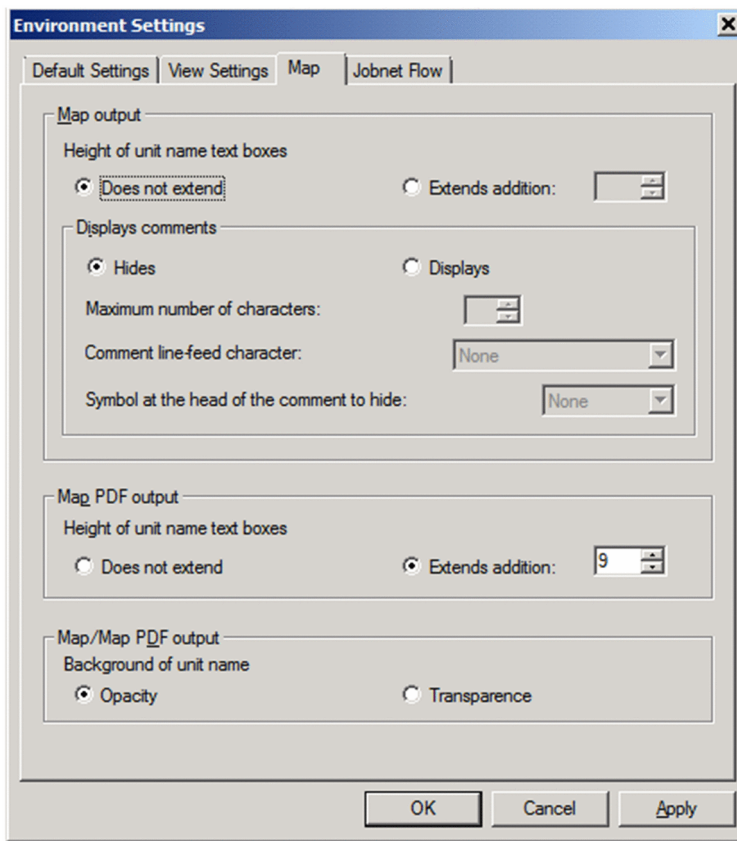
- When **24 hours** is selected  
In a monthly document, a job's schedule extended over two days is displayed as-is. In a daily document, a schedule for 24 hours from the displayed date is displayed.
- When **48 hours** is selected  
In a monthly document, a job's schedule extended over two days is displayed at the position of the scheduled date for job execution. In a daily document, a schedule for 48 hours from the displayed date is displayed.

For details on the 24-hour display system and the 48-hour display system, see [7.15.3 Items on Column Item tab](#).

## 7.19.4 Displayed items of the Map tab

On the **Map** tab, you can perform display settings for map output.

Figure 7–66: Map tab of Environment Settings window



### Map output

Select whether to extend the size of the unit name display area. If the unit name is not displayed fully in the print and print preview, select **Extends**. If you select **Extends**, the height of the unit name display area is increased for the size specified. The default is **Does not extend**.

If you select **Extends**, specify a number (unit: point) in the **addition** box, from 9 to 349 with up to one decimal point. If you specify a number with two or more decimal points, the second decimal point and thereafter are discarded.

### Displays comments

Select whether to display comments under unit names. If you want to display them, select **Displays**. The default is **Hides**.

When you select **Displays**, set the following items:

- **Maximum number of characters**  
Specify the length of a comment by the number from 1 through 80, starting from the beginning of the comment. The default is 30.
- **Comment line-feed location:**  
Line breaks are added right after the specified line-feed character when comments are displayed. The possible options are: **None**; " " (**space**); , (**comma**); . (**period**); - (**hyphen**); : (**colon**); and ; (**semicolon**).  
When **None** is selected, no line-feed character is added in the comment. When " " (**space**) is selected, line-feed characters are added right after double-byte or single-byte space characters. When one of the other symbols is selected, they are added right after the selected single-byte characters. The default is **None**.
- **Symbol at the head of the comment to hide:**

When a comment begins with the specified symbol, the comment for the unit is not displayed. The possible options are: **None**, #, @, % (percent), &, and \*.

When **None** is selected, all comments are displayed. The default is **None**.

### Map PDF output

Select whether to extend the size of the unit name display area. If the unit name is not displayed fully in the print and print preview, select **Extends**. If you select **Extends**, the height of the unit name display area is increased for the size specified. The default is **Extends addition**.

If you select **Extends**, specify a number (unit: point) in the addition box, from 9 to 30 with up to one decimal point. If you specify a number with two or more decimal points, the second and thereafter are discarded. The default is 9.

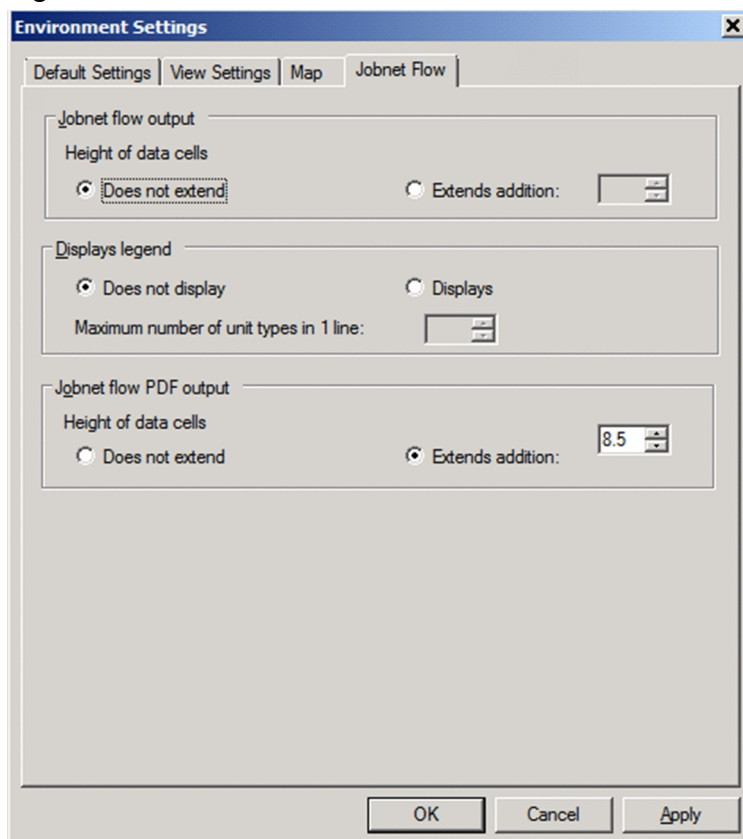
### Map/Map PDF output

Select whether to make the unit name background transparent or not. If the arrow is hidden by the unit name background, select **Transparency**. The default is **Opacity**.

## 7.19.5 Displayed items of the Jobnet Flow tab

On the **Jobnet Flow** tab, you can perform display settings for jobnet flow output display.

Figure 7–67: Jobnet Flow tab of Environment Settings window



### Jobnet flow output

Select whether to extend the size of the data display area. If the data is not fully displayed in the print or the print preview, select **Extends**. If you select **Extends**, the height of the data display area is increased for the size specified. The default is **Does not extend**.

If you select **Extends**, specify a number (unit: point) in the **addition** box, from 8.5 to 400 with up to one decimal point. If you specify a number with two or more decimal points, the second decimal point and thereafter are discarded.

## Displays legend

Select whether to display selected items for each unit type as a legend at the top of the jobnet flow output. If you select **Does not display**, legends are displayed. If you select **Displays**, selected items specified in the jobnet flow format definition are displayed at the top for each type of unit. The default is **Does not display**.

The order of the appearance of unit types is the same as that of unit types to appear in the **Unit tabs** in the **Jobnet Flow Format Definition Settings** window.

In the **Maximum number of unit types in 1 line** field, specify the maximum number of unit types to output in a line in an integer value ranging from 1 through 100. The default is 5.

For example, if there are 6 unit types to output, and if you specify 4 in the **Maximum number of unit types in 1 line** field, 4 unit types will be displayed in the first line with 2 unit types in the second line.

## Jobnet flow PDF output

Select whether to extend the size of the data display area. If the data is not fully displayed in the print or the print preview, select **Extends**. If you select **Extends**, the height of the data display area is increased for the size specified. The default is **Does not extend**.

If you select **Extends**, specify a number (unit: point) in the **addition** box, from 8.5 to 400 with up to one decimal point. If you specify a number with two or more decimal points, the second and thereafter are discarded. The default is 8.5.

## 7.19.6 Cautionary notes for the Environment Settings window

The following shows cautionary notes for the Environment Settings window.

- Paths and file names are converted to UTF-8 encoding when a file is saved. When this conversion takes place, any characters that cannot be converted are replaced with question marks (?). This can cause the following to occur:
  - The dialog box that appears when you click the **Browse** button displays the path of a higher-level directory or the current directory, not the path you specified.
  - If the folder specified in **Job operation information** contains a question mark, the dialog box that appears when you open a file displays the current directory, not the directory you specified.
  - If the folder specified in **Save CSV File** contains a question mark, the dialog box that appears when you save a file displays the current directory, not the directory you specified.
  - If the folder specified in **Format definition** contains a question mark, an error occurs when JP1/AJS3 - Print Option attempts to load a format definition file, and the document is not displayed. Also, the dialog box that appears when you click the **Browse** or **Create** button in the Format Definition Settings window displays the current directory, not the directory you specified.
  - If the folder specified in **Jobnet flow format definition** contains a question mark, an error occurs when JP1/AJS3 - Print Option attempts to load the jobnet flow format definition file, and the jobnet flow image is not output. Also, the dialog box that appears when you click the **Browse** or **Create** button in the Jobnet Flow Format Definition Settings window displays the current directory, not the directory you specified.

If any of these issues occur, change the path of the file or folder in the Environment Settings window.

- If you have configured the system to not show hidden files and folders, the default file or folder is not displayed when you click **Browse**. You can display the file or folder by configuring the system to show all files. For details on how to do so, see the Help for the operating system. Alternatively, you can change the file or folder path to one the system can display.
- If you specify a protected folder such as `C:\Program Files` as a folder path, files might not be output to the intended location.

- If you enable the display of detailed schedule information while a monthly or daily schedule is displayed in the Job Operation Document Output window, simply clicking **OK** or **Apply** does not change the symbols displayed in the window. To update the symbols, choose **Refresh** from the **View** menu.
- If a monthly or daily schedule is being displayed in the Job Operation Document Output window when you attempt to apply the changed **Monthly and daily display hours** setting by clicking the **OK** or **Apply** button, the changed display hour format cannot be applied. To apply the changed display hour format, choose the **View** menu and then **Refresh**.
- If you make the unit name background transparent in map output or map PDF output, the character string of the unit name and the arrow might overlap, making it difficult to read. Resolve this issue either by changing the setting of **Background of unit name** to match the unit configuration, or by making the text box transparent in Microsoft Excel.
- Note that you cannot use 48 hours to display a job operation information file with information collected by using JP1/AJS2 - Print Option Manager License 07-10 or earlier, or a job operation information file not containing any jobnet. If any of these job operation information files is output in a document with **48 hours** specified in **Monthly and daily display hours**, a warning message appears and the data is displayed in 24 hours.
- If you change the **Monthly and daily display hours** setting in the Environment Settings window after displaying a document, refresh the document display. If the document display is not refreshed when the display system setting changes from 24 hours to 48 hours, message KAVR2016-W appears, and then the data is displayed in 24 hours.
- No comments can be displayed in the map PDF output. If you want to display comments in a PDF file, enable comments in the Environment Settings window, output a map to an Excel file, and then convert it to PDF format.
- When multi-user remote operation is enabled, the updates a user made may be lost or a file I/O error may occur if more than one user uses the same location for the destination to which definition files are stored or job operation information files are output. Different locations must be specified for different users.

## 7.20 Version Information window

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The Version Information window displays information about JP1/AJS3 - Print Option.

# 8

## Commands

This chapter describes the syntax of the commands used with JP1/AJS3 - Print Option.

## Command syntax conventions

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The following table describes the notation used in explanations of command syntax:

Symbol	Description
 (vertical bar)	A delimiter between items in command syntax, representing an OR operand. Example: A   B   C in the command syntax indicates that you can specify A, B, or C.
{ }	You must specify one of the items enclosed in these brackets. Items are delimited by vertical bars. Example: { A   B   C } in the command syntax indicates that you can specify either 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] means you can specify A or omit A. [B   C] means you can specify B or C, or omit both.
. . .	The item or items preceding the ellipsis (...) can be repeated. Example: A, B, . . . in the command syntax indicates that after A, you can 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 items take effect. Example: [ <u>A</u>   B] in the command syntax indicates that A is assumed if you omit this item.



## List of commands

The commands used in JP1/AJS3 - Print Option are listed below.

### JP1/AJS3 - Print Option Manager commands

Functionality	Command name	Windows	UNIX	Required permissions
Collect job operation information	jprcollect	Y	Y	#1
Start the JP1/AJS3 - POM service	jprpomlstart	N	Y	#2
Stop the JP1/AJS3 - POM service	jprpomlstop	N	Y	#2

### JP1/AJS3 - Print Option commands

Functionality	Command name	Windows	UNIX	Required permissions
Output job operation documents	jprprint	Y	N	None
Output the contents of the job operation information file in map format or jobnet flow format	jprmpflw	Y	N	None
Add, update, delete, and list authentication information for JP1/AJS to connect to	jprajsmkkey	Y	N	None
Get the job operation information file	jprwebcollect	Y	N	None

#1

The `jprcollect` command uses the `ajspoint` and `ajsshow` commands provided by JP1/AJS. Users who execute the `jprcollect` command must also have permission for these commands. For details, see the manual *JP1/Automatic Job Management System 3 Command Reference*.

#2

Requires superuser permission.

### About the LANG environment variable

When you execute a command in UNIX, set the value of the LANG environment variable as follows in the command execution environment:

OS	Available language types and character codes		
	Language type	Character code	LANG environment variable value
HP-UX	Japanese	Shift JIS	ja_JP.SJIS
		EUC	ja_JP.eucJP
		UTF-8	ja_JP.utf8
	English	ASCII	C
	Chinese	GB18030	zh_CN.gb18030
Solaris	Japanese	Shift JIS	ja_JP.PCK
		EUC	ja ja_JP.eucJP#1
		UTF-8	ja_JP.UTF-8#1
	English	ASCII	C
	Chinese	GB18030	zh_CN.GB18030

OS	Available language types and character codes		
	Language type	Character code	LANG environment variable value
AIX	Japanese	Shift JIS	Ja_JP
		EUC	ja_JP
		UTF-8	JA_JP JA_JP.UTF-8
	English	ASCII	C
	Chinese	GB18030	Zh_CN.GB18030
Linux	Japanese	Shift JIS	ja_JP.SJIS <sup>#2</sup> ja_JP.sjis <sup>#2</sup>
		EUC	Not available.
		UTF-8	ja_JP.UTF-8 ja_JP.utf8
	English	ASCII	C
	Chinese	GB18030	zh_CN.gb18030

#1

Can be used with Solaris 11 or later.

#2

Can be used only with SUSE Linux.

# jprcollect (Windows and UNIX)

## Syntax

```
jprcollect
  unit-name
  output-file-name
  [ -b year/month/day -e year/month/day
  | [-L] [-N] [-T]
  | {-l month | -n month | -t} [-p month]
  | [-C] [-G] [-D] ] [-w]
  [-F name-of-JP1/AJS-scheduler-service]
  [-A] [-U] [-y]
```

## Description

The `jprcollect` command collects information about job operation from JP1/AJS. The command collects definition information and execution schedules and results for job network elements, and stores the information in a job operation information file. The information in these files is the basis for the documents output by JP1/AJS3 - Print Option.

The `jprcollect` command uses the `ajsprint` and `ajsshow` commands provided by JP1/AJS to collect job operation information.

Command name	Purpose
<code>ajsprint</code>	Collecting definition information
<code>ajsshow</code>	Collecting execution schedules and results

Before you use the `jprcollect` command, the environment (environment variables and other settings) must be configured to support the commands listed above. For details, see the manual *JP1/Automatic Job Management System 3 Command Reference*.

You can use unit names to specify the job operation information to collect. Use the full path of a JP1/AJS job, jobnet, or job group to specify a unit name. A full unit name begins with a forward slash (/) and consists of the names of the root jobnet down to the job network element, each separated by forward slashes.

To collect information for all units under the root job group, specify the `-A` option. If you use the `-A` option, you can specify `/` (the root job group) as the unit name.

The `jprcollect` command outputs the collected job operation information to the file (job operation information file) specified in *output-file-name*. Do not specify a file extension in *output-file-name*. JP1/AJS3 - Print Option creates a file with the extension `.aoi` when it outputs the information.

When collecting execution schedules and results, specify the period for which to collect the information. The collection period is defined by a start date and an end date. You can use *date specification*, *monthly specification*, *relative month specification*, or *daily specification* to specify the collection period.

The command collects information for units that are scheduled to execute or were executed within the collection period. It does not collect information for units in *Now Running* status.

The command does not collect execution schedules and results if the start or end date of the collection period falls after January 1st, 2037.

When you use monthly specification or relative month specification, specify the month for which to collect data. A month lasts from the base time on the first day of the month until a time 23 hours, 59 minutes, and 59 seconds after the base time on the last day of the month.

Examples of command specification:

- When specifying a collection period by date specification and calendar date  
To collect execution schedules and results for jobnet Net1 in job group Group1 for the period from January 1st, 2016 to January 31st, 2016 as a calendar date, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -b 2016/01/01 -e 2016/01/31
```
- When specifying a collection period by date specification and execution date  
To collect execution schedules and results for jobnet Net1 in job group Group1 for the period from January 1st, 2016 to January 31st, 2016 as an execution date, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -b 2016/01/01 -e 2016/01/31 -w
```
- When specifying a collection period by monthly specification  
To collect execution schedules and results for jobnet Net1 in job group Group1 using *Last month* as the collection period, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -L
```

If you execute this command in April of 2016, the collection period will be from March 1st to March 31st, 2016.
- When specifying a collection period by relative month specification and calendar date  
To collect execution schedules and results for jobnet Net1 in job group Group1 using *From 3 months ago for 2 months* as the collection period, with the calendar date option specified, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -l 3 -p 2
```

If you execute this command in April of 2016, the collection period will be from January 1st to February 28th, 2016.
- When specifying a collection period by relative month specification and execution date  
To collect execution schedules and results for jobnet Net1 in job group Group1 using *From 5 months ago for 1 months* as the collection period, with the execution date option specified, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -n 5 -p 1 -w
```

If you execute this command in January of 2016, the collection period will be from June 1st to June 30th, 2016.
- When specifying a collection period by relative month specification and execution date  
To collect execution schedules and results for jobnet Net1 in job group Group1 using *From 12 months ago for 12 months* as the collection period, with the execution date option specified, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -l 12 -p 12 -w
```

If you execute this command in December of 2017, the collection period will be from December 1st, 2016 to November 30th, 2017.
- When specifying a collection period by daily specification and calendar date  
To collect execution schedules and results for jobnet Net1 in job group Group1 using *Last day* as the collection period, with the calendar date option specified, and record the information in the file /tmp/file1.aoi, execute the command as follows:  

```
jprcollect /Group1/Net1 /tmp/file1 -C
```

If you execute this command on December 8th, 2017, the collection period will be from December 7th, 2017 to December 7th, 2017.

- When specifying a collection period by daily specification and execution date  
To collect execution schedules and results for jobnet `Net1` in job group `Group1` using *Today* and *Next day* as the collection period, with the execution date option specified, and record the information in the file `/tmp/file1.aoi`, execute the command as follows:

```
jprcollect /Group1/Net1 /tmp/file1 -D -G -w
```

If you execute this command on December 8th, 2017, the collection period will be from December 8th to December 9th, 2017.

## Command directory

In Windows:

```
installation-folder
```

In UNIX:

```
/opt/jplajs2pom/bin
```

## Options and arguments

### *unit-name*

Specify the name of the unit whose job operation information you want to collect. The command collects information for the specified unit and all its subordinate units.

This argument does not accept wildcards (such as `*` and `?`).

Do not specify more than one unit name. If you do, an error occurs when you attempt to output a job operation document.

Unit names are case sensitive.

### *output-file-name*

Specify the name of the job operation information file to which to output the collected job operation information, without the extension (`.aoi`).

You can specify the file name by absolute or relative path.

Do not use machine-dependent characters or any of the following symbols in the file name.

`\ / : * ? " < > | $ ` -`

If you use a hyphen (`-`), you can specify other than top of the file path name.

If you output the job operation information file by using JP1/AJS3 - Print Option, make sure that the folder path does not exceed 194 bytes, and the file name does not exceed 63 bytes.

In UNIX, make sure that the user who executes the command has write permission for the output directory.

### `-b year/month/day`

Specify the start date of the period for which to collect execution schedules and results. The base time serves as the start time.

- *year*  
Specify a year as a value from 1994 to 2036.
- *month*  
Specify a month as a value from 1 (or 01) to 12.
- *day*

Specify a date as a value from 1 (or 01) to 31.

This option must be specified together with the `-e` option. If you omit one or the other, the command will not collect execution schedules and results.

`-e year/month/day`

Specify the end date of the period for which to collect execution schedules and results. The date you specify must be the same as or later than the start date. The base time plus 23 hours, 59 minutes, and 59 seconds serves as the end time.

- *year*

Specify a year as a value from 1994 to 2036.

- *month*

Specify a month as a value from 1 (or 01) to 12.

- *day*

Specify a date as a value from 1 (or 01) to 31.

This option must be specified together with the `-b` option.

`-L`

Specify this option when you want to collect execution schedules and results for the previous month.

You cannot specify this option with the `-N` option unless the `-T` option is also specified.

`-N`

Specify this option when you want to collect execution schedules and results for the next month.

You cannot specify this option with the `-L` option unless the `-T` option is also specified.

`-T`

Specify this option when you want to collect execution schedules and results for the current month.

`-l month`

Specify this option when you want to collect execution schedules and results for one or more months, starting from a past month.

You can specify the following values:

*Month:* 1 to 12

`-n month`

Specify this option when you want to collect execution schedules and results for one or more months, starting from a future month.

You can specify the following values:

*Month:* 1 to 12

`-t`

Specify this option when you want to collect execution schedules and results for one or more months, starting from the current month.

`-p month`

When collecting execution schedules and results on a monthly basis, specify the number of months for which you want to collect data.

You can specify the following values:

*Month:* 1 to 12

Specify this option together with the `-l`, `-n`, or `-t` option.

If you omit `-p`, then `-p 1` is assumed and the command collects information for one month.

- C  
Specify this option when you want to collect execution schedules and results for the previous day.  
You cannot specify this option with the -G option unless the -D option is also specified.
- G  
Specify this option when you want to collect execution schedules and results for the next day.  
You cannot specify this option with the -C option unless the -D option is also specified.
- D  
Specify this option when you want to collect execution schedules and results for today.
- w  
Specify the start date and end date of the time period when execution schedules and results are collected as an execution date. If you omit this option, specify the start and end dates of the time period mentioned earlier as a calendar date.
- F *name-of-JP1/AJS-scheduler-service*  
Specify the name of the JP1/AJS scheduler service to be accessed by the command.
- A  
Allows you to specify the root job group (/) in *unit-name*.
- U  
Specify this option to collect information about the last update times for the specified unit and its subordinate units. This information is only collected from JP1/AJS3 - Manager version 09-00 or later.
- Y  
Specify this option to collect jobnet information for each release ID when the registration information for the specified unit includes jobnet release information. This information is only collected from JP1/AJS3 - Manager version 09-00-04 or later.  
For details on jobnet release, see the description of the jobnet release functionality in the manual *JP1/Automatic Job Management System 3 Overview*.

#### Return values

0	Normal termination
4	Ended with warning (the command collected definition information but not execution schedules and results)
10	Abnormal termination (argument specification error)
20	Abnormal termination (runtime error)

#### Supplementary note:

Each time you execute the `jprcollect` command, JP1/AJS3 - Print Option creates a file containing execution log information for the command in the same directory or folder as the job operation information file. The file has the same name as the output file but with the extension `.log`.

The `jprcollect` command does not validate its syntax before executing. If the command terminates abnormally, identify the problem by reviewing the execution log information.

The following shows an example of the information output to an execution log file:

```

JP1/Automatic Job Management System 3 - Print Option 10-00
Fri Apr 13 18:35:20
jprcollect -L /net1 aoifile
"G:\YProgram Files\YHITACHI\JP1\AJS2\bin\Yajsprint" -f %JN /net1
"G:\YProgram Files\YHITACHI\JP1\AJS2\bin\Yajsshow" -a /net1
"G:\YProgram Files\YHITACHI\JP1\AJS2\bin\Yajsshow" -i "start-date, end-date,
J=%JJ, j=%jj, A=%AA, T=%TT, C=%CC, U=%UU, D=%DD, L=%LL, p=%pp, P=%PP, M=%MM,
R=%RR, S=%SS, s=%ss, K=%KK, k=%kk, E=%EE, e=%ee, V=%VV, Q=%QQ, W=%WW, Z=%ZZ,
G=%GG, N=%NN, H=%HH, I=%II, Y=%YY, B=%BB, b=%bb, a=%aa, O=%OO, o=%oo, v=%vv,
w=%ww, F=%FF, i=%ii, l=%ll, r=%rr, d=%dd, #=%##, x=%x, X=%X, m=%mm, q=%qq, SP=%SP,
OP=%OP, St=%St, st=%st, Pt=%Pt, Jm=%Jm, Am=%Am, Ed=%Ed, ab=%ab, an=%an, FG=%FG,
ds=%ds, de=%de, MV=%MV" -b start-date -e end-date -R unit-name
KAVS0130-E Specified Jobnet (/net1) is not registered.
"G:\YProgram Files\YHITACHI\JP1\AJS2\bin\Yajsprint" -f "JN=%JN,ud=%ud,Ed=%Ed" -R /net1

```

JP1/AJS3 or JP1/AJS2 command line output  
generated internally by jprcollect

Error message produced by the  
ajsshow command

Structure and contents of execution log information file:

Line 1: Product header

Line 2: Date and time when command was executed

Line 3: Options and arguments specified at command execution

Line 4 onward: Execution log and execution results of JP1/AJS3 or JP1/AJS2 command (ajsshow and ajsprint)

Cautionary notes:

- If the unit you specify has not been registered for execution, the command will collect definition information but not execution schedules and results, even if you specify a collection period. The command will not collect execution schedules and results if the unit was not registered for execution within the specified collection period. In these situations, although the command terminates with a warning, you can still output documents based on the job operation information file. However, because execution schedules and results were not collected, you cannot output documents that contain execution schedules or results.

If you specify a job group that contains units that have been submitted for execution and those that have not, the command can only collect execution schedules and execution results for the units that have been submitted for execution.

- In UNIX, make sure that the system where the command is executed uses the same character encoding as the JP1/AJS manager.

The character encoding is determined by a setting in the OS (such as the LANG environment variable) that is in effect when you execute the command.

If the system where the command is executed uses EUC encoding, the contents of the job operation information file are converted to Shift-JIS encoding. If a unit name or item value contains machine-dependent characters, a conversion error occurs.

If the system where the command is executed uses Shift-JIS or UTF-8 encoding, the job operation information file is output using the encoding of that system.

- Specifying the -A option to collect job operation information for all units under the root jobnet can result in a large number of unit definitions and large amounts of schedule information being collected. The result is an extremely large job operation information file (.aoi file), which places significant demands on system resources. Displaying or printing such a file in the Job Operation Document Output window, or printing or outputting the file to a CSV file using the jprprint command, can take a very long time.
- A job whose execution schedule and execution results exist within the range of the specified collection period is output. For a job whose execution started within the range of the collection period but ended beyond the range of the collection period, if you collect job operation information after the end of its execution, you can obtain the execution result data within the range of the collection period. You cannot obtain the execution result data beyond the range of the collection period.



- The `jprcollect` command makes use of standard system commands to provide its functionality. Make sure that the following commands are able to be used:  
In UNIX: `sh`, `iconv`, `cp`, `rm`, `echo`, `hostname`  
In Windows: `echo`
- When JP1/AJS3 - Manager is operating in a cluster environment, collect job operation information from the active node. To do so, specify the name of the scheduler service on the logical host as the service name.
- If you specify the `-L` option, the `-N` option, the `-T` option, the `-l` option, the `-n` option, the `-t` option, the `-p` option, the `-C` option, the `-G` option, or the `-D` option, the collection period is determined based on the system time of the physical host, not the local time of the scheduler service. If the local time of the scheduler service differs from the system time of the physical host, specify a collection period based on the local time in the `-b` and `-e` options.
- If a non-Administrator user executes the `jprcollect` command in a Windows server 2019, Windows Server 2016 or Windows Server 2012 environment with UAC enabled, an error occurs if a protected folder such as `C:\Program Files` is specified in the path of the output file. In this scenario, execute the command from a command prompt with Administrator privileges.
- If you do not specify the `-y` option, the `jprcollect` command collects definition information, execution schedules, and execution results for units in *Being Applied* status. It cannot collect release information.
- If you collect job operation information with the JP1/AJS3 environment setting parameter `ADMACLIMIT` set to `yes`, the KAVR1000-E error might occur. In that case, implement either of the following.

(In Windows)

Log on to the OS and create a JP1 user with the same name as the user account that executes the `jprcollect` command and set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.

For details about the JP1 permission levels that are required to execute the `ajsprint` command and the `ajsshow` command, see the documentation for JP1/AJS3.

(In UNIX)

Log in to the OS and create a JP1 user with the same name as the user account that executes the `jprcollect` command and set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.

For details about the JP1 permission levels that are required to execute the `ajsprint` command and the `ajsshow` command, see the documentation for JP1/AJS3.

- If the JP1/AJS3 environment setting parameter `AJSPRINTSORTUNITINF` is set to `yes`, the related line information is output to the job operation information file in the character code ascending order for the preceding unit and succeeding unit. If the environment setting parameter `AJSPRINTSORTUNITINF` is set to `no` or a value is not set, the related line information is output in the creation order for the preceding unit and succeeding unit. For details, see the documentation for JP1/AJS3.
- The `jprcollect` command uses the following information acquired by the JP1/AJS command `ajsshow` to determine the schedule information for jobs in the collection period:
  - Scheduled execution start date and time obtained from a computed processing cycle
  - Scheduled execution end date and time obtained from a computed processing cycle
 If a job has finished executing, the command outputs the actual execution start and end times for the job, as shown in the example below

Figure 8–1: Example of monthly schedule information (with timestamps) output after acquiring operation information for Feb 1 to 28 at 12:00 on Feb 16

[Monthly Schedule]	...	14 Sa	15 Su	16 Mo	17 Tu	18 We	...
●Daily accounting	...	■(17:01) #	■(17:02) #	■(17:00)	■(17:00)	■(17:00)	...

#

An execution record for job that has finished executing.

You can make sure that a document does not include actual execution histories by specifying a future date as the start date of the collection period in the `-b` option.

- When the `jprcollect` command is executed via the linkage with JP1/AJS3 - View, the information is collected using the calendar date or the KAVR5024-E error occurs if the destination is JP1/AJS3 - Print Option Manager 11-00 or earlier and the `-w` option is specified.
- When the `jprcollect` command is executed via the linkage with JP1/AJS3 - View, the KAVR5024-E error occurs if the destination is JP1/AJS3 - Print Option Manager 11-10 or earlier and the number of months specified in the `-l`, `-n`, or `-p` option exceeds 6.
- When the `jprcollect` command is executed via the linkage with JP1/AJS3 - View, the schedule information is not collected or the KAVR5024-E error occurs if the destination is JP1/AJS3 - Print Option Manager 11-10 or earlier and the `-C`, `-D`, and `-G` options are specified.
- If you do not specify the `-w` option, the `jprcollect` command executes the `ajsshow` command with `-b` and `-e` options.

If you specify the `-w` option, the `jprcollect` command executes the `ajsshow` command with `-v` and `-w` options.

- If you add new a unit or change a unit name on JP1/AJS during executing `jprcollect` command, the job operation information file has inconsistent data and an error occurs to output job operation information as documents.

#### Size of job operation information files

You can use the following equation to estimate the size of the job operation information file (`aoi` file) output by the `jprcollect` command.

Keep in mind that a certain amount of leeway is built into this equation.

Many of the factors governing file sizes depend on individual user settings. These include the length of unit names, the depth of the hierarchy, the position of the specified unit in the hierarchy, and the numbers of relation lines and schedule rules. For this reason, the result of the equation does not always reflect the actual file size.

Equation:

$$\begin{aligned} & \text{Number of units defined under specified unit} \times 4.5 \text{ kilobytes} \\ & + \text{Number of generations in specified collection period} \times 3.5 \text{ kilobytes} \end{aligned}$$

The amount of memory the `jprcollect` command will use is the same value as the above size.

#### How the **Calendar date** and **Execution date** options work differently

The following describes how the **Calendar date** and **Execution date** options work differently during collection:

Example 1: If **Calendar date** is selected in the Collecting Job Operation Information window to collect schedules on May 25, 2016:

```
jprcollect /grp1/net1 /tmp/file1 -b 2016/05/25 -e 2016/05/25
```

When this command is executed, the information of the job that is scheduled at 00:30 on May 26 and extends over two days is not collected.

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Month: 2016/5 Base time: 00:00		Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th
☉	PC-jobC																										
☉	PC-jobD																										■(23:55)
☉	PC-jobF																										■(23:55)

Example 2: If **Execution date** is selected in the Collecting Job Operation Information window to collect schedules on May 25, 2016:

```
jprcollect /grp1/net1 /tmp/file1 -b 2016/05/25 -e 2016/05/25 -w
```

When this command is executed, the information of the job that is scheduled at 00:30 on May 26 and extends over two days is collected because the upper-level jobnet is scheduled to run on May 25.

[Monthly Schedule]		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Month: 2016/5 Base time: 00:00		Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th
☉	PC-jobC																										■(23:55)
☉	PC-jobD																										■(23:55)
☉	PC-jobF																										■(00:30)

Example 3: If **Calendar date** is selected in the Collecting Job Operation Information window to collect schedules of today:

```
jprcollect /grp1/net1 /tmp/file1 -D
```

When this command is executed on December 8, 2017, the information of the job that is scheduled at 00:05 on December 9 and extends over two days is not collected.

	..	December 8	December 9	...
/net	..	23:45		...
/net/PCjob1	..	23:45		...
/net/PCjob2	..	23:55		...
/net/PCjob3	..		00:05	...

Example 4: If **Execution date** is selected in the Collecting Job Operation Information window to collect schedules of today:

```
jprcollect /grp1/net1 /tmp/file1 -D -w
```

When this command is executed on December 8, 2017, the information of the job that is scheduled at 00:05 on December 9 and extends over two days is collected because the upper-level jobnet is scheduled to run on December 8.

	..	December 8	December 9	...
/net	..	23:45		...
/net/PCjob1	..	23:45		...
/net/PCjob2	..	23:55		...
/net/PCjob3	..		00:05	...

# jprpomlstart (UNIX)

---

## Syntax

```
jprpomlstart
```

## Description

Starts the JP1/AJS3 - Print Option Manager service.

## Command directory

```
/opt/jplajs2pom/bin
```

## Options and arguments

None.

### Return values

0	Normal termination
3	Ended with warning (the JP1/AJS3 - Print Option Manager service is already running)
Other	Abnormal termination

### Cautionary notes:

- Execute the `jprpomlstart` command from an account with superuser privileges.
- When you execute the `jprpomlstart` command, make sure that the `LANG` environment variable in the command execution environment specifies the same encoding as JP1/AJS3 - Manager. For a description of the character codes you can use, see *About the LANG environment variable* in [List of commands](#).
- After stopping the JP1/AJS3 - Print Option Manager service with the `jprpomlstop` command, if you restart the service with the `jprpomlstart` command, error KAVR5022-E might be output. If this occurs, execute the `jprpomlstart` command again after waiting about one minute to a few minutes<sup>#</sup>.

#

At least, the length of time indicated by the Time Wait value set by the OS is required for the above waiting time. For details on how to confirm or change this value, see the relevant OS manual.

# jprpomlstop (UNIX)

---

## Syntax

```
jprpomlstop
```

## Description

Stops the JP1/AJS3 - Print Option Manager service.

## Command directory

```
/opt/jplajs2pom/bin
```

## Options and arguments

None.

### Return values

0	Normal termination
4	Ended with warning (the JP1/AJS3 - Print Option Manager service is already stopped)
Other	Abnormal termination

### Cautionary note:

Execute the `jprpomlstop` command from an account with superuser privileges.

## jprprint (Windows)

---

### Syntax

```
jprprint
  job-operation-information-file-name
  format-definition-file-name
  [{-p|-c output-CSV-file-name [-u]]}
  [-r release-ID]
```

### Description

The `jprprint` command outputs the contents of a job operation information file to a printer in the format defined in a format definition file. The command outputs the information to the default printer.

The `jprprint` command displays a window when it prints the document using a printer. For this reason, you must be logged in to Windows to use this command.

Specify the job operation information file (`.aoi`) and format definition file (`.jof`) by full path. You cannot specify a relative path.

If you specify a `-c` output CSV file name (`.csv`), the `jprprint` command outputs the information to the specified file in CSV format.

For automatic operation by using JP1/AJS

When a window or a message dialog does not display and wait for input<sup>#</sup> by executing the `jprprint` command

You can specify an executable file or a script file to JP1/AJS job definition for executing the job.

For details on how to design the system for automated job execution, see the manual JP1/AJS.

When a window or a message dialog displays and waits for input<sup>#</sup> by executing the `jprprint` command

You can use JP1/Script by logging in to Windows. JP1/Script provides functionality to enable job execution in the user session space. Create a script file (`.spt`) and specify the created script file for the executable file for JP1/AJS. For details on how to create a script file, see the manual JP1/Script (For Windows Systems).

#

For an example that a window or a message dialog displays and waits for input:

- When you print the document using a printer, a printer dialog displays and wait for a user response.

Example of command specification:

To print the job operation information file `C:\Input\SAMP.aoi` as defined in the format definition file `C:\Format\unit.jof`, execute the command as follows:

```
jprprint c:\Input\SAMP.aoi c:\Format\unit.jof
```

The following shows an example of executing the command above using a JP1/Script script file:

```
NetExec("SERVER", "C:\Program Files\HITACHI\JP1AJS2PO\jprprint.exe", _
    True, "", False, Empty, _
    " " "c:\Input\SAMP.aoi " " ", _
    " ""c:\Format\unit.jof " " ", _
    "-p")
Exit(_EXEC_RTN_)
```

For details on how to create a script file, see the manual *JP1/Script (For Windows Systems)*.

## Command directory

*installation-directory*

## Options and arguments

### *job-operation-information-file-name*

Specify the name of the job operation information file whose information you want to output.

Specify the file name by full path (including the extension *.aoi*).

Make sure that the path and file name of the file do not exceed 258 bytes in total, the path does not exceed 194 bytes, and the file name does not exceed 63 bytes.

### *format-definition-file-name*

Specify the name of the format definition file that contains the formats for the job operation information you want to output.

Specify the file name by full path (including the extension *.jof*).

Make sure that the path and file name do not exceed 258 bytes in total, the path does not exceed 194 bytes, and the file name does not exceed 63 bytes.

The format definition file is located in the folder specified in the **Format definition** field in the Environment Settings window.

You can create format definition files in the Format Definition Settings window.

### **-p**

Specify this option to output the job operation information to the default printer. This option cannot be specified together with the **-c** option.

### **-c** *output-CSV-file-name*

When you want to output job operation information to a CSV file, specify the **-c** option and the name of the CSV file to which to output the information.

Specify the file name by full path (including the extension *.csv*).

Make sure that the path and file name of the file do not exceed 258 bytes in total, and the path does not exceed 194 bytes. The file names of files whose path and file name exceed 258 bytes in total are converted automatically when the file is saved. For details on the rules governing automatic file name conversion, see [7.10 Save CSV File window](#).

Do not use any of the following characters in a file name:

`\ / : * ? " < > |`

This option cannot be specified together with the **-p** option.

If you specify this operand, the document is not output to the printer.

The contents of the CSV file differ depending on whether the **Outputs CRLFs to CSV file** check box is selected in the Environment Settings window.

### **-u**

You can specify this option when **-c** *output-CSV-file-name* is specified.

This option dictates how the command behaves when the file specified in *output-CSV-file-name* already exists.

If you specify this option, the file is overwritten if it already exists. If you omit this option, the command terminates abnormally if the file already exists.

### **-r**

If the specified job operation information file contains release ID information, specify the release ID of the jobnet whose information you want to output.

If you do not specify a release ID, the command outputs jobnet information for one of the release IDs in the file. For details on release IDs, see the manual *JPI/Automatic Job Management System 3 Overview*.

Cautionary notes:

- If you print a document using a printer by executing the `jprprint` command, a printer dialog or a message dialog might display and wait for a user response. In this way, log in to Windows and execute the command.
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as `C:\Program Files` as the output destination for a CSV file, the file might be redirected and saved to each user's VirtualStore folder.

Files are redirected when the save destination is a folder in one of the following directories:

- `system-drive:\Windows`
- `system-drive:\Program Files`
- `system-drive:\Program Files (x86)` (for 64bit Windows)

The redirected files are stored in the following directories:

- `%LocalAppData%\VirtualStore\Windows`
- `%LocalAppData%\VirtualStore\Program Files`
- `%LocalAppData%\VirtualStore\Program Files (x86)`

The default value of the `%LocalAppData%` is `system-drive:\Users\OS-user-name\AppData\Local`.

- If the length of the path (including the file name) to the CSV file created by the `jprprint` command exceeds 218 characters, an error occurs when you start Microsoft Excel to open the CSV file. If this occurs, use one of the following methods to open the file:
  - Change the name of the file to a shorter one.
  - Change the name or names of one or more folders that contain the file to shorter ones.
  - Move the file to a folder with the shorter path name.
- If you press the **Ctrl + C** keys during execution of the `jprprint` command, the `jprprint` command is interrupted, but printing might go on in the background or a CSV file might be output.

Return values

0	Normal termination
4	Terminated with warning (there is no information to output or the input file includes unsupported units)
10	Abnormal termination (such as an argument specification error or the maximum number of units exceeded)
20	Abnormal termination (runtime error)

Memory used by `jprprint` command

You can use the following equation to determine how much memory the `jprprint` command will use.

Keep in mind that a certain amount of leeway is built into this equation.

Many of the factors governing memory usage depend on individual user settings. These include the length of unit names, the depth of the hierarchy, the amount of unit attribute data, and the number of schedule rules. For this reason, the result of the equation does not always reflect actual memory usage.

Equation:

$$4 \text{ MB} + (\text{Memory needed to load job operation information file}) \times 3.5 \text{ bytes}$$

- Memory needed to load job operation information file:  
= *All units* + *Format*
- All units:  
= 20 bytes + 4 bytes x Total number of units + (1 unit) x Total number of units



- 1 unit:  

$$= 28 \text{ bytes} + (48 \text{ bytes} + \text{average data of unit attributes} \times \text{number of days of daily data collected}) \times \text{number of attributes collected by ajsshow command} + (48 \text{ bytes} + \text{average data of unit attributes}) \times \text{number of attributes collected by ajsprint command} + (\text{number of attributes collected by ajsshow command} + \text{number of attributes collected by ajsprint command}) \times 8 \text{ bytes}$$
- Format  

$$= 61 \text{ bytes} \times 4 \text{ bytes} + 12 \text{ bytes} \times \text{number of columns selected}$$

Note:

- If memory usage reaches the OS's upper limit (2 GB) for a single process, the process fails in the insufficient memory error (KAVR0002-E) even when the machine capacity allows more.  
 In such a case, perform (1), (2), or both below in order to divide the job operation information file into smaller parts
  - (1) In order to make the number of target units smaller, choose a unit name from the lower level and specify it for the `jprcollect` command.
  - (2) In order to make the volume of collecting schedule information smaller, specify a shorter collection period for the `jprcollect` command.
- In cases where multi-user remote operation is enabled, the required amount of memory space is given by multiplying the amount needed for a single process of JP1/AJS3 - Print Option by the number of users who use JP1/AJS3 - Print Option.

# jprmpflw (Windows)

## Syntax

```
jprmpflw
    job-operation-information-file-name
    {-m map-output-save-file-name [-u] [-b] [-d depth-of-the-job-hierarchical-tree]
    |-l jobnet-flow-output-save-file-name [-u] [-b] [-d depth-of-the-job-hierarchical-tree]}
    [-r release-ID]
```

## Description

The `jprmpflw` command outputs the contents of the job operation information file in map format or jobnet flow format.

For automatic operation using JP1/AJS, execute the command in either of the following ways:

Specify an executable file or a script file to a JP1/AJS2 - Manager or JP1/AJS3 - Manager job definition for executing the job.

For details on how to design the system for automated job execution, see the manual of JP1/AJS2 or JP1/AJS3.

Use JP1/Script by logging on to Windows.

JP1/Script provides functionality to enable job execution in the user session space. Create a script file (`.spt`) and specify the created script file as an executable file for JP1/AJS. For details on how to create a script file, see the manual *JP1/Script (For Windows Systems)*.

Example of command specification:

- When the information in the job operation information file (`C:\Input\SAMP.aoi`) is output to a file (`C:\work\map.xlsx`) in map format

```
jprmpflw C:\Input\SAMP.aoi -m C:\work\map.xlsx
```

- When the information in the job operation information file (`C:\Input\SAMP.aoi`) is output to a file (`C:\work\flow.xlsx`) in jobnet flow format according to the jobnet flow format definition

```
jprmpflw C:\Input\SAMP.aoi -l C:\work\flow.xlsx
```

## Command directory

```
installation-directory
```

## Options and arguments

### *job-operation-information-file-name*

Specify the name of the job operation information file whose information you want to output.

Specify the file name by full path (including the extension `.aoi`).

Make sure that the path and file name of the file do not exceed 258 bytes in total, the path does not exceed 194 bytes, and the file name does not exceed 63 bytes.

Do not use any of the following characters in a file name:

`\ / : * ? " < > |`

**-m *map-output-save-file-name***

Specify the name of an output file when jobnet definition information is output to a Microsoft Excel file in map format.

Specify the file name by the full path (including the extension `.xlsx`).

Make sure that the path and file name of the file do not exceed 258 bytes in total. The file name of a file whose path and file name exceed 258 bytes in total is converted automatically when the file is saved according to the automatic file name conversion rules. For details on the automatic file name conversion rules, see the *Supplementary note*.

The folder path name does not exceed 194 bytes in length.

Do not use any of the following characters in a file name:

`\ / : * ? " < > |`

This option cannot be specified together with the `-l` option.

**-l *jobnet-flow-output-save-file-name***

Specify the name of an output file when jobnet definition information is output to a Microsoft Excel file in jobnet flow format.

Specify the file name by the full path (including the extension `.xlsx`).

Make sure that the path and file name of the file do not exceed 258 bytes in total. The file name of a file whose path and file name exceed 258 bytes in total is converted automatically when the file is saved according to the automatic file name conversion rules. For details on the automatic file name conversion rules, see the *Supplementary note*.

The folder path name does not exceed 194 bytes in length.

Do not use any of the following characters in a file name:

`\ / : * ? " < > |`

This option cannot be specified together with the `-m` option.

**-u**

Specify the behavior when the file specified for the map output save file name or jobnet flow output save file name already exists.

If you specify this option, the file is overwritten if it already exists. If you omit this option, the command terminates abnormally if the file already exists.

**-b**

Specify this option if you want to insert a page break between jobnets.

A page break is not inserted if this is not specified.

**-d *depth-of-the-job-hierarchical-tree***

Specify this option if units deeper than the specified depth of the job hierarchical tree are not to be output.

Specify this as a number from 1 to 2,147,483,647. When you specify 1, the units directly under the top unit in the job operation information file are to be output.

If this option is not specified, all layers are output.

**-r *release-ID***

If the specified job operation information file contains release ID information, specify the release ID of the jobnet whose information you want to output.

If this option is not specified, the command assumes that the first valid release ID in the job operation information file is specified.

**Return values**

0	Normal termination
4	Terminated with warning (there is no information to output, part of the information was output, or the input file includes unsupported units)

10	Abnormal termination (such as an argument specification error or the maximum number of units exceeded)
20	Abnormal termination (runtime error)

#### Supplementary note: Automatic file name conversion rules

If the entire file path name exceeds 258 bytes, the whole part other than the extension of the file name (.xlsx) is converted into 252 (excluding the extension and \ between the folder name and the file name) - *folder-path-name-length* bytes or less.

- Converting the file path name, excluding the extension

If the file name minus the extension exceeds 252 - *folder-path-name-length* bytes and the 252 - *folder-path-name-length* byte position is the first byte of a two-byte code, the first 251 - *folder-path-name-length* bytes are used as the file name. If the file name minus the extension is 251 - *folder-path-name-length* or fewer bytes, the file name is not converted. If the converted file name is already in use at the same path, a three-character hexadecimal serial number (000 to FFF, using capital letters for alphabetic characters) is appended to the end of the converted file name. However, if the 249 - *folder-path-name-length* byte position is the first byte of a two-byte code, a three-byte serial number is added after the first 248 - *folder-path-name-length* bytes.

- The extension is always .xlsx.

The file name is converted to Shift-JIS encoding for the Japanese locale or ASCII encoding for any non-Japanese locales. Any characters that cannot be converted are replaced with hyphens (-).

#### Memory used by jprmpflw command

You can use the following equation to determine how much memory the jprmpflw command will use.

Keep in mind that a certain amount of leeway is built into this equation.

Many of the factors governing memory usage depend on individual user settings. These include the length of unit names, the depth of the hierarchy, the amount of unit attribute data, and the number of schedule rules. For this reason, the result of the equation does not always reflect actual memory usage.

Equation:

$$4 \text{ MB} + (\text{Memory needed to load job operation information file}) \times 3.5 \text{ bytes}^{\#1}$$

- Memory needed to load job operation information file:

$$= \text{All units} + \text{Format} + \text{Jobnet flow format}^{\#2}$$

- All units:

$$= 20 \text{ bytes} + 4 \text{ bytes} \times \text{Total number of units} + (1 \text{ unit}) \times \text{Total number of units}$$

- 1 unit:

$$= 28 \text{ bytes} + (48 \text{ bytes} + \text{average data of unit attributes} \times \text{number of days of daily data collected}) \times \text{number of attributes collected by ajsshow command} + (48 \text{ bytes} + \text{average data of unit attributes}) \times \text{number of attributes collected by ajsprint command} + (\text{number of attributes collected by ajsshow command} + \text{number of attributes collected by ajsprint command}) \times 8 \text{ bytes}$$

- Format

$$= 61 \text{ bytes} \times 4 \text{ bytes} + 12 \text{ bytes} \times 10 (\text{average number of columns selected}) \\ = 376 \text{ bytes}$$

- Jobnet flow format

$$= 6 \text{ bytes} + (8 \text{ bytes} \times \text{average number of columns selected}) \times \text{number of output unit types}$$

#1: If you execute multiple jprmpflw commands or multi-user remote operation is enabled, you need the amount of memory obtained by multiplying the value determined with this equation by the number of executed commands or the number of execution users.

#2: Add it when the jobnet flow is output.

Note:

- In an environment with User Account Control (UAC) enabled, if a user without administrator privileges specifies a file path containing an OS-protected folder, such as C:\Program Files, as a map output save file name in the -m option or as a jobnet flow output save file name in the -l option, the file is redirected and output to the VirtualStore folder for each user.

Files are redirected when the save destination is a folder in one of the following directories:

- *system-drive*: \Windows
- *system-drive*: \Program Files
- *system-drive*: \Program Files (x86) (for 64bit Windows)

The redirected files are stored in the following directories:

- %LocalAppData%\VirtualStore\Windows
- %LocalAppData%\VirtualStore\Program Files
- %LocalAppData%\VirtualStore\Program Files (x86)

The default value of the %LocalAppData% is *system-drive*: \Users\OS-user-name\AppData\Local.

- If a jobnet does not contain any unit to display, or in the root jobnet or the manager jobnet, only the full name of the jobnet is output.
- Job groups are not to be output. If the top unit in the job operation information file is a job group, do not set *depth-of-the-job-hierarchical-tree* to 1. If you specify it, nothing is output. Specify the number of output layers so that a layer where a jobnet is defined is included.
- In map output, the standard icons provided by JP1/AJS3 - View 12-00 are displayed. The following icon appears for units that do not have the standard icons:



- You cannot tell if a jobnet has release information from an icon. The jobnet shows the same icon as ones without release information.
- If the unit name is not displayed fully in the print and print preview of the map output file, you can extend the unit name display area to display the cutoff unit name. For details on how to extend the size of the unit name display area, see [7.19.4 Displayed items of the Map tab](#).
- If the arrow is hidden by the unit name's background in map output, you can make the unit name background transparent to display the hidden arrow. For details on how to make the unit name background transparent, see [7.19.4 Displayed items of the Map tab](#).
- Specify whether to display comments in map output in the **Map** tab of the Environment Settings window. For details on how to specify the setting, see [7.19.4 Displayed items of the Map tab](#).
- If maps are configured to display comments in map output, but you cannot see a comment hidden under the icon due to its length, then enlarge the size of the area where the unit name is displayed, or edit the width of the cell in Microsoft Excel.
- In map output, when maps are configured not to display comments, unit names are aligned center, while when configured to display them, both unit names and comments aligned left.
- Jobnet flow output will fail if the jobnet flow definition file specified in the Environment Settings window cannot be found. Make sure that the file specified in the Environment Settings window exists at the specified location.
- If jobnet flow output produces a cell in Microsoft Excel that contains more than 255 characters, ##### might appear as the cell data in Microsoft Excel.
- If the jobnet flow output process outputs a piece (generation) of data to Microsoft Excel that exceeds 4,000 bytes, the jobnet flow output functionality outputs "x (The data has too many characters to display.)"

in its place. Each cell output cannot contain more than 32,000 bytes or 255 lines of data. Data exceeding these limits is truncated.

When the limit is exceeded, the information about the name and attributes of the unit that caused the problem is output to a log file. Take action such as dividing the input data over several jobnet flow images.

- If the strings in cells are not displayed fully in the print and print preview of the jobnet flow output file, you can extend the display area to display the cutoff items. For details on how to extend the size of the display area for data, see [7.19.5 Displayed items of the Jobnet Flow tab](#).
- If you want to display legends in jobnet flow output, configure the system to display legends in the **Jobnet Flow** tab of the Environment Settings window. For details on how to specify the setting, see [7.19.5 Displayed items of the Jobnet Flow tab](#).
- The amount of information the map output and jobnet flow output functionality can output depends on the maximum number of lines, columns, and maximum number of page breaks allowed in Microsoft Excel. If the output information exceeds these limits, an error occurs in Microsoft Excel when the output file is opened. You can find out how many lines, columns, and page breaks Microsoft Excel allows by viewing the Help or other documentation for Microsoft Excel.
- If an error occurs in map output and jobnet flow output, open the file stored in the output destination to check the error.
- If the length of the path (including the file name) to the file created by the `jprmpflw` command exceeds 218 characters, an error occurs when you start Microsoft Excel to open the file. If this occurs, use one of the following methods to open the file:
  - Change the name of the file to a shorter one.
  - Change the name or names of one or more folders that contain the file to shorter ones.
  - Move the file to a folder with the shorter path name.
- If you perform map output and jobnet flow output, install Microsoft .NET Framework 4.5 or later.
- The line weights of arrows in map output and jobnet flow output are determined according to the default setting of Microsoft Excel. Therefore, they might be different from those of arrows in the file created by the `jprmpflw` command.
- The start and end positions of arrows in map output and jobnet flow output may be different from those of arrows in the file created by the `jprmpflw` command by a few millimeters.
- Sizes of files that store the results of map output and jobnet flow output are different from those of files created by the `jprmpflw` command.
- Fonts to display unit names and comments in map output may be different from those of fonts in the file created by the `jprmpflw` command.
- If you press the **Ctrl + C** keys during execution of the `jprmpflw` command, the `jprmpflw` command is interrupted, but files might be output in the background.

# jprajsmkkey (Windows)

## Syntax

```
jprajsmkkey
  {-U login-user-name [-P password]
   -H host-name-of-JP1/AJS3 - Manager
   { -a | -u | -d }
   | -l }
```

## Description

The `jprajsmkkey` command encrypts JP1/AJS3 - Manager authentication information and registers it in the authentication information file.

The command also allows you to browse, update, or delete the authentication information registered in the authentication information file.

The registered authentication information is used when the `jprwebcollect` command is executed.

Example of command specification:

- To specify the following items to register them in the authentication information file: Login user name: `jpladmin`, password: `jpladmin`, JP1/AJS3 - Manager host name: `host001`

```
jprajsmkkey -U jpladmin -P jpladmin -H host001 -a
```

- To specify the following items and enter the password in the console to register them in the authentication information file: Login user name: `jpladmin`, JP1/AJS3 - Manager host name: `host001`

```
jprajsmkkey -U jpladmin -H host001 -a
Enter Password :
Re-Enter Password :
```

- To specify the following items to update the authentication information file: Login user name: `jpladmin`, password: `jpladmin01`, JP1/AJS3 - Manager host name: `host001`

```
jprajsmkkey -U jpladmin -P jpladmin01 -H host001 -u
```

- To specify the following items to delete the user from the authentication information file: Login user name: `jpladmin`, JP1/AJS3 - Manager host name: `host001`

```
jprajsmkkey -U jpladmin -H host001 -d
```

- To output the list of users registered in the authentication information file

```
jprajsmkkey -l
```

## Command directory

```
installation-directory
```

## Options and arguments

### **-U** *login-user-name*

Specify the name of the JP1 user who logs in to JP1/AJS3 - Manager to connect to, from 1 to 31 bytes. For details on the JP1 user name, see the manual of the JP1/Base.

This option cannot be specified together with the **-l** option.

### **-P** *password*

Specify the password for the JP1 user who logs in from 6 to 32 bytes. For details on the password of the JP1 user, see the manual of the JP1/Base.

If you omit the password when the **-a** option and the **-u** option are specified, you need to enter the same password twice in the command prompt. Do not enter a wrong password as the password is not shown. An error is displayed when the first and second passwords entered are different. Thus, execute the command again.

This option cannot be specified together with the **-l** option.

If you specify this option together with the **-d** option, the specified password value is ignored.

### **-H** *host-name-of-JP1/AJS3 - Manager*

Specify the host name or IP address of JP1/AJS3 - Manager to connect to, from 1 to 255 bytes.

This option cannot be specified together with the **-l** option.

### **-a**

The option specifies to encrypt the specified JP1 user name, password, and JP1/AJS3 - Manager host name and register them in the authentication information file.

A KAVR4104-E error occurs if the combination of the specified JP1 user name and JP1/AJS3 - Manager host name already exists. Update them with the **-u** option.

This option cannot be specified together with **-u**, **-d**, or **-l** option.

If the **-u**, **-d**, or **-l** option is not specified, the command assumes that the **-a** option is specified.

### **-u**

Updates the authentication information file with the specified JP1 user name, password, and JP1/AJS3 - Manager host name.

If the combination of the specified JP1 user name and JP1/AJS3 - Manager host name already exists, the password is overwritten. If it does not exist, a KAVR4108-E error occurs. Use the **-a** option to register the user.

This option cannot be specified together with **-a**, **-d**, or **-l** option.

### **-d**

Deletes the combination of the specified JP1 user name and JP1/AJS3 - Manager host name from the authentication information file. No password is required.

A KAVR4108-E error occurs if the combination of the specified JP1 user name and JP1/AJS3 - Manager host name does not exist.

This option cannot be specified together with **-a**, **-u**, or **-l** option.

### **-l**

Outputs a list of JP1/AJS3 - Manager host names and login users to the standard output.

Output information:

The command outputs JP1/AJS3 - Manager host names and login user names, but not passwords.

```
[host-name-#1-of-JP1/AJS3 - Manager] login-user-name-#1
[host-name-#2-of-JP1/AJS3 - Manager] login-user-name-#2
:
```

When more than one user is registered, all data is output.



A KAVR4109-E error occurs if you execute the command when JP1/AJS3 - Manager host names and login users are not registered.

This option cannot be specified together with -U, -P, -H, -a, -u, or -d option.

Output example:

```
[mgrhost1] jpladmin  
[mgrhost100] jpladmin  
[localhost] jpladmin
```

#### Return values

0	Normal termination
10	Abnormal termination (argument specification error)
20	Abnormal termination (runtime error)

#### Note:

- The `jprajsmkkey` command does not check if the login user name and password are valid. They are authenticated when the `jprwebcollect` command is executed.
- If a wrong login user name, password, or JP1/AJS3 - Manager host name is specified, an authentication error occurs when the `jprwebcollect` command is executed. For details on how to set up the login user and password, see the manual of the JP1/Base. For details on how to set up the JP1/AJS3 - Manager host name, see the manual of the JP1/AJS3.
- If more than one user uses a machine in which JP1/AJS3 - Print Option is installed, enable multi-user remote operation, and each user should register their authentication information.

# jprwebcollect (Windows)

## Syntax

```
jprwebcollect
  unit-name
  job-operation-information-file-name
  [ -b year/month/day -e year/month/day
  | [-L] [-N] [-T]
  | {-l month | -n month | -t} [-p month]
  | [-C] [-G] [-D] ] [-w]
  [-F name-of-JP1/AJS-scheduler-service]
  [-A] [-U] [-y]
  [-z]
  --user login-user-name
  --mhost host-name-of-JP1/AJS3 - Manager
  --whost host-name-of-JP1/AJS3 - Web Console
  [--protocol {http | https}]
  [--port port-number]
```

## Description

The `jprwebcollect` command collects job operation information after logging in to JP1/AJS3 - Manager from which the information is collected through the JP1/AJS3 - Web Console to connect to. It collects the information of job network element definitions as well as execution schedules and results. The collected information is stored in the job operation information file. The job operation information file is used as the input information for the job operation document output.

The `jprwebcollect` command uses the `ajsprint` and `ajsshow` commands provided by JP1/AJS to collect job operation information.

Command name	Purpose
<code>ajsprint</code>	Collecting definition information
<code>ajsshow</code>	Collecting execution schedules and results

Before you use the `jprwebcollect` command, the environment (environment variables and other settings) must be configured to support the commands listed above. For details, see the manual *JP1/Automatic Job Management System 3 Command Reference*.

You can use unit names to specify the job operation information to collect. Use the full path of a JP1/AJS job, jobnet, or job group to specify a unit name. A full unit name begins with a forward slash (/) and consists of the names of the root jobnet down to the job network element, each separated by forward slashes.

To collect information for all units under the root job group, specify the `-A` option. If you use the `-A` option, you can specify `/` (the root job group) as the unit name.

When collecting execution schedules and results, specify the period for which to collect the information. The collection period is defined by a start date and an end date. You can use *date specification*, *monthly specification*, *relative month specification*, or *daily specification* to specify the collection period. For details about the collection period, see [jprcollect \(Windows and UNIX\)](#).

Examples of command specification:

- When the JP1/AJS3 - Manager host name from which the information is collected is `host001`, the login user is `jpladmin`, and the name of the JP1/AJS3 - Web Console host to connect to is `hostweb01`

To collect execution schedules and results for jobnet `Net1` in job group `Group1` using the *current month* as the collection period, and record the information in the file `c:\work\test.aoi`, execute the command as follows:

```
jprwebcollect /Group1/Net1 c:\work\test.aoi -T -F AJSROOT1 --user jpladmin
--mhost host001 --whost hostweb01
```

The execution history is output to `c:\work\test.log`.

## Command directory

```
installation-folder
```

## Options and arguments

### *unit-name*

Specify the name of the unit whose job operation information you want to collect. The command collects information for the specified unit and all its subordinate units.

This argument does not accept wildcards (such as `*` and `?`).

Do not specify more than one unit name. If you do, an error occurs when you attempt to output a job operation document.

Unit names are case sensitive.

### *job-operation-information-file-name*

Specify the name of the job operation information file whose information you want to output.

Specify the file name by full path (including the extension `.aoi`).

Make sure that the path and file name of the file do not exceed 258 bytes in total, the path does not exceed 194 bytes, and the file name does not exceed 63 bytes.

Do not use any of the following symbols in the file name.

`\ / : * ? " < > |`

### `-b` *year/month/day*

Specify the start date of the period for which to collect execution schedules and results. The base time serves as the start time.

- *year*  
Specify a year as a value from 1994 to 2036.
- *month*  
Specify a month as a value from 1 (or 01) to 12.
- *day*  
Specify a date as a value from 1 (or 01) to 31.

This option must be specified together with the `-e` option. If you omit one or the other, the command will not collect execution schedules and results.

-e *year/month/day*

Specify the end date of the period for which to collect execution schedules and results. The date you specify must be the same as or later than the start date. The base time plus 23 hours, 59 minutes, and 59 seconds serves as the end time.

- *year*

Specify a year as a value from 1994 to 2036.

- *month*

Specify a month as a value from 1 (or 01) to 12.

- *day*

Specify a date as a value from 1 (or 01) to 31.

This option must be specified together with the -b option.

-L

Specify this option when you want to collect execution schedules and results for the previous month.

You cannot specify this option with the -N option unless the -T option is also specified.

-N

Specify this option when you want to collect execution schedules and results for the next month.

You cannot specify this option with the -L option unless the -T option is also specified.

-T

Specify this option when you want to collect execution schedules and results for the current month.

-l *month*

Specify this option when you want to collect execution schedules and results for one or more months, starting from a past month.

You can specify the following values:

*Month:* 1 to 12

-n *month*

Specify this option when you want to collect execution schedules and results for one or more months, starting from a future month.

You can specify the following values:

*Month:* 1 to 12

-t

Specify this option when you want to collect execution schedules and results for one or more months, starting from the current month.

-p *month*

When collecting execution schedules and results on a monthly basis, specify the number of months for which you want to collect data.

You can specify the following values:

*Month:* 1 to 12

Specify this option together with the -l, -n, or -t option.

If you omit -p, then -p 1 is assumed and the command collects information for one month.

-C

Specify this option when you want to collect execution schedules and results for the previous day.

You cannot specify this option with the -G option unless the -D option is also specified.

- G  
Specify this option when you want to collect execution schedules and results for the next day.  
You cannot specify this option with the -C option unless the -D option is also specified.
- D  
Specify this option when you want to collect execution schedules and results for today.
- w  
Specify the start date and end date of the time period when execution schedules and results are collected as an execution date. If you omit this option, specify the start and end dates of the time period mentioned earlier as a calendar date.  
For details how the **Calendar date** and **Execution date** options work differently, see [jprcollect \(Windows and UNIX\)](#).
- F *name-of-JP1/AJS-scheduler-service*  
Specify the name of the JP1/AJS scheduler service to be accessed by the command.  
If you omit this option, the command assumes that the service name of the JP1/AJS scheduler service has AJSROOT1 specified for operation.
- A  
Allows you to specify the root job group (/) in *unit-name*.
- U  
Specify this option to collect information about the last update times for the specified unit and its subordinate units.
- Y  
Specify this option to collect jobnet information for each release ID when the registration information for the specified unit includes jobnet release information.  
For details on jobnet release, see the description of the jobnet release functionality in the manual *JP1/Automatic Job Management System 3 Overview*.
- z  
Specify the behavior when the file specified for the job operation information file name already exists.  
If you specify this option, the file is overwritten when the file already exists. If you omit this option, an error occurs when the file already exists.
- user *login-user-name*  
Specify the name of the JP1 user who logs in to JP1/AJS3 - Manager from which the information is collected.  
Execute the jprajsmkkey command in advance, to register the JP1/AJS3 - Manager host name, login user name, and password in the authentication information file. An error occurs if the specified login user name is not registered in the authentication information file.
- mhost *host-name-of-JP1/AJS3 - Manager*  
Specify the host name or IP address of the JP1/AJS3 - Manager host from which the information is collected from 1 to 255 bytes.  
Execute the jprajsmkkey command in advance, to register the JP1/AJS3 - Manager host name, login user name, and password in the authentication information file. An error occurs if the specified login user name is not registered in the authentication information file.
- whost *host-name-of-JP1/AJS3 - Web Console*  
Specify the host name or IP address of the JP1/AJS3 - Web Console host from which the information is collected from 1 to 255 bytes.
- protocol {http | https}  
Specify the communication protocol for JP1/AJS3 - Web Console to connect to as either HTTP or HTTPS communication. If you omit the --protocol option, the default is http.

`--port port-number`

Specify the port number used for communicating with JP1/AJS3 - Web Console to connect to. If you omit the `--port` option, the default is 22252 when you specify `http` in the `--protocol` option, and if you specify `https` in the `--protocol` option, the default is 22253.

#### Return values

0	Normal termination
4	Ended with warning (the command collected definition information but not execution schedules and results)
10	Abnormal termination (argument specification error)
20	Abnormal termination (runtime error)

#### Supplementary note:

Each time you execute the `jprwebcollect` command, JP1/AJS3 - Print Option creates a file containing execution log information for the command in the same directory or folder as the job operation information file. The file has the same name as the output file but with the extension `.log`.

The `jprwebcollect` command does not validate its syntax before executing. If the command terminates abnormally, identify the problem by reviewing the execution log information.

For details about the execution log information, see *jprcollect (Windows and UNIX)*.

#### Cautionary notes:

- This command is available when the versions of JP1/AJS3 - Print Option, JP1/AJS3 - Manager from which the information is collected and JP1/AJS3 - Print Option Manager installed in the same machine, and JP1/AJS3 - Web Console to connect to are all 12-50 or later.
- If the unit you specify has not been registered for execution, the command will collect definition information but not execution schedules and results, even if you specify a collection period. The command will not collect execution schedules and results if the unit was not registered for execution within the specified collection period. In these situations, although the command terminates with a warning, you can still output documents based on the job operation information file. However, because execution schedules and results were not collected, you cannot output documents that contain execution schedules or results.

If you specify a job group that contains units that have been submitted for execution and those that have not, the command can only collect execution schedules and execution results for the units that have been submitted for execution.

- Specify the correct name of the scheduler service for JP1/AJS3 - Manager from which the information is collected. If it is not specified correctly, characters are garbled when you output documents with the output job operation information file.
- Specifying the `-A` option to collect job operation information for all units under the root jobnet can result in a large number of unit definitions and large amounts of schedule information being collected. The result is an extremely large job operation information file (`.aoi` file), which places significant demands on system resources. Displaying or printing such a file in the Job Operation Document Output window, or printing or outputting the file to a CSV file using the `jprprint` command, can take a very long time.
- A job whose execution schedule and execution results exist within the range of the specified collection period is output. For a job whose execution started within the range of the collection period but ended beyond the range of the collection period, if you collect job operation information after the end of its execution, you can obtain the execution result data within the range of the collection period. You cannot obtain the execution result data beyond the range of the collection period.
- When JP1/AJS3 - Manager is operating in a cluster environment, collect job operation information from the active node. To do so, specify the name of the scheduler service on the logical host as the service name.

- When you specify the `-b` option and the `-e` option, the year, month, and day specified are used as the options of the `ajsshow` command.  
When you specify the `-L`, `-N`, `-T`, `-l`, `-n`, `-t`, `-p`, `-C`, `-G`, and `-D` options, the collection period is determined based on the system time of the physical host.
- If you do not specify the `-w` option, the `jprwebcollect` command executes the `ajsshow` command with `-b` and `-e` options.  
If you specify the `-w` option, the `jprwebcollect` command executes the `ajsshow` command with `-v` and `-w` options.
- If you do not specify the `-y` option, the `jprwebcollect` command collects definition information, execution schedules, and execution results for units in *Being Applied* status. It cannot collect release information.
- Grant a JP1 permission level on the JP1 resource group as the target unit of the `ajsprint` command and `ajsshow` command to the JP1 user specified for login authentication of JP1/AJS3 - Manager.  
For details on the JP1 permission level necessary to execute the `ajsprint` and `ajsshow` commands, see the manual of the JP1/AJS3.
- If the JP1/AJS3 environment setting parameter `AJSPRINTSORTUNITINF` is set to `yes`, the related line information is output to the job operation information file in the character code ascending order for the preceding unit and succeeding unit. If the environment setting parameter `AJSPRINTSORTUNITINF` is set to `no` or a value is not set, the related line information is output in the creation order for the preceding unit and succeeding unit. For details, see the documentation for JP1/AJS3.
- If JP1/AJS adds a unit or changes a unit name during execution of the `jprwebcollect` command, the contents of the output job operation information file become inconsistent, causing an error when a document is output.
- If a user without administrator privileges in an environment where UAC (User Account Control) is enabled, specifies a protected folder such as `C:\Program Files` as the job operation information file, the file might be redirected and saved to each user's `VirtualStore` folder.  
Files are redirected when the save destination is a folder in one of the following directories:
  - *system-drive*: \Windows
  - *system-drive*: \Program Files
  - *system-drive*: \Program Files (x86) (for 64bit Windows)
 The redirected files are stored in the following directories:
  - %LocalAppData%\VirtualStore\Windows
  - %LocalAppData%\VirtualStore\Program Files
  - %LocalAppData%\VirtualStore\Program Files (x86)
 The default value of the %LocalAppData% is *system-drive*: \Users\OS-user-name\AppData\Local.
- An error occurs if the values specified in the `--user` option and the `--mhost` option are not registered in the authentication information file. Use the `jprajsmkkey` command to register them in the authentication information file before executing the `jprwebcollect` command.
- Authentication fails and an error occurs if the authentication information file contains incorrect information. Use the `jprajsmkkey` command to list the information in the authentication information file and check the JP1/AJS3 - Manager host name and login user.
- If any of the `--mhost`, `--whost`, `--protocol`, and `--port` options are specified incorrectly, communication fails, resulting in an error. For details on the environment settings for JP1/AJS3 - Web Console and JP1/AJS3 - Manager, see the manual of the JP1/AJS.
- Specify the same communication protocol in the `--protocol` option and port number in the `--port` option as those in the Web server definition file for JP1/AJS3 - Web Console. If they do not match, communication

fails, resulting in an error. For details on the Web server definition file for JP1/AJS3 - Web Console, see the manual of the JP1/AJS.

- If an error occurs in JP1/AJS3 - Web Console and JP1/AJS3 - Manager, use the data collection tools for JP1/AJS3 - Web Console and JP1/AJS3 - Manager to collect logs.

If an error occurs in JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager, take the output job operation information file and the execution history file, and use the data collection tools for JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager to collect logs.

#### Size of job operation information files

You can use the following equation to estimate the size of the job operation information file (`aoi` file) output by the `jprwebcollect` command.

Keep in mind that a certain amount of leeway is built into this equation.

Many of the factors governing file sizes depend on individual user settings. These include the length of unit names, the depth of the hierarchy, the position of the specified unit in the hierarchy, and the numbers of relation lines and schedule rules. For this reason, the result of the equation does not always reflect the actual file size.

Equation:

$$\begin{aligned} & \text{Number of units defined under specified unit} \times 4.5 \text{ kilobytes} \\ & + \text{Number of generations in specified collection period} \times 3.5 \text{ kilobytes} \end{aligned}$$

The amount of memory the `jprwebcollect` command will use is the same value as the above size in each JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager.



# 9

## Messages

This chapter describes the messages output by JP1/AJS3 - Print Option.

## 9.1 JP1/AJS3 - Print Option messages

---

This section describes the messages output by JP1/AJS3 - Print Option that have message IDs.

### 9.1.1 Message format

Each message consists of a message ID, followed by the message text. Messages are output in the following format:

*KAVRnnnn-Z message text*

### 9.1.2 Message IDs

The message ID consists of the following components:

K

System identifier

AVR

Indicates the message output by JP1/AJS3 - Print Option.

*nnnn*

Message serial number

Z

Message type, as one of the following:

E	Error message. Processing is canceled.
I	Information message. This type of message notifies the user of information.
Q	Question message. This type of message prompts the user to choose an option.
W	Warning message. Processing continues after the message is output.

### 9.1.3 Format of message explanations

This section describes the format used in this manual to describe messages. Characters in italics differ depending on the context of the message.

However, for messages with maintenance information such as a detailed error code or file name, it may not be displayed in some cases.

#### Message ID

Message text

Explanation of the output message text.

(S)

System action

(O)

Operator action at message output

## 9.2 List of output destinations of messages

This section lists the output destinations of messages output by JP1/AJS3 - Print Option.

In the table, the output destinations are shown as follows:

Abbreviations:

syslog: syslog

Event log: Windows event log

stdout: Standard output

stderr: Standard error output

Internal log: internal log (Trace log)

JP1 event: JP1 event

Message box: message box

Y: Output

--: Not output

Table 9–1: Output destinations of messages

Message ID	Output destination						
	syslog	Event log	stdout	stderr	Internal log	JP1 event	Message box
KAVR0001 - KAVR0004	--	--	--	Y	Y	--	Y
KAVR0100 - KAVR0104	--	--	--	Y	--	--	--
KAVR0150	--	--	--	Y	--	--	Y
KAVR1000 - KAVR1001	--	--	--	Y	--	--	Y
KAVR1010	--	--	--	Y	--	--	Y
KAVR1011	--	--	--	Y	--	--	--
KAVR1012 - KAVR1013	--	--	--	Y	--	--	Y
KAVR1014	--	--	--	Y	--	--	--
KAVR1015 - KAVR1016	--	--	--	--	--	--	Y
KAVR1020	--	--	--	Y	--	--	Y
KAVR2000 - KAVR2007	--	--	--	--	--	--	Y
KAVR2010	--	--	--	--	--	--	Y
KAVR2011	--	--	--	Y	--	--	Y
KAVR2012 - KAVR2016	--	--	--	--	--	--	Y
KAVR2020	--	--	--	--	--	--	Y
KAVR2030	--	--	--	--	--	--	Y

Message ID	Output destination						
	syslog	Event log	stdout	stderr	Internal log	JP1 event	Message box
KAVR2050	--	--	--	Y	--	--	Y
KAVR2101 - KAVR2103	--	--	--	--	--	--	Y
KAVR2105 - KAVR2112	--	--	--	--	--	--	Y
KAVR2201	--	--	--	--	--	--	Y
KAVR2251 - KAVR2255	--	--	--	--	--	--	Y
KAVR2259 - KAVR2260	--	--	--	--	--	--	Y
KAVR2261 - KAVR2265	--	--	--	--	--	--	Y
KAVR2269 - KAVR2270	--	--	--	--	--	--	Y
KAVR2301 - KAVR2303	--	--	--	--	--	--	Y
KAVR2901	--	--	--	--	--	--	Y
KAVR3000 - KAVR3006	--	--	--	--	--	--	Y
KAVR3010 - KAVR3030	--	--	--	--	--	--	Y
KAVR3050	--	--	--	--	--	--	Y
KAVR4000 - KAVR4024	--	--	--	Y	--	--	--
KAVR4100 - KAVR4112	--	--	--	Y	--	--	--
KAVR4200 - KAVR4216	--	--	--	Y	--	--	--
KAVR4501 - KAVR4502	--	--	--	Y	--	--	--
KAVR5000 - KAVR5004	--	--	--	--	Y	--	Y
KAVR5005	--	--	--	--	--	--	Y
KAVR5006	--	--	--	--	Y	--	Y
KAVR5007 - KAVR5008	--	--	--	--	--	--	Y
KAVR5009 - KAVR5010	--	--	--	--	Y	--	Y
KAVR5011 - KAVR5012	--	--	--	--	Y	--	--
KAVR5013	--	--	--	--	Y	--	Y

Message ID	Output destination						
	syslog	Event log	stdout	stderr	Internal log	JP1 event	Message box
KAVR5014	--	--	--	Y	Y	--	--
KAVR5015 - KAVR5019	--	--	--	Y	--	--	--
KAVR5020	--	--	--	Y	Y	--	--
KAVR5021	--	--	--	--	Y	--	--
KAVR5022	--	--	--	Y	--	--	--
KAVR5024	--	--	--	Y	--	--	--
KAVR5027	--	--	--	--	Y	--	Y

## 9.3 List of messages

---

This section lists the messages output by JP1/AJS3 - Print Option that have message IDs.

### KAVR0001-E

The unexpected error occurred. Detailed information: (*detailed information*)

An unexpected error occurred during processing.

(S)

Aborts processing.

(O)

Collect information and contact the system administrator.

### KAVR0002-E

Memory is insufficient.

Processing was canceled. Possible causes are:

- If memory usage reaches the OS's upper limit (2 GB) for a single process, the process fails in the insufficient memory error (KAVR0002-E) even when the machine capacity allows more.
- The job operation information file has garbled data.
- The job operation information file has inconsistent data.

(S)

Aborts processing.

(O)

- Close unnecessary programs and try again.
- Make sure that sufficient disk space is available by deleting unnecessary files.
- Divide the job operation information file into smaller parts through (1), (2), or both below to continue operation.
  - (1) In order to make the number of target units smaller, choose a unit name from the lower level and specify it in the Collecting Job Operation Information window or for the `jprcollect` command.
  - (2) In order to make the volume of collecting schedule information smaller, specify a shorter collection period in the Collecting Job Operation Information window or for the `jprcollect` command.
- Make sure that the value of the `LANG` in the file (automatic startup shell script) or the value of the `LANG` on the environment where `jprcollect` command is executed uses as same value as JP1/AJS3.
- If you add new a unit or change a unit name on JP1/AJS during collecting the job operation information, collect the job operation information again.

### KAVR0003-E

An attempt to create a folder has failed.  
*folder-name* (Err: *error-code*)

An attempt to create a folder has failed. Possible causes are:

- The name of the folder contains an illegal character
- You do not have permission to create a folder

(S)

Aborts processing.

(O)

Check the following, and then try again:

When the error code is 123 (ERROR\_INVALID\_NAME) or 267 (ERROR\_DIRECTORY):

- Whether the folder name contains any of the following illegal characters:  
`\ / ; * ? " < > | : ,`
- Whether the name begins or ends with a period (.)
- Whether the name contains one of the following reserved words, or begins with one of them, followed by a period (.), regardless of whether it is in uppercase or lowercase:  
CON, PRN, AUX, CLOCK\$, NUL, COM0, COM1, COM2, COM3, COM4, COM5, COM6, COM7, COM8, COM9, LPT0, LPT1, LPT2, LPT3, LPT4, LPT5, LPT6, LPT7, LPT8, LPT9
- Whether the name begins with AJS, regardless of whether it is in uppercase or lowercase
- Whether the name begins with HLICLIB, regardless of whether it is in uppercase or lowercase

When the error code is 5 (ERROR\_ACCESS\_DENIED):

Whether you have permission to create a folder

## KAVR0004-E

An attempt to write a file has failed.

*file-name* (Err: *error-code*)

An attempt to write to a file has failed. Possible causes are:

- The name of the file contains an illegal character
- You do not have permission to write to a file

(S)

Aborts processing.

(O)

Check the following, and then try again:

When the error code is 123 (ERROR\_INVALID\_NAME) or 2 (ERROR\_FILE\_NOT\_FOUND):

- Whether the file name contains any of the following illegal characters:  
`\ / ; * ? " < > | : ,`
- Whether the name begins or ends with a period (.)
- Whether the name contains one of the following reserved words, or begins with one of them, followed by a period (.), regardless of whether it is in uppercase or lowercase:  
CON, PRN, AUX, CLOCK\$, NUL, COM0, COM1, COM2, COM3, COM4, COM5, COM6, COM7, COM8, COM9, LPT0, LPT1, LPT2, LPT3, LPT4, LPT5, LPT6, LPT7, LPT8, LPT9
- Whether the name begins with AJS, regardless of whether it is in uppercase or lowercase
- Whether the name begins with HLICLIB, regardless of whether it is in uppercase or lowercase



When the error code is 5 (ERROR\_ACCESS\_DENIED):

Whether you have permission to create a file

#### KAVR0100-E

Specified value of the argument is invalid. argument:*argument*

An invalid value is specified for a command argument.

(S)

Aborts processing.

(O)

Specify the value correctly, and try again.

#### KAVR0101-E

Specification of the argument is duplicated. argument:*argument*

The same command argument is specified more than once.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

#### KAVR0102-E

Specification of the argument is insufficient. argument:*argument*

A mandatory argument was omitted.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

#### KAVR0103-E

Invalid argument is specified. argument:*argument*

An invalid command argument is specified.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

#### KAVR0104-E

Cannot specify these options together.

Conflicting options are specified in the command arguments.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

#### KAVR0150-I

Job operation information was collected.

The collection of job operation information ended normally.

#### KAVR1000-E

Job operation information could not be collected.

An attempt to collect job operation information has failed. The probable causes are as follows:

- The specified unit does not exist
- The JP1/AJS scheduler service is not running
- The output file cannot be created
- The JP1/AJS3 environment setting parameter `ADMACLIMIT` is set to `yes`.

(S)

Aborts processing.

(O)

- Specify a unit that exists.
- Start the JP1/AJS scheduler service.
- Check the write permission for the specified output target.
- Log in to the OS, create a JP1 user with the same name as the user account that executes the `jprcollect` command or executes job operation information collection from the **Start** menu, and then set the JP1 permission level for the JP1 resource group of the target units for the `ajsprint` command and the `ajsshow` command.

Identify and address the cause of the error by referring to the execution logs, and then try again. Execution log information is recorded in the file *output-file-name*.log.

#### KAVR1001-W

Only definition information was collected. Execution schedule/result information could not be collected.

JP1/AJS3- Print Option was able to collect definition information, but could not collect execution schedules and results. Possible causes are:

- The specified unit has not been registered for execution
  - There are no execution schedules or results in the specified collection period
  - You specified a job group in which one or more of the constituent units has not been registered for execution
- In this case, JP1/AJS3 - Print Option collects execution schedules and results for the units that have been registered for execution.

(S)

Continues processing.

(O)

You can output documents that contain definition information.

If you need the document to contain execution schedules and results, identify and address the cause of the error by referring to the execution logs, and then try again. Execution log information is recorded in the file *output-file-name.log*.

## KAVR1010-E

Cannot to specify the generic name for unit name.

You cannot use wildcards (\* and ?) when specifying unit names.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

## KAVR1011-E

Unit name cannot be omitted.

You must specify a unit name.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

## KAVR1012-E

Output file name cannot be omitted.

You must specify an output file name.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

## KAVR1013-E

The specified output file name is invalid.

The output file name is specified incorrectly. Possible causes are:

- The directory you specified does not exist
- The directory name or file name contains an illegal character
- The system cannot create the specified file

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

#### KAVR1014-E

Specify -b argument and -e argument with the pair.

The -b argument and the -e argument must be specified together.

(S)

Aborts processing.

(O)

Specify the command arguments correctly, and try again.

#### KAVR1015-E

The specified start month is invalid.

The start month is specified incorrectly. The cause is as follows:

- The specified value is outside the range of 1 to 12

(S)

Aborts processing.

(O)

Specify the correct value, and try again.

#### KAVR1016-E

The specified number of months is invalid.

The number of months is specified incorrectly. The cause is as follows:

- The specified value is outside the range of 1 to 12

(S)

Aborts processing.

(O)

Specify the correct value, and try again.

#### KAVR1020-E

Prerequisite program is not installed.

A prerequisite program (JP1/AJS) is not installed.

(S)

Aborts processing.

(O)

Install the prerequisite program.

#### KAVR2000-E

An error occurred during a file read.

*file-name* (Err: *error-code*)

An attempt to read a file has failed. Possible causes are:

- The path does not exist
- The file does not exist
- You do not have permission to access the file

(S)

Aborts processing.

(O)

Check the following, and then try again:

- Make sure that the path exists.
- Make sure that the file exists.
- Make sure that you have access permission for the file.

If the problem is not solved, check whether something else is wrong with the file.

#### KAVR2001-E

This file data is corrupted.

The specified job operation information file, format definition file, or jobnet flow format definition file is corrupted.

(S)

Aborts processing.

(O)

Re-create the job operation information file, and try again.

#### KAVR2002-I

Processing was stop.

The process of inputting a job operation information file was canceled by the operator.

(S)

Continues processing.

#### KAVR2003-E

An error occurred during a file write.

*file-name* (Err: *error-code*)

An attempt to write to a file has failed.

(S)

Aborts processing.

(O)

Make sure that the file is available, and try again.

#### KAVR2004-E

The specified file name contains invalid characters (e.g., \, /, :, \*, ?, ", <, >, |).

The file name contains one or more illegal characters (\ / : \* ? " < > |).

(S)

Aborts processing.

(O)

Specify the file name correctly, and try again.

#### KAVR2005-E

The file name is too long. Specify a file name that has 63 or shorter bytes.

A file name is specified that contains more than 63 bytes.

(S)

Aborts processing.

(O)

Specify a file name containing 63 or fewer bytes, and try again.

#### KAVR2006-W

An unsupported unit type is contained in the job operation information file.

The job operation information file contains a unit type that is not supported by the current version of JP1/AJS3 - Print Option.

(S)

Continues processing.

(O)

Check which unit types are unsupported.

Symbols are displayed for unsupported unit types even if Description is specified as the display format for the column item in the format definition.

#### KAVR2007-E

The displayed file has been modified.

The displayed file has been modified.

(S)

Aborts processing.

(O)

Display the file again.

#### KAVR2010-Q

The displayed file will be closed. Do you want to continue?

This message asks the user to confirm closing of the current document.

(S)

Waits for a response.

(O)

Specify Yes to close the file.

To leave the file open, specify No.

#### KAVR2011-E

The number of units in the job operation information file exceeded maximum number of units (*maximum-number-of-units*).

The number of units exceeded the maximum number that can be output to the document.

(S)

Aborts processing.

(O)

Re-create the job operation information file so that the number of units does not exceed the maximum, and then try again. If you need to increase the maximum number of units, you can do so in the Environment Settings window.

#### KAVR2012-I

You can use neither daily nor monthly format definition when execution schedule/result information is not contained in the job operation information file.

You cannot output a document in monthly or daily format because the input file does not contain information about execution schedules and results.

The causes are as follows:

- The job operation information file (.aoi file) does not contain schedule information (set in JP1/AJS) for a jobnet, or the jobnet whose schedule information it contains has not been registered for execution.
- A collection period for schedule information was not specified in a parameter of the command that collected the job operation information, or there was no schedule information in the specified collection period.

(S)

The document area becomes unavailable, and processing continues.

(O)

Create a document in list format.

#### KAVR2013-E

The file path name is too long. Specify a file path name that has 258 or shorter bytes.

You cannot use the specified path and file name because they contain more than 258 bytes in total.

(S)

Aborts processing.

(O)

Specify a path and file name that contain 258 or fewer bytes, and try again.

#### KAVR2014-E

The folder path name is too long. Specify a folder path name that has 194 or shorter bytes.

You cannot use the specified path because it contains more than 194 bytes.

(S)

Aborts processing.

(O)

Specify a path that contains 194 or fewer bytes, and try again.

#### KAVR2015-E

The *XXX* is too long. Specify *XXX* that has *YYY* or shorter bytes.

You cannot use the specified *XXX* because it exceeds *YYY* bytes.

(S)

Aborts processing.

(O)

*XXX* is truncated so that only the first *YYY* bytes are displayed. Characters that cannot be converted to ASCII encoding are replaced with question marks (?). Specify *XXX* using *YYY* bytes or fewer, and try again.

#### KAVR2016-W

The monthly or daily document is not output in 48 hours, because the execution date information for the jobnet does not exist.

The jobnet execution schedule information did not exist, so the monthly or daily document was output in 24 hours. The possible causes are as follows:

- The job operation information file that contains the information collected by JP1/AJS2 - Print Option Manager License 07-10 or earlier was used.
- The job operation information file did not contain the definition and execution schedule information of an upper-level jobnet of the output target job.
- After the **Monthly and daily display hours** setting in the Environment Settings window was changed from 24 hours to 48 hours, the document display was not refreshed.

(S)

Continues processing.

(O)

To output a monthly or daily document in 48 hours, try again by using the job operation information file as follows:



- Use a job operation information file that contains the information collected by JP1/AJS2 - Print Option Manager License 07-50 or later, or by JP1/AJS3 Print Option Manager.
- Collect the job operation information in such a way that information of an upper-level jobnet of the output target job is contained.

If you change the **Monthly and daily display hours** setting in the Environment Settings window, refresh the document display.

To stop displaying this message, in the **View Settings** tab of the Environment Settings window, set **24 hours** for **Monthly and daily display hours**.

#### KAVR2020-I

The below file was output.

*file-name*

A CSV file was successfully created.

(S)

Continues processing.

#### KAVR2030-W

You cannot use the default printer.

No default printer is set.

(S)

Aborts processing.

(O)

Set a default printer and try again.

#### KAVR2050-W

The size of item in the output data exceeded the limit.

- *The size of all data in a cell exceeded 32,000 bytes.*
- *The size of a data in a cell exceeded 4,095 bytes.*
- *The number of lines in a cell exceeded 2,000.*

An item in the output data has exceeded one of the restrictions below. The messages in italics are output in a message dialog only when that particular condition is met.

- The total data in a cell exceeds 32,000 bytes
- The characters in one piece of data in a cell exceeds 4,095 bytes
- The number of lines in a cell exceeds 2,000

(S)

Continues processing.

(O)

View the log file (*JP1/AJS3-Print-Option-installation-folder\Log\ajs2po.log*) and review the value in the cell that exceeded the limit.

### KAVR2101-Q

If you change the basic format, the settings items will be initialized. Do you want to continue?

This message asks the user to confirm the change to the basic format.

(S)

Waits for a response.

(O)

Specify Yes to change the basic format.

To leave the basic format unchanged, specify No.

### KAVR2102-Q

The settings items will be initialized. Do you want to continue?

This message asks the user to confirm initialization of the defined settings.

(S)

Waits for a response.

(O)

Specify Yes to initialize the settings.

To leave the settings unchanged, specify No.

### KAVR2103-E

Add the column items to the format definition.

An attempt was made to register an empty format definition file.

(S)

Aborts processing.

(O)

Define one or more column items in the format definition and try again.

### KAVR2105-Q

Do you want to terminate the format definition settings?

This message requests confirmation from the user when canceling the process of setting a format definition.

(S)

Waits for a response.

(O)

Specify Yes to stop setting the format definition.

To continue setting the format definition, specify No.

### KAVR2106-E

Enter the value in the range 0-23 in the hour field of the base time.

The hour part of the base time is specified incorrectly.

(S)

Cancels processing.

(O)

Enter a value from 0 to 23 as the hour of the base time.

#### KAVR2107-E

Enter the value in the range 0-59 in the minute field of the base time.

The minute part of the base time is specified incorrectly.

(S)

Cancels processing.

(O)

Enter a value from 0 to 59 as the minute of the base time.

#### KAVR2108-W

The current version does not support a unit type in the format definition file.

The format definition file contains a column item that is not supported by the current version of JP1/AJS3 - Print Option.

(S)

Continues processing.

(O)

Check the unsupported column item.

Although this error does not prevent you from using the format definition file, delete the column item if it is not needed. If you output the document with the column item still in place, hyphens (-) appear as the data for that column.

#### KAVR2109-E

Enter the value in the range 10-80 in the column width field.

A column width is specified incorrectly.

(S)

Aborts processing.

(O)

Enter a value from 10 to 80 as the column width.

#### KAVR2110-E

Enter the value in the range 0-99 in the margin field.

A margin is set incorrectly.

(S)

Aborts processing.

(O)

Enter a value from 0 to 99 as the margin.

#### KAVR2111-E

Enter the value in the range 32000-150000 in the maximum number of units field.

The maximum number of units is specified incorrectly.

(S)

Aborts processing.

(O)

Enter a value from 32,000 to 150,000 as the maximum number of units.

#### KAVR2112-E

Enter the value in the *XXX* in the range *YYY-ZZZ*.

The value for *XXX* is specified incorrectly.

(S)

Aborts processing.

(O)

Re-input a value for *XXX* in the range *YYY-ZZZ*.

#### KAVR2201-E

The specified page range is invalid.

The page range is specified incorrectly.

(S)

Aborts processing.

(O)

Enter a correct value for the page range.

#### KAVR2251-E

The map output failed. (An attempt to create the work file has failed.)

Map output failed because a work file could not be created.

(S)

Aborts processing.

(O)

Check the access permissions for the %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

#

By default, %allusersprofile% represents *system-drive*: \ProgramData.

## KAVR2252-E

The map output failed. (An attempt to start Excel has failed.)

Map output failed because Microsoft Excel could not be started.

(S)

Aborts processing.

(O)

Make sure that Microsoft Excel is able to start in your environment.

## KAVR2253-E

The map PDF output failed. (An attempt to create the work file has failed.)

Map PDF output failed because a work file could not be created.

(S)

Aborts processing.

(O)

Check the access permissions for the %allusersprofile%#\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

#  
By default, %allusersprofile% represents *system-drive*: \ProgramData.

## KAVR2254-E

The map PDF output failed. (An attempt to start Excel has failed.)

Map PDF output failed because Microsoft Excel could not be started.

(S)

Aborts processing.

(O)

Make sure that a version of Microsoft Excel that supports map PDF output is able to start in your environment.

## KAVR2255-E

The map PDF output failed. (An attempt to convert the output file to PDF format has failed.)

Map PDF output failed because the data in the input file could not be converted to PDF format.

- A version of Microsoft Excel that supports map PDF output is not installed.
- The path to the file exceeds 218 characters.

(S)

Aborts processing.

(O)

- Make sure that a version of Microsoft Excel that supports map PDF output is able to start in your environment.

- Make sure that the path to the file does not exceed 218 characters, and try again.

#### KAVR2259-E

The map output failed.

Map output has failed.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR2260-E

The map PDF output failed.

Map PDF output has failed.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR2261-E

The jobnet flow output failed. (An attempt to create the work file has failed.)

Jobnet flow output failed because an attempt to create a work file failed.

(S)

Aborts processing.

(O)

Check the access permissions for the %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

#

By default, %allusersprofile% represents *system-drive*: \ProgramData.

#### KAVR2262-E

The jobnet flow output failed. (An attempt to start Excel has failed.)

Jobnet flow output failed because Microsoft Excel could not be started.

(S)

Aborts processing.

(O)

Make sure that Microsoft Excel is able to start in your environment.

## KAVR2263-E

The jobnet flow PDF output failed. (An attempt to create the work file has failed.)

Jobnet flow PDF output failed because an attempt to create a work file failed.

(S)

Aborts processing.

(O)

Check the access permissions for the %allusersprofile%#\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

#

By default, %allusersprofile% represents *system-drive*: \ProgramData.

## KAVR2264-E

The jobnet flow PDF output failed. (An attempt to start Excel has failed.)

Jobnet flow PDF output failed because Microsoft Excel could not be started.

(S)

Aborts processing.

(O)

Make sure that a version of Microsoft Excel that supports jobnet flow PDF output is able to start in your environment.

## KAVR2265-E

The jobnet flow PDF output failed. (An attempt to convert the output file to PDF format has failed.)

Jobnet flow PDF output failed because the data in the input file could not be converted to PDF format.

- A version of Microsoft Excel that supports jobnet flow PDF output is not installed.
- The path to the file exceeds 218 characters.

(S)

Aborts processing.

(O)

- Make sure that a version of Microsoft Excel that supports jobnet flow PDF output is able to start in your environment.
- Make sure that the path to the file does not exceed 218 characters, and try again.

## KAVR2269-E

The jobnet flow output failed.

Jobnet flow output failed.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR2270-E

The jobnet flow PDF output failed.

Jobnet flow PDF output failed.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR2301-E

The specified print range is invalid.

The end date of the print range is earlier than the start date.

(S)

Aborts processing.

(O)

Specify the print range correctly, and try again.

#### KAVR2302-E

The specified print start date is invalid.

The start date of the print range is specified incorrectly.

(S)

Aborts processing.

(O)

Specify the start date of the print range correctly, and try again.

#### KAVR2303-E

The specified print end date is invalid.

The end date of the print range is specified incorrectly.

(S)

Aborts processing.

(O)

Specify the end date of the print range correctly, and try again.

#### KAVR2901-Q

JP1/AJS2 - Print Option will end. Do you want to continue?



This message asks the user to confirm closing the program.

(S)

Waits for a response.

(O)

Specify Yes to close the program.

To cancel the operation, specify No.

#### KAVR3000-I

The job map output ended successfully.

Indicates that map output has ended normally.

(S)

Waits for a response.

(O)

Specify OK to finish the map output process.

#### KAVR3001-E

The map output failed. Check the output file.

Because map output ended abnormally, this message prompts the user to check the output map.

(S)

Waits for a response.

(O)

Specify OK to finish the map output process.

#### KAVR3002-I

Processing will now stop.

This message indicates that processing has stopped because it was canceled by an operator.

(S)

Waits for a response.

(O)

Specify OK to finish processing.

#### KAVR3003-I

The jobnet flow output ended successfully.

Indicates that a jobnet flow image was output successfully.

(S)

Waits for a response.

(O)

Specify OK to finish processing.

#### KAVR3004-E

The jobnet flow output failed. Check the output file.

Because jobnet flow output ended abnormally, this message prompts the user to check the output jobnet flow image.

(S)

Waits for a response.

(O)

Specify OK to finish processing.

#### KAVR3005-E

The specified levels of job hierarchical tree is invalid.

The number of hierarchical levels is specified incorrectly.

(S)

Aborts processing.

(O)

Enter the number of hierarchical levels correctly, and try again.

#### KAVR3006-E

The jobnet flow output exceeded the maximum value of 256 for columns.

Indicates that the jobnet flow output exceeded Microsoft Excel's maximum number for columns, 256, and ended abnormally.

(S)

Waits for a response.

(O)

Specify **OK** to terminate processing.

Take one of the following measures:

- Change the data layout specified for the jobnet flow format definition from **2 columns format** to **1 column format**.
- Check the Microsoft Excel output result last output for a jobnet flow output. Use the jobnet editor of JP1/AJS3 - View to open the jobnet map that cannot be output, and then adjust the horizontal position inside each unit icon map area so that their map size is 85 or lower.
- If you are using Microsoft Excel 2007 or later, under **Excel Options**, open the **Save** tab. Change the settings of **Save files in this format** to a format that does not switch to Compatibility Mode when you open a new book.

#### KAVR3010-E

An error occurred during a file read.

*file-name* (Err: *error-code*)

An attempt to load a file has failed.

(S)

Aborts processing.

(O)

Make sure that the file is accessible, and try again.

#### KAVR3011-E

This file data is corrupted.

The specified job operation information file or jobnet flow format definition file is corrupted.

(S)

Aborts processing.

(O)

Re-create the job operation information file or jobnet flow format definition file, and try again.

#### KAVR3012-E

An error occurred during a file write.

*file-name* (Err: *error-code*)

An attempt to write to a file has failed.

(S)

Aborts processing.

(O)

Make sure that the file is accessible, and try again.

#### KAVR3013-E

The specified output file name is invalid.

The output file name is specified incorrectly. Possible causes are:

- The specified directory does not exist
- The name of the directory or file contains an illegal character
- The system could not create the specified file

(S)

Aborts processing.

(O)

Specify the file name correctly, and try again.

#### KAVR3014-E

The file name is too long. Specify a file name that has 63 or shorter bytes.

The file name is longer than 63 bytes.

(S)

Aborts processing.

(O)

Specify a file name of 63 or fewer bytes, and try again.

#### KAVR3015-E

The file path name is too long. Specify a file path name that has 258 or shorter bytes.

You cannot use the specified file because its path and file name exceed 258 bytes in total.

(S)

Aborts processing.

(O)

Specify a path and file name of 258 or fewer total bytes, and try again.

#### KAVR3016-E

The folder path name is too long. Specify a folder path name that has 194 or shorter bytes.

You cannot use the specified path because it is longer than 194 bytes.

(S)

Aborts processing.

(O)

Specify a path of 194 bytes or fewer, and try again.

#### KAVR3020-I

The below file was output.

*file-name*

A PDF file was output successfully.

(S)

Continues processing.

#### KAVR3021-E

The map PDF output failed.

An attempt to perform map PDF output has failed.

(S)

Waits for a response.

(O)

Specify OK to finish processing.

### KAVR3022-E

The jobnet flow PDF output failed.

Jobnet flow PDF output ended abnormally.

(S)

Waits for a response.

(O)

Specify OK to finish processing.

### KAVR3023-E

The jobnet flow PDF output exceeded the maximum value of 256 for columns.

Indicates that the jobnet flow PDF output exceeded Microsoft Excel's maximum number for columns, 256, and ended abnormally.

(S)

Waits for a response.

(O)

Specify **OK** to terminate processing.

Take one of the following measures:

- Change the data layout specified for the jobnet flow format definition from **2 columns format** to **1 column format**.
- Use the jobnet editor of JP1/AJS3 - View to open the jobnet map that was output with the jobnet flow PDF output, and then adjust the horizontal position inside each unit icon map area so that their map size is 85 or lower.
- If you are using Microsoft Excel 2007 or later, under **Excel Options**, open the **Save** tab. Change the settings of **Save files in this format** to a format that does not switch to Compatibility Mode when you open a new book.

### KAVR3030-E

You cannot use the default printer.

The default printer is unavailable.

(S)

Aborts processing.

(O)

Review the configuration of your default printer, and then try again. If your default printer is a networked printer, check the connection to the print server.

If you do not need to print the document, perform one of the following and try again.

- Set a dummy local printer as the default printer
- Remove all printers from the system

### KAVR3050-W

The size of the data in the jobnet flow output file exceeded the limit.

- The size of all data in a cell exceeded 32,000 bytes.

- *The size of a data in a cell exceeded 4,095 bytes.*
- *The number of lines in a cell exceeded 2,000.*

An item in the jobnet flow output data exceeded one of the restrictions below. The messages in italics are output in a message dialog only when that particular condition is met.

- The total data in a cell exceeds 32,000 bytes
- The characters in one piece of data in a cell exceeds 4,095 bytes
- The number of lines in a cell exceeds 2,000

(S)

Continues processing.

(O)

View the log file (*JP1/AJS3-Print-Option-installation-folder\Log\ajs2po.log*), and review the value in the cell that exceeded the limit.

### KAVR4000-E

Job operation information file name must be specified.

You must specify a job operation information file name.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4001-E

Format definition file name must be specified.

You must specify a format definition file name.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4002-E

The specified job operation information file name is invalid.

- The specified file does not have the extension `.aoi`
- The specified file does not have an extension

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4003-E

The specified format definition file name is invalid.

- The specified file does not have the extension `.jof`
- The specified file does not have an extension

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4004-E

The specified CSV file name is invalid.

- The extension of the specified file is not CSV
- The specified file does not have an extension

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4005-E

CSV file name must be specified.

- The `-c` option is specified without a CSV file name

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4006-E

The job operation information file cannot be read.

- The specified job operation information file does not exist.
- The contents of the specified job operation information file are invalid.
- You do not have access permission for the specified job operation information file, or the file is currently in use.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4007-E

The format definition file cannot be read.

- The specified format definition file does not exist.
- The contents of the specified format definition are invalid.
- You do not have access permission for the specified format definition file, or the file is currently in use.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4008-E

The CSV file cannot be written.

- You do not have access permission for the destination file, or the file is already in use.
- The file name is specified incorrectly.
- The specified file already exists (when `-u` option is not specified).
- The write destination disk has insufficient space.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4009-E

You cannot use the default printer.

- No default printer is set

(S)

Aborts processing.

(O)

Set a default printer, and try again.

## KAVR4010-E

You can use neither daily nor monthly format definition when execution schedule/result information is not contained in the job operation information file.

- You specified a monthly or daily format definition but the job operation information file does not contain execution schedules or results.

(S)

Aborts processing.



(O)

Specify a job operation information file that contains execution schedules and results, and try again.

#### KAVR4011-W

The monthly or daily document is not output in 48 hours, because the execution date information for the jobnet does not exist.

The jobnet execution schedule information did not exist, so the monthly or daily document was output in 24 hours. The possible causes are as follows:

- The job operation information file that contains the information collected by JP1/AJS2 - Print Option Manager License 07-10 or earlier was used.
- The job operation information file did not contain the definition and execution schedule information of an upper-level jobnet of the output target job.

(S)

Continues processing.

(O)

To output a monthly or daily document in 48 hours, try again by using the job operation information file as follows:

- Use a job operation information file that contains the information collected by JP1/AJS2 - Print Option Manager License 07-50 or later, or by JP1/AJS3 Print Option Manager.
- Collect the job operation information in such a way that information of an upper-level jobnet of the output target job is contained.

To stop displaying this message, in the **View Settings** tab of the Environment Settings window, set **24 hours** for **Monthly and daily display hours**.

#### KAVR4012-E

An attempt to create map output file has failed. (The work file could not be created.)

Map output failed due to a failure to create the work file.

(S)

Aborts processing.

(O)

Check the access permissions to the %allusersprofile%#\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

#

%allusersprofile% refers to *system-drive*: \ProgramData by default.

#### KAVR4013-E

Prerequisite program for map output is not installed.

Map output failed due to some of the prerequisite programs not being installed.

(S)

Aborts processing.

(O)

Install the prerequisite programs.

#### KAVR4014-E

The specified map output file name is invalid.

- The name of a file whose extension is not `.xls` was specified.
- The file extension was not specified.
- The specified directory does not exist.
- The name of the directory or file contains an illegal character.
- The directory name contains more than 194 bytes, or the file path name contains more than 258 bytes.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4015-E

Map output file name must be specified.

- The `-m` option is specified, but no map output file name is specified.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4016-E

An attempt to create map output file has failed.

An attempt to create map output file has failed.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR4017-E

An attempt to save map output file has failed.

- You do not have access permission for the destination file, or the file is already in use.
- The file name is specified incorrectly.
- The specified file already exists (when the `-u` option is not specified).
- The write destination disk has insufficient space.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4018-E

An attempt to create jobnet flow output file has failed. (The work file could not be created.)

Jobnet flow output failed due to a failure in the process of creating the work file.

(S)

Aborts processing.

(O)

Check the access permissions to the %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

#

%allusersprofile% refers to *system-drive*: \ProgramData by default.

#### KAVR4019-E

Prerequisite program for jobnet flow output is not installed.

Jobnet flow output failed due to some of the prerequisite programs not being installed.

(S)

Aborts processing.

(O)

Install the prerequisite programs.

#### KAVR4020-E

The specified jobnet flow output file name is invalid.

- The name of a file whose extension is not `xlsx` was specified.
- The file extension was not specified.
- The specified directory does not exist.
- The name of the directory or file contains an illegal character.
- The directory name contains more than 194 bytes, or the file path name contains more than 258 bytes.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4021-E

Jobnet flow output file name must be specified.

- The -l option is specified, but no jobnet flow output file name is specified.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4022-E

An attempt to create jobnet flow output file has failed.

An attempt to create jobnet flow output file has failed.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR4023-E

The jobnet flow format definition file cannot be read.

- The specified jobnet flow format definition file does not exist.
- The specified jobnet flow format definition file contains invalid information.
- No access permissions to the specified jobnet flow format definition file are granted, or the specified jobnet flow format definition file is in use.

(S)

Aborts processing.

(O)

Specify the jobnet flow format definition file correctly in the Environment Settings window, and try again.

#### KAVR4024-E

An attempt to save jobnet flow output file has failed.

- You do not have access permission for the destination file, or the file is already in use.
- The file name is specified incorrectly.
- The specified file already exists (when the -u option is not specified).
- The write destination disk has insufficient space.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4100-E

Login name must be specified.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4101-E

Password must be specified.

The password cannot be omitted.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4102-E

Password and confirm password do not match.

The confirm password has a different value from the password.

(S)

Aborts processing.

(O)

Enter the same value for the confirm password as that for the password, and try again.

#### KAVR4103-E

JP1/AJS3 - Manager host name must be specified.

The JP1/AJS3 - Manager host name cannot be omitted.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

#### KAVR4104-E

The specified JP1/AJS3 - Manager host name and login name already exist in authentication information file.

(S)

Aborts processing.

(O)

Take one of the following measures:

- Update the authentication information by specifying the JP1/AJS3 - Manager host name, login user name, and password in the `-u` option.
- Delete the authentication information by specifying the JP1/AJS3 - Manager host name and login user name in the `-d` option, and then register them again with the `-a` option.

#### KAVR4105-E

An attempt to encrypt authentication information file has failed.

The encryption file output failed due to a failure in the process of encrypting authentication information.

(S)

Aborts processing.

(O)

Contact the system administrator.

#### KAVR4106-E

An attempt to save authentication information file has failed.

- You do not have access permission for the destination file.
- The write destination disk has insufficient space.

(S)

Aborts processing.

(O)

- Check the access permissions to the `%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO` folder.
- Check that the system drive has free disk space.

#:

`%allusersprofile%` refers to *system-drive*: \ProgramData by default.

#### KAVR4107-E

The authentication information file cannot be read.

- You do not have access permission for the authentication information file.
- The authentication information file is already in use.

(S)

Aborts processing.

(O)

- Check the access permissions to the `%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO` folder.
- Wait for a while, and try again.

#:

`%allusersprofile%` refers to *system-drive*: \ProgramData by default.

#### KAVR4108-E

The specified JP1/AJS3 - Manager host name and login name do not exist in authentication information file.

The specified JP1/AJS3 - Manager host name and login name do not exist in authentication information file.

(S)

Aborts processing.

(O)

Check the JP1/AJS3 - Manager host name and login user name registered in the authentication information file by using the `-l` option, and try again.

#### KAVR4109-E

The authentication information does not exist in authentication information file.

The authentication information does not exist in authentication information file.

(S)

Aborts processing.

(O)

Register authentication information by using the `-a` option, and try again.

#### KAVR4110-I

The specified authentication information was added to authentication information file.

(S)

The specified authentication information was added to authentication information file.

#### KAVR4111-I

The specified authentication information was deleted from authentication information file.

(S)

The specified authentication information was deleted from authentication information file.

#### KAVR4112-I

Authentication information file was updated with the specified authentication information.

(S)

Authentication information file was updated with the specified authentication information.

#### KAVR4200-E

Job operation information could not be collected.

An attempt to collect job operation information has failed. The possible causes are as follows:

- The specified unit does not exist.

- The JP1/AJS3 scheduler service is not running.
- The output file cannot be created.
- The execution permissions of the JP1 user specified for login authentication of JP1/AJS3 - Manager are not granted to the JP1 resource group as the target unit.

(S)

Aborts processing.

(O)

- Specify a unit that exists.
- Start the JP1/AJS3 scheduler service.
- Check the write permission for the specified output target.
- Grant the execution permissions of the `ajsprint` command and `ajsshow` command to the JP1 resource group as the target unit that the JP1 user specified for login authentication of JP1/AJS3 - Manager belongs to.

See the execution log information, investigate the cause carefully, remove the cause of the failure, and then try again. The execution log information is recorded in the file *output-file-name.log*.

## KAVR4201-W

Only definition information was collected. Execution schedule/result information could not be collected.

JP1/AJS3 - Print Option was able to collect definition information, but could not collect execution schedules and results. Possible causes are:

- The specified unit has not been registered for execution.
  - There are no execution schedules or results in the specified collection period.
  - You specified a job group in which one or more of the constituent units have not been registered for execution.
- In this case, JP1/AJS3 - Print Option collects execution schedules and results for the units that have been registered for execution.

(S)

Continues processing.

(O)

You can output documents that contain definition information.

If you need the document to contain execution schedules and results, identify and address the cause of the error by referring to the execution logs, and then try again. The execution log information is recorded in the file *output-file-name.log*.

## KAVR4202-E

You cannot to specify the generic name for unit name.

You cannot use wildcards (\* and ?) when specifying unit names.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.



### KAVR4203-E

Unit name must be specified.

You must specify a unit name.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4204-E

Job operation information file name must be specified.

You must specify a job operation information file name.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4205-E

The specified job operation information file name is invalid.

The specified job operation information file name is invalid. The possible causes are as follows:

- The specified directory does not exist.
- The name of the directory or file contains an illegal character.
- The directory name contains more than 194 bytes, or the file path name contains more than 258 bytes.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

### KAVR4206-E

Specify -b argument and -e argument with the pair.

The -b argument and the -e argument must be specified together.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4207-E

Prerequisite program is not installed. (Detailed information: *detailed information*)

A prerequisite program is not installed properly. The causes are as follows:

- The version of JP1/AJS3 - Web Console is 12-10 or earlier.
- JP1/AJS3 - Manager is not installed, or its version is 12-10 or earlier.
- JP1/AJS3 - Print Option Manager is not installed, or its version is 12-00 or earlier.

(S)

Aborts processing.

(O)

- Install JP1/AJS3 - Web Console 12-50 or later.
- Install JP1/AJS3 - Manager 12-50 or later.
- Install JP1/AJS3 - Print Option Manager 12-50 or later.

## KAVR4208-E

The authentication information file cannot be read.

- The authentication information file does not exist.
- You do not have access permission for the authentication information file.
- The authentication information file is already in use.

(S)

Aborts processing.

(O)

- Register authentication information by using `jprajsmkkey` command, and try again.
- Check the access permissions to the `%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO` folder.
- Wait for a while, and try again.

#:

`%allusersprofile%` refers to *system-drive*: \ProgramData by default.

## KAVR4209-E

Login name must be specified.

Login name must be specified.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4210-E

JP1/AJS3 - Manager host name must be specified.

JP1/AJS3 - Manager host name must be specified.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4211-E

JP1/AJS3 - Web Console host name must be specified.

JP1/AJS3 - Web Console host name must be specified.

(S)

Aborts processing.

(O)

Enter the argument correctly, and try again.

## KAVR4212-E

The specified JP1/AJS3 - Manager host name and login name do not exist in authentication information file.

The specified JP1/AJS3 - Manager host name and login name do not exist in authentication information file.

(S)

Aborts processing.

(O)

Check that the JP1/AJS3 - Manager host name and login user name are registered as authentication information by using the `jprajsmkkey` command with the `-l` option, and then try again.

## KAVR4213-E

An attempt to save job operation information file has failed.

- You do not have access permission for the destination file, or the file is already in use.
- The specified file already exists (when the `-z` option is not specified).
- The write destination disk has insufficient space.

(S)

Aborts processing.

(O)

- Check the access permissions for the destination file.
- Wait for a while, and try again.
- If the specified file exists in the write destination, specify a different file name or use the `-z` option.
- Make sure that sufficient disk space is available by deleting unnecessary files.

## KAVR4214-E

An error occurred during authentication process.

- The port number specified for use in communication with JP1/AJS3 - Web Console is not available.
- An invalid protocol was specified for communication with JP1/AJS3 - Web Console.
- An error occurred during the process of communication with JP1/AJS3 - Web Console.
- An authentication error occurred with the user and password in the specified authentication information file.

(S)

Aborts processing.

(O)

- Check if the port number specified for use in communication with JP1/AJS3 - Web Console is available.
- Check if the protocol specified for communication with JP1/AJS3 - Web Console is valid.
- Check the network settings and the firewall settings.
- Check if the user and password in the specified authentication information file are correct.

## KAVR4215-E

An attempt to access to file has failed.

A file I/O error occurred.

(S)

Aborts processing.

(O)

Check the status of the file system.

## KAVR4216-E

An error occurred in JP1/AJS3- Web Console. (Detailed information: *detailed information*)

An error occurred in JP1/AJS3- Web Console. The causes are as follows:

- The specified JP1/AJS3 - Manager host does not allow JP1/AJS3 - Web Console to connect to it.
- The number of commands to be concurrently executed on the JP1/AJS3 - Manager host to connect to has been exceeded.
- Downloading the job operation information file exceeded its time limit.

(S)

Aborts processing.

(O)

- Check if the JP1/AJS3 - Manager host to connect to allows JP1/AJS3 - Web Console to connect to the host.
- Check the number of commands to be concurrently executed on the JP1/AJS3 - Manager host to connect to.
- Review the collection conditions and reduce the size of the job operation information file, or wait for a while and try again.

If the problem is not solved with the above actions, collect the files required for troubleshooting, and contact maintenance personnel.

#### KAVR4501-W

Because output information does not exist, processing is ended.

- The job operation information file does not contain any information for the unit types specified in the format definition file.

(S)

Aborts processing.

#### KAVR4502-W

An unsupported unit type is contained in the job operation information file.

The job operation information file contains a unit type that is not supported by the current version of JP1/AJS3 - Print Option.

(S)

Continues processing.

(O)

Check which unit types are unsupported.

Symbols are displayed for unsupported unit types even if Description is specified as the display format for the column item in the format definition.

#### KAVR5000-E

An error occurred during communication.

- The port number to be used by the JP1/AJS3 - Print Option Manager service is not registered.
- The port numbers to be used by the JP1/AJS3 - Print Option Manager service are duplicated.
- A communication error occurred when collecting job operation information.
- The JP1/AJS3 - Print Option Manager service is not running.

(S)

Aborts processing.

(O)

- Check that the port number to be used by the JP1/AJS3 - Print Option Manager service is properly registered in the `Services` file.
- Check that the port numbers to be used by the JP1/AJS3 - Print Option Manager service are not duplicated.
- Check the network and firewall configurations.
- Start the JP1/AJS3 - Print Option Manager service.

#### KAVR5001-E

An attempt to access to file has failed.

- A file I/O error occurred.

(S)

Aborts processing.

(O)

Check the status of the file system.

#### KAVR5002-I

Cancel button was pushed.

- The operator clicked the **Cancel** button while the job operation information file was being transferred.

(S)

Cancels transfer of the job operation information file.

(O)

None.

#### KAVR5003-E

Memory could not be allocated.

- Insufficient memory

(S)

Aborts processing.

(O)

Close unnecessary programs and try again.

#### KAVR5004-E

JP1/AJS2 - Print Option installation location is unobtainable.

- JP1/AJS3 - Print Option is not installed correctly.

(S)

Aborts processing.

(O)

Re-install JP1/AJS3 - Print Option.

#### KAVR5005-I

Job operation information was collected.

- Job operation information was collected successfully.

(S)

None.

(O)

None.

## KAVR5006-E

The arguments are invalid.

- A command argument is specified incorrectly.

(S)

Aborts processing.

(O)

Check the command arguments, and then try again.

## KAVR5007-I

Job operation information is being collected.

- Job operation information is being collected.

(S)

None.

(O)

None.

## KAVR5008-I

It is transferring the file now.

- A job operation information file is being transferred.

(S)

None.

(O)

None.

## KAVR5009-E

An attempt to start JP1/AJS2 - Print Option has failed.

- An attempt to open the Job Operation Document Output window has failed.

(S)

Aborts processing.

(O)

Make sure that JP1/AJS3 - Print Option is installed correctly, and then try again.

## KAVR5010-E

An attempt to collect the job operation information has failed.

- A unit name is specified incorrectly in the Collecting Job Operation Information window, or the output destination for the job operation information file is specified incorrectly in the Collecting Job Operation Information window.
- The LANG environment variable was set incorrectly when the JP1/AJS3 - Print Option Manager service was started.

- An attempt to output a job operation information file failed because JP1/AJS3 - Print Option is not installed correctly.
- Another program uses the port number set for the JP1/AJS3 - POM service (jp1ajs2poml).
- The JP1/AJS3 environment setting parameter ADMACLIMIT is set to `yes`.

(S)

Aborts processing.

(O)

- Make sure that unit names and the destination for the job operation information file are specified correctly in the Collecting Job Operation Information window.
- Make sure that the `LANG` environment variable is set correctly at execution of the `jprpomlstart` command, and in the automatic startup script for the JP1/AJS3 - Print Option Manager service.
- Install a version of JP1/AJS3 - Print Option that is compatible with your operating system.
- Make sure that the port number set for the JP1/AJS3 - POM service (jp1ajs2poml) in the services file does not conflict with that of another program.
- Take either of the following measures:

(In Windows)

- If you are operating the JP1/AJS3 - Print Option Manager service using a local system account, create a JP1 user named `system` and set the JP1 permission level for the JP1 resource group of the target units for the `ajspoint` command and the `ajsshow` command.
- If you are operating the JP1/AJS3 - Print Option Manager service using a user account, create a JP1 user with the same name as the user account and set the JP1 permission level for the JP1 resource group of the target units for the `ajspoint` command and the `ajsshow` command.

(In UNIX)

- Create a JP1 user named `root` and set the JP1 permission level for the JP1 resource group of the target units for the `ajspoint` command and the `ajsshow` command.

## KAVR5011-E

An attempt to start the service has failed.

- The service could not be started.

(S)

Aborts processing.

(O)

Collect the files required for troubleshooting, and contact maintenance personnel.

## KAVR5012-E

An attempt to start the thread has failed.

- A thread could not be started.

(S)

Aborts processing.



(O)

Collect the files required for troubleshooting, and contact maintenance personnel.

#### KAVR5013-E

An error occurred in JP1/AJS2 - Print Option Manager License.

- An error occurred in the JP1/AJS3 - Print Option Manager program.

(S)

Aborts processing.

(O)

Collect the files required for troubleshooting, and contact maintenance personnel.

#### KAVR5014-E

An error occurred in JP1/AJS2 - Print Option Manager License service.

- An error occurred in the service.

(S)

Aborts processing.

(O)

Collect the files required for troubleshooting, and contact maintenance personnel.

#### KAVR5015-I

JP1/AJS2 - Print Option Manager License service was started.

- The JP1/AJS3 - Print Option Manager service has started.

(S)

None.

(O)

None.

#### KAVR5016-I

JP1/AJS2 - Print Option Manager License service was stopped.

- The JP1/AJS3 - Print Option Manager service has stopped.

(S)

None.

(O)

None.

#### KAVR5017-I

JP1/AJS2 - Print Option Manager License service has already been started.

- The JP1/AJS3 - Print Option Manager service is already running.

(S)

None.

(O)

None.

#### KAVR5018-I

JP1/AJS2 - Print Option Manager License service has already been stopped.

- The JP1/AJS3 - Print Option Manager service is already stopped.

(S)

None.

(O)

None.

#### KAVR5019-E

An attempt to start JP1/AJS2 - Print Option Manager License service has failed.

- An attempt to start the JP1/AJS3 - Print Option Manager service failed.

(S)

Aborts processing.

(O)

Collect the files required for troubleshooting, and contact maintenance personnel.

#### KAVR5020-I

The service is stopped by receiving a signal.

- The service will be stopped because a signal to kill the service was received.

(S)

Stops the service.

(O)

None.

#### KAVR5021-E

JP1/AJS2 - Print Option Manager License installation location is unobtainable.

- JP1/AJS3 - Print Option Manager is not installed correctly.

(S)

Aborts processing.

(O)

Re-install JP1/AJS3 - Print Option Manager.

## KAVR5022-E

The process is stopping now. Wait for the process to end, and then retry.

A stop request is being processed.

(S)

Aborts processing.

(O)

Wait a while and try again.

## KAVR5024-E

An attempt to collect the job operation information has failed, because the version of JP1/Automatic Job Management System 2 - Print Option Manager License is old.

An attempt to collect job operation information failed because the version of JP1/AJS3 - Print Option Manager is out of date.

(S)

Aborts processing.

(O)

Upgrade JP1/AJS3 - Print Option Manager.

## KAVR5027-E

An attempt to read the product information failed. (Detailed information: *function-name, return-code*)

An attempt to read product information has failed.

(S)

Aborts processing.

(O)

If you changed the system time to a time earlier than the installation time of the product, change the time back, and then try the operation again.

For any other cases, perform an overwrite installation and then try the operation again. If this message appears again after the overwrite installation, uninstall the product, re-install it, and then retry the operation.

# 10

## Troubleshooting

This chapter describes what to do if a problem occurs while using JP1/AJS3 - Print Option.

## 10.1 Troubleshooting procedure

---

If an error occurs in JP1/AJS3 - Print Option, follow these steps:

1. Find out what happened.

Find out what occurred at the time of the error. If a message was output, check the contents of the message. For details about the cause of each message and the action to take, see [9. Messages](#). For details about the log information output during JP1/AJS3 - Print Option operation, see [10.2 Types of log information](#).

2. Collect data.

Collect data to identify the cause of the error. See [10.3 Information to be collected when a problem occurs](#), [10.4 Using data collection tools to collect information](#), and [10.5 Configuring dump file output and collecting dump files](#), and collect the necessary information.

3. Investigate the problem.

Determine the cause of the problem based on the information you collected. Identify where the error occurred or determine the scope of the problem.

## 10.2 Types of log information

---

Two types of log information are output when you use JP1/AJS3 - Print Option:

- Common message logs
- Process logs

This section describes these two types of log information.

### 10.2.1 Common message log

The common message log provides the system administrator with information about errors that occurred in the system. It provides the minimum level of information required to troubleshoot errors.

Common message log entries are output to the Windows event log in Windows, and to syslog in UNIX.

### 10.2.2 Process log

A process log is log information output by individual features of JP1/AJS3 - Print Option. Each feature outputs information to its own log file. For details about the log files to which process log information is output, see [10.3.2 Information relating to JP1/AJS3 - Print Option](#).

## 10.3 Information to be collected when a problem occurs

This section describes the information that you need to collect when a problem occurs in JP1/AJS3 - Print Option, and how to collect it.

### 10.3.1 Information to collect from OS log files

When a problem occurs in JP1/AJS3 - Print Option, collect the following log information output by the operating system:

#### (1) In Windows

Table 10–1: OS log information to collect when a problem occurs (in Windows)

Files to collect	Collected by data collection tool
Windows event log	Y
hosts file and services file	Y
User dump file	Y <sup>#1</sup>
Memory dump	Y <sup>#2</sup>
Crash dump	Y <sup>#2</sup>

Legend:

Y: This information can be collected by the data collection tool.

#1

The data collection tool can acquire a user dump file if one has been output by the user.

#2

The data collection tool cannot acquire memory dumps and crash dumps. You must collect this information manually when a problem occurs. For details about how to do so, see [10.5.2 Collecting dump files](#).

#### (2) In UNIX

Table 10–2: OS log information to collect when a problem occurs (in UNIX)

Files to collect	Collected by data collection tool
syslog file	Y
hosts file, services file	Y
core file	Y <sup>#</sup>

Legend:

Y: This information can be collected by the data collection tool.

#

If you execute a command that outputs a core file, you must collect the core file manually from the current directory.

## 10.3.2 Information relating to JP1/AJS3 - Print Option

When a problem occurs, collect the following files relating to JP1/AJS3 - Print Option:

### (1) In Windows

Collect all of the following files on the computer where the problem occurred.

Table 10–3: Files to collect when a problem occurs (in Windows)

Program name	Folder	File type	Collected by tool
JP1/AJS3 - Print Option Manager <sup>#3</sup>	Output destination specified in command argument <sup>#1, #4</sup>	Job operation information files (extension: aoi)	--
	Output destination specified in command argument <sup>#1, #4</sup>	Job operation information collection log (extension: log)	--
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2POM\Tmp <sup>#2</sup>	Log files (all extensions)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2POM\Log <sup>#7</sup>	Log files (all extensions)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2POM\	Environment settings information file (file name: jprpoml.ini)	Y
JP1/AJS3 - Print Option <sup>#3</sup>	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Input <sup>#5</sup>	Job operation information files (extension: aoi)	--
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Format <sup>#5</sup>	Format definition files (extension: jof)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Map\FlowFormat <sup>#5</sup>	Jobnet flow format definition files (extension: fof)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Log <sup>#6</sup>	Log files (all extensions)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Users	Folders and files in the Users folder while multi-user remote operation is enabled (all extensions)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Map <sup>#8</sup>	Temporary files (all extensions)	Y
	%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO\Profiles <sup>#9</sup>	Authentication information file (all extensions)	--

Legend:

Y: Can be collected by data collection tool.

--: Cannot be collected by data collection tool.

Note:

The default of %allusersprofile% is *system-drive*:\ProgramData.



#1

If no path is specified, the files are created in the execution directory.

#2

This log information is output if an error is detected when collecting job operation information via JP1/AJS3 - View.

#3

If you have configured the system to not show hidden files and folders, %allusersprofile% folder is not displayed. You can display the folder by configuring the system to show all files. For details about how to do so, see the Help for the operating system.

#4

An error occurs if a non-Administrator user specifies a protected folder such as C:\Program Files as the output destination in a Windows Server 2019, Windows Server 2016 or Windows Server 2012 environment with UAC enabled. In this scenario, execute the command from a command prompt with Administrator privileges.

#5

If you are using another output folder, collect the files from that folder.

#6

The format of the logged information is private.

If a log file size exceeds max size when the map output or jobnet flow output is performed, the file is deleted and re-created. For this reason, if an error occurs during map output or jobnet flow output, back up the log files in this folder before you use that function again.

#7

The format of the logged information is private.

#8

Temporary files are output to this folder if you use map output or jobnet flow output function.

#9

The file is created when the jprajsmkkey command is executed to register authentication information.

## (2) In UNIX

Collect all of the following files on the computer where the problem occurred:

Table 10–4: Files to collect when a problem occurs (in UNIX)

Program name	Directory	File type	Collected by tool
JP1/AJS3 - Print Option Manager	Output destination specified in command argument <sup>#1</sup>	Job operation information files (extension: aoi)	--
	Output destination specified in command argument <sup>#1</sup>	Job operation information collection log (extension: log)	--
	/opt/jp1ajs2pom/tmp <sup>#2</sup>	Log files (all extensions)	Y
	/opt/jp1ajs2pom/log <sup>#4</sup>	Log files (all extensions)	Y
	/opt/jp1ajs2pom	core file <sup>#3</sup>	Y
	/opt/jp1ajs2pom	Environment settings information file (file name: jprpoml.ini)	Y

Legend:

Y: Can be collected by data collection tool.

--: Cannot be collected by data collection tool.

#1

If no path is specified, the files are created in the execution directory.

#2

This log information is output if an error is detected when collecting job operation information via JP1/AJS3 - View.

#3

If you executed a command that output a core file, you must collect the core file manually from the current directory.

#4

The format of the logged information is private.

### 10.3.3 Status of JP1/AJS3 - Print Option processes

Check the status of the JP1/AJS3 - Print Option processes.

#### (1) In Windows

Use the Windows task manager to check the status of JP1/AJS3 - Print Option processes.

For details about the processes, see [E. List of Processes](#).

#### (2) In UNIX

Use the UNIX `ps` command to check the status of JP1/AJS3 - Print Option processes.

For details about the processes, see [E. List of Processes](#).

### 10.3.4 Operation data

If an error occurs, collect the following operational information:

- Details of the operation
- The time when the error occurred
- System configuration (OS versions, host names, configuration information, list of installed software)  
In Windows, you can acquire detailed information from System Information.
- Whether the error can be reproduced

### 10.3.5 On-screen error information

Collect hard copies of error messages generated by commands, and the contents of error message dialog boxes that appear on screen.

## 10.4 Using data collection tools to collect information

---

Hitachi provides *data collection tools* that you can use to collect the data needed to troubleshoot JP1 products.

This section describes how to prepare and execute the data collection tools.

### 10.4.1 Preparing to use the data collection tools

After installing JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager, copy the respective data collection tools to a folder other than the one in which the program is installed.

At installation, the data collection tools are stored at the following locations:

Data collection tool for JP1/AJS3 - Print Option

```
installation-folder\PO_ras.bat
```

Data collection tool for JP1/AJS3 - Print Option Manager (in Windows)

```
installation-folder\POM_ras.bat
```

Data collection tool for JP1/AJS3 - Print Option Manager (in UNIX)

```
/opt/jplajs2pom/POM_ras.sh
```

Note:

- In JP1/AJS3 - Print Option, the default value of *installation-folder* is *system-drive*: \Program Files \Hitachi\JP1AJS2PO.  
For Windows (64-bit), interpret Program Files as Program Files (x86).
- In JP1/AJS3 - Print Option Manager, the default value of *installation-folder* is *system-drive*: \Program Files (x86)\Hitachi\JP1AJS2POM.

Cautionary note:

- Do not copy a data collection tool to an installation folder (such as C:\Program Files) or its subfolders.
- A data collection tool is updated during an upgrade installation.
- The data collection tools are not customizable.

### 10.4.2 Running the JP1/AJS3 - Print Option data collection tool

The data collection tool for JP1/AJS3 - Print Option is a batch file. When you execute the batch file, the tool collects and outputs the required data all at once.

The following describes how to run the data collection tool, explains the syntax associated with the tool (such as options, return values, messages, and cautionary notes), and lists the files the tool collects.

#### (1) Running the JP1/AJS3 - Print Option data collection tool

The following shows an example of a command line that executes the JP1/AJS3 - Print Option data collection tool. In this example, the tool is stored in the folder C:\usertools.

```
c:\>c:\usertools\PO_ras.bat
```

The data collection tool outputs the data it collects to subfolders of *folder-where-data-collection-tool-is-stored* \jp1ajs2po\backlog.

\PO\_1st

Primary data is output to this folder.

\PO\_2nd

Secondary data is output to this folder.



### Note

- You can specify options that limit the range of data collected by the data collection tool. For details about the syntax of these options, see [\(2\) Syntax of the JP1/AJS3 - Print Option data collection tool](#).
- For details about the types of primary and secondary data collected by the data collection tool, see [\(3\) Data collected by the JP1/AJS3 - Print Option data collection tool](#).

## (2) Syntax of the JP1/AJS3 - Print Option data collection tool

### Format

```
PO_ras.bat  
    [-t]  
    [-u]
```

### Description

Acquires maintenance information associated with JP1/AJS3 - Print Option. This information includes log information of various types and information output by the OS.

### Required permission

Administrators permission

### Arguments

-t

Specify this option when you do not want to collect the hosts file and the services file.

-u

Specify this option when you do not want to collect a user dump.

### Output destination

```
folder-where-data-collection-tool-is-stored\jp1ajs2po\backlog
```

### Return values

0	Normal termination
Other than 0	Abnormal termination

### Messages

Message	Description	Behavior
Finished. Press any key.	Processing finished normally. Press any key.	Waits for a response from the user.

Message	Description	Behavior
Failed. Press any key.	Processing did not finish normally. Press any key. Identify and address the cause of the problem by reviewing the messages output by the OS and other relevant information, and then try again.	Waits for a response from the user.
File <i>file-name</i> is exist. Delete to continue? (y/n)	A file with the specified name created by a prior instance of the data collection tool exists. Enter <i>y</i> to delete the file and continue processing. To cancel processing, enter <i>n</i> .	Waits for a response from the user.
Directory <i>folder-name</i> is exist. Delete to continue? (y/n)	A folder with the specified name created by a prior instance of the data collection tool exists. Enter <i>y</i> to delete the folder and continue processing. To cancel processing, enter <i>n</i> .	Waits for a response from the user.
Error exists in option.	An option is specified incorrectly. Specify the option correctly, and then try again.	Finishes processing.

#### Cautionary notes:

- The data collection tool does not compress the data it collects. To compress the data, use a third-party tool.
- A confirmation message appears if a file output by a previous instance of the batch file exists at the same location. To overwrite the file, enter *y*. To cancel the operation, enter *n*.
- If you perform an operation on a collected file (such as moving or deleting it) immediately after the data collection tool has finished executing, a message might appear indicating that the process cannot access the file because the file is in use by another process. This message appears because internal processing to collect OS information is still taking place even though the data collection tool itself has finished executing. If you encounter this message, wait a few minutes and try again.
- You must start the data collection tool from a command prompt with administrator privileges. To open the command prompt, right-click **Command prompt** in the **Start** menu and choose **Run as administrator**.  
If you run the data collection tool without Administrators permission, UAC will display dialog boxes several times requiring confirmation from the user.  
You do not need to open the command prompt as an Administrator if UAC is disabled.
- Do not run more than one instance of the data collection tool at once.

### (3) Data collected by the JP1/AJS3 - Print Option data collection tool

There are two categories of data collected by the JP1/AJS3 - Print Option data collection tool: *primary data* and *secondary data*. The tables below list the folders and files associated with each category.

Primary data (*folder-where-data-collection-tool-is-stored\jplajs2po\backlog\PO\_1st*)

Table 10–5: Primary data for JP1/AJS3 - Print Option

Folder or file containing collected data	Contents
\FILELIST.txt	A list of the files in the JP1/AJS3 - Print Option installation folder
\GETERROR.log	Log data output by the data collection tool (PO_ras.bat)
\HOSTS	hosts file

Folder or file containing collected data	Contents
\services	services file
1. \ProductInfo.txt 2. \Version.txt	Product information file
\jprpo.ini	Operation settings file for management
1. \JP1AJS2PO.DAT 2. \NETFRAMEWORK.DAT 3. \OFFICE.DAT	Registry information for various products
\WIN.DAT	Windows registry information
\OSINFO.txt	OS version information, Windows environment variables, IP configuration information, network configuration information, statistics
\PERMISSIONINFO.TXT	Permission information for the JP1/AJS3 - Print Option folder, folders in which log information is kept, and log files, Permission information for the Users folder and its sub-folders while the multi-user remote operation functionality is used
\SECDIT.txt	Local security policy settings acquired by the <code>secedit</code> command, including account policies, audit policies, event log settings, and security options.
\WINMSD.TXT	Information acquired by the <code>msinfo32</code> command, including an overview of the system, information about running tasks, and service information. This file contains all system information collected by the <code>msinfo32</code> command.
\ALLUSERSPROFILE\INI	Storage folder for configuration files
\ALLUSERSPROFILE\Format	Storage folder for format definition files
\ALLUSERSPROFILE\FlowFormat	Storage folder for jobnet flow format definition files
\ALLUSERSPROFILE\Map	Work files for map output and flow output
\ALLUSERSPROFILE\Map\Tmp	Work file folders and work files for map output and flow output when the <code>jprmpflw</code> command is executed
\ALLUSERSPROFILE\Log	Storage folder for log files
1. \HITACHI_JP1_INST_LOG 2. \HCDINST	Log files for integrated installer
\LicLog	Log file for installer license checking
\common	License information file
\ALLUSERSPROFILE\Users	Folders and files in the Users folder while multi-user remote operation is enabled

Secondary data (*folder-where-data-collection-tool-is-stored*\jp1ajs2po\backlog\PO\_2nd)

**Table 10–6: Secondary data for JP1/AJS3 - Print Option**

Folder or file containing collected data	Contents
\eventlog\AppEvent.txt	Application event log

Folder or file containing collected data	Contents
\eventlog\SysEvent.txt	System event log
\eventlog\UACVirtualEvent.txt	Event log entries related to UAC file virtualization
1. \USERDUMP\*.dmp 2. \WTSNDUMP\*.dmp	User dump files <sup>#</sup>

#

The data collection tool can acquire a user dump file only if one has been output by the user.

### 10.4.3 Collecting data for JP1/AJS3 - Print Option Manager (in Windows)

The data collection tool for JP1/AJS3 - Print Option Manager is a batch file. When you execute the batch file, the tool collects and outputs the required data all at once.

The following describes how to run the data collection tool, explains the syntax associated with the tool (such as options, return values, messages, and cautionary notes), and lists the files the tool collects.

#### (1) Running the JP1/AJS3 - Print Option Manager data collection tool (in Windows)

The following shows an example of a command line that executes the JP1/AJS3 - Print Option Manager data collection tool. In this example, the tool is stored in the folder C:\usertools.

```
c:\>c:\usertools\POM_ras.bat
```

The data collection tool outputs the data it collects to subfolders of *folder-where-data-collection-tool-is-stored* \jp1ajs2pom\backlog.

\POM\_1st

Primary data is output to this folder.

\POM\_2nd

Secondary data is output to this folder.



#### Note

- You can specify options that limit the range of data collected by the data collection tool. For details about the syntax of these options, see *(2) Syntax of the JP1/AJS3 - Print Option Manager data collection tool (in Windows)*.
- For details about the types of primary and secondary data collected by the data collection tool, see *(3) Data collected by JP1/AJS3 - Print Option Manager data collection tool (in Windows)*.

## (2) Syntax of the JP1/AJS3 - Print Option Manager data collection tool (in Windows)

### Format

```
POM_ras.bat
    [-t]
    [-u]
```

### Description

Acquires maintenance information associated with JP1/AJS3 - Print Option Manager. This information includes log information of various types and information output by the OS.

### Required permission

Administrators permission

### Arguments

-t

Specify this option when you do not want to collect the hosts file and the services file.

-u

Specify this option when you do not want to collect a user dump.

### Output destination

```
folder-where-data-collection-tool-is-stored\jp1ajs2pom\backlog
```

### Return values

0	Normal termination
Other than 0	Abnormal termination

### Messages

Message	Description	Behavior
Finished. Press any key.	Processing finished normally. Press any key.	Waits for a response from the user.
Failed. Press any key.	Processing did not finish normally. Press any key. Identify and address the cause of the problem by reviewing the messages output by the OS and other relevant information, and then try again.	Waits for a response from the user.
File <i>file-name</i> is exist. Delete to continue? (y/n)	A file with the specified name created by a prior instance of the data collection tool exists. Enter y to delete the file and continue processing. To cancel processing, enter n.	Waits for a response from the user.
Directory <i>folder-name</i> is exist. Delete to continue? (y/n)	A folder with the specified name created by a prior instance of the data collection tool exists. Enter y to delete the folder and continue processing. To cancel processing, enter n.	Waits for a response from the user.
Error exists in option.	An option is specified incorrectly. Specify the option correctly, and then try again.	Finishes processing.



#### Cautionary notes:

- The data collection tool does not compress the data it collects. To compress the data, use a third-party tool.
- A confirmation message appears if a file output by a previous instance of the batch file exists at the same location. To overwrite the file, enter *y*. To cancel the operation, enter *n*.
- If you perform an operation on a collected file (such as moving or deleting it) immediately after the data collection tool has finished executing, a message might appear indicating that the process cannot access the file because the file is in use by another process. This message appears because internal processing to collect OS information is still taking place even though the data collection tool itself has finished executing. If you encounter this message, wait a few minutes and try again.
- You must start the data collection tool from a command prompt with administrator privileges. To open the command prompt, right-click **Command prompt** in the **Start** menu and choose **Run as administrator**.  
If you run the data collection tool without Administrators permission, UAC will display dialog boxes several times requiring confirmation from the user.  
You do not need to open the command prompt as an Administrator if UAC is disabled.
- Do not run more than one instance of the data collection tool at once.

### (3) Data collected by JP1/AJS3 - Print Option Manager data collection tool (in Windows)

There are two categories of data collected by the JP1/AJS3 - Print Option Manager data collection tool: *primary data* and *secondary data*. The tables below list the folders and files associated with each category.

Primary data (*folder-where-data-collection-tool-is-stored\jp1ajs2pom\backlog\POM\_1st*)

Table 10–7: Primary data for JP1/AJS3 - Print Option Manager (in Windows)

Folder or file containing collected data	Contents
\FILELIST.txt	A list of the files in the JP1/AJS3 - Print Option Manager installation folder
\GETERROR.log	Log data output by the data collection tool (POM_ras.bat)
\HOSTS	hosts file
\services	services file
\JP1AJS2POM.DAT	Registry information for JP1/AJS3 - Print Option Manager
\WIN.DAT	Windows registry information
\JP1AJS2POMLSV.DAT	JP1/AJS3 - POM service registry information
\OSINFO.txt	OS version information, Windows environment variables, IP configuration information, network configuration information, statistics
\PERMISSIONINFO.TXT	Permission information for the JP1/AJS3 - Print Option Manager folder, folders in which log information is kept, and log files
\SECEDIT.txt	Local security policy settings acquired by the <i>secedit</i> command, including account policies, audit policies, event log settings, and security options.
\WINMSD.TXT	Information acquired by the <i>msinfo32</i> command, including an overview of the system, information about running tasks, and service information.

Folder or file containing collected data	Contents
\WINMSD.TXT	This file contains all system information collected by the msinfo32 command.
\ALLUSERSPROFILE\Tmp	Temporary folder for job operation information files
\ALLUSERSPROFILE\Log	Storage folder for log files
1. \HITACHI_JP1_INST_LOG 2. \HCDINST	Log files for integrated installer
\LicLog	Log file for installer license checking
\common	License information file
\jprpoml.ini	Environment settings file
1. \ProductInfo.txt 2. \Version.txt	Product information file

Secondary data (*folder-where-data-collection-tool-is-stored\jp1ajs2pom\backlog\POM\_2nd*)

Table 10–8: Secondary data for JP1/AJS3 - Print Option Manager (in Windows)

Folder or file containing collected data	Contents
\eventlog\AppEvent.txt	Application event log
\eventlog\SysEvent.txt	System event log
\eventlog\UACVirtualEvent.txt	Event log entries related to UAC file virtualization
1. \USERDUMP\*.dmp 2. \WTSNDUMP\*.dmp	User dump files <sup>#</sup>

#

The data collection tool can acquire a user dump file only if one has been output by the user.

## 10.4.4 Collecting data for JP1/AJS3 - Print Option Manager (in UNIX)

The data collection tool for JP1/AJS3 - Print Option Manager is a batch file. When you execute the batch file, the tool collects and outputs the required data all at once.

The following describes how to run the data collection tool, explains the syntax associated with the tool (such as options, return values, messages, and cautionary notes), and lists the files that the tool collects.

### (1) Running the JP1/AJS3 - Print Option Manager data collection tool (in UNIX)

The following shows an example of a command line that executes the data collection tool for JP1/AJS3 - Print Option Manager. In this example, the tool is stored in the directory `/user/tmp/`.

```
# /user/tmp/POM_ras.sh
```

The data collection tool outputs the data it collects to the following files in the directory *directory-where-data-collection-tool-is-stored/jp1ajs2pom/backlog*.

POM\_1st.tar.Z

Primary data is output to this file.

POM\_2nd.tar.Z

Secondary data is output to this file.



**Note**

- You can specify options that limit the range of data collected by the data collection tool. For details about the syntax of these options, see *(2) Syntax of JP1/AJS3 - Print Option Manager data collection tool (in UNIX)*.
- For details about the types of primary and secondary data collected by the data collection tool, see *(3) Data collected by the JP1/AJS3 - Print Option Manager data collection tool (in UNIX)*.

**(2) Syntax of JP1/AJS3 - Print Option Manager data collection tool (in UNIX)**

**Format**

```
POM_ras.sh
  [-t]
  [-u]
```

**Description**

Acquires maintenance information associated with JP1/AJS3 - Print Option Manager. This information includes log information of various types and information output by the OS.

**Required permission**

Superuser permission

**Arguments**

-t

Specify this option when you do not want to collect the hosts file, services file, and password file.

-u

Specify this option when you do not want to collect a core dump.  
When you specify this option, backtrace information is still collected.

**Output destination**

```
directory-where-data-collection-tool-is-stored/jplajs2pom/backlog
```

**Return values**

0	Normal termination
Other than 0	Abnormal termination

**Messages**

Message	Description	Behavior
Directory <i>directory-name</i> is created	The specified directory was created.	Continues processing.
Overwrite file ( <i>file-name</i> ) ok?	Prompts the user to confirm overwriting the file <i>file-name</i> .	Waits for a response from the user.

Message	Description	Behavior
Overwrite file ( <i>file-name</i> ) ok?	Enter <i>y</i> to continue processing. To cancel processing, enter <i>n</i> .	Waits for a response from the user.
Output file name : ( <i>file-name</i> )	The file <i>file-name</i> was created.	Finishes processing.
Write permission error ( <i>directory-name</i> )	<p>You do not have write permission for the specified directory. Possible causes are:</p> <ul style="list-style-type: none"> <li>• You do not have permission to create the directory</li> <li>• The directory is being used by another process</li> </ul> <p>Address the cause of the problem and try again.</p>	Finishes processing.
Make directory ( <i>directory-name</i> ) is unsuccessful	<p>The specified directory could not be created. Possible causes are:</p> <ul style="list-style-type: none"> <li>• You do not have permission to create the directory</li> <li>• The directory is being used by another process</li> </ul> <p>Address the cause of the problem and try again.</p>	Finishes processing.
[ -t ] [ -u ]	An option is specified incorrectly. Specify the option correctly, and then try again.	Finishes processing.

#### Cautionary notes:

- The data collection tool compresses the data it collects. The following describes the compression method used in each OS:

##### In Linux:

Data is compressed using the `gzip` command. If the `gzip` command is not installed in the environment where you execute the data collection tool, the tool uses the `tar` command to output the data as an archive. It does not use the `compress` command. If the `tar` command is not installed, the data collection tool terminates abnormally and processing finishes.

##### In UNIX platforms other than Linux:

Data is compressed using the `compress` command. If the `compress` command is not installed in the environment where you execute the data collection tool, the tool uses the `gzip` command to compress the data. If neither the `compress` command nor `gzip` are installed, the tool uses the `tar` command to output the data as an archive. If the `tar` command is not installed, the data collection tool terminates abnormally and processing finishes.

- To prevent a situation in which the user who executes the script does not have permission to view some of the files the script collects, execute the script as a superuser.
- If the script outputs a file that already exists, a message appears asking the user whether to overwrite the file. Enter *y* to overwrite the file, and *n* to cancel the operation.
- Do not run more than one instance of the data collection tool at once.
- If you want to expand compressed data, do it on Windows. If you expand the collected data on the OS that uses it, the environment file is overwritten by it.

### (3) Data collected by the JP1/AJS3 - Print Option Manager data collection tool (in UNIX)

There are two categories of data collected by the JP1/AJS3 - Print Option Manager data collection tool: *primary data* and *secondary data*. The tables below list the files and directories associated with each category.

Primary data (*directory-where-data-collection-tool-is-stored/jplajs2pom/backlog/POM\_1st.tar.Z*)

Table 10–9: Primary data for JP1/AJS3 - Print Option Manager (in UNIX)

Directory or file containing collected data	Contents
/etc/hosts	hosts file
/etc/passwd	passwd file
/etc/services	services file
/etc/environment (in AIX)	environment file
/etc/inittab	inittab file
/etc/.hitachi/pplstd/pplstd	Information about installed Hitachi products
/etc/opt/jplajs2pom	Directory containing JP1/AJS3 - POM service startup and shutdown scripts
/opt/jplajs2pom/log	Storage directory for log files
/opt/jplajs2pom/tmp	Temporary directory for job operation information files
/opt/jplajs2pom/tmp/POM.filelist	A list of the files in the JP1/AJS3 - Print Option Manager installation directory
/opt/jplajs2pom/tmp/POM.osinfo	OS version information and environment variables
/opt/jplajs2pom/tmp/POM.processlist	Process list
/opt/jplajs2pom/jprpoml.ini	Environment settings file

Secondary data (*directory-where-data-collection-tool-is-stored/jplajs2pom/backlog/POM\_2nd.tar.Z*)

Table 10–10: Secondary data for JP1/AJS3 - Print Option Manager (in UNIX)

Directory or file containing collected data	Contents
1. /var/adm/syslog/syslog.log (in HP-UX) 2. /var/adm/messages (in Solaris) 3. /var/adm/syslog (in AIX) 4. /var/log/messages* (in Linux)	syslog file and directory containing syslog
core# files under /opt/jplajs2pom	core file

#

If you executed a command that output a core file, you must collect the core file manually from the current directory.

## 10.5 Configuring dump file output and collecting dump files

---

In some circumstances, the contents a memory dump or a crash dump might be needed to troubleshoot a problem with JP1/AJS3 - Print Option.

This section describes how to configure a system to output a memory or a crash dump, and how to collect dump files.

### 10.5.1 Configuring dump file output

If you want to collect dump files when a problem occurs, you need to configure the system to output a memory dump or a crash dump.

#### (1) Configuring memory dump output

1. In the Control Panel, double-click **System**.
2. On the Advanced page, click the **Settings** button in the **Startup and Recovery** area.
3. From the **Write debugging information** drop-down list, select **Complete Memory Dump** and enter the output destination file in **Dump file**.

Cautionary note:

The size of the memory dump depends on the real memory size. The more physical memory installed in the system, the larger the size of the memory dump. Ensure that sufficient disk space is available to store the memory dump. For details, see the Windows Help.

#### (2) Configuring crash dump output

For details about how to collect information equivalent to a crash dump, see [10.5.2 Collecting dump files](#).

### 10.5.2 Collecting dump files

This section describes how to collect information equivalent to memory dumps and crash dumps<sup>#</sup>.

#

You cannot use the data collection tool to collect crash dumps in these operating systems. Instead of a crash dump, collect the following information:

- User dumps
- Problem reports

#### (1) Collecting memory dumps

When a STOP error occurs in Windows, the memory contents are dumped to a file which you can then collect. First, you need to configure Windows to output a memory dump when an error occurs. For details, see [10.5.1\(1\) Configuring memory dump output](#). Dump files are output to the path you specify.

## (2) Collecting user dumps

When an application error causes a JP1/AJS3 - Print Option process to stop, an error dialog box appears. You can then collect a user dump by performing the actions below.

Cautionary note:

If you close the error dialog box, you will no longer be able to collect a user dump. If you inadvertently close the error dialog box before collecting the user dump (by clicking the **OK** button accidentally, for example), reproduce the error and collect the user dump with the error dialog box on screen.

1. Start Task Manager.

You can start Task Manager by performing one of the following actions:

- Right-click an empty area on the taskbar, and then select **Task Manager**.
- Press the CTRL+SHIFT+ESC keys.

2. Click the **Processes** tab in Task Manager.

3. Right-click the name of the JP1/AJS3 - Print Option process that was stopped by the application error, and choose **Create Dump File**.

4. A dialog box appears indicating the output destination for the user dump. You can then collect the user dump from that folder.

## (3) Collecting problem reports

You can use problem reports to identify problems on a host, and find out how best to resolve them. When an application error causes the JP1/AJS3 - Print Option process to stop, collect a problem report by following the procedure below:

1. Enter `wercn` in the Run dialog box and click the **OK** button.

The Problem Reports and Solutions dialog box appears.

2. In the left side of the dialog box, click **View problem history**.

A list of problem histories appears.

3. Double-click the problem for which you want to collect a problem report.

A detailed problem report appears.

4. Click **Copy to clipboard**.

5. Paste the copied report into a text editor or similar, and then save the file.

You can now use the saved report to help troubleshoot the problem.

# Appendixes



## A. List of Supported Column Items

The following table lists the column items you can specify when defining a list format in the Format Definition Settings window, and when defining a jobnet flow format in the Jobnet Flow Format Definition Settings window.

No.	Specification	Item	List	Jobnet flow	Detail of item
1	unit <sup>#1</sup>	(Common) Unit name	Y	Y <sup>#2</sup>	--
2	unit <sup>#1</sup>	(Common) Permission mode	Y	Y <sup>#3</sup>	--
3	unit <sup>#1</sup>	(Common) JP1 user name	Y	Y <sup>#3</sup>	--
4	unit <sup>#1</sup>	(Common) JP1 resource group name	Y	Y <sup>#3</sup>	--
5	ud <sup>#4</sup>	(Common) Last updated time	Y	Y <sup>#3</sup>	--
6	Ed <sup>#4</sup>	(Common) Created time	Y	Y <sup>#3</sup>	--
7	--	(Common) Notes	Y	Y <sup>#3</sup>	--
8	ty <sup>#5</sup>	(Attribute) Unit type	Y	Y <sup>#3</sup>	Sign, Description
9	cm <sup>#5</sup>	(Attribute) Comment	Y	Y <sup>#3</sup>	--
10	op <sup>#5</sup>	(Job group) Open day	Y <sup>#6</sup>	--	Sign, Description
11	cl <sup>#5</sup>	(Job group) Closed day	Y <sup>#6</sup>	--	Sign, Description
12	sdd <sup>#5</sup>	(Job group) Base date	Y	--	Sign, Description
13	md <sup>#5</sup>	(Job group) Base month	Y	--	Sign, Description
14	stt <sup>#5</sup>	(Job group) Base time	Y	--	--
15	gty <sup>#5</sup>	(Job group) Type of the job group	Y	--	Sign, Description
16	ncl <sup>#5</sup>	(Job group) Execution order control	Y	--	Sign, Description
17	ncn <sup>#5</sup>	(Job group) Jobnet connector name	Y <sup>#6</sup>	--	--
18	ncs <sup>#5</sup>	(Job group) Execution order control method	Y	--	Sign, Description
19	ncex <sup>#5</sup>	(Job group) Connection range	Y	--	Sign, Description
20	nchn <sup>#5</sup>	(Job group) Connection host name	Y	--	--
21	ncsv <sup>#5</sup>	(Job group) Connection service name	Y	--	--
22	sd <sup>#5</sup>	(Jobnet) Execution start date	Y <sup>#7</sup>	Y <sup>#7 #8</sup>	Sign, Description
23	st <sup>#5</sup>	(Jobnet) Execution start time	Y	Y <sup>#8</sup>	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
24	sy <sup>#5</sup>	(Jobnet) Delayed start time	Y <sup>#7</sup>	Y #7 #8	Sign, Description
25	ey <sup>#5</sup>	(Jobnet) Delayed end time	Y <sup>#7</sup>	Y #7 #8	Sign, Description
26	ln <sup>#5</sup>	(Jobnet) Rule number of the schedule	Y <sup>#7</sup>	Y #7 #8	--
27	cy <sup>#5</sup>	(Jobnet) Processing cycle	Y	Y #8	Sign, Description
28	sh <sup>#5</sup>	(Jobnet) How to substitute the schedule of the closed day job	Y	Y #8	Sign, Description
29	shd <sup>#5</sup>	(Jobnet) Maximum number of shift days	Y	Y #8	--
30	wt <sup>#5</sup>	(Jobnet) Time when the event wait is released	Y	Y #8	Sign, Description
31	wc <sup>#5</sup>	(Jobnet) Number of times the system waits for an event	Y	Y #8	Sign, Description
32	cftd <sup>#5</sup>	(Jobnet) Schedule by days from start	Y <sup>#7</sup>	Y #7 #8	Sign, Description
33	ed <sup>#5</sup>	(Jobnet) Expiration date of a defined schedule	Y	Y	--
34	rg <sup>#5</sup>	(Jobnet) Number of execution result logs to keep	Y	Y	--
35	pr <sup>#5</sup>	(Jobnet) Default for the priority of job execution <pr>	Y	Y	--
36	ni <sup>#5</sup>	(Jobnet) Default for the priority of job execution <ni>	Y	Y	--
37	ha <sup>#5</sup>	(Jobnet) Hold status	Y	Y	Sign, Description
38	ejn <sup>#5</sup>	(Jobnet) Exclusive jobnet name	Y	Y	--
39	cd <sup>#5</sup>	(Jobnet) Number of days after which a timeout should occur	Y	Y	Sign, Description
40	de <sup>#5</sup>	(Jobnet) Whether to depend on the schedule for the upper-level jobnet	Y	Y	Sign, Description
41	ms <sup>#5</sup>	(Jobnet) Schedule option	Y	Y	Sign, Description
42	mp <sup>#5</sup>	(Jobnet) Whether to enable concurrent jobnet execution	Y	Y	Sign, Description
43	jc <sup>#5</sup>	(Jobnet) Full path name of the job group	Y	Y #8	--
44	rh <sup>#5</sup>	(Jobnet) Execution manager name	Y	Y	--
45	ex <sup>#5</sup>	(Jobnet) Execution agent name	Y	Y	--
46	ar <sup>#5</sup>	(Jobnet) Relating execution order	Y	Y	Sign, Description
47	fd <sup>#5</sup>	(Jobnet) Time required for execution	Y	Y	--

No.	Specification	Item	List	Jobnet flow	Detail of item
48	nc1 <sup>#5</sup>	(Jobnet) Execution order control	Y	Y	Sign, Description
49	ncn <sup>#5</sup>	(Jobnet) Jobnet connector name	Y #6	Y #6	--
50	ncs <sup>#5</sup>	(Jobnet) Execution order control method	Y	Y	Sign, Description
51	ncex <sup>#5</sup>	(Jobnet) Connection range	Y	Y	Sign, Description
52	nchn <sup>#5</sup>	(Jobnet) Connection host name	Y	Y	--
53	ncsv <sup>#5</sup>	(Jobnet) Connection service name	Y	Y	--
54	mm <sup>#5</sup>	(Jobnet) Wait method	Y	Y	Sign, Description
55	nmg <sup>#5</sup>	(Jobnet) When no generations wait for	Y	Y	Sign, Description
56	eun <sup>#5</sup>	(Jobnet) Name of unit whose end is being waited for	Y	Y #8	--
57	ega <sup>#5</sup>	(Jobnet) When abnormal end exists for execution generation	Y	Y	Sign, Description
58	uem <sup>#5</sup>	(Jobnet) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
59	--	(Jobnet) Number of immediate jobs <sup>#9</sup>	Y	Y	--
60	mh <sup>#5</sup>	(Manager unit) Manager host name	Y	--	--
61	mu <sup>#5</sup>	(Manager unit) Manager unit name	Y	--	--
62	tc <sup>#5</sup>	(UNIX/PC job) Command text	Y	Y #8	--
63	sc <sup>#5</sup>	(UNIX/PC job) Script file name	Y	Y #8	--
64	prm <sup>#5</sup>	(UNIX/PC job) Parameters	Y	Y #8	--
65	wkp <sup>#5</sup>	(UNIX/PC job) Work path name	Y	Y #8	--
66	ev <sup>#5</sup>	(UNIX/PC job) Environment variable file name	Y	Y #8	--
67	env <sup>#5</sup>	(UNIX/PC job) Environment variable	Y #7	Y #7 #8	--
68	si <sup>#5</sup>	(UNIX/PC job) Standard input file name	Y	Y #8	--
69	so <sup>#5</sup>	(UNIX/PC job) Standard output file name	Y	Y #8	--
70	se <sup>#5</sup>	(UNIX/PC job) Standard error output file name	Y	Y #8	--
71	soa <sup>#5</sup>	(UNIX/PC job) Append option for a standard output file name	Y	Y	Sign, Description
72	sea <sup>#5</sup>	(UNIX/PC job) Append option for a standard error output file name	Y	Y	Sign, Description
73	etm <sup>#5</sup>	(UNIX/PC job) Timeout period of job execution	Y	Y	--
74	pr <sup>#5</sup>	(UNIX/PC job) Priority of job execution	Y	Y	--

No.	Specification	Item	List	Jobnet flow	Detail of item
75	ex <sup>#5</sup>	(UNIX/PC job) Execution agent name	Y	Y	--
76	un <sup>#5</sup>	(UNIX/PC job) Execution user name	Y	Y	--
77	jd <sup>#5</sup>	(UNIX/PC job) Type of end judgment	Y	Y	Sign, Description
78	wth <sup>#5</sup>	(UNIX/PC job) Threshold for the warning end	Y	Y	--
79	tho <sup>#5</sup>	(UNIX/PC job) Threshold for the abnormal end	Y	Y	--
80	jdf <sup>#5</sup>	(UNIX/PC job) End judgment file name	Y	Y #8	--
81	ts1 <sup>#5</sup>	(UNIX/PC job) Transfer source file name 1	Y	Y #8	--
82	td1 <sup>#5</sup>	(UNIX/PC job) Transfer destination file name 1	Y	Y #8	--
83	top1 <sup>#5</sup>	(UNIX/PC job) Option 1 to automatically delete the transfer destination file	Y	Y	Sign, Description
84	ts2 <sup>#5</sup>	(UNIX/PC job) Transfer source file name 2	Y	Y #8	--
85	td2 <sup>#5</sup>	(UNIX/PC job) Transfer destination file name 2	Y	Y #8	--
86	top2 <sup>#5</sup>	(UNIX/PC job) Option 2 to automatically delete the transfer destination file	Y	Y	Sign, Description
87	ts3 <sup>#5</sup>	(UNIX/PC job) Transfer source file name 3	Y	Y #8	--
88	td3 <sup>#5</sup>	(UNIX/PC job) Transfer destination file name 3	Y	Y #8	--
89	top3 <sup>#5</sup>	(UNIX/PC job) Option 3 to automatically delete the transfer destination file	Y	Y	Sign, Description
90	ts4 <sup>#5</sup>	(UNIX/PC job) Transfer source file name 4	Y	Y #8	--
91	td4 <sup>#5</sup>	(UNIX/PC job) Transfer destination file name 4	Y	Y #8	--
92	top4 <sup>#5</sup>	(UNIX/PC job) Option 4 to automatically delete the transfer destination file	Y	Y	Sign, Description
93	ha <sup>#5</sup>	(UNIX/PC job) Hold status	Y	Y	Sign, Description
94	eu <sup>#5</sup>	(UNIX/PC job) JP1 user who executes the job	Y	Y	Sign, Description
95	jty <sup>#5</sup>	(UNIX/PC job) Service of the execution destination	Y	Y	Sign, Description
96	fd <sup>#5</sup>	(UNIX/PC job) Time required for execution	Y	Y	--
97	mm <sup>#5</sup>	(UNIX/PC job) Wait method	Y	Y	Sign, Description
98	nmg <sup>#5</sup>	(UNIX/PC job) When no generations wait for	Y	Y	Sign, Description
99	eun <sup>#5</sup>	(UNIX/PC job) Name of unit whose end is being waited for	Y	Y #8	--
100	ega <sup>#5</sup>	(UNIX/PC job) When abnormal end exists for execution generation	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
101	uem <sup>#5</sup>	(UNIX/PC job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
102	abr <sup>#5</sup>	(UNIX/PC job) Whether to retry on abnormal end	Y	Y	Sign, Description
103	rjs <sup>#5</sup>	(UNIX/PC job) Lower limit value of return code on automatic retry	Y	Y	--
104	rjc <sup>#5</sup>	(UNIX/PC job) Upper limit value of return code on automatic retry	Y	Y	--
105	rec <sup>#5</sup>	(UNIX/PC job) Maximum retry times	Y	Y	--
106	rei <sup>#5</sup>	(UNIX/PC job) Retry interval	Y	Y	--
107	qu <sup>#5</sup>	(QUEUE job) Queue name	Y	Y	--
108	qm <sup>#5</sup>	(QUEUE job) Host name	Y	Y	--
109	req <sup>#5</sup>	(QUEUE job) Job name	Y	Y	--
110	sc <sup>#5</sup>	(QUEUE job) Script file name	Y	Y #8	--
111	prm <sup>#5</sup>	(QUEUE job) Parameters	Y	Y #8	--
112	jd <sup>#5</sup>	(QUEUE job) Type of end judgment	Y	Y	Sign, Description
113	wth <sup>#5</sup>	(QUEUE job) Threshold for the warning end	Y	Y	--
114	tho <sup>#5</sup>	(QUEUE job) Threshold for the abnormal end	Y	Y	--
115	ts1 <sup>#5</sup>	(QUEUE job) Transfer source file name 1	Y	Y #8	--
116	td1 <sup>#5</sup>	(QUEUE job) Transfer destination file name 1	Y	Y #8	--
117	ts2 <sup>#5</sup>	(QUEUE job) Transfer source file name 2	Y	Y #8	--
118	td2 <sup>#5</sup>	(QUEUE job) Transfer destination file name 2	Y	Y #8	--
119	ts3 <sup>#5</sup>	(QUEUE job) Transfer source file name 3	Y	Y #8	--
120	td3 <sup>#5</sup>	(QUEUE job) Transfer destination file name 3	Y	Y #8	--
121	ts4 <sup>#5</sup>	(QUEUE job) Transfer source file name 4	Y	Y #8	--
122	td4 <sup>#5</sup>	(QUEUE job) Transfer destination file name 4	Y	Y #8	--
123	ha <sup>#5</sup>	(QUEUE job) Hold status	Y	Y	Sign, Description
124	eu <sup>#5</sup>	(QUEUE job) JP1 user who executes the job	Y	Y	Sign, Description
125	pr <sup>#5</sup>	(QUEUE job) Priority of job execution	Y	Y	--
126	fd <sup>#5</sup>	(QUEUE job) Time required for execution	Y	Y	--
127	mm <sup>#5</sup>	(QUEUE job) Wait method	Y	Y	Sign, Description
128	nmg <sup>#5</sup>	(QUEUE job) When no generations wait for	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
129	eun <sup>#5</sup>	(QUEUE job) Name of unit whose end is being waited for	Y	Y #8	--
130	ega <sup>#5</sup>	(QUEUE job) When abnormal end exists for execution generation	Y	Y	Sign, Description
131	uem <sup>#5</sup>	(QUEUE job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
132	abr <sup>#5</sup>	(QUEUE job) Whether to retry on abnormal end	Y	Y	Sign, Description
133	rjs <sup>#5</sup>	(QUEUE job) Lower limit value of return code on automatic retry	Y	Y	--
134	rje <sup>#5</sup>	(QUEUE job) Upper limit value of return code on automatic retry	Y	Y	--
135	rec <sup>#5</sup>	(QUEUE job) Maximum retry times	Y	Y	--
136	rei <sup>#5</sup>	(QUEUE job) Retry interval	Y	Y	--
137	ej <sup>#5</sup>	(Judgment job) Type of judgment condition	Y	Y	Sign, Description
138	ejc <sup>#5</sup>	(Judgment job) Return code	Y	Y	--
139	ejt <sup>#5</sup>	(Judgment job) End judgment file name	Y	Y #8	--
140	ha <sup>#5</sup>	(Judgment job) Hold status	Y	Y	Sign, Description
141	ejv <sup>#5</sup>	(Judgment job) Variable name	Y	Y	--
142	ejt <sup>#5</sup>	(Judgment job) Judgment value <character string>	Y	Y #8	--
143	ejj <sup>#5</sup>	(Judgment job) Judgment value <numeric value>	Y	Y	--
144	ejl <sup>#5</sup>	(Judgment job) Lower limit value of return code	Y	Y	--
145	ejh <sup>#5</sup>	(Judgment job) Upper limit value of return code	Y	Y	--
146	ejs <sup>#5</sup>	(Judgment job) Lower limit value of judgment value <numeric value>	Y	Y	--
147	ejg <sup>#5</sup>	(Judgment job) Upper limit value of judgment value <numeric value>	Y	Y	--
148	ejm <sup>#5</sup>	(Judgment job) Lower limit judgment condition	Y	Y	Sign, Description
149	aju <sup>#5</sup>	(Judgment job) Upper limit judgment condition	Y	Y	Sign, Description
150	evwid <sup>#5</sup>	(JP1 event reception monitoring job) Event ID	Y	Y	--
151	evusr <sup>#5</sup>	(JP1 event reception monitoring job) Name of user who issues the event	Y	Y	--
152	evgrp <sup>#5</sup>	(JP1 event reception monitoring job) Name of group that issues the event	Y	Y	--
153	evhst <sup>#5</sup>	(JP1 event reception monitoring job) Name of host that issues the event	Y	Y	--

No.	Specification	Item	List	Jobnet flow	Detail of item
154	evipa <sup>#5</sup>	(JP1 event reception monitoring job) IP address of host that issues the event	Y	Y	--
155	evwms <sup>#5</sup>	(JP1 event reception monitoring job) Message	Y	Y #8	--
156	evdet <sup>#5</sup>	(JP1 event reception monitoring job) Event details	Y	Y #8	--
157	evwsv <sup>#5</sup>	(JP1 event reception monitoring job) Severity level of JP1 events	Y	Y	Sign, Description
158	evwfr <sup>#5</sup>	(JP1 event reception monitoring job) Arbitrary extended attribute name	Y	Y #8	--
159	evtmc <sup>#5</sup>	(JP1 event reception monitoring job) Conditions for end judgment	Y	Y #8	Sign, Description
160	evuid <sup>#5</sup>	(JP1 event reception monitoring job) ID of user who issues the event	Y	Y	--
161	evgid <sup>#5</sup>	(JP1 event reception monitoring job) ID of group that issues the event	Y	Y	--
162	evpid <sup>#5</sup>	(JP1 event reception monitoring job) ID of process that issues the event	Y	Y	--
163	jpoir <sup>#5</sup>	(JP1 event reception monitoring job) Macro variable name	Y	Y #8	--
164	etm <sup>#5</sup>	(JP1 event reception monitoring job) Timeout period for job execution	Y	Y	--
165	ex <sup>#5</sup>	(JP1 event reception monitoring job) Execution agent name	Y	Y	--
166	ha <sup>#5</sup>	(JP1 event reception monitoring job) Hold status	Y	Y	Sign, Description
167	eu <sup>#5</sup>	(JP1 event reception monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
168	evesc <sup>#5</sup>	(JP1 event reception monitoring job) Find event before execution	Y	Y	--
169	ets <sup>#5</sup>	(JP1 event reception monitoring job) Status after close	Y	Y	Sign, Description
170	fd <sup>#5</sup>	(JP1 event reception monitoring job) Time required for execution	Y	Y	--
171	mm <sup>#5</sup>	(JP1 event reception monitoring job) Wait method	Y	Y	Sign, Description
172	nmg <sup>#5</sup>	(JP1 event reception monitoring job) When no generations wait for	Y	Y	Sign, Description
173	eun <sup>#5</sup>	(JP1 event reception monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
174	ega <sup>#5</sup>	(JP1 event reception monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description
175	uem <sup>#5</sup>	(JP1 event reception monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
176	flwf <sup>#5</sup>	(File monitoring job) Monitoring file name	Y	Y	--

No.	Specification	Item	List	Jobnet flow	Detail of item
177	flwc <sup>#5</sup>	(File monitoring job) Monitoring options	Y	Y	Sign, Description
178	flwi <sup>#5</sup>	(File monitoring job) Monitoring interval	Y	Y	--
179	jpoir <sup>#5</sup>	(File monitoring job) Macro variable name	Y	Y #8	--
180	flco <sup>#5</sup>	(File monitoring job) Whether to make monitor conditions true if the file to be monitored exists.	Y	Y	Sign, Description
181	etm <sup>#5</sup>	(File monitoring job) Timeout period for job execution	Y	Y	--
182	ex <sup>#5</sup>	(File monitoring job) Execution agent name	Y	Y	--
183	ha <sup>#5</sup>	(File monitoring job) Hold status	Y	Y	Sign, Description
184	eu <sup>#5</sup>	(File monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
185	ets <sup>#5</sup>	(File monitoring job) Status after close	Y	Y	Sign, Description
186	fd <sup>#5</sup>	(File monitoring job) Time required for execution	Y	Y	--
187	mm <sup>#5</sup>	(File monitoring job) Wait method	Y	Y	Sign, Description
188	nmg <sup>#5</sup>	(File monitoring job) When no generations wait for	Y	Y	Sign, Description
189	eun <sup>#5</sup>	(File monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
190	ega <sup>#5</sup>	(File monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description
191	uem <sup>#5</sup>	(File monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
192	pfm <sup>#5</sup>	(Email reception monitoring job) Platform	Y	Y	Sign, Description
193	mlprf <sup>#5</sup>	(Email reception monitoring job) Profile name	Y	Y	--
194	mladr <sup>#5</sup>	(Email reception monitoring job) Sender	Y	Y	--
195	mlsbf <sup>#5</sup>	(Email reception monitoring job) Subject	Y	Y	--
196	mltxt <sup>#5</sup>	(Email reception monitoring job) Message text	Y	Y #8	--
197	mlsav <sup>#5</sup>	(Email reception monitoring job) Whether to save received email	Y	Y	Sign, Description
198	mllst <sup>#5</sup>	(Email reception monitoring job) List received mail	Y	Y	--
199	mlstx <sup>#5</sup>	(Email reception monitoring job) Message text file name	Y	Y	--
200	mlsfd <sup>#5</sup>	(Email reception monitoring job) Name of folder for saving attached file	Y	Y	--



No.	Specification	Item	List	Jobnet flow	Detail of item
201	mlafl <sup>#5</sup>	(Email reception monitoring job) List file name	Y	Y	--
202	jpoif <sup>#5</sup>	(Email reception monitoring job) Macro variable name	Y	Y #8	--
203	etm <sup>#5</sup>	(Email reception monitoring job) Timeout period for job execution	Y	Y	--
204	ex <sup>#5</sup>	(Email reception monitoring job) Execution agent name	Y	Y	--
205	ha <sup>#5</sup>	(Email reception monitoring job) Hold status	Y	Y	Sign, Description
206	eu <sup>#5</sup>	(Email reception monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
207	ets <sup>#5</sup>	(Email reception monitoring job) Status after close	Y	Y	Sign, Description
208	fd <sup>#5</sup>	(Email reception monitoring job) Time required for execution	Y	Y	--
209	mm <sup>#5</sup>	(Email reception monitoring job) Wait method	Y	Y	Sign, Description
210	nmg <sup>#5</sup>	(Email reception monitoring job) When no generations wait for	Y	Y	Sign, Description
211	eun <sup>#5</sup>	(Email reception monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
212	ega <sup>#5</sup>	(Email reception monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description
213	uem <sup>#5</sup>	(Email reception monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
214	mqcor <sup>#5</sup>	(Message queue reception monitoring job) Correlation ID	Y	Y	--
215	mqque <sup>#5</sup>	(Message queue reception monitoring job) Message input queue name	Y	Y	--
216	mqdsc <sup>#5</sup>	(Message queue reception monitoring job) Message ID	Y	Y	--
217	mqmdl <sup>#5</sup>	(Message queue reception monitoring job) Model queue name	Y	Y	--
218	mqsf <sup>#5</sup>	(Message queue reception monitoring job) Message storage file name	Y	Y	--
219	jpoif <sup>#5</sup>	(Message queue reception monitoring job) Macro variable name	Y	Y #8	--
220	etm <sup>#5</sup>	(Message queue reception monitoring job) Timeout period for job execution	Y	Y	--
221	ex <sup>#5</sup>	(Message queue reception monitoring job) Execution agent name	Y	Y	--
222	ha <sup>#5</sup>	(Message queue reception monitoring job) Hold status	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
223	eu <sup>#5</sup>	(Message queue reception monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
224	ets <sup>#5</sup>	(Message queue reception monitoring job) Status after close	Y	Y	Sign, Description
225	fd <sup>#5</sup>	(Message queue reception monitoring job) Time required for execution	Y	Y	--
226	mm <sup>#5</sup>	(Message queue reception monitoring job) Wait method	Y	Y	Sign, Description
227	nmg <sup>#5</sup>	(Message queue reception monitoring job) When no generations wait for	Y	Y	Sign, Description
228	eun <sup>#5</sup>	(Message queue reception monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
229	ega <sup>#5</sup>	(Message queue reception monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description
230	uem <sup>#5</sup>	(Message queue reception monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
231	msqpt <sup>#5</sup>	(MSMQ reception monitoring job) Queue path name	Y	Y #8	--
232	msrer <sup>#5</sup>	(MSMQ reception monitoring job) Correlation ID	Y	Y	--
233	mslbl <sup>#5</sup>	(MSMQ reception monitoring job) Message label	Y	Y	--
234	msapl <sup>#5</sup>	(MSMQ reception monitoring job) Application information	Y	Y	--
235	mssvf <sup>#5</sup>	(MSMQ reception monitoring job) Message storage file name	Y	Y	--
236	jpoit <sup>#5</sup>	(MSMQ reception monitoring job) Macro variable name	Y	Y #8	--
237	etm <sup>#5</sup>	(MSMQ reception monitoring job) Timeout period for job execution	Y	Y	--
238	ex <sup>#5</sup>	(MSMQ reception monitoring job) Execution agent name	Y	Y	--
239	ha <sup>#5</sup>	(MSMQ reception monitoring job) Hold status	Y	Y	Sign, Description
240	eu <sup>#5</sup>	(MSMQ reception monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
241	ets <sup>#5</sup>	(MSMQ reception monitoring job) Status after close	Y	Y	Sign, Description
242	fd <sup>#5</sup>	(MSMQ reception monitoring job) Time required for execution	Y	Y	--
243	mm <sup>#5</sup>	(MSMQ reception monitoring job) Wait method	Y	Y	Sign, Description
244	nmg <sup>#5</sup>	(MSMQ reception monitoring job) When no generations wait for	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
245	eun <sup>#5</sup>	(MSMQ reception monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
246	ega <sup>#5</sup>	(MSMQ reception monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description
247	uem <sup>#5</sup>	(MSMQ reception monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
248	lftpd <sup>#5</sup>	(Log file monitoring job) Data to be trapped	Y	Y #8	--
249	lffnm <sup>#5</sup>	(Log file monitoring job) Log file name	Y	Y	--
250	lfdft <sup>#5</sup>	(Log file monitoring job) Log file output format	Y	Y	Sign, Description
251	lfrft <sup>#5</sup>	(Log file monitoring job) Record format	Y	Y	Sign, Description
252	lfhds <sup>#5</sup>	(Log file monitoring job) Header format	Y	Y	Sign, Description
253	lfmks <sup>#5</sup>	(Log file monitoring job) Data lines except log	Y	Y #8	--
254	lfsiv <sup>#5</sup>	(Log file monitoring job) Monitoring interval	Y	Y	--
255	lfmxl <sup>#5</sup>	(Log file monitoring job) Event data length	Y	Y	--
256	lfsrc <sup>#5</sup>	(Log file monitoring job) Input from first data	Y	Y	Sign, Description
257	lfcre <sup>#5</sup>	(Log file monitoring job) Error when file does not exist	Y	Y	Sign, Description
258	jpoif <sup>#5</sup>	(Log file monitoring job) Macro variable name	Y	Y #8	--
259	etm <sup>#5</sup>	(Log file monitoring job) Timeout period for job execution	Y	Y	--
260	ex <sup>#5</sup>	(Log file monitoring job) Execution agent name	Y	Y	--
261	ha <sup>#5</sup>	(Log file monitoring job) Hold status	Y	Y	Sign, Description
262	eu <sup>#5</sup>	(Log file monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
263	ets <sup>#5</sup>	(Log file monitoring job) Status after close	Y	Y	Sign, Description
264	fd <sup>#5</sup>	(Log file monitoring job) Time required for execution	Y	Y	--
265	mm <sup>#5</sup>	(Log file monitoring job) Wait method	Y	Y	Sign, Description
266	nmg <sup>#5</sup>	(Log file monitoring job) When no generations wait for	Y	Y	Sign, Description
267	eun <sup>#5</sup>	(Log file monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
268	ega <sup>#5</sup>	(Log file monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
269	u <sup>#5</sup>	(Log file monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
270	ntlgt <sup>#5</sup>	(Windows event-log monitoring job) Log type	Y	Y	Sign, Description
271	ntevt <sup>#5</sup>	(Windows event-log monitoring job) Event type	Y	Y	Sign, Description
272	ntnsr <sup>#5</sup>	(Windows event-log monitoring job) Whether to monitor the specified source	Y	Y	Sign, Description
273	ntsrc <sup>#5</sup>	(Windows event-log monitoring job) Source of events	Y	Y	--
274	ntncl <sup>#5</sup>	(Windows event-log monitoring job) Whether to monitor the specified category	Y	Y	Sign, Description
275	ntcls <sup>#5</sup>	(Windows event-log monitoring job) Category of events	Y	Y	--
276	ntnei <sup>#5</sup>	(Windows event-log monitoring job) Whether to monitor the specified event ID	Y	Y	Sign, Description
277	nteid <sup>#5</sup>	(Windows event-log monitoring job) Event ID	Y	Y	--
278	ntdis <sup>#5</sup>	(Windows event-log monitoring job) Explanation	Y	Y #8	--
279	jpoit <sup>#5</sup>	(Windows event-log monitoring job) Macro variable name	Y	Y #8	--
280	etm <sup>#5</sup>	(Windows event-log monitoring job) Timeout period for job execution	Y	Y	--
281	ex <sup>#5</sup>	(Windows event-log monitoring job) Execution agent name	Y	Y	--
282	ha <sup>#5</sup>	(Windows event-log monitoring job) Hold status	Y	Y	Sign, Description
283	eu <sup>#5</sup>	(Windows event-log monitoring job) JP1 user who executes the job	Y	Y	Sign, Description
284	ets <sup>#5</sup>	(Windows event-log monitoring job) Status after close	Y	Y	Sign, Description
285	fd <sup>#5</sup>	(Windows event-log monitoring job) Time required for execution	Y	Y	--
286	mm <sup>#5</sup>	(Windows event-log monitoring job) Wait method	Y	Y	Sign, Description
287	nmg <sup>#5</sup>	(Windows event-log monitoring job) When no generations wait for	Y	Y	Sign, Description
288	eun <sup>#5</sup>	(Windows event-log monitoring job) Name of unit whose end is being waited for	Y	Y #8	--
289	ega <sup>#5</sup>	(Windows event-log monitoring job) When abnormal end exists for execution generation	Y	Y	Sign, Description
290	u <sup>#5</sup>	(Windows event-log monitoring job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
291	ntolg <sup>#5</sup>	(Windows event-log monitoring job) Any log type	Y	Y	--
292	tmitv <sup>#5</sup>	(Execution interval control job) Waiting time	Y	Y	--
293	jpoif <sup>#5</sup>	(Execution interval control job) Macro variable name	Y	Y #8	--
294	etm <sup>#5</sup>	(Execution interval control job) Timeout period for job execution	Y	Y	--
295	ex <sup>#5</sup>	(Execution interval control job) Execution agent name	Y	Y	--
296	ha <sup>#5</sup>	(Execution interval control job) Hold status	Y	Y	Sign, Description
297	eu <sup>#5</sup>	(Execution interval control job) JP1 user who executes the job	Y	Y	Sign, Description
298	ets <sup>#5</sup>	(Execution interval control job) Status after close	Y	Y	Sign, Description
299	fd <sup>#5</sup>	(Execution interval control job) Time required for execution	Y	Y	--
300	mm <sup>#5</sup>	(Execution interval control job) Wait method	Y	Y	Sign, Description
301	nmg <sup>#5</sup>	(Execution interval control job) When no generations wait for	Y	Y	Sign, Description
302	eun <sup>#5</sup>	(Execution interval control job) Name of unit whose end is being waited for	Y	Y #8	--
303	ega <sup>#5</sup>	(Execution interval control job) When abnormal end exists for execution generation	Y	Y	Sign, Description
304	uem <sup>#5</sup>	(Execution interval control job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
305	etn <sup>#5</sup>	(Execution interval control job) Whether to expire right after starting	Y	Y	Sign, Description
306	evsid <sup>#5</sup>	(JP1 event sending job) Event ID	Y	Y	--
307	evhst <sup>#5</sup>	(JP1 event sending job) Event destination host name	Y	Y	--
308	evsms <sup>#5</sup>	(JP1 event sending job) Message	Y	Y #8	--
309	evssv <sup>#5</sup>	(JP1 event sending job) Severity level of JP1 events	Y	Y	Sign, Description
310	evsfr <sup>#5</sup>	(JP1 event sending job) Extended attribute name	Y	Y	--
311	pfm <sup>#5</sup>	(JP1 event sending job) Platform type	Y	Y	Sign, Description
312	etm <sup>#5</sup>	(JP1 event sending job) Timeout period for job execution	Y	Y	--
313	ex <sup>#5</sup>	(JP1 event sending job) Execution agent name	Y	Y	--
314	ha <sup>#5</sup>	(JP1 event sending job) Hold status	Y	Y	Sign,

No.	Specification	Item	List	Jobnet flow	Detail of item
314	ha <sup>#5</sup>	(JP1 event sending job) Hold status	Y	Y	Description
315	eu <sup>#5</sup>	(JP1 event sending job) JP1 user who executes the job	Y	Y	Sign, Description
316	evsrt <sup>#5</sup>	(JP1 event sending job) Whether to check arrival of JP1 events	Y	Y	Sign, Description
317	evspl <sup>#5</sup>	(JP1 event sending job) Check interval	Y	Y	--
318	evsrc <sup>#5</sup>	(JP1 event sending job) Check count	Y	Y	--
319	jty <sup>#5</sup>	(JP1 event sending job) Service of the execution destination	Y	Y	Sign, Description
320	fd <sup>#5</sup>	(JP1 event sending job) Time required for execution	Y	Y	--
321	mm <sup>#5</sup>	(JP1 event sending job) Wait method	Y	Y	Sign, Description
322	nmg <sup>#5</sup>	(JP1 event sending job) When no generations wait for	Y	Y	Sign, Description
323	eun <sup>#5</sup>	(JP1 event sending job) Name of unit whose end is being waited for	Y	Y #8	--
324	ega <sup>#5</sup>	(JP1 event sending job) When abnormal end exists for execution generation	Y	Y	Sign, Description
325	uem <sup>#5</sup>	(JP1 event sending job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
326	mladr <sup>#5</sup>	(Email sending job) Address of a destination	Y <sup>#7</sup>	Y #7 #8	Sign, Description
327	mlprf <sup>#5</sup>	(Email sending job) Profile name	Y	Y	--
328	mlsbj <sup>#5</sup>	(Email sending job) Subject	Y	Y	--
329	mltxt <sup>#5</sup>	(Email sending job) Message text	Y	Y #8	--
330	mlftx <sup>#5</sup>	(Email sending job) Message text file name	Y	Y	--
331	mlatf <sup>#5</sup>	(Email sending job) Attached file name	Y <sup>#7</sup>	Y #7 #8	--
332	mlafl <sup>#5</sup>	(Email sending job) Attached file list name	Y	Y	--
333	pfm <sup>#5</sup>	(Email sending job) Platform type	Y	Y	Sign, Description
334	etm <sup>#5</sup>	(Email sending job) Timeout period of job execution	Y	Y	--
335	ex <sup>#5</sup>	(Email sending job) Execution agent name	Y	Y	--
336	ha <sup>#5</sup>	(Email sending job) Hold status	Y	Y	Sign, Description
337	eu <sup>#5</sup>	(Email sending job) JP1 user who executes the job	Y	Y	Sign, Description
338	jty <sup>#5</sup>	(Email sending job) Service of the execution destination	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
339	fd <sup>#5</sup>	(Email sending job) Time required for execution	Y	Y	--
340	mm <sup>#5</sup>	(Email sending job) Wait method	Y	Y	Sign, Description
341	nm <sup>#5</sup>	(Email sending job) When no generations wait for	Y	Y	Sign, Description
342	eun <sup>#5</sup>	(Email sending job) Name of unit whose end is being waited for	Y	Y #8	--
343	ega <sup>#5</sup>	(Email sending job) When abnormal end exists for execution generation	Y	Y	Sign, Description
344	uem <sup>#5</sup>	(Email sending job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
345	mqqe <sup>#5</sup>	(Message queue sending job) Queue name	Y	Y	--
346	mqqor <sup>#5</sup>	(Message queue sending job) Correlation ID	Y	Y	--
347	mqqdc <sup>#5</sup>	(Message queue sending job) Message ID	Y	Y	--
348	mqqrm <sup>#5</sup>	(Message queue sending job) Whether to retain the message	Y	Y	Sign, Description
349	mqqmgr <sup>#5</sup>	(Message queue sending job) Queue manager name	Y	Y	--
350	mqqmdl <sup>#5</sup>	(Message queue sending job) Model queue name	Y	Y	--
351	mqqpgm <sup>#5</sup>	(Message queue sending job) Connection queue management program name	Y	Y	--
352	mqqmfn <sup>#5</sup>	(Message queue sending job) Format name	Y	Y	--
353	mqqmdn <sup>#5</sup>	(Message queue sending job) Message data file name	Y	Y	--
354	mqqhld <sup>#5</sup>	(Message queue sending job) Retention time	Y	Y	--
355	mqqpri <sup>#5</sup>	(Message queue sending job) Priority	Y	Y	--
356	mqqeqn <sup>#5</sup>	(Message queue sending job) Dead-letter queue name	Y	Y	--
357	pfm <sup>#5</sup>	(Message queue sending job) Platform type	Y	Y	Sign, Description
358	etm <sup>#5</sup>	(Message queue sending job) Timeout period for job execution	Y	Y	--
359	ex <sup>#5</sup>	(Message queue sending job) Execution agent name	Y	Y	--
360	ha <sup>#5</sup>	(Message queue sending job) Hold status	Y	Y	Sign, Description
361	eu <sup>#5</sup>	(Message queue sending job) JP1 user who executes the job	Y	Y	Sign, Description
362	jty <sup>#5</sup>	(Message queue sending job) Service of the execution destination	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
363	fd <sup>#5</sup>	(Message queue sending job) Time required for execution	Y	Y	--
364	mm <sup>#5</sup>	(Message queue sending job) Wait method	Y	Y	Sign, Description
365	nmg <sup>#5</sup>	(Message queue sending job) When no generations wait for	Y	Y	Sign, Description
366	eun <sup>#5</sup>	(Message queue sending job) Name of unit whose end is being waited for	Y	Y #8	--
367	ega <sup>#5</sup>	(Message queue sending job) When abnormal end exists for execution generation	Y	Y	Sign, Description
368	uem <sup>#5</sup>	(Message queue sending job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
369	msqpt <sup>#5</sup>	(MSMQ sending job) Queue path name	Y	Y #8	--
370	msqlb <sup>#5</sup>	(MSMQ sending job) Queue label name	Y	Y	--
371	msrer <sup>#5</sup>	(MSMQ sending job) Correlation ID	Y	Y	--
372	mslmt <sup>#5</sup>	(MSMQ sending job) Delivery limit time	Y	Y	--
373	mshld <sup>#5</sup>	(MSMQ sending job) Retention time for the message	Y	Y	--
374	msmod <sup>#5</sup>	(MSMQ sending job) Delivery mode	Y	Y	Sign, Description
375	mspri <sup>#5</sup>	(MSMQ sending job) Priority	Y	Y	--
376	msjnl <sup>#5</sup>	(MSMQ sending job) Whether to put a sent message into the journal queue	Y	Y	Sign, Description
377	msumr <sup>#5</sup>	(MSMQ sending job) Whether to put a message that could not be sent into the dead-letter queue	Y	Y	Sign, Description
378	mstfn <sup>#5</sup>	(MSMQ sending job) Message text file name	Y	Y #8	--
379	msttp <sup>#5</sup>	(MSMQ sending job) Message text type	Y	Y	--
380	mslbl <sup>#5</sup>	(MSMQ sending job) Message label	Y	Y	--
381	msapl <sup>#5</sup>	(MSMQ sending job) Application information	Y	Y	--
382	etm <sup>#5</sup>	(MSMQ sending job) Timeout period for job execution	Y	Y	--
383	ex <sup>#5</sup>	(MSMQ sending job) Execution agent name	Y	Y	--
384	ha <sup>#5</sup>	(MSMQ sending job) Hold status	Y	Y	Sign, Description
385	eu <sup>#5</sup>	(MSMQ sending job) JP1 user who executes the job	Y	Y	Sign, Description
386	jty <sup>#5</sup>	(MSMQ sending job) Service of the execution destination	Y	Y	Sign, Description
387	fd <sup>#5</sup>	(MSMQ sending job) Time required for execution	Y	Y	--



No.	Specification	Item	List	Jobnet flow	Detail of item
388	mm <sup>#5</sup>	(MSMQ sending job) Wait method	Y	Y	Sign, Description
389	nmg <sup>#5</sup>	(MSMQ sending job) When no generations wait for	Y	Y	Sign, Description
390	eun <sup>#5</sup>	(MSMQ sending job) Name of unit whose end is being waited for	Y	Y #8	--
391	ega <sup>#5</sup>	(MSMQ sending job) When abnormal end exists for execution generation	Y	Y	Sign, Description
392	uem <sup>#5</sup>	(MSMQ sending job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
393	cmsts <sup>#5</sup>	(OpenView Status Report job) Status to be reported to HP NNM	Y	Y	Sign, Description
394	cmaif <sup>#5</sup>	(OpenView Status Report job) Additional information	Y	Y	--
395	pfm <sup>#5</sup>	(OpenView Status Report job) Platform type	Y	Y	Sign, Description
396	etm <sup>#5</sup>	(OpenView Status Report job) Timeout period for job execution	Y	Y	--
397	ex <sup>#5</sup>	(OpenView Status Report job) Execution agent name	Y	Y	--
398	ha <sup>#5</sup>	(OpenView Status Report job) Hold status	Y	Y	Sign, Description
399	eu <sup>#5</sup>	(OpenView Status Report job) JP1 user who executes the job	Y	Y	Sign, Description
400	jty <sup>#5</sup>	(OpenView Status Report job) Service of the execution destination	Y	Y	Sign, Description
401	fd <sup>#5</sup>	(OpenView Status Report job) Time required for execution	Y	Y	--
402	mm <sup>#5</sup>	(OpenView Status Report job) Wait method	Y	Y	Sign, Description
403	nmg <sup>#5</sup>	(OpenView Status Report job) When no generations wait for	Y	Y	Sign, Description
404	eun <sup>#5</sup>	(OpenView Status Report job) Name of unit whose end is being waited for	Y	Y #8	--
405	ega <sup>#5</sup>	(OpenView Status Report job) When abnormal end exists for execution generation	Y	Y	Sign, Description
406	uem <sup>#5</sup>	(OpenView Status Report job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
407	pwl <sup>#5</sup>	(Local power control job) Execution type	Y	Y	Sign, Description
408	pwl <sup>#5</sup>	(Local power control job) Termination request type	Y	Y	Sign, Description
409	pfm <sup>#5</sup>	(Local power control job) Platform type	Y	Y	Sign,

No.	Specification	Item	List	Jobnet flow	Detail of item
409	pfm <sup>#5</sup>	(Local power control job) Platform type	Y	Y	Description
410	etm <sup>#5</sup>	(Local power control job) Timeout period for job execution	Y	Y	--
411	ex <sup>#5</sup>	(Local power control job) Execution agent name	Y	Y	--
412	ha <sup>#5</sup>	(Local power control job) Hold status	Y	Y	Sign, Description
413	eu <sup>#5</sup>	(Local power control job) JP1 user who executes the job	Y	Y	Sign, Description
414	jty <sup>#5</sup>	(Local power control job) Service of the execution destination	Y	Y	Sign, Description
415	fd <sup>#5</sup>	(Local power control job) Time required for execution	Y	Y	--
416	mm <sup>#5</sup>	(Local power control job) Wait method	Y	Y	Sign, Description
417	nmg <sup>#5</sup>	(Local power control job) When no generations wait for	Y	Y	Sign, Description
418	eun <sup>#5</sup>	(Local power control job) Name of unit whose end is being waited for	Y	Y #8	--
419	ega <sup>#5</sup>	(Local power control job) When abnormal end exists for execution generation	Y	Y	Sign, Description
420	uem <sup>#5</sup>	(Local power control job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
421	pwrh <sup>#5</sup>	(Remote power control job) Remote host name	Y	Y	--
422	pwr <sup>#5</sup>	(Remote power control job) Request type	Y	Y	Sign, Description
423	pwrn <sup>#5</sup>	(Remote power control job) Whether to set next power-on time	Y	Y	Sign, Description
424	pwr <sup>#5</sup>	(Remote power control job) Whether to restart the system	Y	Y	Sign, Description
425	pwrw <sup>#5</sup>	(Remote power control job) Whether to wait for the end of power-off	Y	Y	Sign, Description
426	pwrp <sup>#5</sup>	(Remote power control job) Platform type of remote host	Y	Y	Sign, Description
427	pfm <sup>#5</sup>	(Remote power control job) Platform type	Y	Y	Sign, Description
428	etm <sup>#5</sup>	(Remote power control job) Timeout period for job execution	Y	Y	--
429	ex <sup>#5</sup>	(Remote power control job) Execution agent name	Y	Y	--
430	ha <sup>#5</sup>	(Remote power control job) Hold status	Y	Y	Sign, Description
431	eu <sup>#5</sup>	(Remote power control job) JP1 user who executes the job	Y	Y	Sign,

No.	Specification	Item	List	Jobnet flow	Detail of item
431	eu <sup>#5</sup>	(Remote power control job) JP1 user who executes the job	Y	Y	Description
432	jty <sup>#5</sup>	(Remote power control job) Service of the execution destination	Y	Y	Sign, Description
433	fd <sup>#5</sup>	(Remote power control job) Time required for execution	Y	Y	--
434	mm <sup>#5</sup>	(Remote power control job) Wait method	Y	Y	Sign, Description
435	nmg <sup>#5</sup>	(Remote power control job) When no generations wait for	Y	Y	Sign, Description
436	eun <sup>#5</sup>	(Remote power control job) Name of unit whose end is being waited for	Y	Y #8	--
437	ega <sup>#5</sup>	(Remote power control job) When abnormal end exists for execution generation	Y	Y	Sign, Description
438	uем <sup>#5</sup>	(Remote power control job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
439	cty <sup>#5</sup>	(Custom UNIX/PC job) Custom job class name	Y	Y	--
440	tc <sup>#5</sup>	(Custom UNIX/PC job) Command text	Y	Y #8	--
441	sc <sup>#5</sup>	(Custom UNIX/PC job) Script file name	Y	Y #8	--
442	prm <sup>#5</sup>	(Custom UNIX/PC job) Parameters	Y	Y #8	--
443	env <sup>#5</sup>	(Custom UNIX/PC job) Environment variable	Y <sup>#7</sup>	Y #7 #8	--
444	st <sup>#5</sup>	(Custom UNIX/PC job) Standard input file name	Y	Y #8	--
445	so <sup>#5</sup>	(Custom UNIX/PC job) Standard output file name	Y	Y #8	--
446	se <sup>#5</sup>	(Custom UNIX/PC job) Standard error output file name	Y	Y #8	--
447	etm <sup>#5</sup>	(Custom UNIX/PC job) Timeout period of job execution	Y	Y	--
448	pr <sup>#5</sup>	(Custom UNIX/PC job) Priority	Y	Y	--
449	ex <sup>#5</sup>	(Custom UNIX/PC job) Execution agent name	Y	Y	--
450	un <sup>#5</sup>	(Custom UNIX/PC job) Execution user name	Y	Y	--
451	jd <sup>#5</sup>	(Custom UNIX/PC job) Type of end judgment	Y	Y	Sign, Description
452	wth <sup>#5</sup>	(Custom UNIX/PC job) Threshold for the warning end	Y	Y	--
453	tho <sup>#5</sup>	(Custom UNIX/PC job) Threshold for the abnormal end	Y	Y	--
454	jdf <sup>#5</sup>	(Custom UNIX/PC job) End judgment file name	Y	Y #8	--
455	ha <sup>#5</sup>	(Custom UNIX/PC job) Hold status	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
456	eu <sup>#5</sup>	(Custom UNIX/PC job) JP1 user who executes the job	Y	Y	Sign, Description
457	wkp <sup>#5</sup>	(Custom UNIX/PC job) Work path name	Y	Y #8	--
458	ev <sup>#5</sup>	(Custom UNIX/PC job) Environment variable file name	Y	Y #8	--
459	soa <sup>#5</sup>	(Custom UNIX/PC job) Append option for a standard output file name	Y	Y	Sign, Description
460	sea <sup>#5</sup>	(Custom UNIX/PC job) Append option for a standard error output file name	Y	Y	Sign, Description
461	ts1 <sup>#5</sup>	(Custom UNIX/PC job) Transfer source file name 1	Y	Y #8	--
462	td1 <sup>#5</sup>	(Custom UNIX/PC job) Transfer destination file name 1	Y	Y #8	--
463	top1 <sup>#5</sup>	(Custom UNIX/PC job) Option 1 to automatically delete the transfer destination file	Y	Y	Sign, Description
464	ts2 <sup>#5</sup>	(Custom UNIX/PC job) Transfer source file name 2	Y	Y #8	--
465	td2 <sup>#5</sup>	(Custom UNIX/PC job) Transfer destination file name 2	Y	Y #8	--
466	top2 <sup>#5</sup>	(Custom UNIX/PC job) Option 2 to automatically delete the transfer destination file	Y	Y	Sign, Description
467	ts3 <sup>#5</sup>	(Custom UNIX/PC job) Transfer source file name 3	Y	Y #8	--
468	td3 <sup>#5</sup>	(Custom UNIX/PC job) Transfer destination file name 3	Y	Y #8	--
469	top3 <sup>#5</sup>	(Custom UNIX/PC job) Option 3 to automatically delete the transfer destination file	Y	Y	Sign, Description
470	ts4 <sup>#5</sup>	(Custom UNIX/PC job) Transfer source file name 4	Y	Y #8	--
471	td4 <sup>#5</sup>	(Custom UNIX/PC job) Transfer destination file name 4	Y	Y #8	--
472	top4 <sup>#5</sup>	(Custom UNIX/PC job) Option 4 to automatically delete the transfer destination file	Y	Y	Sign, Description
473	fd <sup>#5</sup>	(Custom UNIX/PC job) Time required for execution	Y	Y	--
474	mm <sup>#5</sup>	(Custom UNIX/PC job) Wait method	Y	Y	Sign, Description
475	nmg <sup>#5</sup>	(Custom UNIX/PC job) When no generations wait for	Y	Y	Sign, Description
476	eun <sup>#5</sup>	(Custom UNIX/PC job) Name of unit whose end is being waited for	Y	Y #8	--
477	ega <sup>#5</sup>	(Custom UNIX/PC job) When abnormal end exists for execution generation	Y	Y	Sign, Description

No.	Specification	Item	List	Jobnet flow	Detail of item
478	uem <sup>#5</sup>	(Custom UNIX/PC job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
479	abr <sup>#5</sup>	(Custom UNIX/PC job) Whether to retry on abnormal end	Y	Y	Sign, Description
480	rjs <sup>#5</sup>	(Custom UNIX/PC job) Lower limit value of return code on automatic retry	Y	Y	--
481	rjc <sup>#5</sup>	(Custom UNIX/PC job) Upper limit value of return code on automatic retry	Y	Y	--
482	rec <sup>#5</sup>	(Custom UNIX/PC job) Maximum retry times	Y	Y	--
483	rei <sup>#5</sup>	(Custom UNIX/PC job) Retry interval	Y	Y	--
484	cond <sup>#5</sup>	(Start condition) Connection type	Y	--	Sign, Description
485	ab <sup>#5</sup>	(Start condition) Task after a jobnet with a start condition ends abnormally	Y	--	Sign, Description
486	mcs <sup>#5</sup>	(Start condition) How to perform multiple startup of monitoring generations	Y	--	Sign, Description
487	cgs <sup>#5</sup>	(Start condition) Whether to retain execution generations with satisfied start conditions	Y	--	Sign, Description
488	ncr <sup>#5</sup>	(Jobnet connector) Connection destination jobnet name	Y #6	Y #6	--
489	ncex <sup>#5</sup>	(Jobnet connector) Connection range	Y	Y	Sign, Description
490	nchn <sup>#5</sup>	(Jobnet connector) Connection host name	Y	Y	--
491	ncsv <sup>#5</sup>	(Jobnet connector) Connection service name	Y	Y	--
492	mm <sup>#5</sup>	(Jobnet connector) Wait method	Y	Y	Sign, Description
493	nmg <sup>#5</sup>	(Jobnet connector) When no generations wait for	Y	Y	Sign, Description
494	eun <sup>#5</sup>	(Jobnet connector) Name of unit whose end is being waited for	Y	Y #8	--
495	ega <sup>#5</sup>	(Jobnet connector) When abnormal end exists for execution generation	Y	Y	Sign, Description
496	uem <sup>#5</sup>	(Jobnet connector) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
497	da <sup>#5</sup>	(Flexible job) Destination / Broadcast agent	Y	Y	--
498	sc <sup>#5</sup>	(Flexible job) Execution file name	Y	Y	--
499	prm <sup>#5</sup>	(Flexible job) Parameters	Y	Y	--
500	env <sup>#5</sup>	(Flexible job) Environment variable	Y	Y	--
501	ex <sup>#5</sup>	(Flexible job) Relay agent name	Y	Y	--
502	jd <sup>#5</sup>	(Flexible job) Type of end judgment	Y	Y	Sign,

No.	Specification	Item	List	Jobnet flow	Detail of item
502	jd <sup>#5</sup>	(Flexible job) Type of end judgment	Y	Y	Description
503	wth <sup>#5</sup>	(Flexible job) Threshold for the warning end	Y	Y	--
504	tho <sup>#5</sup>	(Flexible job) Threshold for the abnormal end	Y	Y	--
505	jdf <sup>#5</sup>	(Flexible job) End judgment file name	Y	Y	--
506	ha <sup>#5</sup>	(Flexible job) Hold status	Y	Y	Sign, Description
507	eu <sup>#5</sup>	(Flexible job) JP1 user who executes the job	Y	Y	Sign, Description
508	mm <sup>#5</sup>	(Flexible job) Wait method	Y	Y	Sign, Description
509	nmg <sup>#5</sup>	(Flexible job) When no generations wait for	Y	Y	Sign, Description
510	eun <sup>#5</sup>	(Flexible job) Name of unit whose end is being waited for	Y	Y	--
511	ega <sup>#5</sup>	(Flexible job) When abnormal end exists for execution generation	Y	Y	Sign, Description
512	uem <sup>#5</sup>	(Flexible job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
513	abr <sup>#5</sup>	(Flexible job) Whether to retry on abnormal end	Y	Y	Sign, Description
514	rjs <sup>#5</sup>	(Flexible job) Lower limit value of return code on automatic retry	Y	Y	--
515	rje <sup>#5</sup>	(Flexible job) Upper limit value of return code on automatic retry	Y	Y	--
516	rec <sup>#5</sup>	(Flexible job) Maximum retry times	Y	Y	--
517	rei <sup>#5</sup>	(Flexible job) Retry interval	Y	Y	--
518	fxg <sup>#5</sup>	(Flexible job) Broadcast execution method	Y	Y	Sign, Description
519	htcfl <sup>#5</sup>	(HTTP connection job) Connection configuration file name	Y	Y	--
520	htknd <sup>#5</sup>	(HTTP connection job) Request type	Y	Y	--
521	htrql <sup>#5</sup>	(HTTP connection job) Transmission information file name	Y	Y	--
522	htstf <sup>#5</sup>	(HTTP connection job) Statuses store file name	Y	Y	--
523	htspt <sup>#5</sup>	(HTTP connection job) How to store received data	Y	Y	Sign, Description
524	htrhf <sup>#5</sup>	(HTTP connection job) Received header store file name	Y	Y	--
525	htrbf <sup>#5</sup>	(HTTP connection job) Received body store file name	Y	Y	--

No.	Specification	Item	List	Jobnet flow	Detail of item
526	so <sup>#5</sup>	(HTTP connection job) Standard output file name	Y	Y	--
527	se <sup>#5</sup>	(HTTP connection job) Standard error output file name	Y	Y	--
528	etm <sup>#5</sup>	(HTTP connection job) Timeout period of job execution	Y	Y	--
529	pr <sup>#5</sup>	(HTTP connection job) Priority	Y	Y	--
530	ex <sup>#5</sup>	(HTTP connection job) Execution agent name	Y	Y	--
531	un <sup>#5</sup>	(HTTP connection job) Execution user name	Y	Y	--
532	jd <sup>#5</sup>	(HTTP connection job) Type of end judgment	Y	Y	Sign, Description
533	wth <sup>#5</sup>	(HTTP connection job) Threshold for the warning end	Y	Y	--
534	tho <sup>#5</sup>	(HTTP connection job) Threshold for the abnormal end	Y	Y	--
535	jdf <sup>#5</sup>	(HTTP connection job) End judgment file name	Y	Y	--
536	ha <sup>#5</sup>	(HTTP connection job) Hold status	Y	Y	Sign, Description
537	eu <sup>#5</sup>	(HTTP connection job) JP1 user who executes the job	Y	Y	Sign, Description
538	fd <sup>#5</sup>	(HTTP connection job) Time required for execution	Y	Y	--
539	mm <sup>#5</sup>	(HTTP connection job) Wait method	Y	Y	Sign, Description
540	nmg <sup>#5</sup>	(HTTP connection job) When no generations wait for	Y	Y	Sign, Description
541	eun <sup>#5</sup>	(HTTP connection job) Name of unit whose end is being waited for	Y	Y	--
542	ega <sup>#5</sup>	(HTTP connection job) When abnormal end exists for execution generation	Y	Y	Sign, Description
543	uem <sup>#5</sup>	(HTTP connection job) When unmonitored end exists for monitoring generation	Y	Y	Sign, Description
544	abr <sup>#5</sup>	(HTTP connection job) Whether to retry on abnormal end	Y	Y	Sign, Description
545	rjs <sup>#5</sup>	(HTTP connection job) Lower limit value of return code on automatic retry	Y	Y	--
546	rje <sup>#5</sup>	(HTTP connection job) Upper limit value of return code on automatic retry	Y	Y	--
547	rec <sup>#5</sup>	(HTTP connection job) Maximum retry times	Y	Y	--
548	rei <sup>#5</sup>	(HTTP connection job) Retry interval	Y	Y	--
549	j <sup>#10</sup>	(ajsshow) Jobnet or job full-path name	Y <sup>#6</sup>	Y <sup>#3</sup>	--
550	j <sup>#10</sup>	(ajsshow) Jobnet or job name	Y	Y <sup>#3</sup>	--

No.	Specification	Item	List	Jobnet flow	Detail of item
551	A <sup>#10</sup>	(ajsshow) AJSPATH	Y <sup>#6</sup>	Y <sup>#3</sup>	--
552	T <sup>#10</sup>	(ajsshow) Unit type	Y <sup>#6 #7</sup>	Y <sup>#3</sup>	Sign, Description
553	C <sup>#10</sup>	(ajsshow) Jobnet or job status	Y <sup>#7</sup>	Y <sup>#3</sup>	--
554	U <sup>#10</sup>	(ajsshow) User name of a jobnet registered for execution	Y <sup>#7</sup>	Y <sup>#3</sup>	--
555	D <sup>#10</sup>	(ajsshow) Time when the jobnet was registered for execution	Y <sup>#7</sup>	Y <sup>#3</sup>	--
556	L <sup>#10</sup>	(ajsshow) Number of jobnet nests with respect to the root jobnet as 0	Y	Y <sup>#3</sup>	--
557	p <sup>#10</sup>	(ajsshow) Whether the next execution is scheduled	Y <sup>#7</sup>	Y <sup>#3</sup>	--
558	P <sup>#10</sup>	(ajsshow) Date and time of the next execution schedule	Y <sup>#7</sup>	Y <sup>#3</sup>	--
559	M <sup>#10</sup>	(ajsshow) Next execution method	Y <sup>#7</sup>	Y <sup>#3</sup>	--
560	R <sup>#10</sup>	(ajsshow) Return value or signal code	Y	Y <sup>#3</sup>	--
561	S <sup>#10</sup>	(ajsshow) Date and time when jobnet execution is started or when a job is submitted	Y <sup>#7</sup>	Y <sup>#3</sup>	--
562	s <sup>#10</sup>	(ajsshow) Date and time when jobnet execution is started or when a job is submitted <with seconds>	Y <sup>#7</sup>	Y <sup>#3</sup>	--
563	K <sup>#10</sup>	(ajsshow) Date and time when jobnet re-execution is started	Y <sup>#7</sup>	Y <sup>#3</sup>	--
564	k <sup>#10</sup>	(ajsshow) Date and time when jobnet re-execution is started <with seconds>	Y <sup>#7</sup>	Y <sup>#3</sup>	--
565	E <sup>#10</sup>	(ajsshow) Date and time when jobnet or job execution is ended	Y <sup>#7</sup>	Y <sup>#3</sup>	--
566	e <sup>#10</sup>	(ajsshow) Date and time when jobnet or job execution is ended <with seconds>	Y <sup>#7</sup>	Y <sup>#3</sup>	--
567	V <sup>#10</sup>	(ajsshow) Date and time when jobnet or job execution is started in another host	Y <sup>#7</sup>	Y <sup>#3</sup>	--
568	Q <sup>#10</sup>	(ajsshow) Date and time when jobnet or job execution was ended in another host	Y <sup>#7</sup>	Y <sup>#3</sup>	--
569	W <sup>#10</sup>	(ajsshow) \$LANG value	Y <sup>#7</sup>	Y <sup>#3</sup>	--
570	Z <sup>#10</sup>	(ajsshow) \$TZ value	Y <sup>#6 #7</sup>	Y <sup>#3</sup>	--
571	G <sup>#10</sup>	(ajsshow) Generation number	Y	Y <sup>#3</sup>	--
572	N <sup>#10</sup>	(ajsshow) Priority of execution	Y <sup>#7</sup>	Y <sup>#3</sup>	--
573	H <sup>#10</sup>	(ajsshow) Agent host name	Y <sup>#6 #7</sup>	Y <sup>#3</sup>	--
574	I <sup>#10</sup>	(ajsshow) Job number	Y <sup>#7</sup>	Y <sup>#3</sup>	--
575	Y <sup>#10</sup>	(ajsshow) Number of executions of jobnets or jobs that ended normally	Y <sup>#7</sup>	Y <sup>#3</sup>	--
576	B <sup>#10</sup>	(ajsshow) Scheduled execution start date and time obtained from a computed processing cycle	Y <sup>#7</sup>	Y <sup>#3</sup>	--



No.	Specification	Item	List	Jobnet flow	Detail of item
577	b <sup>#10</sup>	(ajsshow) Scheduled execution start date and time obtained from a computed processing cycle <with seconds>	Y <sup>#7</sup>	Y <sup>#3</sup>	--
578	a <sup>#10</sup>	(ajsshow) Estimated time required for execution	Y <sup>#7</sup>	Y <sup>#3</sup>	--
579	O <sup>#10</sup>	(ajsshow) Scheduled execution end date and time obtained from a computed processing cycle	Y <sup>#7</sup>	Y <sup>#3</sup>	--
580	o <sup>#10</sup>	(ajsshow) Scheduled execution end date and time obtained from a computed processing cycle <with seconds>	Y <sup>#7</sup>	Y <sup>#3</sup>	--
581	v <sup>#10</sup>	(ajsshow) Start time of the period that schedule and result information is output	Y <sup>#7</sup>	Y <sup>#3</sup>	--
582	w <sup>#10</sup>	(ajsshow) End time of the period that schedule and result information is output	Y <sup>#7</sup>	Y <sup>#3</sup>	--
583	F <sup>#10</sup>	(ajsshow) Hold attribute of the next execution schedule	Y <sup>#7</sup>	Y <sup>#3</sup>	--
584	i <sup>#10</sup>	(ajsshow) Type of registration for execution	Y <sup>#7</sup>	Y <sup>#3</sup>	--
585	l <sup>#10</sup>	(ajsshow) Execution registration number	Y <sup>#7</sup>	Y <sup>#3</sup>	--
586	r <sup>#10</sup>	(ajsshow) Standard error output file name	Y #6 #7	Y <sup>#3</sup>	--
587	d <sup>#10</sup>	(ajsshow) Delay status	Y <sup>#7</sup>	Y <sup>#3</sup>	--
588	## <sup>#10</sup>	(ajsshow) Execution-ID	Y <sup>#7</sup>	Y <sup>#3</sup>	--
589	x <sup>#10</sup>	(ajsshow) Current date	Y <sup>#7</sup>	Y <sup>#3</sup>	--
590	X <sup>#10</sup>	(ajsshow) Current time	Y <sup>#7</sup>	Y <sup>#3</sup>	--
591	m <sup>#10</sup>	(ajsshow) Time at which start conditions are effective	Y <sup>#7</sup>	Y <sup>#3</sup>	--
592	q <sup>#10</sup>	(ajsshow) Number of times by which start conditions are effective	Y <sup>#7</sup>	Y <sup>#3</sup>	--
593	sp <sup>#10</sup>	(ajsshow) State of being suspended (or not)	Y <sup>#7</sup>	Y <sup>#3</sup>	--
594	Op <sup>#10</sup>	(ajsshow) Execution date for a jobnet	Y <sup>#7</sup>	Y <sup>#3</sup>	--
595	St <sup>#10</sup>	(ajsshow) Actual execution start date and time of a jobnet or job	Y <sup>#7</sup>	Y <sup>#3</sup>	--
596	st <sup>#10</sup>	(ajsshow) Actual execution start date and time of a jobnet or job <with seconds>	Y <sup>#7</sup>	Y <sup>#3</sup>	--
597	Pt <sup>#10</sup>	(ajsshow) Date and time at which jobnet execution is to start	Y <sup>#7</sup>	Y <sup>#3</sup>	--
598	Jm <sup>#10</sup>	(ajsshow) Full-path jobnet or job name	Y #6 #7	Y <sup>#3</sup>	--
599	Am <sup>#10</sup>	(ajsshow) AJSPATH	Y #6 #7	Y <sup>#3</sup>	--
600	Ed <sup>#10</sup>	(ajsshow) Whether or not to suppress the execution if the scheduled time for execution has passed during startup of the scheduler service	Y <sup>#7</sup>	Y <sup>#3</sup>	--
601	ab <sup>#10</sup>	(ajsshow) Estimated time between the start of the abnormally ended job and the end of the root jobnet	Y <sup>#7</sup>	Y <sup>#3</sup>	--

No.	Specification	Item	List	Jobnet flow	Detail of item
602	an <sup>#10</sup>	(ajsshow) Estimated time between the start of the unit next to the abnormally ended job and the end of the root jobnet	Y <sup>#7</sup>	Y <sup>#3</sup>	--
603	FG <sup>#10</sup>	(ajsshow) Number of future generations	Y <sup>#7</sup>	Y <sup>#3</sup>	--
604	ds <sup>#10</sup>	(ajsshow) Date/time for monitoring the start delay	Y <sup>#7</sup>	Y <sup>#3</sup>	--
605	de <sup>#10</sup>	(ajsshow) Date/time for monitoring the termination delay	Y <sup>#7</sup>	Y <sup>#3</sup>	--
606	Ft <sup>#10</sup>	(ajsshow) Hold attributes	Y <sup>#7</sup>	Y <sup>#3</sup>	--
607	MV <sup>#10</sup>	(ajsshow) Macro variable and passing information	Y #6 #7	Y <sup>#3</sup>	--
608	CI <sup>#10</sup>	(ajsshow) Execution-ID of the connection-destination	Y	Y <sup>#3</sup>	--
609	RI <sup>#10</sup>	(ajsshow) Release-ID	Y	Y <sup>#3</sup>	--
610	PW <sup>#10</sup>	(ajsshow) Whether the wait condition is not approved.	Y	Y <sup>#3</sup>	Sign, Description <sup>#11</sup>
611	RY <sup>#10</sup>	(ajsshow) Retry execution times	Y	Y <sup>#3</sup>	--
612	RC <sup>#10</sup>	(ajsshow) Retry status	Y	Y <sup>#3</sup>	--
613	RS <sup>#10</sup>	(ajsshow) Retry registration time	Y	Y <sup>#3</sup>	--
614	Rs <sup>#10</sup>	(ajsshow) Retry registration time <with seconds>	Y	Y <sup>#3</sup>	--
615	RT <sup>#10</sup>	(ajsshow) Retry start time	Y	Y <sup>#3</sup>	--
616	Rt <sup>#10</sup>	(ajsshow) Retry start time <with seconds>	Y	Y <sup>#3</sup>	--

Legend:

Y: Supported.

--: Not applicable

#1

Equivalent to unit attribute parameters in JP1/AJS. For details, see the description of the syntax of unit definition files in the manual *JP1/Automatic Job Management System 3 Command Reference*.

#2

The unit name is always displayed in a jobnet flow image. It cannot be selected or removed in the Jobnet Flow Format Definition Settings window.

#3

This item can be selected for each unit type in the Jobnet Flow Format Definition window.

#4

Equivalent to the format indicator specified in the `-f` option of the JP1/AJS `ajsprint` command. For details, see the description of the `ajsprint` command in the manual *JP1/Automatic Job Management System 3 Command Reference*.

#5

Equivalent to parameters of unit definition information output by the `-a` option of the JP1/AJS `ajsprint` command. For details, see the description of the `ajsprint` command in the manual *JP1/Automatic Job Management System 3 Command Reference*.

#6

When outputting a document in list format, this item might exceed the maximum character string length (up to 32,000 bytes) the document can display.

#7

When outputting a document in list format or as a jobnet flow image, this item might exceed the maximum character string length (up to 4,000 bytes) the document can display per unit of data. In this case, cross (×) and the text *The data has too many characters to display* appear on screen and in the document.

#8

When outputting a jobnet flow image, this item might exceed the maximum character string length (up to 255 bytes) Microsoft Excel can display in a cell. In this case, ##### appears as the data in the Excel cell.

#9

This item displays the number of jobs directly under the jobnet. This number does not include job groups, jobnets, start conditions, or jobnet connectors.

For a manager jobnet, you cannot collect information from another JP1/AJS3 - Manager host, so you cannot display the number of jobs directly under the jobnet.

#10

Equivalent the format indicator specified in the `-i` option of the JP1/AJS `ajsshow` command (except for %). For details, see the description of the `ajsshow` command in the manual *JP1/Automatic Job Management System 3 Command Reference*.

#11

In a Japanese environment, when you select either **Sign** or **Description** in **Detail of column item** in Format Definition Settings dialog, the same value is displayed.

#### Notes:

- In *(Jobnet)Rule number of the schedule*, configuration information is not output when the rule number matches the link number.
- For the root job group (AJSROOT1) created automatically at JP1/AJS installation, *(Common) Created time* displays the date on which the database in the installation image was created.
- *Sign, Description* in the Detail of item column in the table represents the code and description of the information output by the JP1/AJS `ajsprint` and `ajsshow` commands. For details on the information output by the `ajsprint` and `ajsshow` commands, see the description of the definition information format and parameters in the manual *JP1/Automatic Job Management System 3 Command Reference*.
- Signs are displayed for unsupported unit types even if *Description* is specified as the display format for the column item in the format definition.
- If there is no relevant data, or if the unit type is not subject to column output, a blank space, a hyphen (-), or asterisks (\*\*\*) will be displayed. For unit types that are subject to column output, see the descriptions of the `ajsprint` command and `ajsshow` command in the manual *JP1/Automatic Job Management System 3 Command Reference*.

## B. List of Column Items in Daily and Monthly Documents

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The following table lists the column items you can specify in the Format Definition Settings window for the *daily* and *monthly* basic formats.

No.	Column item	Detail of column item
1	(Monthly)Schedule	Sign, Sign(Time), Sign(Day Time)
2	(Monthly)Result	Sign, Sign(Time), (Time)Detail, Sign(Day Time), (Day Time)Detail
3	(Daily)Schedule	Sign, Sign(Time)
4	(Daily)Result	Sign, Sign(Time), or (Time)Detail

Cautionary note:

If a job in the collection period has finished executing, daily and monthly documents display the actual execution times in the job schedule.

## C. List of Symbols in Daily and Monthly Documents

The tables below show the symbols displayed when **Sign** or **Sign(Time)** is selected in the **Detail of column item** field for formats based on a daily or monthly basic format.

- Without detailed schedule information selected

Status	Symbol
Scheduled	■

Note:

In monthly and daily documents, the symbol ■ (Scheduled) is also displayed for actual execution results if the unit started executing in the collection period.

- With detailed schedule information selected

Status	Symbol
Scheduled	■
Running	□
Normal end	●
Abnormal end	×
Warning end	▲
Others	○

Note:

- The following table shows how the symbol for jobs in *Scheduled* and *Running* status in the collection period is determined in daily and monthly documents.

Detailed status	Status	Symbol
time-wait	Scheduled	■
time-wait-R	Scheduled	■
term-wait	Scheduled	■
exec-wait	Scheduled	■
queuing	Scheduled	■
queuing-R	Scheduled	■
condition-wait	Scheduled	■
start-delay	Scheduled	■
nest-start-delay	Scheduled	■
running	Running	□
running-R	Running	□
AB-cont	Running	□
AB-cont-R	Running	□
WA-cont	Running	□
WA-cont-R	Running	□
monitoring	Running	□

The symbols for jobs in Normal end, Abnormal end, Warning end, and Others statuses in monthly and daily documents are determined using the same rules that govern symbols for monthly and daily results.

- The symbol for the *Scheduled* status might be displayed for detailed statuses other than those listed above.
- You can find out the detailed status of statuses in the *Others* category by reading the description of jobnet, job, and jobnet connector statuses in the manual *JP1/Automatic Job Management System 3 Overview*. Statuses not mentioned in the manual are categorized as *Others*.
- You can check job statuses by creating a format definition that displays the *(ajsshow) Jobnet or job status* item and the *(ajsshow) Scheduled execution start date and time obtained from a computed processing cycle*, or *(ajsshow) Scheduled execution start date and time obtained from a computed processing cycle <with seconds>* items listed in *A. List of Supported Column Items*.

The tables below show the symbols displayed when **Sign** or **Sign(Time)** is selected in the **Detail of column item** field for formats whose basic format is daily or monthly results.

Status name	Status	Symbol
normal	Normal end	●
normal-R	Normal end	●
normal-false	Normal end	●
monitor-normal	Normal end	●
abnormal	Abnormal end	×
abnormal-R	Abnormal end	×
abnormal-WR	Abnormal end	×
interrupt	Abnormal end	×
interrupt-R	Abnormal end	×
kill	Abnormal end	×
kill-R	Abnormal end	×
kill-WR	Abnormal end	×
fail	Abnormal end	×
fail-R	Abnormal end	×
fail-WR	Abnormal end	×
warning	Warning end	▲
warning-R	Warning end	▲
Other	Others	○

## D. Product File Information

This section lists the files and directories associated with JP1/AJS3 -Print Option.

### D.1 Product file information for JP1/AJS3 - Print Option

The following table lists the files and directories associated with JP1/AJS3 - Print Option:

Table D–1: List of JP1/AJS3 - Print Option files and directories

Directory or file name	Purpose	Created at installation	Equation
<i>installation-folder</i>	Installation folder	Y	--
+-- AJS2POaoi.ico	Icon for job operation information files	Y	--
+-- AJS2POfof.ico	Icon for format definition files	Y	--
+-- AJS2POjof.ico	Icon for jobnet flow format definition files	Y	--
+-- apomapdl.dll	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- JOP001.exe		Y	--
+-- JOPTRS00.dll		Y	--
+-- jprajsmkkey.exe		Y	--
+-- jpreltms.dll		Y	--
+-- jprcollect_cl.exe		Y	--
+-- jprprint.exe		Y	--
+-- jprmpflw.exe		Y	--
+-- jprwebcollect.exe		Y	--
+-- Readme_en.txt		Y	--
+-- Readme_ja.txt		Y	--
+-- hlic*.dll		Y	--
+-- xsd files		Y	--
+-- ProductInfo.txt		Y	--
+-- Version.txt		Y	--
+-- jprpo.ini	Operation settings file for management	Y <sup>#2</sup>	--
+-- jprpo.ini.model	Sample operation settings file for management	Y	--
+-- PO_ras.bat	Data collection tool	Y	--
+-- doc	Online help	Y	--

Directory or file name	Purpose	Created at installation	Equation
+-- en	Online help	Y	--
+-- htm files		Y	--
+-- GRAPHICS		Y	--
+-- gif files		Y	--
+-- ja		Y	--
+-- htm files		Y	--
+-- GRAPHICS		Y	--
+-- gif files		Y	--
+-- Flow	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- JPRFLWPF.exe		Y	--
+-- JPRFLWPR.exe		Y	--
+-- JPRPDFPR.dll		Y	--
+-- Interop.Scripting.dll		Y	--
+-- Microsoft.Office.Interop.Excel.dll		Y	--
+-- Office.dll		Y	--
+-- ja-JP	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- JPRFLWPF.resources.dll		Y	--
+-- JPRFLWPR.resources.dll		Y	--
+-- zh-CN		Y	--
+-- JPRFLWPF.resources.dll		Y	--
+-- Map	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- JPRMAPPR.exe		Y	--
+-- JPRPDFPR.dll		Y	--
+-- Interop.Scripting.dll		Y	--
+-- Microsoft.Office.Interop.Excel.dll		Y	--
+-- Office.dll		Y	--
+-- JPRMAPPF.exe		Y	--
+-- Image	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- AJSView		Y	--
+-- gif files		Y	--
+-- Custom		Y	--
+-- gif files		Y	--
+-- ja-JP	Programs and libraries for JP1/AJS3 - Print Option	Y	--



Directory or file name	Purpose	Created at installation	Equation
+++ JPRMAPPR.resources.dll	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+++ JPRMAPPF.resources.dll		Y	--
+++ zh-CN		Y	--
+++ JPRMAPPF.resources.dll		Y	--
%allusersprofile%\Hitachi\JP1\JP1_DEFAULT\JP1AJS2PO#5	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+++ JOP000dft00.ini	Environment settings file	N#1	--
+++ JOP000dft01.ini	Page settings file	N#1	--
+++ japanese_sample_set.exe	Compressed sample format definition file and job operation information file for a Japanese language environment	Y	--
+++ english_sample_set.exe	Compressed sample format definition file and job operation information file for an English language environment	Y	--
+++ Format	Sample format definition files and Standard format definition files	Y	--
+++ job.jof		Y#2, #3, #6	--
+++ job.jof.model		Y#8, #9	--
+++ jobnet.jof		Y#2, #3, #6	--
+++ jobnet.jof.model		Y#8, #9	--
+++ unit.jof		Y#2, #3, #6	--
+++ unit.jof.model		Y#8, #9	--
+++ schedule_result.jof		Y#2, #3, #6	--
+++ schedule_result.jof.model		Y#8, #9	--
+++ full_path.jof		Y#2, #3, #6	--
+++ full_path.jof.model		Y#8, #9	--
+++ daily_schedule.jof		Y#2, #3, #6	--
+++ daily_schedule.jof.model		Y#8, #9	--
+++ daily_result.jof		Y#2, #3, #6	--
+++ daily_result.jof.model		Y#8, #9	--
+++ monthly_schedule.jof		Y#2, #3, #6	--
+++ monthly_schedule.jof.model		Y#8, #9	--
+++ monthly_result.jof		Y#2, #3, #6	--
+++ monthly_result.jof.model		Y#8, #9	--
+++ exec_order.jof		Y#2, #3, #6	--

Directory or file name	Purpose	Created at installation	Equation
+-- exec_order.jof.model	Sample format definition files and Standard format definition files	Y#8, #9	--
+-- Input	Sample job operation information files	Y	--
+-- SAMP-S.aoi		Y#6	--
+-- SAMP.aoi		Y#6	--
+-- SAMP-JA.aoi		Y#10	--
+-- SAMP-S-JA.aoi		Y#10	--
+-- Log	Log files	Y	--
+-- ajs2po.log		N	Equation (1)
+-- ajs2po.log.1		N	Equation (1)
+-- ajs2pomlcl.log		N	Equation (1)
+-- ajs2pomlcl.log.1		N	Equation (1)
+-- apomapdl.log		N	Equation (1)
+-- apomapdl.log.1		N	Equation (1)
+-- hliclib*.conf		N	--
+-- hliclib*.log		N	Equation (8)
+-- jprajsmkkey.log		N	Equation (1)
+-- jprajsmkkey.log.1		N	Equation (1)
+-- JPRFLWPF.log		N	Equation (1)
+-- JPRFLWPF.log.1		N	Equation (1)
+-- JPRFLWPR.log		N	Equation (1)
+-- JPRMAPPF.log		N	Equation (1)
+-- JPRMAPPF.log.1		N	Equation (1)
+-- JPRMAPPR.log		N	Equation (1)
+-- jprmpflw.log		N	Equation (1)
+-- jprmpflw.log.1		N	Equation (1)
+-- jprwebcollect.log		N	Equation (1)
+-- jprwebcollect.log.1		N	Equation (1)
+-- Map	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- ajs2_flow.txt		N#4	Equation (2)
+-- ajs2_map.txt		N#4	Equation (3)
+-- ajs2_rel.txt		N#4	Equation (4)
+-- FlowFormat	Sample jobnet flow format definition file and Standard jobnet flow format definition file	Y	--
+-- JobFlow.fof		Y	--

Directory or file name	Purpose	Created at installation	Equation
+-- JobFlow.fof.model	Sample jobnet flow format definition file and Standard jobnet flow format definition file	Y#11	--
+-- Tmp	Programs and libraries for JP1/AJS3 - Print Option	Y	--
+-- Temporary folder		N#15	--
+-- Profiles	Authentication information file	Y	--
+-- jprpo_user.profile		N#16	--
+-- Users	Default folder for each user when using multi-user remote operation	Y	--
+-- OS-user-name <sup>#7</sup>		N #12	--
+-- Format	Sample format definition files (when using multi-user remote operation)	N #12	--
+-- job.jof		N #13	--
+-- jobnet.jof		N #13	--
+-- unit.jof		N #13	--
+-- schedule_result.jof		N #13	--
+-- full_path.jof		N #13	--
+-- daily_schedule.jof		N #13	--
+-- daily_result.jof		N #13	--
+-- monthly_schedule.jof		N #13	--
+-- monthly_result.jof		N #13	--
+-- exec_order.jof		N #13	--
+-- Input	Job operation information file (when using multi-user remote operation)	N #12	--
+-- Log	Log files (when using multi-user remote operation)	N #12	--
+-- ajs2po.log		N#12	Equation (1)
+-- ajs2po.log.1		N#12	Equation (1)
+-- ajs2pomlcl.log		N#12	Equation (1)
+-- ajs2pomlcl.log.1		N#12	Equation (1)
+-- apomapdl.log		N#12	Equation (1)
+-- apomapdl.log.1		N#12	Equation (1)
+-- jprajsmkkey.log		N#12	Equation (1)
+-- jprajsmkkey.log.1		N#12	Equation (1)
+-- JPRFLWPR.log		N#12	Equation (1)
+-- JPRMAPPR.log		N#12	Equation (1)
+-- jprmpflw.log		N#12	Equation (1)

Directory or file name	Purpose	Created at installation	Equation
+-- jprmpflw.log.1	Log files (when using multi-user remote operation)	N#12	Equation (1)
+-- JPRMAPPF.log		N#12	Equation (1)
+-- JPRMAPPF.log.1		N#12	Equation (1)
+-- JPRFLWPF.log		N#12	Equation (1)
+-- JPRFLWPF.log.1		N#12	Equation (1)
+-- jprwebcollect.log		N#12	Equation (1)
+-- jprwebcollect.log.1		N#12	Equation (1)
+-- Map	Programs and libraries for JP1/AJS3 - Print Option (when using multi-user remote operation)	N #12	--
+-- ajs2_flow.txt		N #4, #12	Equation (2)
+-- ajs2_map.txt		N #4, #12	Equation (3)
+-- ajs2_rel.txt		N #4, #12	Equation (4)
+-- FlowFormat	Sample jobnet flow format definition file (when using multi-user remote operation)	N #12	--
+-- JobFlow.fof		N #14	--
+-- Tmp	Programs and libraries for JP1/AJS3 - Print Option (when using multi-user remote operation)	N #12	--
+-- Temporary		N #12, #15	--
folder			
+-- Profiles	Authentication information file	N #12	--
+--		N #12, #16	--
jprpo_user.profile			
+-- JOP000df00.ini	Environment settings file (when using multi-user remote operation)	N #12	--
+-- JOP000df01.ini	Paper settings file (when using multi-user remote operation)	N #12	--
Saved CSV Files	Other files	N	Equation (5)
job operation information file		N	Equation (6)
Execution logs for job operation information files		N	Equation (7)

Legend:

- Y: Created during JP1/AJS3 - Print Option installation.
- N: Not created during JP1/AJS3 - Print Option installation.
- : Not applicable.

Notes:

- The default value of *installation-folder* is *system-drive*: \Program Files\Hitachi\JP1AJS2PO.
- For Windows (64-bit), interpret Program Files as Program Files (x86).
- The default of %SystemRoot% is *system-drive*: \Windows.
- The default of %allusersprofile% is *system-drive*: \ProgramData.

#1

This file is created and updated in the course of JP1/AJS3 - Print Option operation.

#2

Not installed if the same file already exists.

#3

This file is updated if you change the format definition and save the file with the same name.

#4

This file is created each time a particular operation occurs. Because previous instances of the file are deleted, the number of files does not increase.

#5

If you have configured the system to not show hidden files and folders, the %allusersprofile% folder is not displayed. You can display the folder by configuring the system to show all files. For details on how to do so, see the Help for the operating system.

#6

The sample format definition file and job operation information file for an English language environment are installed. You can use them by changing to the format for a Japanese language environment in the Job Operation Document Output window.

The following shows how to change to the format for a Japanese language environment:

(1) Open the `japanese_sample_set.exe` file in the %allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2PO folder.

(2) Extract the file into an arbitrary location.

(3) Place the format definition file (file in the Format folder) contained in the extracted folder into the destination of the path specified in **Format definition** in the Environment Settings window. Alternatively, specify the folder (Format folder) in which the extracted format definition file exists to the folder in **Format definition** in the Environment Settings.

(4) In the Job Operation Document Output window, choose the **View** menu and **Refresh**. Then, the items displayed in the format combo box are changed according to the format definition stored in the revised format definition folder.

**Supplementary note:**

The `japanese_sample_set.exe` file and the contained files are assumed to run on an OS for a Japanese language environment. If these files run on an OS for a different language environment, characters might be garbled or an error might occur.

#7

The domain name is not included in it.

#8

This is the Standard format definition file. Based on this file, a sample of the multi-user format definition file is created. The sample files are created when multiple users activate JP1/AJS3 - Print Option for the first time after the multi-user remote operation functionality is enabled. If the Standard format definition files are deleted, no sample file is created when multiple users activate JP1/AJS3 - Print Option for the first time, which in turn causes the error KVR2000-E to be output. Afterwards, because the creation of a sample file from the Standard file does not take place when JP1/AJS3 - Print Option is activated for the second or subsequent time, you have to manually place a format definition file in the created multi-user format definition folder and then reactivate JP1/AJS3 - Print Option.

#9

To be installed when a new installation or upgrade installation is made in a non-Japanese language OS environment.

#10

A sample job operation information file for a Japanese language environment will be installed.

#11

This is the Standard jobnet flow format definition. Based on this file, a sample of the multi-user jobnet flow format definition file is created. The sample file is created when multiple users activate JP1/AJS3 - Print Option for the first time after the multi-user remote operation functionality is enabled. If the Standard jobnet flow format definition is deleted, no sample file is created when multiple users perform jobnet flow output or jobnet flow PDF output for the first time, which in turn causes the error KAVR3010-E to be output. Afterwards, because the creation of a sample file from the Standard file does not take place when JP1/AJS3 - Print Option is activated for the second or subsequent time, you have to manually place a jobnet flow format definition file in the created the multi-user jobnet flow format definition folder and then reactivate JP1/AJS3 - Print Option.

#12

This file is created or updated when the multi-user remote operation functionality is used.

#13

This is a sample of the multi-user format definition file. The sample file is created based on the Standard format definition file that is stored in the default format definition folder when multiple users activate JP1/AJS3 - Print Option for the first time after the multi-user remote operation functionality is enabled.

#14

This is a sample of the multi-user jobnet flow format definition file. The sample file is created based on the Standard jobnet flow format definition file that is stored in the default jobnet flow format definition folder when multiple users activate JP1/AJS3 - Print Option for the first time after the multi-user remote operation functionality is enabled.

#15

The folder is created when the `jprmpflw` command is executed and then deleted when the command finishes.

#16

The file is created when the `jprajsmkkey` command is executed to register authentication information.

The equations are as follows:

Equation (1):

Maximum of 1 MB

Equation (2):

*Number of units* x 8 + *number of jobnets* (KB)

Equation (3):

*Number of units* x 0.08 + *number of jobnets* (KB)

Equation (4): *Number of relation lines* x 0.06 + *number of jobnets* (KB)

Equation (5):

*Number of lines in document area* x *number of columns* x 4 (KB)

Equation (6):

*Number of units defined under specified unit* x 4.5 +  
*number of generations in specified period* x 3.5 (KB)

Equation (7):

Maximum of 1 KB

Equation (8):

Maximum of 4 kinds x 5 files x 1 MB

#### Cautionary note:

Back up the sample format definition files, sample jobnet flow format definition files, environment settings files, and page settings files as needed.

## D.2 Product file information for JP1/AJS3 - Print Option Manager

The tables below list the files and directories associated with JP1/AJS3 - Print Option Manager for each OS.

### (1) In Windows

Table D–2: List of JP1/AJS3 - Print Option Manager files and directories (in Windows)

Folder or file name	Purpose	Created at installation	Equation
<i>installation-folder</i>	Installation folder	Y	--
+-- AJS2POMaoi.ico	Icon for job operation information files	Y	--
+-- jpreltns.dll	Programs and libraries for JP1/AJS3 - Print Option Manager	Y	--
+-- jprcollect.exe		Y	--
+-- jprcollect_gui.exe		Y	--
+-- jprpomlstart.exe		Y	--
+-- jprpomlstop.exe		Y	--
+-- jprpomlsv.exe		Y	--
+-- Readme_en.txt		Y	--
+-- Readme_ja.txt		Y	--
+-- hlic*.dll		Y	--
+-- xsd file		Y	--
+-- ProductInfo.txt		Y	--
+-- Version.txt		Y	--
+-- POM_ras.bat	Data collection tool	Y	--
<i>POM_DATA_PATH</i> <sup>#1</sup>	Programs and libraries for JP1/AJS3 - Print Option Manager	Y	--
+-- jprpoml.ini	Environment settings file	Y	--
+-- jprpoml.ini.model	Sample environment settings file	Y	--
+-- Log	Log files	Y	--
+-- ajs2pomcollect.log		N	Equation (1)
+-- ajs2pomcollect.log.1		N	Equation (1)
+-- ajs2pomlsv.log		N	Equation (1)
+-- ajs2pomlsv.log.1		N	Equation (1)
+-- hliclib*.conf		N	--

Folder or file name	Purpose	Created at installation	Equation
+-- hliclib*.log	Log files	N	Equation (4)
+-- Tmp	Temporary work area	Y	--
+-- job operation information file <sup>#2</sup>		N	Equation (2)
+-- Execution log for job operation information file <sup>#2</sup>		N	Equation (3)
POM_DATA_PATH <sup>#3</sup>	Programs and libraries for JP1/AJS3 - Print Option Manager	Y	--
+-- Log	Log files	Y	--
+-- hliclib*.conf		N	--
+-- hliclib*.log		N	Equation (4)
job operation information file	Other files	N	Equation (2)
Execution log for job operation information file		N	Equation (3)

Legend:

- Y: Created during JP1/AJS3 - Print Option Manager installation.
- N: Not created during JP1/AJS3 - Print Option Manager installation.
- : Not applicable.

#1

When new installation, the value of *POM\_DATA\_PATH* 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%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2POM
- If the installation folder is other than the above:  
*installation-folder*

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

When an error occurs, the files remain in this directory. Remove the files by manual operation, if necessary.

#3

The value of *POM\_DATA\_PATH2* is the following:

%allusersprofile%\Hitachi\JP1\JP1\_DEFAULT\JP1AJS2POM

Notes:

- The default value of *installation-folder* is *system-drive*: \Program Files (x86)\Hitachi\JP1AJS2POM.
- The default of %allusersprofile% is *system-drive*: \ProgramData.
- The %allusersprofile% folder is not displayed if you have configured the system to not show hidden files and folders. You can display the folder by configuring the system to show all files. For details on how to do so, see the Help for the operating system.



The equations are as follows:

Equation (1):

Maximum of 1 MB

Equation (2):

Temporary files are created when you collect job operation information from JP1/AJS3 - View.

*Number of units defined under specified unit* x 4.5 +

*number of generations in specified period* x 3.5 (KB)

Equation (3):

Maximum of 1 KB

Equation (4):

Maximum of 4 kinds x 5 files x 1 MB

## (2) In UNIX

Table D–3: List of JP1/AJS3 - Print Option Manager files and directories (in UNIX)

Directory or file name	Purpose	Created at installation	Equation
/opt/jp1ajs2pom	Installation directory	Y	--
+++ bin	Programs and libraries for JP1/AJS3 - Print Option Manager	Y	--
+++ jprcollect		Y	--
+++ jprpomlstart		Y	--
+++ jprpomlstop		Y	--
+++ jprpomlsv		Y	--
+++ lib		Y	--
+++ nls		Y	--
+++ Links		Y <sup>#1</sup>	--
+++ language type		Y <sup>#2</sup>	--
+++ jprcollectmsg.cat		Y	--
+++ log	Log files	Y	--
+++ ajs2pomcollect.lck <sup>#5</sup>		N	--
+++ ajs2pomcollect.log		N	Equation (1)
+++ ajs2pomcollect.log.1		N	Equation (1)
+++ ajs2pomlsv.lck <sup>#5</sup>		N	--
+++ ajs2pomlsv.log		N	Equation (1)
+++ ajs2pomlsv.log.1		N	Equation (1)
+++ hliclib*.conf <sup>#3</sup>		N	--
+++ hliclib*.log <sup>#3</sup>		N	Equation (4)
+++ <i>user account name</i> <sup>#3#4</sup>		N	--

Directory or file name	Purpose	Created at installation	Equation
+-- hliclib*.conf <sup>#3</sup>	Log files	N	--
+-- hliclib*.log <sup>#3</sup>		N	Equation (4)
+-- tmp	Temporary work area	Y	--
+-- job operation information file <sup>#6</sup>		N	Equation (2)
+-- Execution log for job operation information file <sup>#6</sup>		N	Equation (3)
+-- jprpoml.ini	Environment settings file	Y	--
+-- jprpoml.ini.model	Sample environment settings file	Y	--
+-- POM_ras.sh	Data collection tool	Y	--
/etc/opt/jp1ajs2pom	Automatic startup and shutdown scripts	N	--
+-- jprpoml_start		N	--
+-- jprpoml_stop		N	--
job operation information file	Other files	N	Equation (2)
Execution log for job operation information file		N	Equation (3)

Legend:

- Y: Created during JP1/AJS3 - Print Option Manager installation.
- N: Not created during JP1/AJS3 - Print Option Manager installation.
- : Not applicable.

#1

The link names and link destinations for each OS are as follows:

HP-UX:

- japanese -> ja\_JP.SJIS
- japanese.euc -> ja\_JP.eucJP

Solaris:

- japanese -> ja
- ja\_JP.eucJP -> ja

AIX:

- Ja\_JP.IBM-932 -> Ja\_JP
- ja\_JP.IBM-eucJP -> ja\_JP
- JA\_JP.UTF-8 -> JA\_JP

Linux:

- ja\_JP.SJIS -> ja\_JP.sjis
- ja -> ja\_JP.eucJP
- ja\_JP -> ja\_JP.eucJP
- ja\_JP.EUCJP -> ja\_JP.eucJP
- ja\_JP.ujis -> ja\_JP.eucJP

- ja\_JP.utf8 -> ja\_JP.UTF-8

#2

The directory names for each OS are as follows:

HP-UX:

- ja\_JP.SJIS
- ja\_JP.eucJP
- ja\_JP.utf8
- zh\_CN.gb18030

Solaris:

- ja\_JP.PCK
- ja\_JP.UTF-8
- ja
- zh\_CN.GB18030

AIX:

- Ja\_JP
- ja\_JP
- JA\_JP
- Zh\_CN.GB18030

Linux:

- ja\_JP.sjis
- ja\_JP.eucJP
- ja\_JP.UTF-8
- zh\_CN.gb18030

#3

The file is created only in Linux.

#4

The file is created for each user when a user that does not have superuser permission executes the `jprcollect` command.

#5

This file is used internally by JP1/AJS3 - Print Option Manager. Do not modify or remove the file.

#6

When an error occurs, the files remain in this directory. Remove the files by manual operation, if necessary.

The equations are as follows:

Equation (1):

Maximum of 1 MB

Equation (2):

Temporary files are created when you collect job operation information from JP1/AJS3 - View.

*Number of units defined under specified unit* x 4.5 +

*number of generations in specified period* x 3.5 (KB)

Equation (3):

Maximum of 1 KB

Equation (4):

Maximum of 4 kinds x 5 files x 1 MB

## E. List of Processes

---

This appendix lists the processes associated with JP1/AJS3 - Print Option Manager.

### E.1 List of JP1/AJS3 - Print Option Manager processes

The JP1/AJS3 - Print Option Manager process starts when you start the JP1/AJS3 - POM service.

The JP1/AJS3 - Print Option Manager processes are listed below.

#### (1) In Windows

You can check the status of the JP1/AJS3 -Print Option Manager process on the Processes page of the Task Manager window.

Process name	Description
jprpomslv.exe	Provides the JP1/AJS3 - POM service

#### (2) In UNIX

You can check the status of the JP1/AJS3 -Print Option Manager process by executing the `ps` command.

Process name	Description
jprpomslv	Provides the JP1/AJS3 - POM service

### E.2 Notes on monitoring the JP1/AJS3 - Print Option Manager process by JP1/Cm2/SSO

To monitor the process and service of JP1/AJS3 - Print Option Manager using the JP1/Cm2/SSO process monitoring function, according to the following monitoring process information, set the JP1/Cm2/SSO process monitoring conditions. For details on the setting procedure, see the manual *JP1/SNMP System Observer*.

- Monitored application name  
JP1/AJS3 - Print Option Manager
- Additional information  
JP1/Automatic Job Management System 3 - Print Option Manager
- Number of monitored processes: 1

#### (1) Monitored process information (Windows and UNIX)

See the following table:

Parent process information					Child process information				
No. of processes	Type <sup>#1</sup>	Process name <sup>#2</sup>	Threshold		No. of processes	Type <sup>#1</sup>	Process name <sup>#2</sup>	Threshold	
			Lower limit	Upper limit				Lower limit	Upper limit
1	2	jprpomlsv	1	9999	0	--	--	--	--

Legend:

--: Not applicable.

#1

Indicates the process name type (1: command line name, 2: executable file name).

#2

Monitoring is not required if the function for linkage with JP1/AJS3 - View is not used.

## (2) Monitored service information (Windows)

See the following table:

Product name (official name)	Product name (official abbreviation)	Service name <sup>#</sup>
JP1/Automatic Job Management 3 - Print Option Manager	JP1/AJS3 - Print Option Manager	JP1_AJS2_POML

#

Monitoring is not required if the function for linkage with JP1/AJS3 - View is not used.

## F. Version Revisions

---

This appendix lists the changes in each version of the program.

### F.1 Revisions in 12-50

The following changes were made for 12-50:

- Supported Windows Server 2019, Linux 8, Oracle Linux 8, CentOS 8, and SUSE Linux 15.
- Added the following programs as prerequisite programs:
  - Microsoft Office 2019 32-bit (Microsoft Excel 2019 32-bit)
  - Microsoft Office 2019 64-bit (Microsoft Excel 2019 64-bit)
  - Microsoft .NET Framework 4.8
- Added following commands:
  - jprmpflw
  - jprajsmkkey
  - jprwebcollect
- Added the following messages:  
KAVR4012-E, KAVR4013-E, KAVR4014-E, KAVR4015-E, KAVR4016-E, KAVR4017-E, KAVR4018-E, KAVR4019-E, KAVR4020-E, KAVR4021-E, KAVR4022-E, KAVR4023-E, KAVR4024-E, KAVR4100-E, KAVR4101-E, KAVR4102-E, KAVR4103-E, KAVR4104-E, KAVR4105-E, KAVR4106-E, KAVR4107-E, KAVR4108-E, KAVR4109-E, KAVR4110-I, KAVR4111-I, KAVR4112-I, KAVR4200-E, KAVR4201-W, KAVR4202-E, KAVR4203-E, KAVR4204-E, KAVR4205-E, KAVR4206-E, KAVR4207-E, KAVR4208-E, KAVR4209-E, KAVR4210-E, KAVR4211-E, KAVR4212-E, KAVR4213-E, KAVR4214-E, KAVR4215-E, KAVR4216-E
- Added the icon for JP1/CPA Option for AJS3 linked jobs as standard custom jobs.

### F.2 Revisions in 12-00

The following changes were made for 12-00:

- Deleted the following OSs from the prerequisite OSs:
  - Microsoft(R) Windows Server(R) 2008 R2 Datacenter
  - Microsoft(R) Windows Server(R) 2008 R2 Enterprise
  - Microsoft(R) Windows Server(R) 2008 R2 Standard
- Deleted the following program from the prerequisite programs:
  - Microsoft Office 2007 (Microsoft Excel 2007)
- The **Last day**, **Today**, and **Next day** options were added as available periods for job operation information collection.
- The number of months available for the **Relative month specification** option in the **Specify period** list box for job operation information collection was expanded from 6 to 12.
- Changed the following messages:

## F.3 Revisions in 11-50

The following changes were made for 11-50:

- Added icons to distinguish the `ajsprint` command output items from the `ajsshow` command output items to the **Items list** and **Selected items list** in the Jobnet Flow Format Definition Settings window.
- Selected items specified in the Jobnet Flow Format Definition Settings window are now made to be output as a legend for each jobnet type to the first page of Excel produced by jobnet flow output.
- Added the function to select or unselect all items at one time in the **Target unit types** in the Format Definition Settings window.
- Added the sample format definition file and job operation information file for an English language environment.

## F.4 Revisions in 11-10

The following changes were made for 11-10:

- This program is now available in Chinese.
- Added the multi-user remote operation functionality.
- Added the functionality to collect information by specifying the execution date.
- Added the functionality to display comments in the map output.
- The **Map/Jobnet flow** tab in the Environment Settings window was divided into the **Map** tab and the **Jobnet Flow** tab.
- Added a unit attribute that can be selected for list output and jobnet flow output. (For details about the added items, see the following table.)

Specification	Item	List	Jobnet flow
fxg	(Flexible job) Broadcast execution method	Y	Y

Legend:

Y: Supported.

- Added the following messages:  
KAVR0003-E and KAVR0004-E
- Supported Windows Server 2016.
- Added the following programs as prerequisite programs:
  - Microsoft Office 2016 32-bit (Microsoft Excel 2016 32-bit)
  - Microsoft Office 2016 64-bit (Microsoft Excel 2016 64-bit)
  - Microsoft .NET Framework 4.6
- Deleted the following OS from the prerequisite OSs:
  - Red Hat Enterprise Linux(R) Server 6 (32-bit x86)
- Deleted the following program from the prerequisite programs:
  - Microsoft Office 2003 (Microsoft Excel 2003)



- Added the functionality (-w option) to the jprcollect command to collect information by specifying the execution date.

## F.5 Revisions in 11-00

The following changes were made for 11-00:

- Supported the 48-hour display system for monthly and daily documents.
- Changed the name: JP1/AJS3 - Print Option Manager License to JP1/AJS3 - Print Option Manager.
- Added the following messages:  
KAVR2016-W and KAVR4011-W
- Added unit attributes that can be selected for list output and jobnet flow output. (For details about the added items, see the following table.)

Specification	Item	List	Jobnet flow
da	(Flexible job) Address of a destination	Y	Y
sc	(Flexible job) Execution file name	Y	Y
prm	(Flexible job) Parameters	Y	Y
env	(Flexible job) Environment variable	Y	Y
ex	(Flexible job) Relay agent name	Y	Y
jd	(Flexible job) Type of end judgment	Y	Y
wth	(Flexible job) Threshold for the warning end	Y	Y
tho	(Flexible job) Threshold for the abnormal end	Y	Y
jdf	(Flexible job) End judgment file name	Y	Y
ha	(Flexible job) Hold status	Y	Y
eu	(Flexible job) JP1 user who executes the job	Y	Y
mm	(Flexible job) Wait method	Y	Y
nmg	(Flexible job) When no generations wait for	Y	Y
eun	(Flexible job) Name of unit whose end is being waited for	Y	Y
ega	(Flexible job) When abnormal end exists for execution generation	Y	Y
uem	(Flexible job) When unmonitored end exists for monitoring generation	Y	Y
abr	(Flexible job) Whether to retry on abnormal end	Y	Y
rjs	(Flexible job) Lower limit value of return code on automatic retry	Y	Y
rje	(Flexible job) Upper limit value of return code on automatic retry	Y	Y
rec	(Flexible job) Maximum retry times	Y	Y
rei	(Flexible job) Retry interval	Y	Y
htcfl	(HTTP connection job) Connection configuration file name	Y	Y
htknd	(HTTP connection job) Request type	Y	Y

Specification	Item	List	Jobnet flow
htrqf	(HTTP connection job) Transmission information file name	Y	Y
htstf	(HTTP connection job) Statuses store file name	Y	Y
htspt	(HTTP connection job) How to store received data	Y	Y
htrhf	(HTTP connection job) Received header store file name	Y	Y
htrbf	(HTTP connection job) Received body store file name	Y	Y
so	(HTTP connection job) Standard output file name	Y	Y
se	(HTTP connection job) Standard error output file name	Y	Y
etm	(HTTP connection job) Timeout period of job execution	Y	Y
pr	(HTTP connection job) Priority	Y	Y
ex	(HTTP connection job) Execution agent name	Y	Y
un	(HTTP connection job) Execution user name	Y	Y
jd	(HTTP connection job) Type of end judgment	Y	Y
wth	(HTTP connection job) Threshold for the warning end	Y	Y
tho	(HTTP connection job) Threshold for the abnormal end	Y	Y
jdf	(HTTP connection job) End judgment file name	Y	Y
ha	(HTTP connection job) Hold status	Y	Y
eu	(HTTP connection job) JP1 user who executes the job	Y	Y
fd	(HTTP connection job) Time required for execution	Y	Y
mm	(HTTP connection job) Wait method	Y	Y
nmg	(HTTP connection job) When no generations wait for	Y	Y
eun	(HTTP connection job) Name of unit whose end is being waited for	Y	Y
ega	(HTTP connection job) When abnormal end exists for execution generation	Y	Y
uem	(HTTP connection job) When unmonitored end exists for monitoring generation	Y	Y
abr	(HTTP connection job) Whether to retry on abnormal end	Y	Y
rjs	(HTTP connection job) Lower limit value of return code on automatic retry	Y	Y
rje	(HTTP connection job) Upper limit value of return code on automatic retry	Y	Y
rec	(HTTP connection job) Maximum retry times	Y	Y
rei	(HTTP connection job) Retry interval	Y	Y

Legend:

Y: Supported.

- Supported Linux 7 and SUSE Linux 12.
- Added Microsoft .NET Framework 4.0 and Microsoft .NET Framework 4.5 to the prerequisite programs.
- Deleted the following OSs from the prerequisite OSs:
  - Microsoft(R) Windows Server(R) 2008 Enterprise (32-bit)

- Microsoft(R) Windows Server(R) 2008 Standard (32-bit)
- Microsoft(R) Windows Server(R) 2008 Datacenter (x64)
- Microsoft(R) Windows Server(R) 2008 Enterprise (x64)
- Microsoft(R) Windows Server(R) 2008 Standard (x64)
- Microsoft(R) Windows Vista(R) Business
- Microsoft(R) Windows Vista(R) Enterprise
- Microsoft(R) Windows Vista(R) Ultimate
- Microsoft(R) Windows Vista(R) Business (x64)
- Microsoft(R) Windows Vista(R) Enterprise (x64)
- Microsoft(R) Windows Vista(R) Ultimate (x64)
- Microsoft(R) Windows Server(R) 2003, Enterprise Edition
- Microsoft(R) Windows Server(R) 2003, Standard Edition
- Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
- Microsoft(R) Windows Server(R) 2003, Standard x64 Edition
- Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition (x86)
- Microsoft(R) Windows Server(R) 2003 R2, Standard Edition (x86)
- Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
- Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition
- Microsoft(R) Windows Server(R) 2008 Datacenter (32-bit)
- Microsoft(R) Windows(R) XP Professional Operating System
- Red Hat Enterprise Linux(R) 5 (AMD/Intel 64)
- Red Hat Enterprise Linux(R) 5 (x86)
- Deleted the following programs from the prerequisite programs:
  - Microsoft .NET Framework 2.0 SP2 or later
  - Microsoft .NET Framework 3.0
  - Microsoft Office XP (Microsoft Excel 2002)

## F.6 Revisions in 10-50

The following changes were made for 10-50:

- Added **Data layout** and **Orientation** to the jobnet flow format definition items.
- Changed the maximum number of items for a jobnet flow format definition to 20.
- Made it so that you can extend the size of the display area for the unit name or the data display area, when the unit name or data is not fully displayed for printing or the print preview of map output, jobnet flow output, map PDF output, and jobnet flow PDF output.
- Made it so that you can make the background for the unit name transparent when the arrow is hidden by the unit name background for map output and map PDF output.
- Added the following messages:

KAVR2112-E, KAVR3006-E, KAVR3023-E

- Changed the `ajsshow` command items listed in the *List of Supported Column Items* as items that can be specified on the Jobnet Flow Format Definition Settings window.
- Added a unit attribute that can be selected for list output and jobnet flow output. (For details about the added item, see the following table.)

Specification	Item	List	Jobnet flow
--	(Jobnet) Number of immediate jobs	Y	Y

Legend:

Y: Supported.

--: Not applicable

## G. Reference Material for This Manual

This appendix provides reference information, including various conventions, 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 12 Job Management: Getting Started (Job Scheduler)* (3021-3-D20(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Overview* (3021-3-D21(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 System Design (Configuration) Guide* (3021-3-D22(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 System Design (Work Tasks) Guide* (3021-3-D23(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Configuration Guide* (3021-3-D24(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Administration Guide* (3021-3-D25(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Troubleshooting* (3021-3-D26(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Operator's Guide* (3021-3-D27(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Command Reference* (3021-3-D28(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Linkage Guide* (3021-3-D29(E))
- *JP1 Version 12 JP1/Automatic Job Management System 3 Messages* (3021-3-D30(E))

About JP1:

- *JP1 Version 12 JP1/Script (For Windows Systems)* (3021-3-D35(E))
- *JP1 Version 12 JP1/SNMP System Observer* (3021-3-E04(E))

### G.2 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 - View	JP1/Automatic Job Management System 3 - View
JP1/AJS3 - Web Console			JP1/Automatic Job Management System 3 - Web Console
JP1/AJS2 - Print Option Manager License			JP1/Automatic Job Management System 2 - Print Option Manager License
JP1/AJS3 - Print Option		JP1/AJS3 - Print Option	JP1/Automatic Job Management System 3 - Print Option
		JP1/AJS3 - Print Option Manager License	JP1/Automatic Job Management System 3 - Print Option Manager
		JP1/AJS3 - Print Option Manager	

Abbreviation			Full name or meaning
JP1/Cm2/SSO			JP1/SNMP System Observer
JP1/CPA Option for AJS3			JP1/Client Process Automation Option for Automatic Job Management System 3
JP1/PFM/SSO			JP1/Performance Management/SNMP System Observer
JP1/SSO			JP1/Server System Observer
AIX			AIX V7.1
HP-UX		HP-UX (IPF)	HP-UX 11i V3 (IPF)
Linux	CentOS 6(x64)		CentOS 6 (x64)
	CentOS 7		CentOS 7
	CentOS 8		CentOS 8
	Linux 6	Linux 6 (x64)	Red Hat Enterprise Linux(R) Server 6 (64-bit x86_64)
	Linux 7		Red Hat Enterprise Linux(R) Server 7
	Linux 8		Red Hat Enterprise Linux(R) Server 8
	Oracle Linux 6(x64)		Oracle Linux(R) Operating System 6 (x64)
	Oracle Linux 7		Oracle Linux(R) Operating System 7
	Oracle Linux 8		Oracle Linux(R) Operating System 8
	SUSE Linux 12		SUSE Linux(R) Enterprise Server 12
	SUSE Linux 15		SUSE Linux(R) Enterprise Server 15
Solaris		Solaris 11	Solaris 11 (SPARC)

*UNIX* is sometimes used generically, referring to HP-UX, Solaris, AIX, and Linux.

## G.3 Conventions: Acronyms

This manual also uses the following acronyms:

Acronym	Full name or meaning
CSV	Comma Separated Value
EUC	Extended UNIX Code
FTP	File Transfer Protocol
GUI	Graphical User Interface
IPF	Itanium(R) Processor Family
JIS	Japanese Industrial Standard code
LAN	Local Area Network
PDF	Portable Document Format
RDP	Remote Desktop Protocol
SNMP	Simple Network Management Protocol

Acronym	Full name or meaning
TCP/IP	Transmission Control Protocol/Internet Protocol
UAC	User Account Control
UTF	UCS Transformation Format
WAN	Wide Area Network

## G.4 Conventions: KB, MB, GB, and TB

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes.
- 1 MB (megabyte) is 1,024<sup>2</sup> bytes
- 1 GB (gigabyte) is 1,024<sup>3</sup> bytes.
- 1 TB (terabyte) is 1,024<sup>4</sup> bytes.

## H. Glossary

---

### B

#### base time

The time that marks when a day ends and the next day begins in a JP1/AJS3 system. For example, if 8:00 a.m. is set as the base time, the previous day is regarded as lasting until 7:59 a.m.

### C

#### configuration definition file

A file that defines the configuration information needed to operate JP1/AJS. For example, a configuration definition file can specify the directory in which to create job network elements, and whether to output messages to syslog.

#### custom job

A predefined job for executing a task with a specific purpose. JP1/AJS3 provides standard custom jobs such as file transfer and job requests to a mainframe. In addition, you can register your own frequently used jobs as custom jobs.

### D

#### document area

An area in the Job Operation Document Output window that displays job operation information for the unit selected in the unit tree. By default, the document area occupies the right side of the window.

### F

#### format definition file

A file (with the extension `.jof`) that defines the format of a document. You can create format definition files in the Format Definition window and store them in the folder specified in the Environment Settings window.

### J

#### job

A group of commands, shell scripts, or Windows executable files.

#### job group

A folder for classifying and managing jobnets.

#### job operation document management

A generic name for JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager.



### job operation document output

A feature of JP1/AJS3 - Print Option. This feature output the job operation information collected by JP1/AJS3 - Print Option Manager to a document.

### job operation information collection

A feature of JP1/AJS3 - Print Option Manager. You can collect job operation information from JP1/AJS3 - Manager.

### job operation information file

A file (extension: `.aoi`) containing job operation information collected from JP1/AJS. Job operation information files are produced by JP1/AJS3 - Print Option Manager. The information in these files is the basis for the documents output by JP1/AJS3 - Print Option.

### jobnet

A set of jobs associated in execution order. When a jobnet is executed, the jobs in the jobnet are automatically executed in their predetermined order.

### jobnet connector

A unit for controlling the execution order of root jobnets. A jobnet connector establishes connections between root jobnets and controls their execution order by having connected generations wait for their counterparts to start or finish.

### jobnet flow format definition file

A file (with the extension `.jof`) that defines the format of a jobnet flow image. Format definitions defined for jobnet flow output in the Jobnet Flow Format Definition window are saved to a jobnet flow format definition file.

### jobnet flow output

A feature that outputs jobnet definitions to Microsoft Excel or a PDF file as a jobnet flow image.

### jobnet release function

A feature that automatically replaces the definition of a jobnet with another definition under certain conditions.

Specify the jobnet definition you want to replace, and the time at which the switch is to take place. The jobnet definition is replaced at the specified time.

### JP1/AJS

A generic name for JP1/Automatic Job Management System 2 and 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/AJS2

An abbreviation of JP1/Automatic Job Management System 2.

## **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 - Print Option**

An abbreviation of JP1/Automatic Job Management System 3 - Print Option.

JP1/AJS3 - Print Option outputs documents containing information about job operation.

JP1/AJS3 - Print Option is sometimes used as a generic name for JP1/AJS3 - Print Option and JP1/AJS3 - Print Option Manager.

## **JP1/AJS3 - Print Option Manager**

An abbreviation of JP1/Automatic Job Management System 3 - Print Option Manager.

JP1/AJS3 - Print Option Manager collects job operation information.

## **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.

# **M**

## **manager job group**

A job group for monitoring JP1/AJS3 - Manager applications from another JP1/AJS3 - Manager.

## **manager jobnet**

A jobnet for monitoring JP1/AJS3 - Manager applications from another JP1/AJS3 - Manager.

## **map output**

A feature that outputs jobnet definitions to Microsoft Excel or a PDF file in map format.

# **N**

## **nested jobnet**

A jobnet defined within another jobnet.

## P

### planning group

A unit for switching execution among multiple root jobnets in a planned manner. Directly under a planning group, you can create a number of root jobnets, each defined differently and with differing execution schedules. This enables the root jobnets to be executed automatically in turn, according to the set schedules.

## R

### recovery job

A job to be executed when a job or jobnet ends abnormally.

### recovery jobnet

A jobnet to be executed when a job or jobnet ends abnormally.

### release ID

A release ID is used to distinguish between jobnet definitions used by the jobnet release function.

## U

### unit

A generic term for any job network element.

### unit attribute

Definition items for JP1/AJS job network elements. Unit attributes are equivalent to the format identifiers used with the JP1/AJS `ajsprint` and `ajsshow` commands.

### unit tree

An area that shows the hierarchy of units in the collected job operation information. By default, the unit tree appears at the left side of the Job Operation Document Output window.

# Index

## A

abbreviations for products 313  
acronyms 314  
automatic file name conversion rules 117

## B

backup  
    target files 37  
basic format 64

## C

collecting  
    job operation information 43  
column items  
    list 261  
commands  
    jprajsmkkey 179  
    jprcollect 159  
    jprmpflw 174  
    jprwebcollect 182  
common message log 242  
conventions  
    abbreviations for products 313  
    acronyms 314  
    KB, MB, GB, and TB 315  
    version numbers 8  
CSV format 116

## D

daily 64  
date specification 82  
displays comments 125  
document area 58

## E

execution log file 87

## F

firewall 27  
font 140  
footer 141  
Format Definition Settings window  
    Column Item tab 126

Others tab 135  
Unit tab 125

## G

GB meaning 315  
Glossary 316

## H

header 141  
Hitachi Program Product Installer  
    using 24

## J

job 44  
job group 44  
jobnet 44  
jobnet flow format definition 72  
jobnet flow output 72  
job operation information  
    collecting 43  
    transferring 53  
job operation information file 43  
JP1/AJS3 - Print Option 18  
    setting up 27  
    uninstalling 26  
JP1/AJS3 - Print Option Manager 18  
JP1/AJS3 View  
    setup 28  
jprajsmkkey 179  
jprcollect 159  
jprmpflw 174  
jprpomlstart 168  
jprpomlstop 169  
jprprint 170  
jprwebcollect 182

## K

KB meaning 315

## L

list 64  
log information  
    collecting 242

common message log [242](#)  
process logs [242](#)

## M

manager job group [44](#)  
manager jobnet [44](#)  
manager unit [44](#)  
MB meaning [315](#)  
monthly [64](#)  
monthly specification [83](#)

## N

nested job group [44](#)  
nested jobnet [44](#)  
Notes on using with JP1/AJS3 - Print Option with  
antivirus software [40](#)

## O

Outputs CLRFs to CSV file [147](#)

## P

page settings [66](#)  
planning group [44](#)  
port numbers [27](#)  
print style  
    full path [125](#)  
    name [125](#)  
    name and level number of subordinate units [125](#)  
processes [305](#)  
process logs [242](#)

## R

relative month specification [83](#)  
remote jobnet [44](#)  
root job group [44](#)  
root jobnet [44](#)

## S

service [29](#)  
Setting up JP1/AJS3 - Web Console [35](#)

## T

TB meaning [315](#)  
transferring  
    job operation information [53](#)

troubleshooting  
    information to collect [243](#)

## U

unit [44](#)  
unit tree [58](#)

## V

version number conventions [8](#)

## W

windows  
    Change Displayed Range window [142](#)  
    Collecting Job Operation Information window [81](#)  
    Environment Settings window [146](#)  
    Format Definition Settings window [124](#)  
    Jobnet Flow Format Definition Settings window [143](#)  
    Jobnet Flow Output window [103](#)  
    Jobnet Flow PDF Output window [111](#)  
    Jobnet Names (Release IDs) List window [98](#)  
    Job Operation Document Output window [92](#)  
    Map Output window [99](#)  
    Map PDF Output window [107](#)  
    Page Settings window [140](#)  
    Print Preview window [119](#)  
    Print window [120](#)  
    Save CSV File window [116](#)  
    Select Job Operation Information File window [97](#)



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