HITACHI
Inspire the Next

For Windows Systems

Job Management Partner 1/Software Distribution

Administrator's Guide Volume 2

3020-3-S82-80(E)

■ Relevant program products

P-2642-1197 Job Management Partner 1/Software Distribution Manager version 09-51 (for Windows Server 2003, Windows XP Professional, and Windows 2000)

P-2642-1397 Job Management Partner 1/Software Distribution Client version 09-51 (for Windows Server 2003, Windows XP, Windows 2000, Windows NT 4.0, Windows Me, and Windows 98)

P-2A42-1197 Job Management Partner 1/Software Distribution Manager version 09-51 (for Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista)

P-2C42-1397 Job Management Partner 1/Software Distribution Client version 09-51 (for Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista)

P-1B42-2J72 Job Management Partner 1/Software Distribution Network Node Manager Linkage version 07-00 (for HP-UX)

P-2642-1C77 Job Management Partner 1/Software Distribution Internet Gateway version 07-00 (for Windows Server 2003, Windows XP Professional, Windows 2000, and Windows NT Server 4.0)

P-2642-1D77 Job Management Partner 1/Software Distribution HTTP Gateway version 07-00 (for Windows Server 2003, Windows XP, Windows 2000, Windows NT 4.0, Windows Me, and Windows 98)

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June 2013: 3020-3-S82-80(E)

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Summary of amendments

The following table lists changes in the manuals 3020-3-S79-80(E), 3020-3-S80-80(E), 3020-3-S81-80(E), and 3020-3-S82-80(E) for JP1/Software Distribution 09-51 and product changes related to these manuals.

Changes	Location
Windows 8 and Windows Server 2012 are now supported.	Desc. and Planning Guide: *1.3.6*, *2.2.1*, *2.2.2*, *2.5.2*, *2.5.3*, *2.5.4*, *2.5.5*, *2.5.6*, *2.5.8*, *2.7.1*, *2.7.2*, *2.7.6*, *2.13.3*, *2.13.7*, *2.14.5*, *5.1.5*, *6.6.1*, *Appendix A.2*, *Appendix C.23*, *C.61*, *C.62*, *Appendix F* Setup Guide: *1.1.1*, *1.1.2*, *2.1.4*, *2.1.6*, *2.1.25*, *3.1.16*, *4.6*, *5.4*, *6.3*, *7.3.2*, *7.4.1*, *7.4.5*, *7.5.1*, *7.5.4*, *9.5.2*, *11.1.1*, *11.1.2* Admin. Guide 1: *2.2.3*, *2.2.5*, *2.2.9*, *2.2.10*, *3.2.2*, *6.2.6*, *6.2.10*, *6.5.3*, *6.6.4*, *11.1.2*, *11.7*, *Appendix F* Admin. Guide 2: *1.1.1*, *4.26.20*, *4.28*, *6.6.4*, *6.6.7*, *7.2.1*, *Appendix A*, *A.1*, *A.2*, *A.3*, *A.4*, *A.5*, *A.6*, *Appendix E*
Microsoft SQL Server 2012 can now be used as a relational database program.	Desc. and Planning Guide: *2.6.5*, *5.2.6*, *5.4.2* Setup Guide:*7.1.1*, *7.3.2*, *7.5.4*, *7.6*, *11.1.1*, *11.1.2*, *Appendix A.2*, *Appendix F* Admin. Guide 2: *6.3.2*
Software information can now be collected for additional Microsoft Office products. In addition, greater detail about Microsoft Office products is now provided.	Desc. and Planning Guide: *2.2.1*
Software information can now be collected for additional anti-virus products.	Desc. and Planning Guide: *2.2.2*

Legend:

Desc. and Planning Guide: *Job Management Partner 1/Software Distribution Description and Planning Guide* (3020-3-S79(E)), for Windows systems

Setup Guide: *Job Management Partner 1/Software Distribution Setup Guide* (3020-3-S80(E)), for Windows systems

Admin. Guide 1: *Job Management Partner 1/Software Distribution Administrator's Guide Volume 1* (3020-3-S81(E)), for Windows systems

Admin. Guide 2: *Job Management Partner 1/Software Distribution Administrator's Guide Volume 2* (3020-3-S82(E)), for Windows systems

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

Preface

This manual explains how to perform system operations with a JP1/Software Distribution system.

It explains how to link JP1/Software Distribution with other products, and how to take corrective action if a problem has occurred. This manual also describes differences in functionality between the Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition of JP1/Software Distribution Client, the 64-bit Edition of JP1/Software Distribution Client, and the Windows CE Edition of JP1/Software Distribution Client.

This manual is part of a related set of manuals for *JP1/Software Distribution for Windows*. The manuals in the set, including this manual, are listed below. Read the applicable manual according to your need.

Job Management Partner 1/Software Distribution Description and Planning Guide, for Windows systems

Read this manual first.

This manual provides an introductory overview of JP1/Software Distribution's concepts and facilities. It also provides examples of typical ways in which JP1/Software Distribution can be set up and used. The manual also includes instructions on how to install JP1/Software Distribution and notes important points you should consider before installing and using JP1/Software Distribution.

Job Management Partner 1/Software Distribution Setup Guide, for Windows systems

This manual describes the installation and setup procedures for JP1/Software Distribution, database creation, and management of your system configuration.

Job Management Partner 1/Software Distribution Administrator's Guide Volume 1, for Windows systems

This manual describes in detail the facilities and operation of the managing server, such as for distributing software, acquiring and managing inventory, and collecting files.

This manual also describes operations at a client.

Job Management Partner 1/Software Distribution Administrator's Guide Volume 2, for Windows systems

This manual describes how to link JP1/Software Distribution with other products, and how to take corrective action if a problem has occurred. This manual also describes differences in functionality between the Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition of JP1/Software Distribution Client.

Job Management Partner 1/Software Distribution Automatic Installation Tool Description and Reference, for Windows systems

This manual describes how to create AIT files and recorder files that are required for packaging non-Hitachi software.

Job Management Partner 1/Software Distribution Administrator Kit Description and Operator's Guide

This manual describes JP1/Software Distribution Administrator Kit, which is used for automatically installing JP1/Software Distribution Client.

Job Management Partner 1/Remote Control Description and Operator's Guide

This manual describes JP1/Remote Control and the remote control facility of JP1/Software Distribution.

Note

In this manual, *JP1* is an abbreviation for *Job Management Partner 1*.

■ Intended readers

This manual is intended for the following readers:

- Administrators who use JP1/Software Distribution to distribute software or to collect and manage asset information
- Users who have a basic understanding of Microsoft Windows operations
- Users who have a basic understanding of networks

■ Related publications

This manual is part of a related set of manuals. The manuals in the set are listed below (with the manual numbers):

- *Job Management Partner 1/Software Distribution Description and Planning Guide* (3020-3-S79(E)), for Windows systems[#]
- *Job Management Partner 1/Software Distribution Setup Guide* (3020-3-S80(E)), for Windows systems[#]

- *Job Management Partner 1/Software Distribution Administrator's Guide Volume 1* (3020-3-S81(E)), for Windows systems#
- *Job Management Partner 1/Software Distribution Automatic Installation Tool Description and Reference* (3020-3-S83(E)), for Windows systems#
- *Job Management Partner 1/Software Distribution Administrator Kit Description and Operator's Guide* (3020-3-S84(E))
- *Job Management Partner 1/Remote Control Description and Operator's Guide* (3020-3-S87(E))
- *Job Management Partner 1/Software Distribution Manager Description and Administrator's Guide* (3000-3-841(E))
- *Job Management Partner 1/Software Distribution Client Description and User's Guide* (3020-3-S85(E)), for UNIX systems
- *Job Management Partner 1/Software Distribution Workstation Description and Operator's Guide* (3000-3-817(E))
- *Job Management Partner 1/Asset Information Manager Description* (3020-3-S76(E))
- *Job Management Partner 1/Asset Information Manager Planning and Setup Guide* (3020-3-S77(E))
- *Job Management Partner 1/Asset Information Manager Administrator's Guide* (3020-3-S78(E))
- *Job Management Partner 1/Client Security Control Description, User's Guide and Operator's Guide* (3020-3-S71(E))
- *Job Management Partner 1/Automatic Job Management System 2 Description* (3020-3-K21(E))
- *Job Management Partner 1/Automatic Job Management System 2 Planning and Administration Guide* (3020-3-K22(E))
- *Job Management Partner 1/Automatic Job Management System 2 Operator's Guide* (3020-3-K24(E))
- *Job Management Partner 1/Automatic Job Management System 2 Command Reference* (3020-3-K25(E))
- *Job Management Partner 1/Automatic Job Management System 2 Linkage Guide* (3020-3-K27(E))
- *Job Management Partner 1/Automatic Job Management System 2 Messages* (3020-3-K28(E))
- *Job Management Partner 1/Automatic Job Management System 3 Introduction* (3020-3-S01(E))
- *Job Management Partner 1/Automatic Job Management System 3 Overview* (3020-3-S02(E))
- *Job Management Partner 1/Automatic Job Management System 3 System Design (Configuration) Guide* (3020-3-S03(E))
- *Job Management Partner 1/Automatic Job Management System 3 System Design (Work Tasks) Guide* (3020-3-S04(E))
- *Job Management Partner 1/Automatic Job Management System 3 Administration Guide* (3020-3-S07(E))
- *Job Management Partner 1/Automatic Job Management System 3 Troubleshooting* (3020-3-S08(E))
- *Job Management Partner 1/Automatic Job Management System 3 Operator's Guide* (3020-3-S09(E))
- *Job Management Partner 1/Automatic Job Management System 3 Command Reference 1* (3020-3-S10(E))
- *Job Management Partner 1/Automatic Job Management System 3 Command Reference 2* (3020-3-S11(E))
- *Job Management Partner 1/Automatic Job Management System 3 Linkage Guide* (3020-3-S12(E))
- *Job Management Partner 1/Automatic Job Management System 3 Messages 1* (3020-3-S13(E))
- *Job Management Partner 1/Automatic Job Management System 3 Messages 2* (3020-3-S14(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Overview* (3021-3-318(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 System Design (Configuration) Guide* (3021-3-319(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 System Design (Work Tasks) Guide* (3021-3-320(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Configuration Guide 1* (3021-3-321(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Configuration Guide 2* (3021-3-322(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Administration Guide* (3021-3-323(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Troubleshooting* (3021-3-324(E))

- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Operator's Guide* (3021-3-325(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Command Reference 1* (3021-3-326(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Command Reference 2* (3021-3-327(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Linkage Guide* (3021-3-328(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Messages 1* (3021-3-329(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Automatic Job Management System 3 Messages 2* (3021-3-330(E))
- *Job Management Partner 1/Integrated Management - Manager Configuration Guide* (3020-3-R77(E))
- *Job Management Partner 1/Integrated Management - Manager Administration Guide* (3020-3-R78(E))
- *Job Management Partner Version 10 Job Management Partner 1/Integrated Management - Manager Configuration Guide* (3021-3-306(E))
- *Job Management Partner Version 10 Job Management Partner 1/Integrated Management - Manager Administration Guide* (3021-3-307(E))
- *Job Management Partner 1/Base User's Guide* (3020-3-R71(E))
- *Job Management Partner 1/Base Messages* (3020-3-R72(E))
- *Job Management Partner 1/Base Function Reference* (3020-3-R73(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Base User's Guide 1* (3021-3-301(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Base Messages* (3021-3-302(E))
- *Job Management Partner 1 Version 10 Job Management Partner 1/Base Function Reference* (3021-3-303(E))
- *HiRDB Version 8 Messages* (3020-6-358(E))

#: In this manual, common parts of manual names, such as *Job Management Partner 1/Software Distribution*, may be omitted.

■ How to use the manual

- Unless noted otherwise, this manual assumes that the version of the JP1/Software Distribution product that is used at the connection destination is JP1/Software Distribution Manager 09-51 for Windows or JP1/Software Distribution Manager 06-72 for UNIX, and that the version of JP1/Software Distribution Client for UNIX that is used is 09-00. If the system at the connection destination is using an earlier version of JP1/Software Distribution, only the facilities supported by that version are available.
- For details about the differences in terminology and facilities for JP1/Software Distribution for UNIX, see *D.2 Differences with JP1/Software Distribution for UNIX* in the manual *Description and Planning Guide*.
- For details about the functional differences with Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition JP1/Software Distribution Client, see *A. Functions Provided in the Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition of JP1/Software Distribution Client*.

■ About online help

JP1/Software Distribution provides online help.

JP1/Software Distribution online help (for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system))

The JP1/Software Distribution online help combines the following manuals:

- *Job Management Partner 1/Software Distribution Description and Planning Guide*, for Windows systems
- *Job Management Partner 1/Software Distribution Setup Guide*, for Windows systems
- *Job Management Partner 1/Software Distribution Administrator's Guide Volume 1*, for Windows systems
- *Job Management Partner 1/Software Distribution Administrator's Guide Volume 2*, for Windows systems

- *Job Management Partner 1/Software Distribution Automatic Installation Tool Description and Reference*, for Windows systems

JP1/Software Distribution Client online help (for JP1/Software Distribution Client (client))

The JP1/Software Distribution Client Help contains information about clients that is extracted from the above manuals.

This online help enables the user to search the entire set of help documents for a desired item.

To access online help, use the **Help** menu in any window of JP1/Software Distribution or the **Help** button in any dialog box. To use the online help, you must have Microsoft Internet Explorer 5.01 or later installed.

■ Conventions: Abbreviations for product names

This manual uses the following abbreviations for names of products associated with JP1/Software Distribution:

Abbreviation	Full name or meaning
HTTP Gateway	Job Management Partner 1/Software Distribution HTTP Gateway
Internet Gateway	Job Management Partner 1/Software Distribution Internet Gateway
JP1/Client Security Control or JP1/CSC	Job Management Partner 1/Client Security Control - Manager
	Job Management Partner 1/Client Security Control - Agent
JP1/Remote Control	Job Management Partner 1/Remote Control Manager
	Job Management Partner 1/Remote Control Agent
JP1/Software Distribution	Job Management Partner 1/Software Distribution Manager
	Job Management Partner 1/Software Distribution Client
Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition of JP1/Software Distribution Client	The edition of JP1/Software Distribution Client that runs on Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista
Windows CE Edition of JP1/Software Distribution Client	The edition of JP1/Software Distribution Client that runs on Windows CE .NET 4.1

This manual uses the following abbreviations for the names of other products:

Abbreviation		Full name or meaning
AMT		Intel Active Management Technology
HP NNM		HP Network Node Manager Software version 6 or earlier
		HP Network Node Manager Starter Edition Software version 7.5 or earlier
HIBUN FDE		HIBUN AE - English version FDE
InstallShield		InstallShield(R)
Itanium 2		Intel Itanium(R) 2 processor
JP1/AJS		Job Management Partner 1/Automatic Job Management System 2
		JP1/Automatic Job Management System 3
JP1/Asset Information Manager		Job Management Partner 1/Asset Information Manager
JP1/Base		Job Management Partner 1/Base
JP1/IM	JP1/IM	Job Management Partner 1/Integrated Management - Manager
	JP1/IM - View	Job Management Partner 1/Integrated Management - View

Abbreviation				Full name or meaning
JP1/PFM/SSO[#1]	JP1/PFM/SSO[#1]			Job Management Partner 1/Performance Management/SNMP System Observer
	JP1/SSO			Job Management Partner 1/Server System Observer
Linux				Linux(R)
MBSA				Microsoft(R) Baseline Security Analyzer
Microsoft Internet Explorer				Microsoft(R) Internet Explorer(R)
				Windows(R) Internet Explorer(R)
Microsoft Internet Information Services				Microsoft(R) Internet Information Server 4.0
				Microsoft(R) Internet Information Services 5.0
				Microsoft(R) Internet Information Services 5.1
				Microsoft(R) Internet Information Services 6.0
				Microsoft(R) Internet Information Services 7.0
Microsoft SQL Server				Microsoft(R) SQL Server(R) 2000
				Microsoft(R) SQL Server(R) 2005
				Microsoft(R) SQL Server(R) 2008
				Microsoft(R) SQL Server(R) 2012
				Microsoft(R) SQL Server(R) 7.0
MS-DOS				Microsoft(R) MS-DOS(R)
Oracle				Oracle8i
				Oracle9i
Pentium				Intel Pentium(R)
Visual Test				Visual Test 4.0
				Visual Test 6.0
				Visual Test 6.5
Windows	Windows 98			Microsoft(R) Windows(R) 98 Operating System
	Windows Me			Microsoft(R) Windows(R) Millennium Edition Operating System
	Windows NT	Windows 2000	Windows 2000 Advanced Server	Microsoft(R) Windows(R) 2000 Advanced Server Operating System
			Windows 2000 Datacenter Server	Microsoft(R) Windows(R) 2000 Datacenter Server Operating System
			Windows 2000 Professional	Microsoft(R) Windows(R) 2000 Professional Operating System
			Windows 2000 Server	Microsoft(R) Windows(R) 2000 Server Operating System
		Windows 7		Microsoft(R) Windows(R) 7 Enterprise
				Microsoft(R) Windows(R) 7 Professional
				Microsoft(R) Windows(R) 7 Ultimate

Abbreviation				Full name or meaning
Windows	Windows NT	Windows 8		Microsoft(R) Windows(R) 8
				Microsoft(R) Windows(R) 8 Enterprise
				Microsoft(R) Windows(R) 8 Pro
		Windows NT 4.0	Windows NT Server 4.0	Microsoft(R) Windows NT(R) Server Network Operating System Version 4.0
			Windows NT Workstation 4.0	Microsoft(R) Windows NT(R) Workstation Operating System Version 4.0
		Windows Server 2003[#2]	Windows Server 2003[#2]	Microsoft(R) Windows Server(R) 2003, R2 Datacenter Edition
				Microsoft(R) Windows Server(R) 2003, R2 Enterprise Edition
				Microsoft(R) Windows Server(R) 2003, R2 Standard Edition
				Microsoft(R) Windows Server(R) 2003, Datacenter Edition
				Microsoft(R) Windows Server(R) 2003, Enterprise Edition
				Microsoft(R) Windows Server(R) 2003, Standard Edition
			Windows Server 2003 (x64)	Microsoft(R) Windows Server(R) 2003 R2, Datacenter x64 Edition
				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) 2003, Datacenter x64 Edition
				Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
				Microsoft(R) Windows Server(R) 2003, Standard x64 Edition
		Windows Server 2008[#3]	Windows Server 2008[#3]	Microsoft(R) Windows Server(R) 2008 Datacenter
				Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(R)
				Microsoft(R) Windows Server(R) 2008 Enterprise
				Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(R)
				Microsoft(R) Windows Server(R) 2008 Standard
				Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(R)
			Windows Server 2008 R2	Microsoft(R) Windows Server(R) 2008 R2 Datacenter
				Microsoft(R) Windows Server(R) 2008 R2 Enterprise
				Microsoft(R) Windows Server(R) 2008 R2 Standard
		Windows Server 2012		Microsoft(R) Windows Server(R) 2012 Datacenter
				Microsoft(R) Windows Server(R) 2012 Standard
		Windows Vista		Microsoft(R) Windows Vista(R) Business
				Microsoft(R) Windows Vista(R) Enterprise
				Microsoft(R) Windows Vista(R) Ultimate

Abbreviation				Full name or meaning
Windows	Windows NT	Windows XP	Windows XP Home Edition	Microsoft(R) Windows(R) XP Home Edition Operating System
			Windows XP Professional	Microsoft(R) Windows(R) XP Professional Operating System
Windows 95				Microsoft(R) Windows(R) 95 Operating System
WSUS	WSUS 2.0			Microsoft(R) Windows Server(R) Update Services 2.0
	WSUS 3.0			Microsoft(R) Windows Server(R) Update Services 3.0
WUA				Windows(R) Update Agent 2.0
				Windows(R) Update Agent 3.0

#1

In descriptions that are explicitly about JP1/SSO, any references to JP1/PFM/SSO do not apply to JP1/SSO.

#2

In descriptions that are explicitly about Windows Server 2003 (IPF) or Windows Server 2003 (x64), any references to Windows Server 2003 do not apply to Windows Server 2003 (IPF) or Windows Server 2003 (x64).

#3

In descriptions that are explicitly about Windows Server 2008 R2, any references to Windows Server 2008 do not apply to Windows Server 2008 R2.

■ Conventions: Acronyms

This manual also uses the following acronyms:

Acronym	Full name or meaning
AIF	Application Information File
AMD	Advanced Micro Devices
API	Application Programming Interface
ASCII	American Standard Code for Information Interchange
BIOS	Basic Input/Output System
BOM	Byte Order Mark
CD-ROM	Compact Disc Read Only Memory
CF	CompactFlash
CGI	Common Gateway Interface
CPU	Central Processing Unit
CSV	Comma Separated Values
DB	Database
DBMS	Database Management System
DHCP	Dynamic Host Configuration Protocol
DLL	Dynamic Linking Library
DNS	Domain Name System
DVD	Digital Versatile Disk
FD	Floppy Disk

Acronym	Full name or meaning
GDI	Graphic Device Interface
GUI	Graphical User Interface
HD	Hard Disk
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
I/O	Input/Output
ID	Identifier
IDE	Integrated Drive Electronics
IE	Internet Explorer
IEEE 1394	Institute of Electrical and Electronic Engineers 1394
IP	Internet Protocol
IPF	Itanium(R) Processor Family
LAN	Local Area Network
MIME	Multipurpose Internet Mail Extension
MS-DOS	Microsoft Disk Operating System
NIC	Network Interface Card
ODBC	Open Database Connectivity
OS	Operating System
PC	Personal Computer
PDA	Personal Digital Assistant
PKI	Public Key Infrastructure
PP	Program Product
RDB	Relational Database
RDBMS	Relational Database Management System
RISC	Reduced Instruction Set Computer
SD	Secure Digital
SMBIOS	System Management Basic Input/Output System
SOL	Serial Over LAN
SSID	Service Set ID
TCP	Transmission Control Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol
UDP	User Datagram Protocol
UNC	Universal Naming Convention
URL	Uniform Resource Locator
USB	Universal Serial Bus
UTC	Coordinated Universal Time

Acronym	Full name or meaning
UUID	Universally Unique Identifier
VRAM	Video Random Access Memory
WAN	Wide Area Network
WINS	Windows Internet Name Service
WMI	Windows Management Instrumentation
WS	Workstation

■ Conventions: Diagrams

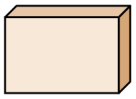
This manual uses the following conventions in diagrams:

• PC or workstation

• Notebook computer

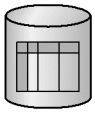
• Server

• Program

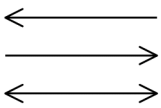


• File

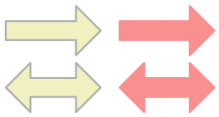
• Relational database



• Flow of control

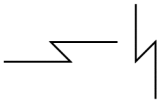


• Flow of data

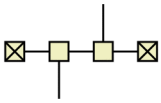


• Input/output operation

• Communication line



• Network (LAN)

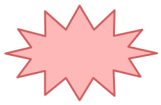


• Network (WAN)

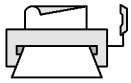
• Modem

• CD-ROM

• Problem



• Facsimile machine



■ Conventions: Fonts and symbols

The following table explains the fonts used in this manual:

Font	Convention
Bold	**Bold** type indicates text on a window, other than the window title. Such text includes menus, menu options, buttons, radio box options, or explanatory labels. For example: • From the **File** menu, choose **Open**. • Click the **Cancel** button. • In the **Enter name** entry box, type your name.

Font	Convention
Italics	*Italics* are used to indicate a placeholder for some actual text to be provided by the user or system. For example: • Write the command as follows: `copy` *source-file target-file* • The following message appears: `A file was not found. (file =` *file-name*`)` *Italics* are also used for emphasis. For example: • Do *not* delete the configuration file.
`Code font`	A `code font` indicates text that the user enters without change, or text (such as messages) output by the system. For example: • At the prompt, enter `dir`. • Use the `send` command to send mail. • The following message is displayed: `The password is incorrect.`

The following table explains the symbols used in this manual:

Symbol	Convention
`|`	In syntax explanations, a vertical bar separates multiple items, and has the meaning of OR. For example: `A|B|C` means A, or B, or C.
`{ }`	In syntax explanations, curly brackets indicate that only one of the enclosed items is to be selected. For example: `{A|B|C}` means only one of A, or B, or C.
`[ ]`	In syntax explanations, square brackets indicate that the enclosed item or items are optional. For example: `[A]` means that you can specify `A` or nothing. `[B|C]` means that you can specify `B`, or `C`, or nothing.
`...`	In coding, an ellipsis (`...`) indicates that one or more lines of coding are not shown for purposes of brevity. In syntax explanations, an ellipsis indicates that the immediately preceding item can be repeated as many times as necessary. For example: `A, B, B, ...` means that, after you specify `A, B,` you can specify B as many times as necessary.

■ Conventions: KB, MB, GB, and TB

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes.
- 1 MB (megabyte) is $1{,}024^2$ bytes.
- 1 GB (gigabyte) is $1{,}024^3$ bytes.
- 1 TB (terabyte) is $1{,}024^4$ bytes.

■ Conventions: References to other manuals

Within the group of manuals *Description and Planning Guide*, *Setup Guide*, *Administrator's Guide Volume 1*, and *Automatic Installation Tool Description and Reference*, a reference in one manual to another manual is indicated in the following format:

For details about *AAA*, see *n.n.n BBB* in the manual *CCC*.

AAA

The topic to be referenced.

n.n.n

The chapter or section number to be referenced. This number may be followed by a number or letter in parentheses.

BBB

The title of the chapter or section to be referenced.

CCC

The abbreviated name of the manual to be referenced. Common parts of manual names, such as *Job Management Partner 1/Software Distribution* and *for Windows systems*, are omitted.

■ 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

1 Managing JP1/Software Distribution Users by Linking with JP1/Base

Linking to JP1/Base allows you to use the user management facilities provided by JP1/Base to manage JP1 users of JP1/Software Distribution.

This chapter explains how to link with JP1/Base to manage JP1 users of JP1/Software Distribution. It also describes the operation permissions that can be set for JP1 users.

1.1 System configuration for linking with JP1/Base

This section explains the programs and system configuration required in order to manage JP1/Software Distribution users by linking with JP1/Base.

1.1.1 Required programs

To link with JP1/Base, you must use one of the following versions of JP1/Software Distribution and JP1/Base:

- JP1/Software Distribution Manager 08-10 or later
- JP1/Base 08-00 or later#

#: If you use the Windows Server 2012 or Windows Server 2008 Edition of JP1/Software Distribution Manager, use JP1/Base 09-00 or later.

1.1.2 System configuration

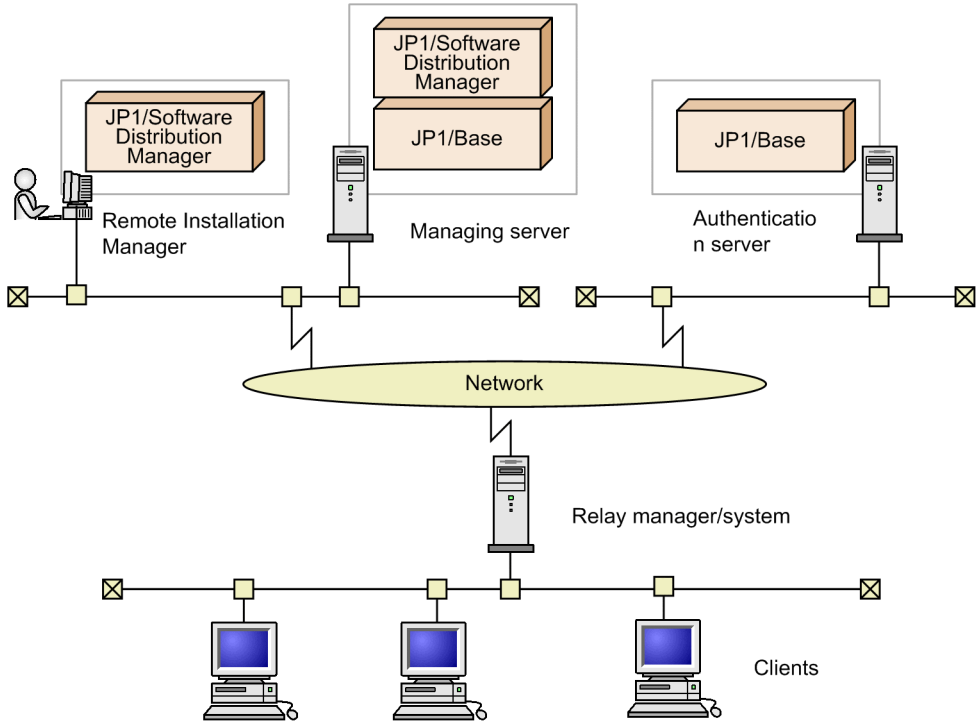
This subsection explains the system configuration needed for linking to JP1/Base.

(1) System configuration requirements

Linking with JP1/Base requires that the system include a JP1/Base server (authentication server) for user authentication. In addition, JP1/Base must have been installed on the same computer on which the server core facility of JP1/Software Distribution Manager is installed.

The following figure shows the system configuration used for linking with JP1/Base.

Figure 1–1: System configuration for linking with JP1/Base



! Important note

If you attempt to use the user management facility when JP1/Base is not installed on the computer on which the server core facility of JP1/Software Distribution Manager is installed, you may not be able to start JP1/Software Distribution because user authentication will not be executed.

For details about how to install JP1/Base and configure the authentication server, see the manual *Job Management Partner 1/Base User's Guide*.

(2) Notes about different JP1/Software Distribution versions and OSs in the same system

- The following operations cannot be applied to an installation of JP1/Software Distribution Manager linked to JP1/Base from JP1/Software Distribution version 08-00 or earlier:
  - Packaging by means of Packager or the `dcmpack` command
  - Deleting packages by means of the *Delete Packages from Relay System* function of Remote Installation Manager
- If you perform packing by using a UNIX edition of JP1/Software Distribution Packager on JP1/Software Distribution Manager linked with JP1/Base, specify in **Password** the password for the JP1/Software Distribution database.

  The UNIX edition of JP1/Software Distribution Packager cannot perform packaging using the password of a JP1 user registered in JP1/Base.

1.2 Setting permissions and available functions for JP1 users

This section explains the permissions that can be set for JP1 users of JP1/Software Distribution, and the functions that can be used with each permission.

1.2.1 Permissions

There are six permission levels that can be set for JP1 users, as listed and described in the following table. The table also shows each permission name (*JP1 permission level*) that is set in JP1/Base.

Table 1–1: Permissions that can be set for JP1 users

No.	Type	JP1 permission level	Description
1	System administrator	JP1_DM_Admin	Permission to use all JP1/Software Distribution functions. This permission is set for an administrator who administers the entire system.
2	Distribution management user	JP1_DM_Deploy	Permission to perform software distribution and packaging. This permission is set for an administrator who performs distribution management tasks.
3	Asset management user	JP1_DM_Inventory	Permission to collect, count, and print inventory information items. This permission is set for an administrator who performs asset management tasks.
4	Collection management user	JP1_DM_Collect	Permission to remotely collect files from clients. This permission is set for an administrator who performs collection management tasks.
5	System-monitoring user	JP1_DM_Observe	Permission to monitor the operating status of clients. This permission is set for an administrator who monitors for inappropriate operations at clients.
6	User who browses information	JP1_DM_Guest	Permission to only browse data. These users cannot execute jobs or collect inventory information.

When you set a user in JP1/Base, you set a JP1 user type. For details about how to set users in JP1/Base, see *1.3.2 Setting up users on the authentication server*.

1.2.2 Features that require user authentication

Authentication of JP1 users is required to use the following user management facilities of JP1/Base:

- Remote Installation Manager
- Packager
- Inventory Viewer
- Unarchiver
- CSV output utility
- Commands

The following table shows the functions available with each permission.

Table 1–2: Available functions

Function	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
Remote Installation Manager	Yes	Yes	Yes	Yes	Yes	Yes
Packager	Yes	Yes	No	No	No	No
Inventory Viewer	Yes	Yes	Yes	No	No	No
Unarchiver	Yes	No	No	Yes	No	No
CSV output utility	Yes	Yes	Yes	Yes	Yes	Yes
Commands	Yes	No	No	No	No	No

Legend:
Sys admin: System administrator
Dist mgmt user: Distribution management user
Asset mgmt user: Asset management user
Clct mgmt user: Collection management user
Sys mon user: System-monitoring user
View user: User who browses information
Yes: Can be executed
No: Cannot be executed

1.2.3 Available operations

The following table lists the operations available to each permission.

Table 1–3: Available operations

Operation	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
Create/delete system configuration information	Yes	No	No	No	No	No
Browse system configuration information	Yes	Yes	Yes	Yes	Yes	Yes
Create and delete destinations	Yes	Yes	Yes	Yes	Yes	No
Browse destinations	Yes	Yes	Yes	Yes	Yes	Yes
Create/delete IDs	Yes	Yes	Yes	Yes	Yes	No
Browse IDs	Yes	Yes	Yes	Yes	Yes	Yes
Auto-maintenance of host groups and IDs	Yes	Yes	Yes	Yes	Yes	No
Detect hosts on which JP1/Software Distribution is not installed	Yes	No	No	No	No	No
Distribute software	Yes	Yes	No	No	No	No
Create cabinet	Yes	Yes	No	No	No	No
Acquire system information	Yes	Yes	Yes	No	No	No
Acquire software information	Yes	Yes	Yes	No	No	No
Acquire user inventory information	Yes	Yes	Yes	No	No	No

Operation	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
Create user inventory item	Yes	No	Yes	No	No	No
Create registry collection item	Yes	Yes	Yes	No	No	No
Edit software inventory dictionary	Yes	Yes	Yes	No	No	No
Edit software search list	Yes	Yes	Yes	No	No	No
Collect files	Yes	No	No	Yes	No	No
Monitor software operation and acquire operation information	Yes	No	No	No	Yes	No
Send messages	Yes	No	No	No	Yes	No
Monitor processes	Yes	No	No	No	Yes	No
Browse operation information	Yes	No	No	No	Yes	No
Collect inventory and operation information from an offline machine	Yes	Yes	Yes	No	No	No
Use WSUS Linkage	Yes	Yes	No	No	No	No
Manage Bundled Edition JP1/Software Distribution Client	Yes	Yes	Yes	Yes	Yes	Yes
Use remote control functionality	Yes	Yes	Yes	Yes	Yes	Yes
Manage updates#	Yes	Yes	No	No	No	No

Legend:

Sys admin: System administrator

Dist mgmt user: Distribution management user

Asset mgmt user: Asset management user

Clct mgmt user: Collection management user

Sys mon user: System-monitoring user

View user: User who browses information

Yes: Can be executed

No: Cannot be executed

#

Execution of tasks by Windows Task Scheduler is not managed by the user management facilities.

1.2.4 Functions available to Remote Installation Manager

All users can use Remote Installation Manager. However, the available functions depend on the type of permission granted to each user. This section explains the functions available to Remote Installation Manager.

(1) Windows

The windows that can be displayed depend on the permission level. The following table lists the windows available to each user.

Table 1–4: Available windows

Window	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
System Configuration window	Yes	Yes	Yes	Yes	Yes	Yes
Destination window	Yes	Yes	Yes	Yes	Yes	Yes
Package window	Yes	Yes	No	No	No	No
Job Definition window	Yes	Yes	Yes	Yes	Yes	No
Job Status window	Yes	Yes	Yes	Yes	Yes	Yes
List of Software Information window	Yes	Yes	Yes	No	No	No
Directory Information window	Yes	Yes	Yes	Yes	Yes	Yes

Legend:

Sys admin: System administrator
Dist mgmt user: Distribution management user
Asset mgmt user: Asset management user
Clct mgmt user: Collection management user
Sys mon user: System-monitoring user
View user: User who browses information
Yes: Can be executed
No: Cannot be executed

(2) Menus

The available menus depend on the permission level granted to each user. Depending on the available operations and functions, unavailable menus become deactivated. This also applies to menus that are displayed by right-clicking.

1.2.5 Functions available to CSV output utility

All users can use the CSV output utility. However, the templates used for counting depend on the permission level granted to each user.

Table 1–5: Available templates

Template name	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
Host attributes	Yes	Yes	Yes	Yes	Yes	Yes
Package attributes	Yes	Yes	No	No	No	No
Package contents	Yes	Yes	No	No	No	No
System information	Yes	Yes	Yes	Yes	Yes	Yes
User inventory information	Yes	Yes	Yes	No	No	No
Installed package information	Yes	Yes	Yes	No	No	No
Job status	Yes	Yes	Yes	Yes	Yes	Yes
Registry information	Yes	Yes	Yes	No	No	No

Template name	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
User information	Yes	Yes	Yes	No	No	No
Software inventory	Yes	Yes	Yes	No	No	No
License information	Yes	Yes	Yes	No	No	No
Microsoft Office products	Yes	Yes	Yes	No	No	No
Anti-Virus products	Yes	Yes	Yes	No	No	No
Startup suppression log	Yes	No	No	No	Yes	No

Legend:
Sys admin: System administrator
Dist mgmt user: Distribution management user
Asset mgmt user: Asset management user
Clct mgmt user: Collection management user
Sys mon user: System-monitoring user
View user: User who browses information
Yes: Can be executed
No: Cannot be executed

Items that cannot be used are not displayed when the template is selected in the CSV output utility.

1.2.6 Jobs that can be executed

The jobs that can be executed depend on the permission level granted to each user. Users whose permission level is *User who browses information* cannot execute jobs. The following table lists jobs that can be executed for each permission type.

Table 1–6: Available jobs

Job type	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
Install package	Yes	Yes	No	No	No	No
Transfer package to relay system	Yes	Yes	No	No	No	No
Batch delete packages on relay system	Yes	Yes	No	No	No	No
Collect files from client	Yes	No	No	Yes	No	No
Collect files from client to relay system	Yes	No	No	Yes	No	No
Acquire collected files from relay system	Yes	No	No	Yes	No	No
Delete collected files from relay system	Yes	No	No	Yes	No	No
Send package, allow client to choose	Yes	Yes	No	No	No	No
Get system information from client	Yes	Yes	Yes	No	No	No
Get software information from client	Yes	Yes	Yes	No	No	No
Get user inventory information	Yes	Yes	Yes	No	No	No
Transfer registry collection definition	Yes	Yes	Yes	No	No	No

Job type	Permission					
	Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
Transfer user inventory schema to client	Yes	Yes	Yes	No	No	No
Get system configuration information	Yes	No	No	No	No	No
Hold report	Yes	No	No	No	No	No
Hold-report release	Yes	No	No	No	No	No
Suspend file transfer	Yes	Yes	No	No	No	No
Resume file transfer	Yes	Yes	No	No	No	No
Report message	Yes	No	No	No	Yes	No
Set the software monitoring policy	Yes	No	No	No	Yes	No
Get software monitoring information from the client	Yes	No	No	No	Yes	No

Legend:
Sys admin: System administrator
Dist mgmt user: Distribution management user
Asset mgmt user: Asset management user
Clct mgmt user: Collection management user
Sys mon user: System-monitoring user
View user: User who browses information
Yes: Can be executed
No: Cannot be executed

Jobs that cannot be executed are not displayed in the Define New Job dialog box.

1.2.7 Commands available to be executed

Only users with the system administrator permission can execute commands.

To use commands, you must set an environment variable for user authentication on the computer used to execute the commands. For details about how to set the environment variable, see *1.3.3 Setting for executing commands*.

The following table lists the commands that can be executed for each permission type.

Table 1–7: Available commands

Command name	Function	Permission					
		Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
`dcminst.exe`	Create and execute a job	Yes	No	No	No	No	No
`dcmcoll.exe`	Collect files	Yes	No	No	No	No	No
`dcmsusp.exe`	Suspend and resume a file transfer	Yes	No	No	No	No	No
`dcmjexe.exe`	Execute a job	Yes	No	No	No	No	No
`dcmrtry.exe`	Retry a job	Yes	No	No	No	No	No
`dcmjbrm.exe`	Delete a job	Yes	No	No	No	No	No
`dcmrmgen.exe`	Delete a job definition	Yes	No	No	No	No	No

Command name	Function	Permission					
		Sys admin	Dist mgmt user	Asset mgmt user	Clct mgmt user	Sys mon user	View user
dcmstat.exe	Get the job status	Yes	No	No	No	No	No
dcmstsw.exe	Monitor the job status	Yes	No	No	No	No	No
dcmcsvu.exe	Export to a CSV-formatted file	Yes	No	No	No	No	No
dcmuidi.exe	Batch input of user inventories	Yes	No	No	No	No	No
dcmdice.exe	Export a software inventory dictionary	Yes	No	No	No	No	No
dcmdici.exe	Import a software inventory dictionary	Yes	No	No	No	No	No
dcmpack.exe	Execute a package	Yes	No	No	No	No	No
dcmpkrm.exe	Delete a package	Yes	No	No	No	No	No
dcmpkget.exe	Acquire a backup of a package	Yes	No	No	No	No	No
dcmpkput.exe	Restore a package from its backup	Yes	No	No	No	No	No
dcmgpmnt.exe	Apply policies to all hosts	Yes	No	No	No	No	No
dcmhstwo.exe	Detect a host on which JP1/Software Distribution is not installed	Yes	No	No	No	No	No
dcmmonrst.exe	Store operating information in a database	Yes	No	No	No	No	No
dcmwsus.exe	Execute WSUS synchronization	Yes	No	No	No	No	No
dcmadsync.exe	Acquire directory information	Yes	No	No	No	No	No
dcmstdiv.exe	Load offline machine information	Yes	No	No	No	No	No

Legend:

Sys admin: System administrator
Dist mgmt user: Distribution management user
Asset mgmt user: Asset management user
Clct mgmt user: Collection management user
Sys mon user: System-monitoring user
View user: User who browses information
Yes: Can be executed
No: Cannot be executed

1.3 Setting up JP1 users

This section explains various procedures, including how to set up JP1 users who use JP1/Software Distribution and how to start operations.

1.3.1 Procedure for starting operation of JP1/Software Distribution

When the user management facilities are used, the procedure for starting operation of JP1/Software Distribution is as follows:

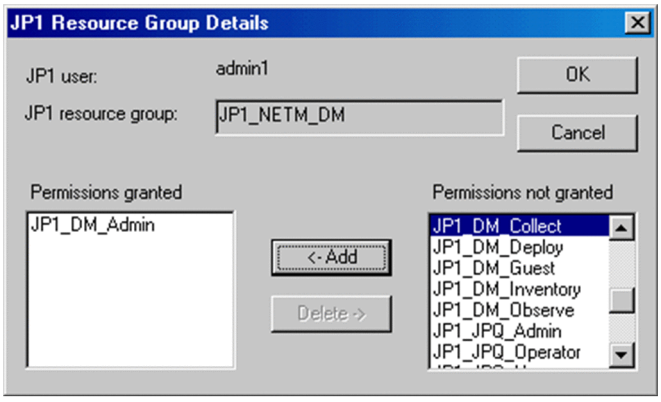
1. Install JP1/Software Distribution Manager (configure a distribution management system).
   Install JP1/Base on the same computer on which JP1/Software Distribution Manager is installed.
2. Install JP1/Base (configure an authentication server).
   For details about how to install JP1/Base and configure an authentication server, see the manual *Job Management Partner 1/Base User's Guide*.
   You can install either the distribution management server first or the authentication server first; the installation order does not matter.
3. Set up JP1/Base.
   Set up JP1/Base on the computer on which JP1/Software Distribution Manager is installed. Specify the authentication server to which you want to connect.
4. On the authentication server, set up the JP1/Software Distribution users.
   On the authentication server, set up JP1 users who will use JP1/Software Distribution. For details about how to set up JP1 users, see *1.3.2 Setting up users on the authentication server*.
5. Set up JP1/Software Distribution.
   Set up JP1/Software Distribution.
6. Start operation of JP1/Software Distribution.
   Operate JP1/Software Distribution in accordance with the permission level granted to the particular user.

1.3.2 Setting up users on the authentication server

On the authentication server, set up JP1 users who will use JP1/Software Distribution. For details about how to set up JP1 users, see the manual *Job Management Partner 1/Base User's Guide*.

When registration of the JP1 users in the authentication server is finished, set permissions for JP1 users to use JP1/Software Distribution.

Figure 1–2: JP1 Resource Group Details dialog box



Specify `JP1_NETM_DM` for the JP1 resource group.

Next, set a JP1 permission level for the JP1 resource group. Use the following table to specify a JP1 permission level. The table shows the correspondence between the JP1 permission level and the type of permission.

Table 1–8: Correspondence between JP1 permission level and type of permission

No.	JP1 permission level	Type of permission
1	JP1_DM_Admin	System administrator
2	JP1_DM_Deploy	Distribution management user
3	JP1_DM_Inventory	Asset management user
4	JP1_DM_Collect	Collection management user
5	JP1_DM_Observe	System-monitoring user
6	JP1_DM_Guest	User who browses information

You can set more than one JP1 permission level for an individual JP1 user. For example, if you set Distribution management user and System-monitoring user, the JP1 user can use JP1/Software Distribution with both permissions.

1.3.3 Setting for executing commands

When you use a user management facility to execute JP1/Software Distribution commands, you must register a system environment variable in the computer that will be used to execute the commands.

The following table describes this environment variable.

Setting item	Description
variable-name	NETM_USERID
variable-value	User name of JP1 user who has permission to execute JP1/Software Distribution commands.

You do not need to set a password.

When the user management facilities are used, you must set the environment variable on the computer from which command execution is to be requested when JP1/Software Distribution commands are executed from JP1/AJS or a user program.

The following table lists and describes the return codes and actions to be taken in the event of a user management error during execution of a JP1/Software Distribution command.

Code	Description	Action
41	No user has been specified in the NETM_USERID environment variable, or acquisition of user permissions from JP1/Base has failed.	Check the NETM_USERID environment variable, or make sure that JP1/Base is running.
42	The user specified in the NETM_USERID environment variable is not authorized to execute the command.	Specify in the NETM_USERID environment variable a user who is authorized to execute the command.
43	The user specified in the NETM_USERID environment variable is not registered in JP1/Base.	Specify in the NETM_USERID environment variable a user who is registered in JP1/Base.

1.3.4 Sharing permission with JP1/IM

When JP1/IM is used by linking with JP1/Software Distribution, you can set a JP1 user who has operation permission for both JP1/IM and JP1/Software Distribution.

By adding the JP1 permission level of JP1/Software Distribution to the permissions of JP1 users who use JP1/IM, even when the user management facilities are used, JP1/Software Distribution can be started from JP1/IM. This makes it possible to manage users of JP1/IM and JP1/Software Distribution together.

For details about managing JP1/Software Distribution by linking with JP1/IM, see *2. Managing JP1/Software Distribution from JP1/IM*.

2 Managing JP1/Software Distribution from JP1/IM

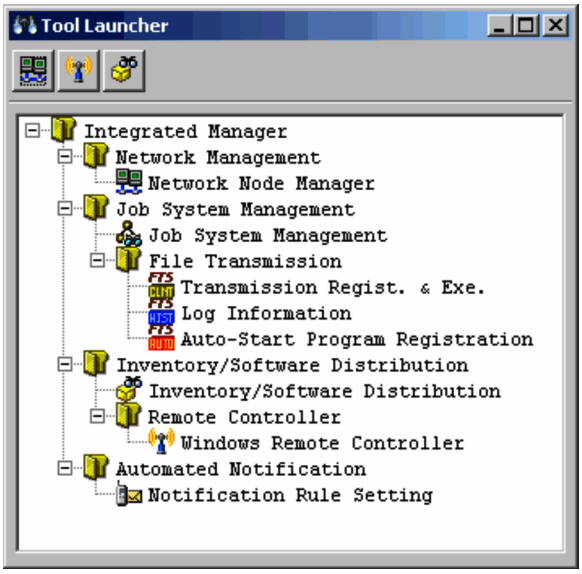
You can display Remote Installation Manager of JP1/Software Distribution from JP1/IM. You can also manage JP1/Software Distribution from JP1/IM by reporting results of jobs executed on JP1/Software Distribution to JP1/IM.

This chapter describes the procedures for managing JP1/Software Distribution from JP1/IM.

2.1 Starting JP1/Software Distribution from JP1/IM

JP1/IM's JP1/IM-View includes a window (Tool Launcher window) in which you can select programs that can be started from JP1/IM. You can start the JP1/Software Distribution facilities from this Tool Launcher window. The following shows an example of the Tool Launcher window:

Figure 2–1: Tool Launcher window



From the Tool Launcher window, you can start Remote Installation Manager and Remote Control Manager.

For details about the functions of JP1/IM and how to use them, see the manual *JP1/Integrated Management - Manager User's Guide*.

2.1.1 Starting Remote Installation Manager

(1) Setting up an environment to start Remote Installation Manager

To start Remote Installation Manager from the Tool Launcher window, you must set up the environment using the definition files.

Copy the following two definition files from their storage directory to the JP1/IM - View installation directory:

`HITACHI_JP1_NETM_APP.conf`

This file defines the location of the application to be executed.

- Storage directory
  Software-Distribution-installation-directory`\conf\appexecute\en`
- Destination directory
  JP1/IM View-installation-directory`\conf\appexecute\en`

`HITACHI_JP1_NETM_FTREE.conf`

This file defines the menu that is displayed in the function tree of the Tool Launcher window.

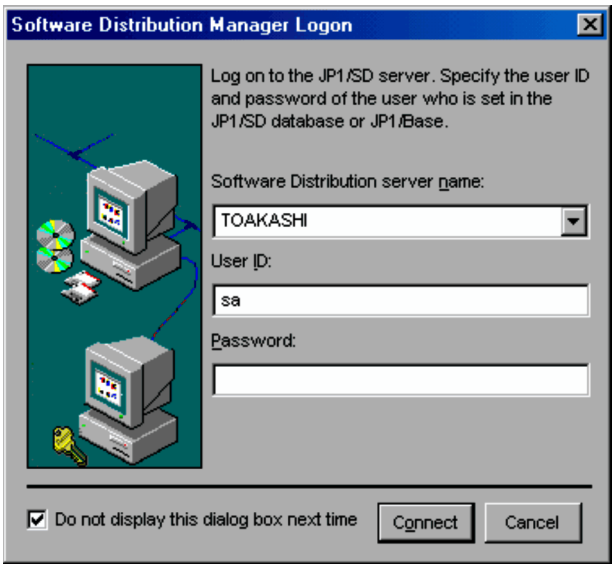
- Storage directory
  Software-Distribution-installation-directory`\conf\function\en`
- Destination directory
  JP1/IM View-installation-directory`\conf\function\en`

(2) Startup procedure

After completing the environment setup described previously in (1), from the Tool Launcher window, clicking **Inventory/Software Distribution** starts Remote Installation Manager.

When Remote Installation Manager starts, the Software Distribution Manager Logon dialog box is displayed.

Figure 2–2: Software Distribution Manager Logon dialog box



For **Software Distribution server name**, enter the host name of the managing server. For **Administrator ID** and **Password**, enter the ID and password of the user who has access authority for the JP1/Software Distribution database.

If a user without the Administrator authority is to use Remote Installation Manager, check to see if the user has write authority for all the subdirectories of the `RMTINS` and `SERVER` directories under the directory where JP1/Software Distribution Manager is installed.

(a) Hiding the JP1/Software Distribution Manager Logon dialog box

JP1/IM logs on to the server during startup. When starting Remote Installation Manager from JP1/IM also, a second logon to the server is requested. To avoid this, you can configure Remote Installation Manager in such a manner that display of the Software Distribution Manager Logon dialog box is skipped.

In the Software Distribution Manager Logon dialog box, select the check box for the **Do not display this dialog box next time** option. As a result, the next time Remote Installation Manager is started from JP1/IM, Remote Installation Manager is automatically logged on to the server without displaying this dialog box. In this case, the connection target is the server that Remote Installation Manager was connected to during the previous session.

(b) Changing the connection target server

You can specify Remote Installation Manager's connection target in the Software Distribution Manager Logon dialog box during startup. However, if the JP1/Software Distribution Manager Logon dialog box is hidden, Remote Installation Manager is automatically connected to the same server as for the previous session, and a user-specified server cannot be selected. In this case, to connect Remote Installation Manager to another server, from Remote Installation Manager's **Options** menu, choose **Specify Connection Destination**. When the JP1/Software Distribution - Specify Connection Destination dialog box is displayed, enter the managing server's host name and the ID and password of the user who has access authority for the JP1/Software Distribution database.

The next time you start Remote Installation Manager from JP1/IM, Remote Installation Manager is connected to this server.

(3) Notes about using the JP1/Software Distribution user management facilities

You should make note of the following points when JP1/Software Distribution is linked to JP1/IM in an environment in which user management facilities are used:

- When you start Remote Installation Manager from the JP1/IM Tool Launcher window, make sure that an authentication server is used to perform user authentication. Also, note that JP1/IM and JP1/Software Distribution Manager must use the same authentication server to perform user authentication; otherwise, user authentication information may be regarded as invalid, resulting in a connection error.
- Once you have started Remote Installation Manager from the JP1/IM Tool Launcher window, if you log out of JP1/IM before you stop Remote Installation Manager, neither Inventory Viewer nor the CSV output utility can be started from Remote Installation Manager. To prevent this from happening, always stop Remote Installation Manager before logging out of JP1/IM. If you inadvertently log out from JP1/IM first, restart Remote Installation Manager.

2.1.2 Starting Remote Control Manager

In JP1/IM View's Tool Launcher window, from **Remote Controller**, clicking **Remote Control** starts Remote Control Manager. For details about remote control, see the manual *Job Management Partner 1/Remote Control Description and Operator's Guide*.

2.2 Reporting JP1 events to JP1/IM

You can use JP1/Base's event service facility to report the results of the jobs executed by JP1/Software Distribution to JP1/IM. At JP1/IM, you use JP1/IM - View's Event Console window to check the JP1 events reported from JP1/Software Distribution.

When reporting JP1 events to JP1/IM, the managing server needs to use a relational database. For details about JP1 events, see the manual *Job Management Partner 1/Base User's Guide*.

2.2.1 Types of JP1 events

This section describes the JP1 events that are reported from JP1/Software Distribution to JP1/IM. To set which JP1 events are to be reported to JP1/IM, use the **Event Service** page during JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system) setup.

In order to report the following JP1 events, you must specify the corresponding settings:

- Operation-monitoring alert event for an invalid device connection
- Ooperation-monitoring alert event for operation history deletion
- Operation-monitoring alert event for software startup suppression
- Operation-monitoring alert event for print suppression

If the linked JP1/IM version is 09-50 or earlier, you must store the JP1/Software Distribution definition files in the JP1/IM installation directory in order to display the details of extended event attributes.

JP1/Software Distribution definition files

JP1/Software-Distribution-installation-directory`\JP1\base_attr\hitachi_jp1_netmdm_nt_base_attr_en.conf`

Storage location in JP1/IM

JP1/IM-Manager-(Console)-installation-directory`\conf\console\attribute`

(1) Send job end event

This JP1 event reports execution results when a job is completed. The execution results of the following jobs can be reported as JP1 events:

- *Install package*
- *Transfer package to relay system*
- *Collect files from client*
- *Collect files from client to relay system*
- *Acquire collected files from relay system*
- *Send package, allow client to choose*

(2) Send instruction end event

This JP1 event reports the execution result of an instruction when an instruction-execution result is reported from a client. An instruction is the smallest unit of a job and is created on the managing server for each destination or package. For example, if you execute a job that distributes two packages to two destinations, four instructions are created.

Instruction execution results can be reported for the same jobs as those for the send job end event described previously in *(1) Send job end event*.

(3) Report when the server is down

This JP1 event reports that an error occurred on the managing server.

(4) Report when the relay system is down

This JP1 event reports that an error occurred in the relay system.

(5) Client alert event

This JP1 event reports that alert information was received from a client.

(6) Operation-monitoring alert event for an invalid device connection

This JP1 event reports that a device whose operation is suppressed was connected to the client PC.

For details about the extended attributes of the operation-monitoring alert event for an invalid device connection, see *2.2.2 Attributes of JP1 events*.

(7) Operation-monitoring alert event for operation history deletion

This JP1 event reports that operation history has been deleted at the client. When this JP1 event is reported, the operation monitoring functions might not be running normally, and you may have to re-execute the *Set the software monitoring policy* job. For details about how to execute jobs, see *8. Managing Jobs* in the *Administrator's Guide Volume 1*.

For details about the extended attributes of the operation-monitoring alert event for operation history deletion, see *2.2.2 Attributes of JP1 events*.

(8) Operation-monitoring alert event for software startup suppression

This JP1 event reports that startup of software was suppressed at the client.

For details about the extended attributes of the operation-monitoring alert event for software startup suppression, see *2.2.2 Attributes of JP1 events*.

(9) Operation-monitoring alert event for print suppression

This JP1 events reports that a print operation was suppressed at the client.

For details about the extended attributes of the operation-monitoring alert event for print suppression, see *2.2.2 Attributes of JP1 events*.

2.2.2 Attributes of JP1 events

The two types of attributes for JP1 events are the basic attributes and the extended attributes. Extended attribute details are reported to JP1/IM in the case of job completion reporting events, client alert events, operation-monitoring alert event for an invalid device connection, and operation-monitoring alert event for operation history deletion. You can use JP1/IM - View's Event Console window to check the details of the extended attribute reported with a send instruction end event.

Table 2-1 shows the basic attributes of JP1 events, Table 2-2 shows the extended attributes of JP1 events, Table 2-3 shows the details of the extended attributes for a send instruction end event, Table 2-4 shows the details of the extended attributes for a client alert event, Table 2-5 shows the details of the extended attributes for an operation-monitoring alert event for an invalid device connection, Table 2-6 shows the details of the extended attributes for an operation-monitoring alert event for operation history deletion, Table 2-7 shows the details of the extended attributes for an operation-monitoring alert event for software startup suppression, and Table 2-8 shows the details of the extended attributes for an operation-monitoring alert event for print suppression.

Table 2–1: Basic attributes of JP1 events

Name of JP1 event		Event ID	Message
Send instruction end event	Normal termination	00010401	Software Distribution Manager was abnormally terminated.

Name of JP1 event		Event ID	Message
Send instruction end event	Error termination	00010402	*xxx* command was successfully completed.
Send job end event	Normal termination	00010403	*xxx* command was abnormally terminated.
	Error termination	00010406	*xxx* was successfully completed.
Report when the server is down		00010407	*xxx* was abnormally terminated.
Report when the relay system is down		00010101	Software Distribution SubManager was abnormally terminated.
Client alert event		00010410 or 00010110#	Client (*xxx*) is in a dangerous condition (*yyy*).
		00010411 or 00010111#	Client (*xxx*) posted a warning (*yyy*).
		00010412 or 00010112#	Client (*xxx*) was back to normal (*yyy*).
Operation-monitoring alert event for an invalid device connection		00010420	The client (*xxx*) failed to suppress an operation by the user (*yyy*) to insert a device (*zzz*) into the client computer.
		00010421	The client (*xxx*) suppressed an operation by the user (*yyy*) to insert a device (*zzz*) into the client computer.
Operation-monitoring alert event for operation history deletion		00010422	The *yyy* to *zzz* operation history was lost because the operation history file was deleted on the client (*xxx*).
Operation-monitoring alert event for software startup suppression		00010423	The client (*xxx*) suppressed an operation by the user (*yyy*) to start the product (*zzz*).
Operation-monitoring alert event for print suppression		00010424	The client (*xxx*) suppressed a print operation by the user (*yyy*).

#: The event ID is 000104*XX* for JP1/Software Distribution Manager and 000101*XX* for JP1/Software Distribution Client (relay system). *XX* is a variable.

Table 2–2: Extended attributes of JP1 events

Attribute name	Description	Attribute value
SERVERITY	Severity	Severity for the system (Emergency, Alert, Critical, Error, Warning, Notice, Information, Debug)
USER_NAME	User name	Executing user
JP1_SOURCEHOST	Source host name	Name of the host where the event resulting in issuance of the JP1 event occurred
PRODUCT_NAME	PP name	/HITACHI/JP1/NETMDM
OBJECT_TYPE	Object type	Hierarchical level at which the JP1 event occurred. (JOB, JOBNET, ACTION, ACTIONFLOW, DMJOB, COMMAND, PACKAGE, CLIENTALERT, DM_MONITORING_ALERT)
OBJECT_NAME	Object name	Name of the location where JP1 event occurred (job number, instruction number, package name, alert code, user name)
ROOT_OBJECT_TYPE	Type of registration name	Type of registration name (same as OBJECT_TYPE)
ROOT_OBJECT_NAME	Registration name	Name as a registration-execution unit (job number, instruction number, package name)

Attribute name	Description	Attribute value
OBJECT_ID	Object ID	Unique character string in the integrated system (job number, instruction number)
OCCURRENCE	Event type	Type of event that occurred (START, END, CREATE, DESTROY, MODIFY, SUBMIT, UNSUBMIT, PAUSE, RELEASE, RESTART, EXCEPTION, ALERT, ALERT_CLEAR, SUPPRESS, etc.)
START_TIME	Starting time	Execution start time (number of seconds from 00:00:00 1/1/1970)
END_TIME	Termination time	Execution termination time (number of seconds from 00:00:00 1/1/1970)
RESULT_CODE	Termination code	Termination code

Table 2–3: Details information about the extended attributes for a send instruction end event

Attribute name	Description
S1	Job name
S2	Job number
S3	Job type D: *Install package* M: *Transfer package to relay system* G: *Collect files from client* S: *Collect files from client to relay system* A: *Acquire collected files from relay system* J: *Send package, allow client to choose*
S4	Instruction number
S5	Maintenance code
S6	Route information
P1	Package name
P2	Package ID
P3	Package version
P4	Package generation number
P5	Cabinet ID
P6	Package code D: Package from PC C: Package from WS

Table 2–4: Detailed information about the extended attributes for a client alert event

Attribute name	Description
A1	Alert code
A2	Host name
A3	IP address

Table 2–5: Detailed information about the extended attributes for an operation-monitoring alert event for an invalid device connection

Attribute name	Description
O1	Execution time
O2	IP address
O3	Host name
O4	Operation monitoring policy that has been applied
O5	Version of the operation monitoring policy that has been applied
O6	Connection name
O7	Device instance ID#1
O8	Controller device instance ID#2
O9	Device type

#1

Device instance ID under the device type (such as disk drive or DVD/CD-ROM drive)

#2

Device instance ID under the device controller

Table 2–6: Detailed information about the extended attributes for an operation-monitoring alert event for operation history deletion

Attribute name	Description
O1	Execution time
O2	IP address
O3	Host name
O4	Operation monitoring policy that has been applied
O5	Version of the operation monitoring policy that has been applied
O10	Start date and time of the information that was lost
O11	End date and time of the information that was lost

Table 2–7: Detailed information about the extended attributes for an operation-monitoring alert event for software startup suppression

Attribute name	Description
O1	Execution time
O2	IP address
O3	Host name
O4	Operation monitoring policy that has been applied
O5	Version of the operation monitoring policy that has been applied
O12	Product name
O13	Product version

Attribute name	Description
O14	File name
O15	File version
O16	Program start account

Table 2–8: Detailed information about the extended attributes for an operation-monitoring alert event for print suppression

Attribute name	Description
O1	Execution time
O2	IP address
O3	Host name
O4	Operation monitoring policy that has been applied
O5	Version of the operation monitoring policy that has been applied
O17	Document name
O18	Name of printer being used

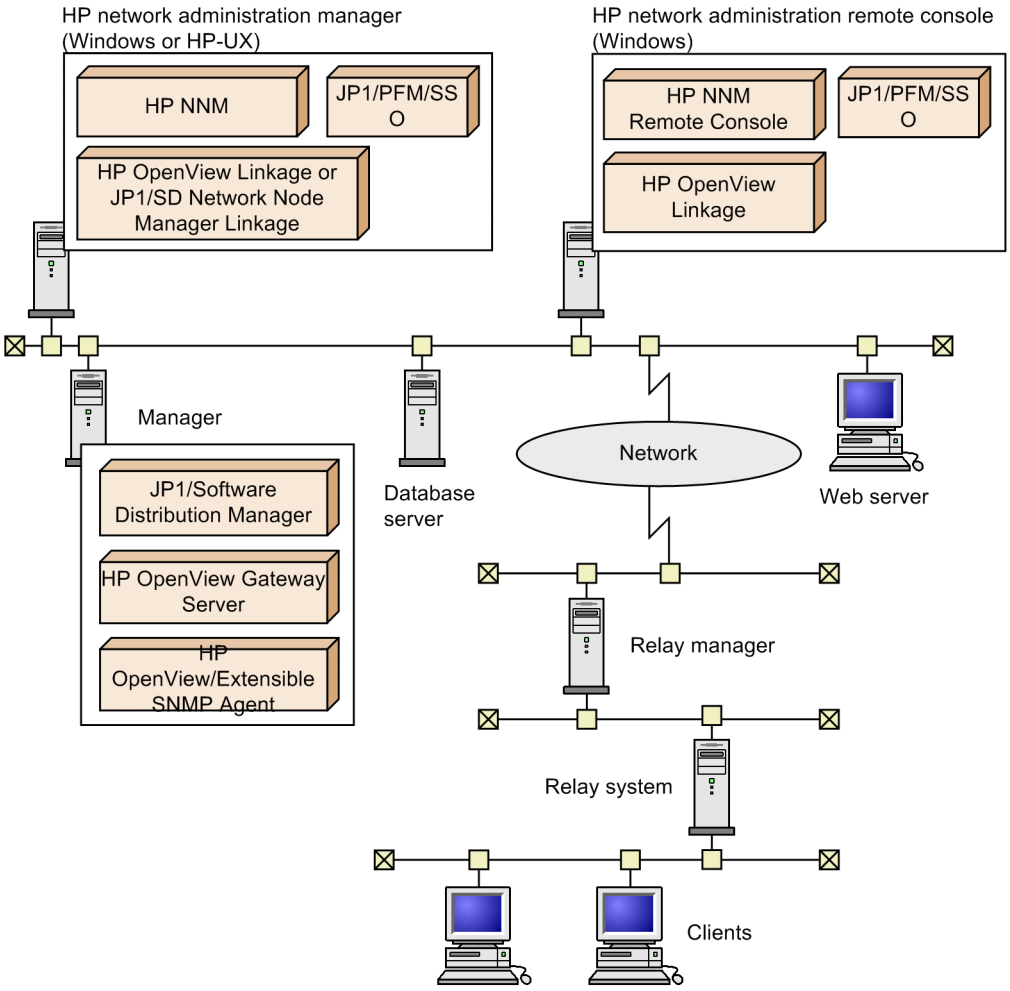
3 Managing JP1/Software Distribution from HP NNM

You can use the monitoring window of HP NNM version 7.5 or earlier to manage JP1/Software Distribution inventory information and job status. This functionality is called *HP OpenView Linkage*. This chapter describes how to use HP OpenView Linkage.

3.1 System configuration when linking with HP NNM

The following figure shows the system and software configuration when linking with HP NNM version 7.5 or earlier.

Figure 3–1: System configuration when linking with HP NNM



Note: OpenView Linkage is a program for Windows, and JP1/SD Network Node Manager Linkage is a program for HP-UX.

3.1.1 System configuration

Place the managing server and HP Network Node Manager in the same network. You can also install the managing server and the HP Network Node Manager on the same PC.

(1) Using the Web interface facility

The Web interface facility of HP NNM version 7.5 or earlier allows you to manage JP1/Software Distribution information via a Web browser. To display JP1/Software Distribution management information from a Web browser, use the port number that was specified when you set up HP OpenView Linkage to collect information from the managing server.

(2) Using NNM remote console

The remote console facility of HP NNM version 7.5 or earlier allows you to access HP NNM information from PCs that are not running HP Network Node Manager. Note the following items when using the remote console facility:

- Place the NNM remote console in the same network as the managing server.
- You must install HP OpenView Linkage on the remote console machine. Install HP OpenView Linkage in the same drive and directory as HP OpenView Linkage installed in the HP Network Node Manager.

3.1.2 Software configuration

This subsection explains the software required for linking with HP NNM version 7.5 or earlier.

HP NNM

This program manages the TCP/IP network configuration and detects errors. It also manages the JP1/Software Distribution configuration and detects errors. This program can be linked to the following HP NNMs:

- Windows HP NNM
- HP-UX HP NNM

NNM remote console

This is an HP NNM component that you can use to reference HP NNM information about a PC other than an HP Network Node Manager. JP1/Software Distribution can be linked to the Windows NNM remote console facility, but not to the HP-UX NNM remote console facility.

JP1/PFM/SSO

This program monitors symbol addition requests.

HP OpenView Linkage

This is a JP1/Software Distribution Manager component that accesses JP1/Software Distribution Manager management information from Windows HP NNM.

JP1/Software Distribution NNM Linkage

This program accesses JP1/Software Distribution Manager management information from HP-UX HP NNM. For details about how to install and set up JP1/SD Network Node Manager Linkage, see *D. Installing and Setting Up HP-UX JP1/Software Distribution Network Node Manager Linkage* in the manual *Setup Guide*.

HP OpenView Gateway Server

This is a JP1/Software Distribution Manager component that provides a gateway facility for accessing JP1/Software Distribution Manager management information from HP NNM.

HP OpenView/Extensible SNMP Agent

This program notifies JP1/PFM/SSO that symbols have been added from the JP1/Software Distribution Manager. This program is not required when HP NNM and the managing server are installed on the same PC.

If the managing server and Remote Installation Manager are used on separate PCs, the PC used for Remote Installation Manager requires HP OpenView/Extensible SNMP Agent.

Web interface

This is an HP NNM facility that you can use to reference HP NNM information about a Web browser.

Table 3-1 lists the software required for linking with Windows HP NNM. Table 3-2 lists the software required for linking with HP-UX HP NNM.

Table 3–1: Software required for linking with Windows HP NNM

System required for using HP OpenView Linkage	Required software
Managing server	Server component and HP OpenView Gateway Server component of JP1/Software Distribution Manager
	Using JP1/PFM/SSO 7.00 or later versions JP1/Cm2/Extensible SNMP Agent 7.00

System required for using HP OpenView Linkage	Required software
Managing server	Using JP1/SSO 6.00, 6.51, or 6.71 JP1/Cm2/Extensible Agent 6.00 or later versions#
HP NNM 6.41	HP NNM 6.41
	JP1/PFM/SSO 7.00
	HP OpenView Linkage component of JP1/Software Distribution Manager
HP NNM 6.20	HP NNM 6.20
	JP1/SSO 6.51, 6.71, or JP1/PFM/SSO 7.00
	HP OpenView Linkage component of JP1/Software Distribution Manager
HP NNM 6.1	HP NNM 6.1
	JP1/SSO 6.00
	HP OpenView Linkage component of JP1/Software Distribution Manager
Web browser	One of the following programs is required. • Microsoft Internet Explorer 6.0 • Microsoft Internet Explorer 5.5 • Microsoft Internet Explorer 5.01

#
This software is not required when you install the managing server and HP NNM on the same PC.

Table 3–2: Software required for linking with HP-UX HP NNM

System required for using HP OpenView Linkage	Required software
Managing server	Server component and HP OpenView Gateway Server component of JP1/Software Distribution Manager
	JP1/Cm2/Extensible Agent 5.00 or later versions#
HP NNM 6.20 (HP-UX10.20, HP-UX11.0, and HP-UX11i)	NNM 6.20
	JP1/SSO 6.51, 6.71, or JP1/PFM/SSO 7.00
	JP1/Software Distribution nnm Linkage 6.52 or 6.71
HP NNM 6.1 (HP-UX10.20 or HP-UX11.0)	NNM 6.1
	JP1/SSO 6.00
	JP1/Software Distribution nnm Linkage 6.00 or 6.51
HP NNM 6.00 (HP-UX10.20 or HP-UX11.0)	NNM 6.00
	JP1/SSO 5.00
	JP1/Software Distribution nnm Linkage 5.20
Web browser	One of the following programs is required. • Microsoft Internet Explorer 6.0 • Microsoft Internet Explorer 5.5 • Microsoft Internet Explorer 5.01

#
This software is not required when you install the managing server and HP NNM on the same PC.

3.1.3 Notes about using hp OpenView Linkage

Note the following items when using HP OpenView Linkage:

- You cannot use the HP OpenView linkage functionality if you have linked JP1/Software Distribution to JP1/Base and you are using the user management facility.
- To enable the agent address of SNMP trap, you must specify `-W` in the `start` option of the `ovtrapd` process of HP NNM so that WinSNMP is disabled. To specify `-W` in the `start` option:
  1. Close all HP NNM windows.
  2. Stop the HP NNM service.
  3. Execute the following commands from the MS-DOS prompt (example when HP NNM is installed on C drive):
     `cd C:\OpenView\lrf`
     `ovdelobj ovtrapd.lrf`
     `notepad ovtrapd.lrf` (starts Notepad)
  4. Add the `-W` option to the last line of the `ovtrapd.lrf` file opened by Notepad and save the file.
     Add `-W` between `pmd` and `OVs_WELL_BEHAVED` as follows:
     `OVs_YES_START:pmd:-W:OVs_WELL_BEHAVED::`
  5. Execute the following command from the MS-DOS prompt:
     `ovaddobj ovtrapd.lrf`
  6. Start the HP NNM service.
- Before starting the HP NNM service, choose **Administrative tools** and **Services** from the Control Panel and stop **SNMP Trap Service**.
- To display the HP NNM IP map correctly, be sure to specify **All Levels** in **On-demand: To what level should submaps be persistent**. You can specify an IP Map by choosing **Properties** from the **Map** menu of HP NNM.

3.2 Checking JP1/Software Distribution symbols

You can check the configuration of JP1/Software Distribution by using the symbols displayed in the node map window of HP NNM version 7.5 or earlier.

3.2.1 Checking symbols

This subsection explains how to use HP NNM version 7.5 or earlier to check JP1/Software Distribution symbols. In this section, HP NNM is simply referred to as *NNM*.

(1) Using the NNM map window

Double-clicking the node symbol displayed in the node map window displays a submap of the selected node. The following shows examples of the network presenter window and the node submap window:

Figure 3–2: Network presenter window (when the NNM Map window is used)

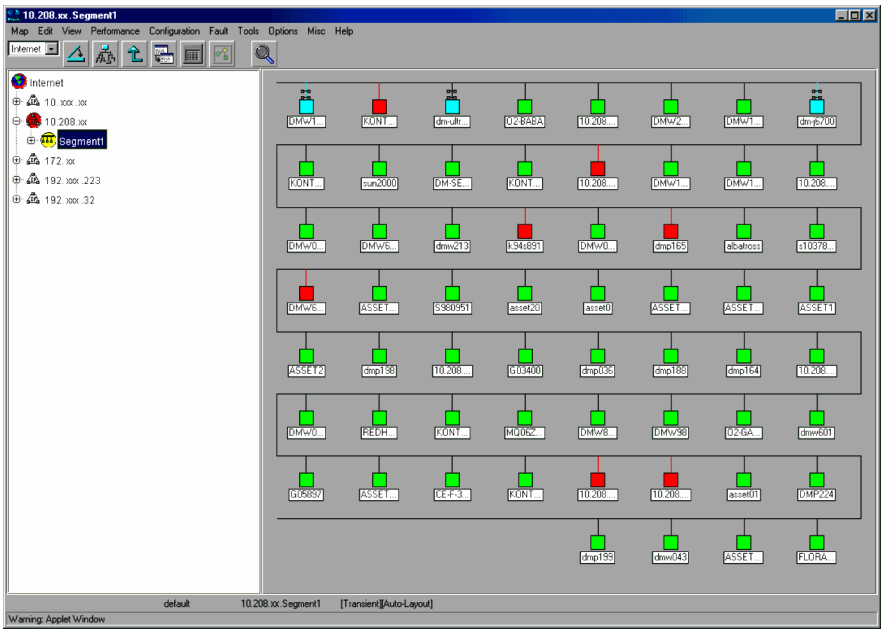
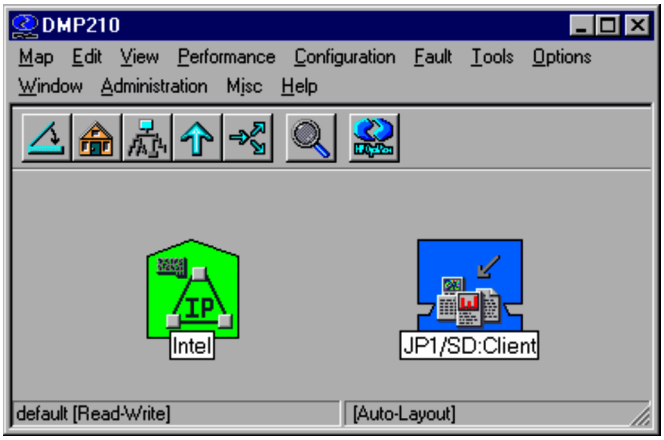


Figure 3–3: Node submap window (when the NNM Map window is used)



Select the **JP1/SD:Client** or **JP1/SD:SubManager** symbol. From the **Administration** menu, click **JP1/Software Distribution Administration** to display the menus. Using these menus, you can access information about inventories and job execution status.

(2) Using a Web browser

Double-clicking a node symbol displayed in the list area or description area in the network presenter window displays the submap of the selected node on a Web browser. The following shows the examples of the network presenter window and the node submap window:

Figure 3–4: Network presenter window (when a Web browser is used)

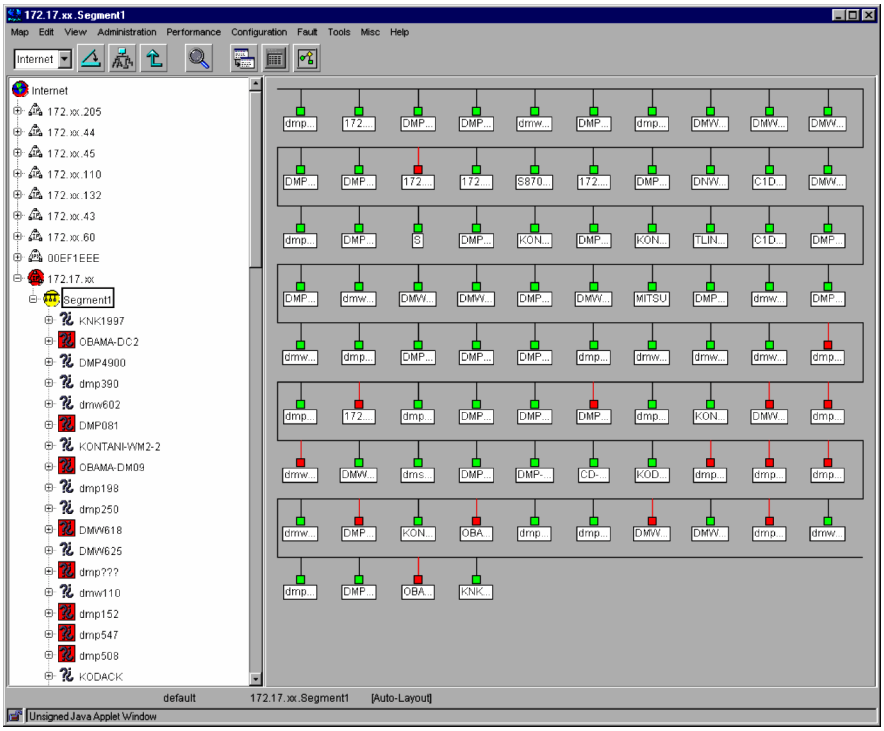
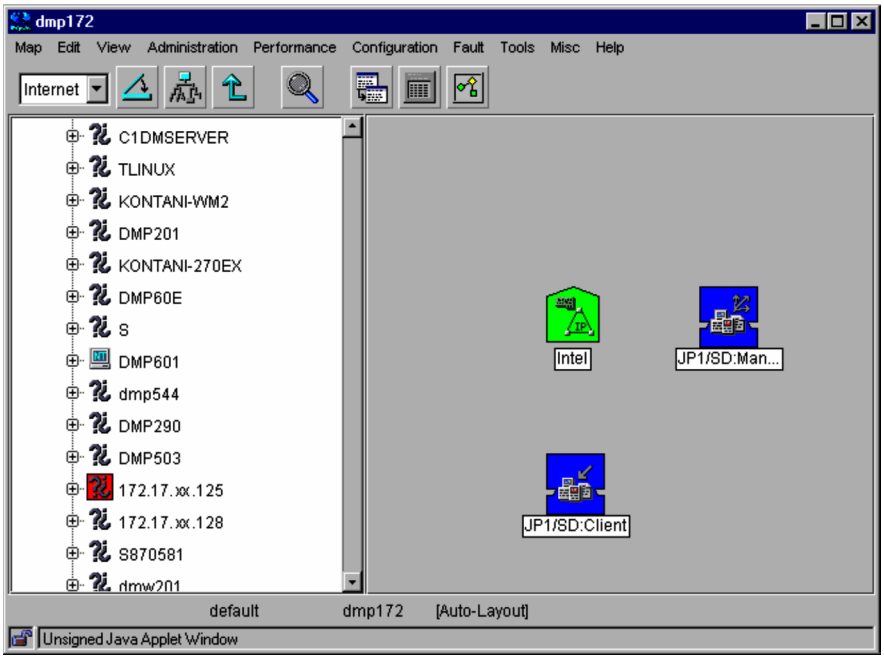


Figure 3–5: Node submap window (when a Web browser is used)



Select the **JP1/SD:Client** or **JP1/SD:SubManager** symbol. From the **Administration** menu, click **JP1/Software Distribution Administration** to display the menus. Using these menus, you can access information about inventories and job execution status.

3.2.2 Types of JP1/Software Distribution symbols

(1) Types of symbols

JP1/Software Distribution systems are displayed on NNM using the following symbols:

Figure 3–6: Symbol for a manager or relay manager

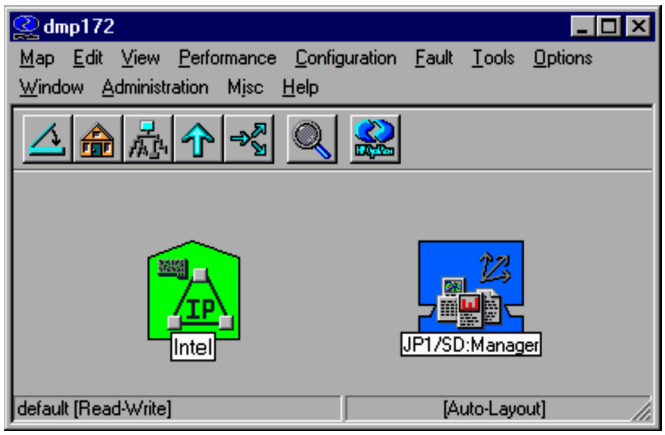


Figure 3–7: Relay system symbol

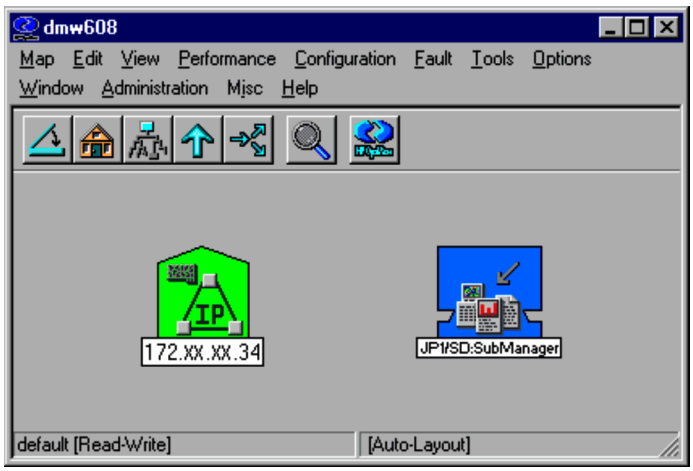
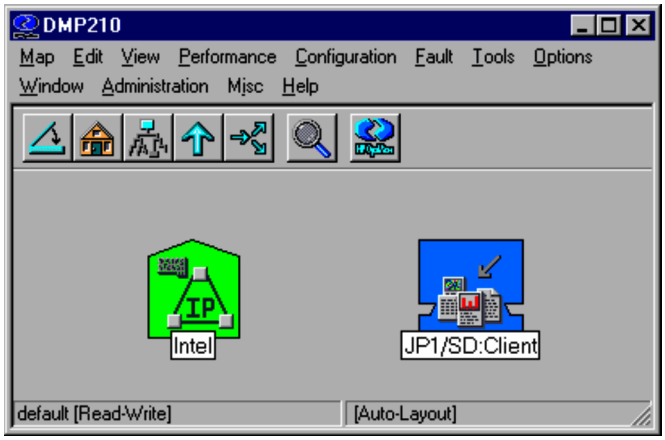


Figure 3–8: Client symbol



(2) When symbols are added or deleted

(a) When symbols are added

The manager symbol is displayed when a service of JP1/Software Distribution Manager is started. Relay system and client symbols are displayed when they are added to the system configuration.

In a system configuration in which the manager is hierarchically structured, the manager symbol is displayed in NNM when the relay manager that belongs to the manager is added to the system configuration.

(b) When symbols are deleted

The relay system and client symbols are deleted when they are deleted from the system configuration.

In a system configuration in which the manager is hierarchically structured, the manager symbol is deleted from NNM when the relay manager that belongs to the manager is deleted from the system configuration.

From the **Administration** menu in HP NNM, clicking **JP1/Software Distribution Administration** and then **Delete Symbols** allows you to batch delete all JP1/Software Distribution symbols. However, the JP1/Software Distribution symbols you have added to the NNM window are not deleted. Additionally, you cannot execute batch symbol deletion from a Web browser.

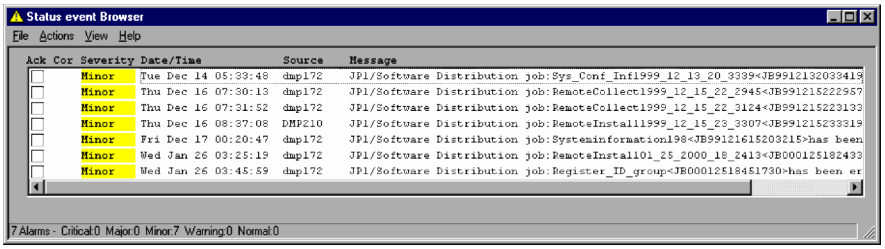
(3) Reflecting errors in symbols

The display color of the host symbol that has caused an error changes. When no error is present, the symbol is displayed in green. When an error occurs, the symbol is displayed in yellow. To return the symbol display to the normal state (green), from the **Administration** menu in NNM, click **JP1/Software Distribution Administration** and then **Initialize Symbols**. You cannot execute symbol initialization with a Web browser.

(a) Checking the occurrence of an error

If an error occurs in the JP1/Software Distribution host and the symbol display status changes, you can investigate the error using the NNM status event browser or the application alarm event browser. The following shows an example of JP1/Software Distribution errors displayed in the status event browser.

Figure 3–9: Example of JP1/Software Distribution errors displayed in the status event browser



The **Source** column displays the JP1/Software Distribution Manager host name. The **Message** column displays the job that has caused an error in the following format:

Software-Distribution-job:*job-name* <*job-ID*> caused an error.

(b) Information reported from JP1/Software Distribution to NNM

If a job causes an error, JP1/Software Distribution reports (or *traps*) the information shown in the table below to NNM.

Table 3–3: Information reported from JP1/Software Distribution to NNM

Information item to report	Description
Trap name	`Netmdm_Sts_job`
Event category	Status event
Enterprise Object ID (`netmdm`)	`.1.3.6.1.4.1.116.7.20`

Information item to report	Description
Specific-trap	1
Severity	Warning area
Variable *$3*	Name of job that caused an error
Variable *$4*	ID of job that caused an error

Because company ID (.1.3.6.1.4.1.116.7.20) is specific to JP1/Software Distribution, you can also design an automatic NNM action that will be performed when a JP1/Software Distribution job is generated.

3.3 Checking inventory information from HP NNM

This section explains how to check the inventory information managed by JP1/Software Distribution Manager from HP NNM version 7.5 or earlier. In this section, HP NNM is simply referred to as *NNM*.

Note that you cannot check inventory information for an offline machine from NNM.

3.3.1 Checking inventory information

(1) Checking inventory information

To check inventory information:

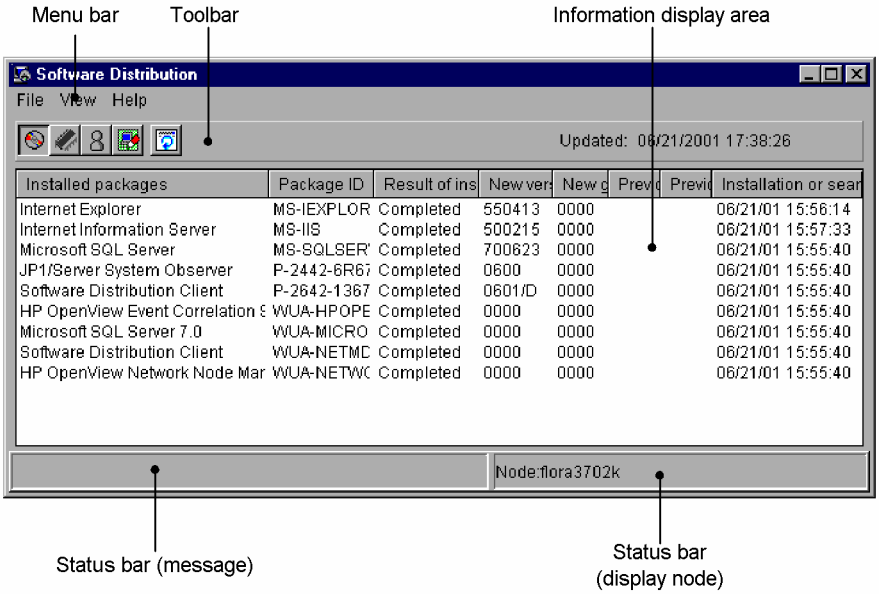
1. Use NNM to select a symbol for the inventory information you wish to check.
2. From the **Administration** menu, choose **Software Distribution Administration**, and then **View Inventory**, and select the inventory information you wish to check.

   JP1/Software Distribution Inventory Viewer is displayed, which allows you to check inventory information.

(2) Configuration of JP1/Software Distribution Inventory Viewer

The following shows what JP1/Software Distribution Inventory Viewer looks like:

Figure 3–10: Example of JP1/Software Distribution Inventory Viewer



Menu bar

File

Closes JP1/Software Distribution Inventory Viewer.

View

Allows you to select the type of inventory information you want to check and to refresh inventory information.

Help

Displays JP1/Software Distribution version information.

Toolbar

: Displays software information.

: Displays system information.

: Displays user inventory information.

: Displays registry information.

: Refreshes inventory information.

Information display area

This area displays the selected inventory information.

Status bar

The display node displays the name (host name or IP address) of the relay system or client for which information is being displayed.

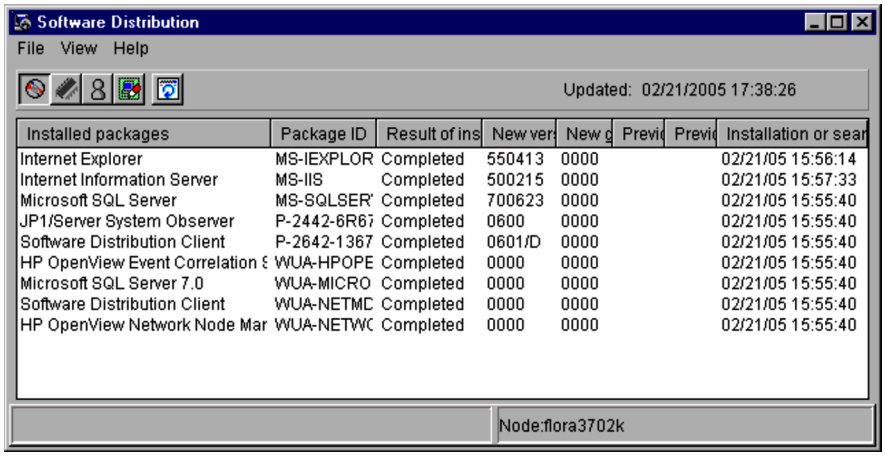
The message displays the tool bar meaning and provides an explanatory message for the input item.

3.3.2 Examples of inventory information

(1) Software information

The following shows a sample software information display:

Figure 3–11: Sample software information display

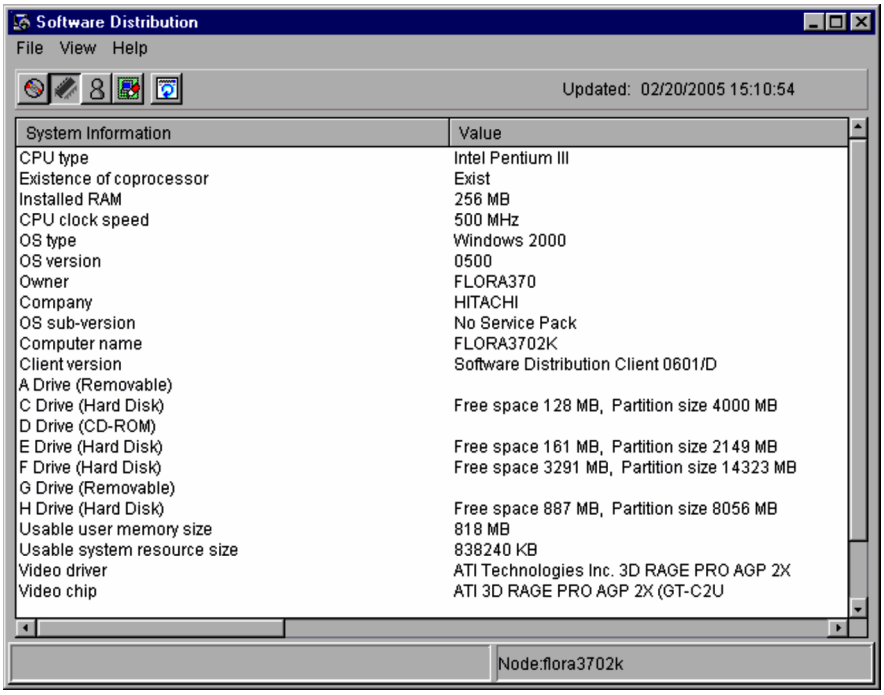


You can reference the installed software information you have collected on the managing server. However, software information that was obtained by using **Search for a file**, **Search for Microsoft Office products,** or **Search for anti-virus products** cannot be referenced. For details about software information that can be referenced, see *2.2.2 Acquiring software information* in the manual *Description and Planning Guide*.

(2) System information

The following shows a sample system information display:

Figure 3–12: Sample system information display

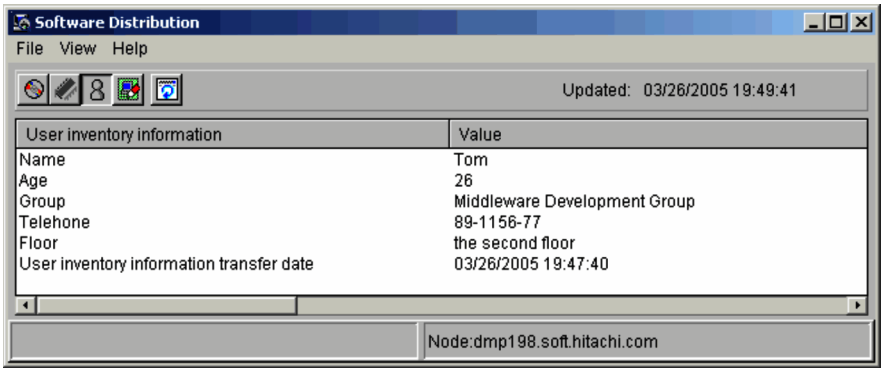


The system information includes the CPU type and OS version. For details about the system information items that can be referenced, see *2.2.1 Acquiring system information* in the manual *Description and Planning Guide*.

(3) User inventory information

You can reference user inventory information managed by the managing server. The following shows a sample software user inventory information display:

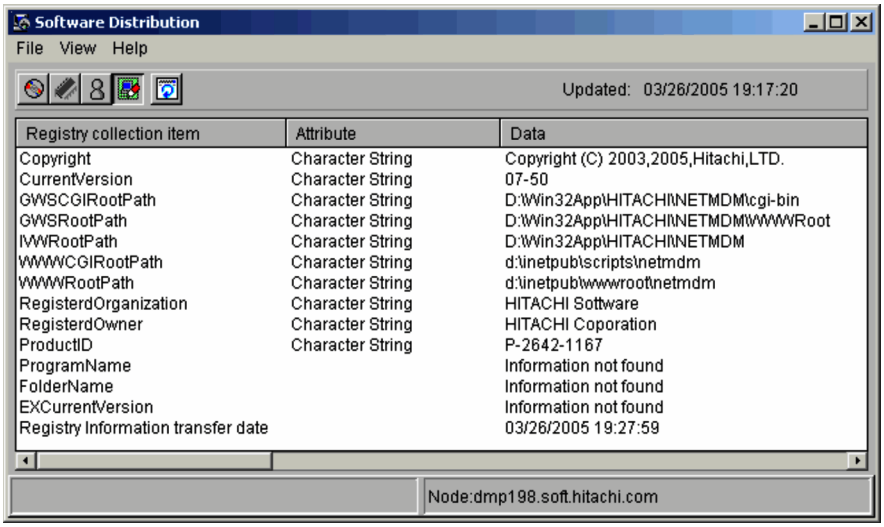
Figure 3–13: Sample user inventory information display



(4) Registry information

You can reference registry information managed by the managing server. The following shows a sample registry information display:

Figure 3–14: Sample registry information display



3.4 Checking job status from HP NNM

This section explains how to check the JP1/Software Distribution job status from HP NNM version 7.5 or earlier. You can check the job status from the HP NNM node submap or status event browser. In this section, HP NNM is simply referred to as *NNM*.

You cannot check the following types of jobs from NNM:

- *Suspend file transfer*, *Resume file transfer*, *Set the software monitoring policy*, and *Get software monitoring information from the client* jobs
- Jobs being deleted

The display of the job execution status is subject to the following restrictions:

- The conditions *Suspended at relay system* and *Resumed* are not displayed.
- The causes of startup failure are not detailed.

3.4.1 Checking job status from the node submap

(1) Verification method

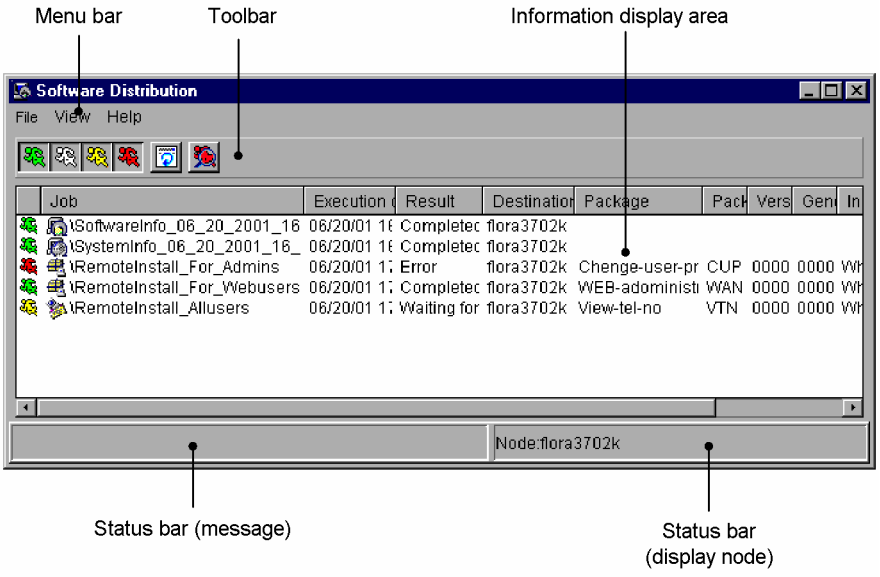
To check the job status from the node submap:

1. Select the symbol for the job status you want to check in the NNM node submap.
2. From the **Administration** menu, click **JP1/Software Distribution Administration** and then **View Job Status**.
   The JP1/Software Distribution Job Viewer is displayed.
3. From the **View** menu, click **Job Status** to select the status of the job you want to display.
   The job is displayed in the selected status. You can also select job status from the toolbar button.
   Double-clicking the job information displayed allows you to check detailed information for that job.

(2) Configuration of JP1/Software Distribution Job Viewer

The following shows what JP1/Software Distribution Job Viewer looks like:

Figure 3–15: Example of JP1/Software Distribution Job Viewer



Menu bar

File menu

This allows you to close JP1/Software Distribution Job Viewer and check detailed information about the job.

View menu

This allows you to select the type of job execution status to be checked and refresh job information.

Help menu

This displays the version information about JP1/Software Distribution.

Toolbar

Green: Shows normal termination jobs.

White: Shows jobs that are yet to be executed.

Yellow: Shows installation-pending jobs.

Red: Shows jobs with errors.

Refreshes job execution status information.

Shows detailed information about a job.

Information display area

Shows jobs with a selected execution status.

Status bar

The view node shows the host name (or IP address) of the relay system or client about which information is being displayed.

Messages show the meaning of the toolbar and explanatory messages on input items.

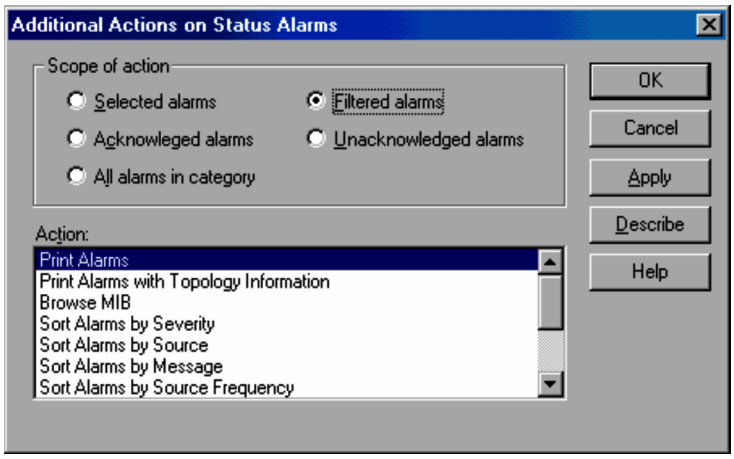
3.4.2 Checking job status from the status event browser

You can also display JP1/Software Distribution Job Viewer from the NNM status event browser. Perform the following steps to check a job status from the status event browser. You cannot display JP1/Software Distribution Job Viewer from the status event browser if a Web browser is used.

1. Select the event that indicates the error occurrence in the JP1/Software Distribution job displayed on the status event browser. Click **Action** and then **Additional Actions**.

   The Additional Actions on Status Alarms dialog box is displayed.

   Figure 3–16: Additional Actions on Status Alarms dialog box



2. Click **View Software Distribution Job Status** from **Action**, and then click **Apply**.

JP1/Software Distribution Job Viewer is displayed. JP1/Software Distribution Job Viewer only displays detailed information for the job selected in the status event browser.

4 Commands

This chapter explains how to automate functions, such as job execution and packaging, by linking with the related program JP1/AJS. It also explains other aspects of JP1/Software Distribution commands, such as the command syntax.

4.1 Overview of automatic operations via linkage with JP1/AJS

JP1/Software Distribution provides several functions, such as packaging and remote installation, in the form of commands. By combining these commands with JP1/AJS, you can automatically execute a variety of functions.

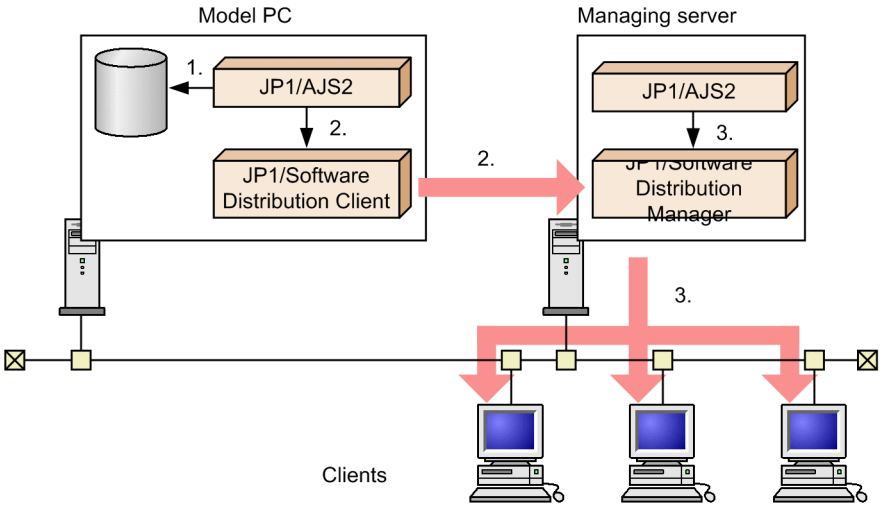
This section describes three examples of the automatic operation of JP1/Software Distribution using JP1/AJS.

1. Detecting the updating of a file and automatically performing remote installation
2. Detecting an error in remote installation and retrying it
3. Collecting files from various locations, modifying the files, and redistributing them

(1) Detecting the updating of a file and automatically performing remote installation

By providing a model PC for the monitoring of data updating, you can automatically execute data packaging and remote installation whenever a particular folder or file is updated. The figure below shows the overview of this process.

Figure 4–1: Detection of file updating and automatic remote installation



You can define the following three processes in JP1/AJS2:

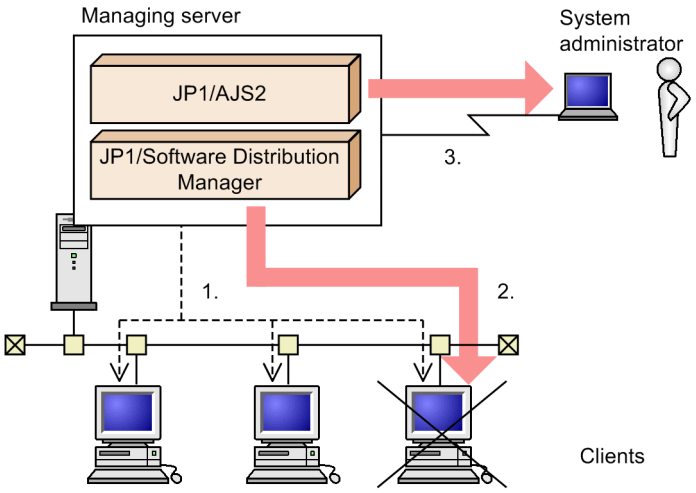
1. JP1/AJS2 running on the model PC monitors specific files or folders.
2. When it detects that a file has been updated, JP1/AJS2 executes the `dcmpack` command on JP1/Software Distribution Client to package the changed data on the managing server.
3. JP1/AJS2 running on the managing server then executes the `dcminst` command on JP1/Software Distribution Manager to remotely install packaged data onto the clients.

In this example, the administrator can update the data of all management target clients by simply storing the distribution target files in a specified folder on a specified PC. By automating all operations, the administrator can eliminate errors in the files to be distributed, as well as human error.

(2) Detecting an error in remote installation and retrying it

A series of tasks can be automated, such as monitoring the results of remote installation on JP1/Software Distribution, re-transmitting data to the PC on which the remote installation failed, or notifying the administrator of a failure of remote installation by e-mail. The figure below shows the overview of this processing.

Figure 4–2: Detecting an error in remote installation and retrying it



You can define the following three processes in JP1/AJS2:

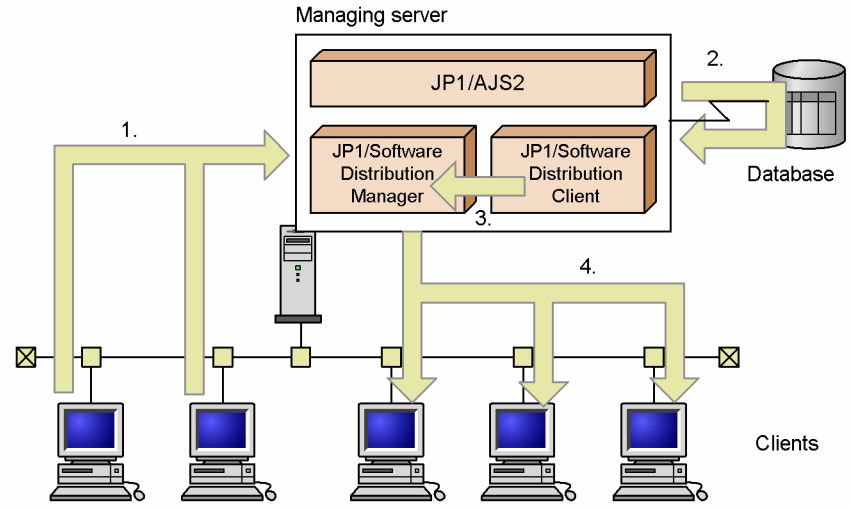
1. The `dcmstat` command runs on JP1/Software Distribution Manager to obtain the execution status of the remote installation jobs.
2. On clients to which distribution failed, the job is re-executed using the `dcmrtry` command.
3. JP1/AJS2 notifies the system administrator by e-mail that the distribution failed.

Although in this example the next processing is executed after an error, it is possible to execute another processing task upon normal completion, rather than after an error, of the remote installation process.

(3) Collecting files from various locations, modifying the files, and redistributing them

You can use the file-collection facility of JP1/Software Distribution to collect files from various locations, modify data on the server side, and update the database. You can also transmit modified data to the clients to replace their data with updated data. The figure below shows the overview of this processing.

Figure 4–3: Collecting files from various locations, modifying the files, and redistributing them



You can define the following four processes in JP1/AJS2:

1. The `dcmcoll` command runs on JP1/Software Distribution Manager to collect data on specific client folders or files.
2. A script is executed on the managing server to manipulate data and update the database.
3. The `dcmpack` command runs on JP1/Software Distribution Client to package the latest data.
4. The `ddminst` command runs on JP1/Software Distribution Manager to distribute the data to the clients.

4.2 Command types and I/O information

This section explains types of JP1/Software Distribution commands and I/O information that is used during the execution of a command.

4.2.1 Command types

This subsection describes the types of JP1/Software Distribution commands and whether or not each command can be executed at JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system).

(1) Commands related to job creation and execution

A user who is permitted to update the JP1/Software Distribution installation directory can execute these commands.

Table 4–1: Commands related to the creation or execution of a job

Function	Command name	JP1/Software Distribution Manager	JP1/Software Distribution Client (relay system)	Section
Creates and executes any of the following four job types: • *Install package* • *Transfer package to relay system* • *Batch delete packages on relay system* • *Send package, allow client to choose*	`dcminst.exe`	Y	Y	*4.10*
Creates and executes the following four types of remote collection jobs: • *Remote collection* • *Collect files from client to relay system* • *Acquire files from relay system* • *Delete collected files from relay system* This command can also restore collected archive files.	`dcmcoll.exe`	Y	Y	*4.4*
Suspends or resumes a file transfer.	`dcmsusp.exe`	Y	X	*4.23*
Executes a job that is defined in the managing server.	`dcmjexe.exe`	Y	Y	*4.12*
Retries a job.	`dcmrtry.exe`	Y	Y	*4.19*
Deletes an executed job.	`dcmjbrm.exe`	Y	Y	*4.11*
Deletes a job definition.	`dcmrmgen.exe`	Y	Y	*4.18*
Gets the job status.	`dcmstat.exe`	Y	Y	*4.20*
Monitors the status of a job; starts an external program depending upon the circumstances.	`dcmstsw.exe`	Y	Y	*4.22*

Legend:

Y: Can be executed.

X: Cannot be executed.

(2) Commands related to inventory information management

A user who is permitted to update ODBC system data sources can execute these commands.

Table 4–2: Commands related to inventory information management

Function	Command name	JP1/Software Distribution Manager	JP1/Software Distribution Client (relay system)	Section
Exports client inventory to a text file in CSV format or in the parameter file format.	dcmcsvu.exe	Y	X	*4.5*
Batch-inputs user inventories from a CSV-formatted file.	dcmuidi.exe	Y	X	*4.24*
Exports either a software inventory dictionary or information about deleted software management tables to a CSV-formatted file.	dcmdice.exe	Y	X	*4.6*
Imports software information from a CSV-formatted file into a software inventory dictionary.	dcmdici.exe	Y	X	*4.7*
Loads offline machine information acquired from offline machines to the managing server.	dcmstdiv.exe	Y	X	*4.21*

Legend:

Y: Can be executed.

X: Cannot be executed.

(3) Commands related to packages

A user who is permitted to update the JP1/Software Distribution installation directory can execute these commands.

Table 4–3: Package-related commands

Function	Command name	JP1/Software Distribution Manager	JP1/Software Distribution Client (relay system)	Section
Packages user data and programs.	dcmpack.exe	S	S	*4.14*
Deletes packages from the cabinet.	dcmpkrm.exe	Y	Y	*4.17*
Creates a backup of a package.	dcmpkget.exe	Y	Y	*4.15*
Restores a package from its backup.	dcmpkput.exe	Y	Y	*4.16*

Legend:

Y: Can be executed.

S: Can be executed in JP1/Software Distribution Manager (relay manager), JP1/Software Distribution Client (relay system), and JP1/Software Distribution Client (client) in which components of Packager are installed.

(4) Commands related to system configuration

A user who is permitted to update ODBC system data sources can execute these commands.

Table 4–4: System configuration-related commands

Function	Command name	JP1/Software Distribution Manager	JP1/Software Distribution Client (relay system)	Section
Applies created policies in batch, and assigns registered hosts to destination groups.	dcmgpmnt.exe	Y	X	*4.8*
Detects hosts in which JP1/Software Distribution is not installed.	dcmhstwo.exe	Y	X	*4.9*

Legend:

Y: Can be executed.

X: Cannot be executed.

(5) Command related to software operation monitoring

A user who is permitted to update ODBC system data sources can execute this command.

Table 4–5: Command related to software operation monitoring

Function	Command name	JP1/Software Distribution Manager	JP1/Software Distribution Client (relay system)	Section
Stores the suppress history and operation history collected by JP1/Software Distribution in a database table so that the information can be managed in the Operation Log List window.	`dcmmonrst.exe`	Y	X	*4.13*

Legend:

Y: Can be executed.

X: Cannot be executed.

(6) Command related to client management

A user who is permitted to update ODBC system data sources can execute this command.

Table 4–6: Command related to client management

Function	Command name	JP1/Software Distribution Manager	JP1/Software Distribution Client (relay system)	Section
Synchronizes a downstream WSUS server with the top-level WSUS server when hierarchical WSUS servers are linked.	`dcmwsus.exe`	Y	X	*4.25*

Legend:

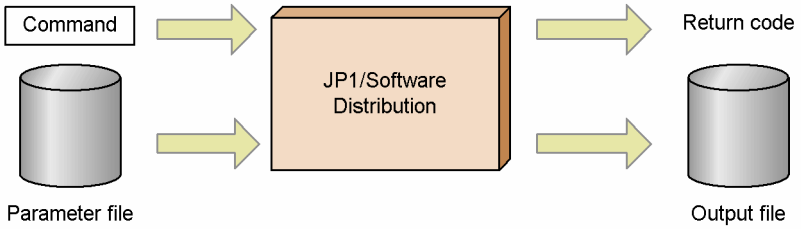
Y: Can be executed.

X: Cannot be executed.

4.2.2 I/O information during command execution

The figure below shows the I/O information during command execution.

Figure 4–4: I/O information during command execution



(1) Input information

During command execution, you can specify execution conditions and details about the job to be executed in the command argument and parameter files. Some items can be specified in both the command argument and parameter files, while other items can be specified only in either a command argument or in a parameter file.

Command

Enter the command to be executed and any arguments associated with it. In the arguments, you can specify the names of parameter files and output files. In addition, you can also define a variety of job execution conditions.

Parameter file

In a parameter file, you can code the destination for remote installation, installation conditions, and other types of information necessary for the execution of a job. For details about how to create a parameter file, see *4.26 Creating a parameter file*. The output file produced after the execution of a command can also be input as a parameter file for another command.

(2) Output information

You can verify the results of execution of a command using the following types of information.

Return code

The results of execution of the command are returned as a return code.

Output file

The results of execution of a command are output to the output file that was specified when the command was executed. You can use the output file from the creation or execution of a job as a parameter file for the execution of a command that retries the job.

(3) Note

When a user executes a command by using JP1/AJS or Windows Task Scheduler, do not specify a directory or file such as on a network drive that the user has no permissions to access for the parameter file and the output file.

4.2.3 Procedure for verifying command error information

If a command results in an error, you can verify the event log by using Windows NT Event Viewer.

You should check the event that is indicated as **Netmdm Utility** in the source column in Event Viewer (event ID 1-2018). Event-detail information provides the name of the command and the cause of the error. The following is an example of a detailed information display.

```
dcmpack=.exe /i C:\dmbat\in.txt /k********
Illegal value in parameter file:L.23
```

This detailed information indicates that line 23 of the parameter file (`C:\dmbat\in.txt`) contains an error. The specified password is displayed as `********`.

4.2.4 Command input format

You should specify JP1/Software Distribution commands in the following format:

command-name`/`*argument1*`[`*value1*`][/`*argument2*`[`*value2*`] ...]`

- Specify an argument with `/` and alphabetic characters.
- Because all character strings beginning with a `/` are interpreted as being arguments, you cannot specify a character string beginning with a `/` as a value.
- Place one or more spaces between a command name and an argument, and between an argument and a value.

- Any value that contains a space or an MS-DOS control character should be enclosed in double quotation marks (`" "`). Such character strings are interpreted according to the MS-DOS specifications. When specifying a double quotation mark as a character in a character string enclosed by double quotation marks, specify `\"`.

  Example:

  ```
  dcmpack.exe /b "dcmpack /i \"C:\dev 1\parameter file1.txt\"" /i "C:\dev
  2\parameter file2.txt"
  ```

4.3 About command explanations

This section explains each command that can use a parameter file, assuming that you will use a parameter file. When you can use both a parameter file and command arguments to specify parameters, this section assumes that you are using a parameter file to specify the parameters. If you want to use command arguments to specify the same parameters for the command, see the *Format of the command without using a parameter file* section in each command explanation.

In a parameter file, you code parameters required for the command execution by setting off the parameters by using tags depending on their meanings. To create a parameter file, you must first use the parameter file specification contents table to check the tags that correspond to the parameters to be set. Next, refer to *4.26.3 Tag specification method* for details about how to specify the tags. For details about the tag types and about the parameter file format, see *4.26 Creating a parameter file*.

If you specify both a parameter file and command arguments, the command arguments take precedence and the parameter file specifications are ignored (except that in the case of the `dcmpkget` command, some definitions in a parameter file may be valid. For details about the `dcmpkget` command, see *4.15 dcmpkget.exe (acquiring a backup of a package)*).

The following sections explain the descriptions of each command.

Function

Describes the function of the command.

Format

Shows the command syntax. You can omit an argument that is enclosed in brackets. When you can use both a parameter file and command argument to specify the same parameter, this syntax assumes that you are using a parameter file to specify the command.

Format example:

```
dcmXXXX.exe [/A] [/B]
             /i parameter-file1 [parameter-file2]
```

In the preceding example, you can omit all the arguments except for `/i` *parameter-file1*. You can specify a maximum of two parameter files.

Arguments

Explains each argument shown in *Format*. The parameters explained in this section cannot be specified in a parameter file.

Parameters in a parameter file and corresponding command arguments

Shows a table that lists the parameters you specify in the parameter file for the command. When you can also use command arguments to specify the same parameters instead of using a parameter file, the table also describes the correspondence between each parameter in a parameter file and the command arguments.

For details about the specifications in a parameter file and details about the default values when omitting them, see *4.26 Creating a parameter file*. If both a parameter file and a command argument are specified for the same parameter, the value specified by the command argument takes precedence, and the specification made by the parameter file is ignored.

Note that the title of this section changes to *Parameters in a parameter file* for a command that does not allow you to use command arguments to specify the contents of a parameter file.

Format of the command without using a parameter file

The following shows the command syntax when using only command arguments without a parameter file. A vertical bar (`|`) separating items means that one of the items can be selected.

Format example:

```
dcmXXXX.exe [/A|/B]
             /j job-name [/l job-folder-path]
```

In the preceding example, you can omit the arguments except for `/j` *job-name*. You can specify either `/A` or `/B`.

This item does not apply to commands in which the content of a parameter file cannot be specified by using an argument or commands for which a parameter file cannot be used.

Return codes

Explains the return codes that indicate the results of the command execution.

Notes

Explains the notes for the command, if any.

Examples:

Gives an example to explain how to execute the command.

4.4 dcmcoll.exe (collecting files)

This section explains the `dcmcoll` command, which collects files. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

Jobs executed using this command can be verified in the Job Status window of the managing server system.

(1) Function

This command creates and executes the following types of jobs that are related to remote collection:

- *Collect files from client*
- *Collect files from client to relay system* (JP1/Software Distribution Manager only).
- *Acquire collected files from relay system* (JP1/Software Distribution Manager only).
- *Delete collected files from relay system* (JP1/Software Distribution Manager only).

It also restores collected archive files.

JP1/Software Distribution Client (relay system) can only create and execute remote collection jobs, and restore archived files.

JP1/Software Distribution Client (relay system) can execute jobs only up to one level below it.

(2) Format

```
dcmcoll.exe [processing-key] [/G] [/Z] [/s]
             /i parameter-file1 [parameter-file2]
             /o result-output-file-name
            [/LC {ON|OFF}]
```

(3) Arguments

- *processing-key*

  This key specifies the type of job to be executed. Specify one of the following five processing keys after the command name; the default is `NETM_COLLECT`:

  - `NETM_COLLECT`

    This processing key executes a *Collect files from client* job. Specify the destination, the files to be collected, and the directory for the collected files in a parameter file or with command arguments.

    This argument can be specified in both JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

  - `NETM_COLTOS`

    This processing key executes a *Collect files from client to relay system* job. Specify the destination, the files to be collected, and the directory for the collected files in a parameter file or with command arguments.

    This argument can be specified only in JP1/Software Distribution Manager; when specified in JP1/Software Distribution Client (relay system), it may cause an error.

  - `NETM_COLTOM`

    This processing key executes a *Delete collected files from relay system* job. Specify the destination (relay system) in a parameter file or with command arguments.

    This argument can be specified only in JP1/Software Distribution Manager; when specified in JP1/Software Distribution Client (relay system), it may cause an error.

  - `NETM_COLRESET`

    This processing key executes a *Delete collected files from relay system* job. Specify the destination (relay system) in a parameter file or with command arguments.

    This argument can be specified only in JP1/Software Distribution Manager; when specified in JP1/Software Distribution Client (relay system), it may cause an error.

  - `NETM_UNARC`

This processing key restores collected archive files (files with a dmz extension). Specify the names of the files to be restored, the target directory, and the source directory in a parameter file or with command arguments.

This argument can be specified in both JP1/Software Distribution Manager and JP1/Software Distribution SubManager.

- /G

If the processing key is NETM_UNARC, this argument directly stores the restored file in the directory specified as the restoration destination. If the processing key is not NETM_UNARC, this argument, if specified, is ignored.

When /G is not specified, a directory with the same name as the destination host name is automatically created under the directory specified as the storage destination for restored files.

Do not specify this argument if the destinations must be distinguished.

- /Z

If the processing key is NETM_UNARC, this argument deletes the archive file at the same time as restoring the file, without deleting the directory in which the archive file is stored.

If the processing key is not NETM_UNARC, this argument, if specified, is ignored.

- /s

This argument creates and saves a job without executing it. If the processing key is NETM_UNARC, this argument, if specified, is ignored.

When this argument is specified, the output file produced by the execution of the command does not contain a job number.

- /i

Specify one or two full paths for the parameter file to be used. The two paths must be separated with a space. Specifying three or more paths causes the command to fail.

If two parameter files are specified, JP1/Software Distribution interprets by concatenating their contents. By specifying information about destinations and information about collection and restoration in separate parameter files, you can conveniently modify one of the files to re-execute the job.

Note that because any unneeded parameters are ignored, you can share the parameter file for collecting and restoring files. Specifying the same parameter in both files can cause an error.

- /o

Specify the full path for the output file.

If the processing key is NETM_UNARC, this argument is ignored. In other cases, this argument is required.

The following items are output to a specified output file upon normal completion of the command, overwriting any previously existing output file.

- Job name
- Job number
- Job storage folder path

The job number (value of jobno) identifies the job that has been started. When deleting this job or verifying its execution status, you should code the value of jobno in the parameter file. Note that specifying the value /s in a command argument suppresses the output of job numbers.

An output file for which /s is specified can be used directly as a parameter file for the dcmjexe command. If /s is not used, the output file can be used as a parameter file for the dcmjbrm, dcmrtry, dcmstat, and dcmstsw commands.

- /LC

Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

- ON

  Continues command processing even after logging off from Windows.

- OFF

  Forcibly terminates command processing once Windows is logged off.

This argument is effective when the command is executed from a service under any of the following OSs:

- Windows NT 4.0
- Windows 2000

- Windows XP
- Windows Server 2003 (excluding Windows Server 2003 (IPF))

Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

- Executing the command in JP1/Software Distribution Manager
  4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*
- Executing the command in JP1/Software Distribution Client (relay system)
  5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the contents of the parameter file used in this command. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–7: Correspondence between parameter file contents and arguments (dcmcoll command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_DESTINATION	directory_com	Directory information (computer hierarchy)	R#1, #2	/dc *value*
	directory_group	Directory information (group hierarchy)	R#1, #2	/dg *value*
	directory_ou	Directory information (organizational unit (OU) hierarchy)	R#1, #2	/do *value*
	group	Host group name	R#1, #2	/g *value*
	host_name	Host name	R#1, #2	/h *value*
	lower_clients	Whether any destination is specified	X	--
JOB_DESTINATION_ID	destination_id	ID name	R#1	/X *value*
FILE_COLLECTION	source_path	Collection-file name	R#3	/y *value*
	dmz_path	Storage folder for collected files (for collection) or source file/ folder (for restoration)	R#4	/z *value*
	unarc_path	Destination folder for restored files	R#5	/r *value*
JOB_ATTRIBUTE	job_generator	Job name	O#6	/j *value*
	jobno	Job number	X	--
	job_folder	Job folder path	O	/l *value*
	unsuspended	Whether there is a suspended distribution	X	--
JOB_SCHEDULE	job_entry_date	Job entry date	O#7	/jst *value*

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_SCHEDULE	job_execution_date	Job execution date	O#7	/jsx *value*
	job_expiration_date	Job expiration date	O#7	/jsp *value*
SCHEDULE	expiration_date	Package expiration date in the relay system	X	--
	expiration_days	Package retention days in the relay system	X	--
	installation_date_and_time	Installation date and time	X	--
	installation_timing	Installation (collection) timing	O	/tS or /tN
OPTION	compress	Compression, yes/no	O	/uY or /uN
	compress_type	Compression method	X	--
	restore	Restore operations during version upgrades	X	--
	encipher	Encryption yes/no	X	--
	reboot	Reboot after installation	X	--
	processing_dialog	Display the processing dialog during installation	X	--
USER_PROGRAM_INSTALLATION_CONDITIONS	external_program_executed_before_installation	External program that is started before installation (collection)	O	/b *value*
	external_program_executed_after_installation	External program that is started after installation (collection)	O	/a *value*
	external_program_error_handler	External program that is started upon error during installation (collection)	O#8	/e *value*
	external_program_handler	External program handler	X	--
	exit	Results-notification method for external program processing	X	--
	action	Disposition of processing error	X	--
	wait	Monitoring method	X	--
	timeout	Monitoring time	X	--
	wait_code	Wait code	X	--

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

JOB_DESTINATION and JOB_DESTINATION_ID are mutually exclusive. One of the parameters /g, /h, /dc, /dg, and /do which cannot be specified together with /X, must be specified.

If the processing key is either NETM_COLTOM or NETM_COLRESET, the only ID that can be specified as a destination is an ID registered as an ID management. The processing key NETM_UNARC, if specified, is ignored.

#2

You cannot specify group or host_name (/g or /h) together with directory_com, directory_group, or directory_ou (/dc, /dg, or /do). However, you can specify group and host_name (/g and /h) together. You can also specify any combination of directory_com, directory_group, and directory_ou (/dc, /dg, and /do).

#3

Required if the processing key is NETM_COLLECT or NETM_COLTOS.

#4

Required if the processing key is NETM_COLLECT, NETM_COLTOS, or NETM_UNARC.

#5

Required if the processing key is NETM_UNARC.

#6

If you omit job_generator or /j, *processing-key+job-execution-date-and-time* is automatically set as the job name. If you execute multiple commands with the same processing key, job names may be duplicated and jobs may not be executed correctly. If you execute multiple commands with the same processing key, Hitachi recommends that you specify different job names using job_generator or /j.

#7

Ignored if the processing key is NETM_UNARC.

#8

Not specifiable for collecting files from a UNIX client.

(5) Format of the command without using a parameter file

The following shows the format of the command when you specify the command by using arguments only instead of using a parameter file:

Collecting files from a client

```
dcmcoll.exe {[NETM_COLLECT] | NETM_COLTOS} [/s]
{[/g host-group] [/h host-name] | [/dc computer-hierarchy][/dg group-
hierarchy]
[/do OU-hierarchy] | /X ID-name}
/y collection-file-name /z storage-folder-for-collected-files
[/j job-name] [/l job-folder-path]
[/jst job-registration-date] [/jsx job-execution-date]
[/jsp job-execution-limit]
[{/tS|/tN}] [ {/uY|/uN}]
[/b external-program-that-is-started-before-collection]
[/a external-program-that-is-started-after-collection]
[/e external-program-that-is-started-upon-error-during-collection]
[/o result-output-file-name]
[/LC {ON|OFF}]
```

Collecting files from a relay server or deleting collected files from a relay system

```
dcmcoll.exe {NETM_COLTOM | NETM_COLRESET} [/s]
{[/g host-group] | [/h host-name} | /X ID-name}
[/j job-name] [/l job-folder-path]
[/jst job-registration-date] [/jsx job-execution-date]
[/jsp job-execution-limit]
[/o result-output-file-name]
[/LC {ON|OFF}]
```

Restoring files

```
dcmcoll.exe NETM_UNARC [/G] [/Z]
             /z source-file-or-folder-for-restoration
             /r destination-folder-for-restored-files
             [/LC {ON|OFF}]
```

(6) Return codes

The following explains the return codes that the `dcmcoll` command may return:

Code	Meaning	Action
0	Managing server started job, or the archive files were successfully restored.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the settings for the command argument or parameter file.
3	Error during connection to managing server.	Check the version of the managing server.
4	Unable to open output file.	Check the specification for the output file.
5	Communication failure between client and managing server.	Check the communications settings in the setup for the managing server.
7	Restoration of one or more archive files failed.	Check the archive file path. Full path of the restored file (*storage directory for restored file* + *created directory* (*archive file storage directory*) + *file name or directory name for the restored file*) might exceed 259 single-byte characters.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Notes

- Number of destinations and collection files specified
  - For each execution of the `dcmcoll` command, you can specify in the parameter file a maximum of 200 destinations (hosts, host groups, ID groups) or directory information items (OU hierarchies, group hierarchies, computer hierarchies). In addition, you can specify up to 100 collected files or associated directories for an increment of 200 destinations.
  - When specifying destinations and collection files by means of command arguments, you can specify only one destination and one file.
  - Multiple destinations and collection files specified in a parameter file are all ignored if the same items are specified using a command argument.
- Destination path

  You can specify a destination path. If the same destination is specified in terms of multiple paths, only the first definition takes effect.
- Jobs with a relay system destination

  Acquire collected files from relay system and *Delete collected files from relay system* jobs require the specification of a relay system as a destination. If you specify a client for the destination of this job, an error occurs or the system remains in execution underway status.
- Collection target and restoration destination directories
  - When a file is to be collected, a directory with the same name as the destination host name is automatically created under the directory specified as a source directory. The file is archived when it is collected and stored under the directory with the host name as an archive file, with a `.dmz` extension.
  - When an archived file is to be restored, as with file collection, a directory with the same name as the destination host name is automatically created under the directory specified as a source directory. When multiple archive files are to be restored in a single operation, and if files of the same name are contained in separate archive files, the files are overwritten. Therefore, when restoring multiple archive files containing identically named files, you should execute the dcmcoll command specifying separate source directories.
  - If the `/G` option is specified in a command argument during the restoration process, the file is directly expanded under the directory specified as a source directory. If you restore files collected from multiple

destinations at the same time, all files are overwritten and it becomes impossible to differentiate the files by destination. To restore only one archive file, use /G.

- If the /G option is not specified in a command argument during the restoration process, a directory with the same name as the destination host name is automatically created under the directory specified as the storage destination for restored files. However, if the directory containing the files to be restored is specified in /z or the dmz_path parameter of the FILE_COLLECTION tag, a directory is not created, and the file is expanded directly.

  If you need to distinguish the restored files by destination, in /z or the dmz_path parameter of the FILE_COLLECTION tag, specify the same directory that you specified during file collection.

- Specifying the job storage folder path

  If you execute the command with specification of a job storage folder path for a folder that has not been defined in the Job Definition window, the specified folder is created. The job storage folder that is created is not deleted and remains after the command has executed. If you do not plan to use this folder, you should delete it after the job is completed.

- If you do not use the parameter file:
  - If the collection destination is WS (in a UNIX system), specify any drive for the drive that contains the collection destination directory. During collection, the specified drive will be ignored, and the files will be collected according to the directory specification. In the following example, c: will be ignored:

    c:/user/tmp

- Specifying an external program
  - If the collection destination is WS (in a UNIX system) and you specify an external program, use the parameter file to execute the command.
- Executing a remote collection job or restoring archived files

  See *5.1.4 Notes on execution of remote collection* in the manual *Administrator's Guide Volume 1*.

(8) Examples

The following is an example of collecting files from the directories SDerror.dir, SDerror2.dir, and SDerror3.dir under C:\temp from hosts dmp491 and dmp492, on which JP1/Software Distribution Client (client) is running. The command is specified so that it starts the collection process when the client is started, and starts external programs before collection, after collection, and in the event of an error.

(a) Creating a parameter file

Code the attributes of the host and the collection file as follows, and save the parameter file under any name.

```
** dcmcoll Parameter File Sample

JOB_DESTINATION{
host_name=dmp492
host_name=dmp491
group = \grp\gname1
group = \grp\gname2;\grp\gname3
}
SCHEDULE{
installation_timing = S
}
OPTION{
compress=Y
}
USER_PROGRAM_INSTALLATION_CONDITIONS{
external_program_executed_before_installation = "C:\test B.exe"
external_program_executed_after_installation = C:\testA.exe -x "a aa"
external_program_error_handler = "C:\test E.exe"
}
FILE_COLLECTION{
source_path= C:\tmp\SDerror.dir
source_path= C:\tmp\SDerror2.dir;C:\tmp\SDerror3.dir
dmz_path= C:\temp\collect
}
```

(b) Command execution

When saving the parameter file in a file named `C:\Dmbat\dcmcoll.txt` and creating an output file in `C:\Dmbat\out.txt`, specify the command as follows:

```
dcmcoll /i C:\Dmbat\dcmcoll.txt /o C:\Dmbat\out.txt /j temp collection
```

(c) Checking the output file

Upon normal completion of the command, the job name, job number, and the path for the job storage folder are output to the `C:\Dmbat\out.txt` file as follows:

```
JOB_ATTRIBUTE{
job_generator= NETM_COLLECT_03_12_11_13_34_36
jobno= JB03121113315383
job_folder= \
}
```

4.5 dcmcsvu.exe (exporting to a CSV-formatted file)

This section explains how to use the dcmcsvu command, which exports inventory information to a text file in CSV format or in the parameter file format.

(1) Function

This command connects the managing server running on the local machine and exports the current inventory information to a text file in CSV format or in the parameter file format. In addition, the results of detecting hosts in which JP1/Software Distribution is not installed or the results of searching for hosts on the network can be output to CSV-formatted files. Note that you can output a CSV file in Unicode, in which case the only supported encoding is UTF-8.

The template by which inventory information can be output is the same as the template used in the CSV output utility. Information is output for the items included in the specified template (the columns in the template). If you use a parameter file to specify this command, you can set details about the output items or filter the output information.

For output of information on hosts on which JP1/Software Distribution is not installed, host information that is specified as outside the range of detection cannot be output.

(2) Format

```
dcmcsvu.exe /i parameter-file-name /o result-output-file-name [/LC {ON|OFF}]
```

(3) Arguments

- /i

  In *parameter-file-name*, specify the full pathname of the parameter file.

- /o

  In *result-output-file-name*, specify the full pathname of the result output file. If you do not specify a full pathname, the result output file is created in the current directory.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the template used for exporting and output file format instead of specifying these parameters in a parameter file. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–8: Correspondence between parameter file contents and arguments (dcmcsvu command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
OUTPUT_CONSTRAINTS	template	Template used for exporting	R	*template-key*
	format	Output file format	O#1	/par or /csv
	group_membership	Membership group	O#2	--
	row	Item (row) you want to output	O#3	--
	condition	Comparison condition	O	--
	unicode	Whether a CSV file in Unicode is to be output	O#4, #5	/uniY or /uniN

Legend:

R: required.

O: optional.

--: Cannot be specified in a command argument.

#1

The default is to output the inventory information to a file in CSV format.

#2

If specified for the output of search results on a host in which JP1/Software Distribution is not installed, this parameter is ignored.

#3

The row parameter takes effect only when you export inventory information to a file in CSV format. If you specify the row parameter when exporting to a file in the parameter file format, the row parameter is ignored.

#4

In order to output a CSV file in Unicode, all the following conditions must be satisfied:

- JP1/Software Distribution Manager is used for command execution
- The following relational database is used in JP1/Software Distribution:
  - Microsoft SQL Server 2005 or later
- One of the following templates is specified:
  - **System information**
  - **Installed package information**
  - **Registry collection item**
  - **Microsoft Office products**
  - **Anti-Virus products**

#5

If this parameter is omitted, the registry setting for output of CSV files in Unicode is effective. If you specify the registry setting for output of CSV files in Unicode and omit this parameter, CSV files are output in Unicode. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

(5) Format of the command without using a parameter file

The following shows the format of the command when you specify the command by using arguments only instead of using a parameter file.

```
dcmcsvu.exe template-key [/par|/csv] [/uniY|/uniN]
/o result-output-file-name [/LC {ON|OFF}]
```

For details about available template keys, see Table *4-23 Export file formats and templates that can be specified* in *4.26.14 OUTPUT_CONSTRAINTS (specifying the output information)*. The items that you can output with each template are the same as those you output with the CSV output utility. For details about the items that are output, see *9.1.1 Items eligible for output to a CSV-formatted file* in the manual *Administrator's Guide Volume 1*.

With respect to the output file format, specify `format=par` (or `csv`) for a parameter file. Note however, that you must specify `dcmcsvu.exe /par` (or `/csv`), in which a slash (`/`) is inserted at the beginning for the command argument.

Note that the specification for output of CSV files in Unicode is `unicode=Y` (or `unicode=N`) in a parameter file, while it is `dcmcsvu.exe /uniY` (or `dcmcsvu.exe /uniN`) as a command argument.

When you use command arguments instead of using a parameter file, you cannot specify details of the output items or filter the output information.

(6) Return codes

The following explains the return codes that the `dcmcsvu` command may return:

Code	Meaning	Action
0	The file output was successfully completed.	None.
1	The command cannot open the specified parameter file or the format of the specified parameter file is incorrect.	Check the pathname or format of the parameter file.
2	An invalid value is specified in a command argument or in the parameter file.	Check the values of command arguments or the values of the parameters in the parameter file.
3	An error occurred during connection or access to the managing server.	Check that the managing server and database server are running and that their settings are correct.
4	The results output file cannot be opened.	Check the status of the results output file, because it may have been opened by another application or there may be insufficient space for the file.
5	The operating environment is incorrect.	Ensure that the operating environment settings for the managing server or database server are correct.
10	The command could not output the information because the number of rows to be written to the parameter file exceeded the maximum when `/par` was specified.	Check the information that will be output and reduce the number of rows to be output.
11	The information to be written to the output file does not exist, so the command did not create the output file.	None.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Example 1

The following is an example in which the execution status of a transferred job is `waiting for installing/collecting`, and in which the job execution status for a host whose job destination name is `dmp4*` is output to the `JOB_DESTINATION` tag using the parameter file format:

(a) Creating a parameter file

Create the following parameter file and save it with any name:

```
OUTPUT_CONSTRAINTS{
template = J_STAT
condition = result=Waiting for installing/collecting AND dstname = dmp4* ;
}
```

You can also use the `status` parameter to extract the jobs in the `waiting for installing/collecting` status. To use the `status` parameter to extract jobs, specify the first six characters of the maintenance code: for example, `status=2000B0`.

(b) Executing the command

When you created the parameter file with the name `C:\temp\in.txt` and you want to export the result to the `C:\temp\parmjob.txt` file, specify the following command:

```
dcmcsvu.exe /i C:\temp\in.txt /o C:\temp\parmjob.txt /par
```

(c) Checking the result output file

After the command terminates normally, the result is output to the `JOB_DESTINATION` tag in the `C:\temp\parmjob.txt` file in the parameter file format:

```
JOB_DESTINATION {
host_name = dmp410; dmp4200; dmp4system
}
```

(8) Example 2

The following is an example in which the execution status of a transferred job is `waiting for installing/collecting` and in which job name, job execution date/time at the server, and job destination name on a host whose job destination name is `dmp4*` are output to a CSV-formatted file. In this example, the status item, instead of the job status item, is used to refine the specification of the job execution status.

(a) Creating a parameter file

Create the following parameter file and save it with any name:

```
OUTPUT_CONSTRAINTS{
template = J_STAT
row = jname; execdate; dstname
condition = status=2000B0 AND dstname = dmp4*;
}
```

(b) Executing the command

When you created the parameter file with the name `C:\temp\in.txt` and you want to export the result to the `C:\temp\jobout.csv` file, specify the following command:

```
dcmcsvu.exe /i C:\temp\in.txt /csv /o C:\temp\jobout.csv
```

(9) Example 3

The following is an example in which system information on a host with a minimum installed RAM size of 256 megabytes and belonging to either a host group A or a host group B is output to a CSV-formatted file.

(a) Creating a parameter file

Create the following parameter file and save it with any name:

```
OUTPUT_CONSTRAINTS{
template = SYS_INFO
condition = ram>=256;
group_membership = \A;\B;
}
```

(b) Executing the command

When you created the parameter file with the name `C:\temp\in.txt` and you want to export the result to the `C:\temp\system.csv`, specify the following command:

```
dcmcsvu.exe /i C:\temp\in.txt /csv /o C:\temp\system.csv
```

(10) Example 4

The following is an example in which installed package information on the following host is output to a CSV-formatted file: a host on which a package with a package name `*OFFICE` and whose first-digit value of the latest version is 6 or less is installed.

(a) Creating a parameter file

Create the following parameter file and save it with any name:

```
OUTPUT_CONSTRAINTS{
template = INSTLD_PKG
condition = pname = *OFFICE;
condition = newver < 6;
}
```

(b) Executing the command

When you created the parameter file with the name `C:\temp\in.txt` and you want to export the result to the `C:\temp\inspack.csv`, specify the following command:

```
dcmcsvu.exe /i C:\temp\in.txt /csv /o C:\temp\inspack.csv
```

4.6 dcmdice.exe (exporting a software inventory dictionary)

This section explains the `dcmdice` command that exports software inventory dictionaries. You can execute this command on the managing server of JP1/Software Distribution Manager. This command does not use a parameter file.

(1) Function

This command connects to a managing server running on a local host, and outputs either a software inventory dictionary or information on deleted software management tables to a CSV-formatted file. The CSV-formatted file that is output by the `dcmdice` command can be edited using spreadsheet software and can be imported into a software inventory dictionary by using the `dcmdici` command.

For each software title, the following types of information are output to the CSV-formatted file:

Management flag, software name, software version, company name, language, path name, file name, file version, file size, update date/time, search date/time, explanation, the number of licenses owned, the number of license warnings issued, and update date/time (UTC)#.

#: The update date/time (UTC) is converted to the local time of the managing server on which the command was executed before it is output.

(2) Format

```
dcmdice.exe /of output filename [/ol maximum lines][/mf management flag]
            [/LC {ON|OFF}]
```

(3) Arguments

- `/of`

  Specify the file to which software inventory dictionary information is to be output, as a full path. Extensions other than `csv` can also be specified.

- `/ol`

  Specify the maximum number of lines to be output to a file. You can specify a value from 100 to 65,535. If the output is more than the specified line count, another file is created. If multiple files are created, they are assigned numbered file names. For example, if the result output file is originally specified as `dictionary.csv`, file names `dictionary2.csv`, `dictionary3.csv`, etc. are assigned. The default is not file splitting, and information is output to a single file.

- `/mf`

  To output only a specific type of software to a CSV-formatted file, specify the management flag associated with the type of software. Specify one of the following management flags. A space is not required between `/mf` and the management flag.

  - `I`

    New software

  - `E`

    Managed software

  - `U`

    Unmanaged software

  - `H`

    Held software

  - `D`

    Software that has been deleted from the software inventory dictionary and registered in the deleted software management table.

The default is to output all software titles that are found in the software inventory dictionary; information about software that is registered in the deleted software management table is not output.

- `/LC`

  Specify `ON` or `OFF` to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - `ON`

    Continues command processing even after logging off from Windows.

  - `OFF`

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify `/LC ON` when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual*Setup Guide*.

  Note that operation may differ depending on the combination of the `/LC` specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Return codes

The following explains the return codes that the `dcmdice` command may return:

Code	Meaning	Action
0	The file output was successful.	None.
2	An invalid value is specified in a command argument.	Check the values of command arguments.
3	An error occurred when the command attempted to connect or access the managing server.	Check the version of the managing server.
4	The output file cannot be opened.	Check the output file specification.
12	Other errors occurred.	Check the event log. Following are possible causes for the error: System error; processing was denied; there is no data in the software inventory dictionary or in the deleted software management table

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Examples

- Specify the following to output software inventory dictionary information to the file `C:\temp\dice.csv` so that any information exceeding 10,000 lines is output to another file (`C:\temp\dice2.csv`):

  ```
  dcmdice.exe /of C:\temp\dice.csv /ol 10000
  ```

- Specify the following to exclusively output information about the deleted software management table to the file `C:\temp\dice.csv`:

  ```
  dcmdice.exe /of C:\temp\dice.csv /mfD
  ```

4.7 dcmdici.exe (importing a software inventory dictionary)

This section explains the `dcmdici` command that imports software inventory dictionaries. You can execute this command on the managing server of JP1/Software Distribution Manager. This command does not use a parameter file.

(1) Function

This command connects to the managing server running on a local host, and imports software information coded in a CSV-formatted file into a software inventory dictionary. The CSV-formatted file that was output using the `dcmdice` command can be edited using spreadsheet software and imported into a software inventory dictionary by using the `dcmdici` command.

The CSV-formatted file to be imported must contain the types of information shown in the table below in the indicated order. The software to be imported is identified in terms of the following key items: *filename*, *file size*, and *update date/time*. If the information identified in the key items is modified, the importation process treats the associated software as a separate software title.

Table 4–9: Values that can be specified in a CSV-formatted file

Item	Specifiable value	Required
Management flag	`I`, `E`, `U`, `H`, `D`, or `F` The management flags have the following meanings: • `I` New software • `E` Managed software • `U` Unmanaged software • `H` Held software • `D` Software that is registered in the deleted software management table • `F` The software to be deleted from the deleted software management table	--
Software name	Character string with 50 characters or less	--
Software version	Character string with 50 characters or less	--
Company name	Character string with 50 characters or less	--
Language	The last 4 digits of the Windows locale identifier (LCID). However, if a language associated with the LCID specified in the Filter Software Inventory dialog box does not exist, the language is indicated as **Neutral**. Specifying the value **0400** causes the language to be identified as **Specified language** in the Filter Software Inventory dialog box.	--
Pathname	Character string with 255 characters or less. If the software is already registered in the software inventory dictionary, importing it by changing the path name of the CSV-formatted file does not change the path name for the software inventory dictionary.	R
Filename	Character string with 255 characters or less.	R
File version	Character string with 50 characters or less.	--
File size	An integer greater than or equal to 0, in units of bytes.	R

Item	Specifiable value	Required
Update date/time	Year, month, day, hour, minute, and second in the *YYYY*/*MM*/*DD hh*:*mm*:*ss* format. The allowable range of dates and time values is `1970/01/01 00:00:00` to `2037/12/31 23:59:59`.	R
Search date/time	Year, month, day, hour, minute, and second in the *YYYY*/*MM*/*DD hh*:*mm*:*ss* format. The allowable range of dates and time values is `1970/01/01 00:00:00` to `2037/12/31 23:59:59`. If the software is already registered in the software inventory dictionary, changing the search date/time in the CSV-formatted file does not change the search date/time for the software inventory dictionary.	--
Description	Character string with 50 characters or less	--
Number of owned licenses	An integer from 0 to 99,999,999.	--
Number of license warnings	An integer from 0 to 99,999,999. If this value is greater than the number of owned licenses, an error may result.	--
Update date/time (UTC)	Year, month, date, hour, minute, and second in the format *YYYY*/*MM*/*DD hh*:*mm*:*ss*. The allowable range of date/time values is `1970/01/01 00:00:00` to `2037/12/31 23:59:59`. It is specified in local time. The time specified here is converted to UTC time before being imported.	--

Legend:
R: required.
--: optional.

How software information is processed during the importation process varies depending on the registration status of the software in the software inventory dictionary before it is imported and the management flag associated with the software information to be imported. The table below shows the types of import processing performed.

Table 4–10: Import processing

Before-importation registration status	Management flag for the software to be imported	Import-time processing
Registered in the deleted software management table	`I`, `E`, `U`, `H`, `D`	Ignored.
	`F`	Deleted from the deleted software management table.
Registered in the software inventory dictionary	`I`, `E`, `U`, `H`	Imported into the software inventory dictionary, and the software is updated if there is any changed information.
	`D`	The software is deleted from the software inventory dictionary only if the software was unmanaged software before it was imported, and it is registered in the deleted software management table. The software is also deleted from the software inventory information maintained on the hosts. If the value `/f` is specified in the argument, the same processing is performed on software that has any management flag.
	`F`	Ignored.
Registered in neither the deleted software management table nor in the software inventory dictionary.	`I`, `E`, `U`, `H`	Added to the software inventory dictionary.
	`D`	Ignored. If the value `/f` is specified in the argument, the software is added to the deleted software management table.
	`F`	Ignored.

(2) Format

```
dcmdici.exe /if input-filename [/f]
            [/df output-filename1] [/nf output-filename2]
            [/LC {ON|OFF}]
```

(3) Arguments

- /if

  Specify the CSV-formatted file, as a full path, to be imported to the software inventory dictionary. Extensions other than csv can also be specified.

- /f

  If the software registered in the software inventory dictionary is imported by specifying the management flag D, the software is deleted from the software inventory dictionary and registered in the deleted software management table. If software that is not registered in the software inventory dictionary is imported by specifying the management flag D, the software is registered in the deleted software management table.

  If software is imported by omitting this argument but specifying the management flag D, only the software registered in the software inventory dictionary by using the management flag U is imported.

- /df

  This argument outputs information about the software that was not added to the software inventory dictionary because the software was registered in the deleted software management table. However, if software registered in the deleted software management table is imported by specifying the management flag D, no software information is output.

  Specify the full path for the file to which target lines are to be output. Extensions other than csv can also be specified. If no target lines exist, files are not output even when this argument is specified.

- /nf

  If software that was registered in the software inventory dictionary by specifying the management flag I, E, or H is imported by specifying the management flag D, this argument causes the output of lines that were not deleted. Similarly, if software that is registered neither in the software inventory dictionary nor in the deleted software management table is imported by specifying the management flag D, this argument causes the output of target lines.

  Specify the full path for the file to which target lines are to be output. Extensions other than csv can also be specified. If no target lines exist, files are not output, even when this argument is specified.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Return codes

The following explains the return codes that the `dcmdici` command may return:

Code	Meaning	Action
0	Either import was successful, or there was no change in the software inventory dictionary or in the deleted software management table.	None.
2	An invalid value is specified in a command argument.	Check the values of command arguments.
3	An error occurred when the command attempted to connect or access the managing server.	Check the version of the managing server.
4	The input or output file cannot be opened.	Check the input or output file specification.
12	Other errors occurred.	Check the event log. Possible causes of error include: a system error, and processing denied.
15	Another process is updating the database.	Wait a while and then retry. Alternatively, check the process that is conducting the updating.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Notes

When you import a software inventory dictionary, perform the import in the same time zone as the managing server on which you exported the software inventory dictionary. If the import is performed in a different time zone from the one in which the export was performed, the acquired update date/time of the import will be incorrect, and you will not be able to manage the software information correctly.

(6) Examples

- To import the CSV-formatted file `C:\temp\dici.csv`, and to output undeleted software among the software titles that were imported by specifying the management flag D to the file `C:\temp\deldbn.csv`, specify the following:

  ```
  dcmdici.exe /if C:\temp\dici.csv /nf C:\temp\deldbn.csv
  ```

- To import the CSV-formatted file `C:\temp\dici.csv`, and to delete the software that was imported by specifying the management flag D, irrespective of the management flags in the software inventory dictionary, specify the following:

  ```
  dcmdici.exe /if C:\temp\dici.csv /f
  ```

- To import the CSV-formatted file `C:\temp\dici.csv`, and to output to the file `C:\temp\deldb.csv` information about software that is not added to the software inventory dictionary because it is already registered in the deleted software management table, specify the following:

  ```
  dcmdici.exe /if C:\temp\dici.csv /df C:\temp\deldb.csv
  ```

4.8 dcmgpmnt.exe (applying policies to all hosts)

This section explains the dcmgpmnt command, which applies policies to all hosts. You can execute this command on the managing server of JP1/Software Distribution Manager. A parameter file is not used with this command.

(1) Function

This command connects to the managing server (JP1/Software Distribution Manager) on the local computer and assigns the registered hosts to host groups in a single operation, according to the created policies.

(2) Format

```
dcmgpmnt.exe [processing-key] [/LC {ON|OFF}]
```

(3) Argument

- *processing-key*

  This key specifies the type of policy to apply to the host groups. Specify one or more of the following processing keys after the command name. The default is NETM_ALLGROUP.

  - NETM_ALLGROUP

    Applies all the policies to the host group.

  - NETM_IPSCOPE

    Applies the policy *Group by IP address* to the host groups.

  - NETM_OSTYPE

    Applies the policy *Group by OS type* to the host groups.

  - NETM_USERINV

    Applies the policy *Group by user inventory items* to the host groups.

  You can specify NETM_IPSCOPE, NETM_OSTYPE, and NETM_USERINV in any combination. Use spaces to delimit each processing key. The default is NETM_ALLGROUP.

  Note that an error occurs and return code 2 is returned if any of the following specifications is given:

  - You specify NETM_ALLGROUP in combination with another processing key.
  - You repeat the same processing key.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Return codes

The following explains the return codes that the `dcmgpmnt` command may return:

Code	Meaning	Action
0	Normal termination or no applicable hosts.	None.
2	Invalid value in command argument.	Check the values in the command argument.
3	Error during connection to managing server.	Check the version of the managing server.
12	Other errors occurred.	Check the event log.
15	Another process is updating the database.	Wait a while and then re-execute the command, or check the process that is updating the database.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Example

The following is an example of applying the policies *Group by IP address* and *Group by user inventory items* to the host groups.

```
dcmgpmnt.exe NETM_IPSCOPE NETM_USERINV
```

4.9 dcmhstwo.exe (detecting a host on which JP1/Software Distribution is not installed)

This section explains the dcmhstwo command, which detects hosts on which JP1/Software Distribution is not installed. You can execute this command on the managing server of JP1/Software Distribution Manager. This command does not use a parameter file.

(1) Function

This command detects hosts on which JP1/Software Distribution is not installed.

Of the hosts that are coded in a specified network configuration information file, this command detects hosts having MAC addresses that are not registered on the managing server running on the local host, as hosts on which JP1/Software Distribution is not installed. The results of detection are stored in the managing server's database.

For details about how to create the network configuration information file, see *9.7.8 Creating a network configuration information file* in the manual *Setup Guide*.

(2) Format

```
dcmhstwo.exe /if network-configuration-information-file [/LC {ON|OFF}]
```

(3) Arguments

- /if

  Specify a network configuration information file as a full path.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Return codes

The following table shows return codes that are generated when the dcmhstwo command is executed:

Code	Meaning	Action
0	Normal termination.	None.
2	An invalid value is specified in the command argument.	Check the value assigned to the command argument.

Code	Meaning	Action
3	An error occurred when an attempt was made to connect to the managing server.	Check the version of the managing server.
4	Unable to open the network configuration information file.	Check the file path.
5	Communication failed between the client and the managing server.	In the setup for the managing server, check the communication environment settings.
12	Other errors occurred.	See the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Example

The following is an example in which the network configuration information file `netcomp.csv` stored in the `C:\temp` folder is read and a host on which JP1/Software Distribution is not installed is detected:

```
dcmhstwo.exe /if C:\temp\netcomp.csv
```

4.10 dcminst.exe (creating and executing a job)

This section explains the `dcminst` command, which creates and executes jobs. You can execute this command on the managing server of JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

Jobs executed with this command can be verified in the Job Status window of the managing server system.

(1) Function

This command creates and executes the following types of jobs that are related to remote installation:

- *Install package*
- *Transfer package to relay system* (JP1/Software Distribution Manager only)
- *Batch delete packages on relay system* (JP1/Software Distribution Manager only)
- *Send package, allow client to choose*

JP1/Software Distribution Client (relay system) can create and execute only *Install package* and *Send package, allow client to choose* jobs.

JP1/Software Distribution Client (relay system) can only execute jobs that are one level below itself.

(2) Format

```
dcminst.exe [processing-key] [/f] [/s]
             /i parameter-file1 [parameter-file2]
             /o result-output-file-name
            [/LC {ON|OFF}]
```

(3) Arguments

- *processing-key*

  This key specifies the type of job to be executed. Specify one of the following four processing keys after the command name; the default is `NETM_INSTALL`.

  - `NETM_INSTALL`

    This processing key executes an *Install package* job. Specify the package to be installed and the installation destination in a parameter file or with command arguments.

    This argument can be specified in both JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

  - `NETM_STORE`

    This processing key executes a *Transfer package to relay system* job. Specify the package to be transmitted and its destination (the client facilities for the relay system) in a parameter file or with the command arguments.

    This argument can be specified only in JP1/Software Distribution Manager; when specified in JP1/Software Distribution Client (relay system), the argument causes an error.

  - `NETM_DELETE`

    This processing key executes a *Batch delete packages on relay system* job. Specify the destination (the client facilities for the relay system) in a parameter file or with the command argument.

    This argument can be specified only in JP1/Software Distribution Manager; when specified in JP1/Software Distribution Client (relay system), the argument causes an error.

  - `NETM_USERINST`

    This processing key executes a *Send package, allow client to choose* job. Specify the package to be installed and the installation destination in a parameter file or with the command arguments.

    This argument can be specified in both JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

- `/f`

If the package to be installed is already installed on the destination client, this argument specifies installation by overwriting. If this argument is not specified, the job terminates normally without overwriting the previously installed package.

If the processing key is NETM_DELETE, this argument, if specified, is ignored.

- /s

  This argument creates and saves a job without executing it.

  When the command is executed, the output file produced by specifying this argument does not contain a job number.

- /i

  Specify one or two full paths for the parameter file to be used. The two paths must be separated by a space. Specifying three or more paths causes the command to fail.

  If two parameter files are specified, JP1/Software Distribution interprets by concatenating their contents. By specifying destinations and packages in separate parameter files, you can only modify a package and redistribute it to the same client, or distribute the same package to different destinations. In this case, you can use the output file for the dcmpack command as a parameter file specifying the attributes of packages.

- /o

  Specify the full path for the output file. The following items are output to the specified output file upon normal completion of the command, overwriting any previously existing output file.

  - Job name
  - Job number
  - Job storage folder path

  The job number (value of jobno) identifies the job that has been started. When deleting this job or verifying its execution status, you should code the value of jobno in the parameter file. Note that specifying the value /s in a command argument suppresses the output of job numbers.

  An output file for which /s is specified can be used directly as a parameter file for the dcmjexe and dcmrmgen commands. If /s is not specified, the output file can be used as a parameter file for the dcmjbrm, dcmrtry, dcmstat, and dcmstsw commands.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

  - Executing the command in JP1/Software Distribution Client (relay system)

    5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the contents of the parameter file used in this command. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–11: Correspondence between parameter file contents and arguments (dcminst command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_DESTINATION	group	Host group name	R[#1]	/g *value*
	directory_com	Directory information (computer hierarchy)	R[#1, #2]	/dc *value*
	directory_group	Directory information (group hierarchy)	O[#1, #2]	/dg *value*
	directory_ou	Directory information (organizational unit (OU) hierarchy)	O[#1, #2]	/do *value*
	host_name	Host name	R[#1]	/h *value*
	lower_clients	Whether to specify all lower clients	O[#1, #3]	--
JOB_DESTINATION_ID	destination_id	ID name	R[#1]	/X *value*
PACKAGING_INFORMATION[#4]	package_name	Package name	R	/p *value*
	package_id	Package ID	R	/I *value*
	version_revision	Version/revision	R	/v *value*
	generation	Generation	R	/G *value*
	cabinet_name	Cabinet name	R	/c *value*
	cabinet_id	Cabinet ID	R	/C *value*
	package_code	Code type	O	/KW or /KP
JOB_ATTRIBUTE	job_generator	Job name	O[#5]	/j *value*
	jobno	Job number	X	--
	job_folder	Job folder path	O	/l *value*
	unsuspended	Distribution during suspension yes/no	O[#6]	/uns *value*
JOB_SCHEDULE	job_entry_date	Job registration date and time	O	/jst *value*
	job_execution_date	Job execution date and time	O	/jsx *value*
	job_expiration_date	Job execution time limit	O	/jsp *value*
JOB_SPLIT_DELIVERY[#6]	split_size	Split size	O	/sds *value*
	wait_time	Transfer interval	O	/sdt *value*
JOB_CLIENT_CONTROL	client_wake_up	Whether to activate the client	O	/WWU
	client_shutdown	Whether to shut down the client	O	/WUS

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

JOB_DESTINATION and JOB_DESTINATION_ID are mutually exclusive. The parameters /g, /h, /dc, /dg, and /do cannot be specified together with /X. Always specify one or the other.

If the processing key is either NETM_STORE or NETM_DELETE, an ID cannot be specified.

#2

You cannot specify group or host_name (/g or /h) together with directory_com or directory_ou (/dc or /do). However, you can specify group and host_name (/g and /h) together. You can also specify any combination of directory_com, directory_group, and directory_ou (/dc, /dg, and /do).

Even if you specify lower_clients together with directory_com, directory_group, or directory_ou (/dc, /dg, or /do), all destination specifications are ignored.

#3

Cannot be specified in JP1/Software Distribution Client (relay system).

#4

In this command, a reserved word cannot be specified as a parameter for the tag PACKAGING_INFORMATION.

#5

If you omit job_generator or /j, *processing-key+job-execution-date-and-time* is automatically set as the job name. If you execute multiple commands with the same processing key, job names may be duplicated and jobs may not be executed correctly. If you execute multiple commands with the same processing key, Hitachi recommends that you specify different job names using job_generator or /j.

#6

unsuspended of JOB_ATTRIBUTE and JOB_SPLIT_DELIVERY are mutually exclusive.

(5) Format of the command without using a parameter file

The following shows the format of the command when you specify the command by using arguments only instead of using a parameter file:

```
dcminst.exe [processing-key] [/f] [/s]
               {[/g host-group] [/h host-name] |
               [/dc computer-hierarchy] [/dg group-hierarchy]
               [/do OU-hierarchy] | /X ID}
               /p package-name /I package-ID
               /v version/revision /G generation
               /c cabinet-name /C cabinet-ID
              [{/KW| /KP}]
              [/j job-name] [ /l job-folder-path]
              [/uns unsuspended]
              [/jst job-registration-date-and-time]
              [/jsx job-execution-date-and-time]
              [/jsp job-execution-time-limit]
              [/sds split-size] [/sdt transfer-interval]
              [/WWU client-wakeup]
              [/WUS client-shutdown]
               /o result-output-file-name
              [/LC {ON|OFF}]
```

(6) Return codes

The following explains the return codes that the dcminst command may return:

Code	Meaning	Action
0	Managing server has started job.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the settings for the command argument or parameter file.

Code	Meaning	Action
3	Error during connection to managing server.	Check the version of the managing server.
4	Unable to open output file.	Check the specification for the output file.
5	Communication failure between client and managing server.	Check the communications settings in the setup for the managing server.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Notes

- Number of destinations and packages specified
  - In a parameter file, a maximum of 200 destinations can be specified per execution of a `dcminst` command, and a maximum of 100 packages can be specified.
  - The command can include only one argument for specifying the destination and only one argument for specifying the package. However, in the `/h` or `/g` argument, you can specify up to 200 values by separating them with a semicolon (`;`).
  - Multiple packages specified in a parameter file are all ignored if the same items are specified in terms of a command argument.
- `/f` option specification
  - Specifying the `/f` option causes the package to be transmitted regardless of whether the same package has previously been distributed. To avoid an unnecessary increase in network traffic, you should use the `/f` option only when overwriting a previously distributed package.
  - Specifying the `/f` option allows you to install software of the same version but different contents on an overwrite basis. However, you should use this option advisedly because it negates the ability of JP1/Software Distribution to keep track of the versions of installed packages.
- The job name specified in the `job_generator` parameter of the `JOB_ATTRIBUTE` tag already exists as an existing job name:
  - A job is created based on an existing job definition.
- Specifying the startup of a client

  When specifying whether a client is to be started in an environment in which host IDs are used, specify either a host group name or the ID group as the destination for a job. If you specify a host name, the client startup specification is ignored. In the case of a relay system, the client startup specification is always ignored.
- Specifying the job storage folder path

  If you execute the command with specification of a job storage folder path for a folder that has not been defined in the Job Definition window, the specified folder is created. The job storage folder that is created is not deleted and remains after the command has executed. If you do not plan to use this folder, you should delete it after the job is completed.

(8) Example

The following is an example of distributing software packaged under the name `Finance Data 2003 5` to hosts `dmp491` and `dmp492`, on which JP1/Software Distribution Client (client) is running.

(a) Creating a parameter file

Code the attributes of the host and the package in a parameter file as follows, and save the parameter file under any name:

```
** dcminst Parameter File Sample

JOB_DESTINATION{
host_name=dmp491;dmp492
}
```

```
PACKAGING_INFORMATION
{
package_name=Finance Data 2003 5
package_id=FD200305
version_revision=000001
generation=0000
cabinet_name=FCAB01
cabinet_id=F1
package_code=P
}
```

(b) Command execution

When saving the parameter file that has been created in a file named `C:\Dmbat\dcminst.txt` and acquiring an output file in `C:\Dmbat\out.txt`, code the following specification:

```
dcminst.exe /i C:\Dmbat\dcminst.txt /o C:\Dmbat\out.txt /j overwrite-
installation /f
```

(c) Checking the output file

Upon normal completion of the command, the job name, job number, and job storage folder path are output to the `C:\Dmbat\out.txt` file as follows:

```
JOB_ATTRIBUTE{
job_generator= NETM_INSTALL_2003_12_11_13_34_36
jobno= JB03121113315383
job_folder= \
}
```

4.11 dcmjbrm.exe (deleting a job)

This section explains the dcmjbrm command, which deletes jobs. You can use this command in the managing server system for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

This command specifies an executed job in a parameter file and deletes it from the managing server.

(2) Format

```
dcmjbrm.exe /i parameter-file-name [/LC {ON|OFF}]
```

(3) Arguments

- /i

  Specify the full path for the parameter file to be used.

  You can also use the output file from the dcminst command (without the /s specification), the dcmcoll command (without the /s specification), the dcmjexe command, or the dcmsusp command (without the /s specification) as a parameter file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

  - Executing the command in JP1/Software Distribution Client (relay system)

    5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file

The table below shows the contents of the parameter file for the dcmjbrm command. The contents of the parameter file used in this command cannot be specified by using a command argument.

Table 4–12: Contents of the parameter file (dcmjbrm command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator	Job name	X	--
	jobno	Job number	R	--
	job_folder	Job folder path	X	--
	unsuspended	Whether a distribution being suspended exists	X	--

Legend:

R: required.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

(5) Return codes

The following explains the return codes that the dcmjbrm command may return:

Code	Meaning	Action
0	Either job was deleted or specified job is not found.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the values in the parameter file.
3	Error during connection to managing server.	Check the version of the managing server.
5	Communication failure between client and managing server system.	Check the communications settings in the setup for the managing server.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(6) Notes

- In a parameter file, specify the job number that was output to an output file by the dcmcoll (no /s specification), dcminst (no /s specification), dcmjexe, or dcmsusp (no /s specification) command.
- The dcmjbrm command cannot be executed if there is an unknown job number for the job to be deleted. In this case, you should verify the job status of the job in the Job Status window of the managing server.

(7) Example

The following is an example of deleting the *invoice-file-0001-collection* job that was executed in the dcmjexe command.

(a) Creating a parameter file

In the parameter file, specify the job number that was output to the output file for the dcmjexe command as follows:

If the output file for the dcmjexe command has been saved, you can specify that file as a parameter file.

```
** dcmjexe output->dcmjbrm input

JOB_ATTRIBUTE{
job_generator= invoice-file-0001-collection
jobno= JB03121113315383
```

```
job_folder= \batch-definition
}
```

(b) Command execution

If the output file for the `dcmjexe` command has been saved in `C:\Dmbat\out.txt`, code the command as follows:

```
dcmjbrm.exe /i C:\Dmbat\out.txt
```

4.12 dcmjexe.exe (executing a job)

This section explains the dcmjexe command, which executes a job. You can execute this command in the managing server system for JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system).

(1) Function

This command executes the job defined in a parameter file. Only one job per JOB_ATTRIBUTE tag can be executed.

(2) Format

```
dcmjexe.exe /i parameter-file-name /o result-output-file-name [/LC {ON|OFF}]
```

(3) Arguments

- /i

  Specify the full path for the parameter file to be used.

  You can also use the output file from the dcminst command (with the /s specification), the dcmcoll command (with the /s specification), or the dcmsusp command (with the /s specification) as a parameter file.

- /o

  Specify the full path for the output file. The following items are output to the specified output file upon normal completion of the command, overwriting any previously existing output file.

  - Job name
  - Job number
  - Job storage folder path

  The job number (value of jobno) identifies the job that has been started. When deleting this job or verifying its execution status, you should code the value of jobno in the parameter file. You can use the output file as a parameter file for the dcmjbrm, dcmrtry, dcmstat, and dcmstsw commands.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

  - Executing the command in JP1/Software Distribution Client (relay system)

    5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

Although the dcmjexe command requires a parameter file, you can also use command arguments to specify some of the parameter file contents used in this command. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–13: Correspondence between parameter file contents and arguments (dcmjexe command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator	Job name	R	--
	jobno	Job number	X	--
	job_folder	Job folder path	O#	--
	unsuspended	Whether a distribution being suspended exists	X	--
JOB_SCHEDULE	job_entry_date	Job registration date and time	O	/jst *value*
	job_execution_date	Job execution date and time	O	/jsx *value*
	job_expiration_date	Job execution limit	O	/jsp *value*

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#

By default, the dcmjexe command executes a job by searching all the folders or files that lie below the root folder.

(5) Command format for specifying the contents of a parameter file in terms of arguments

To specify the job registration date and time, job execution date and time, and job execution time limit by using the command arguments, code the command in the following format:

```
dcmjexe.exe /i parameter-file-name /o result-output-file-name
            [/jst job-registration-date-and-time][/jsx job-execution-date-and-time]
            [/jsp job-execution-time-limit] [/LC {ON|OFF}]
```

(6) Return codes

The following explains the return codes that the dcmjexe command may return:

Code	Meaning	Action
0	Managing server has started job.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the values in the parameter file.
3	Error during connection to managing server.	Check the version of the managing server.
4	Unable to open output file.	• Check the specification for the output file. • A job may have been started. Check the job status.
5	Communication failure between client and managing server system.	Check the communications settings in the setup for the managing server.

Code	Meaning	Action
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Example

The following is an example of executing an *invoice-file-0001-collection* job saved in the batch-definition of the managing server system folder.

(a) Creating a parameter file

Code the folder in which the job to be executed is saved, and the job name, in the parameter file as follows, and save the parameter file under any name:

```
** dcmjexe Parameter File Sample

JOB_ATTRIBUTE{
job_generator= invoice-file-0001-collection
job_folder= \batch-definition
}
```

(b) Command execution

When saving the parameter file in a file named `C:\Dmbat\dcmjexe.txt` and acquiring an output file in `C:\Dmbat\out.txt`, code the following specification:

```
dcmjexe.exe /i C:\Dmbat\dcmjexe.txt /o C:\Dmbat\out.txt
```

(c) Checking the output file

Upon normal completion of the command, the job name of the job that was started, the job number, and the job storage folder path are output to the `C:\Dmbat\out.txt` file as follows:

```
JOB_ATTRIBUTE{
job_generator= invoice-file-0001-collection
jobno= JB03121113315383
job_folder= \batch-definition
}
```

4.13 dcmmonrst.exe (storing operating information in a database)

This section explains the dcmmonrst command, which stores operating information (suppress history and operation history) collected by JP1/Software Distribution in a database so that the operating information can be managed from the Operation Log List window.

You can execute this command in the managing server system for JP1/Software Distribution Manager. Note that this command cannot be executed when the **Store the operation monitoring history in the JP1/SD database** check box is cleared on the **Operation Monitoring** page in the setup.

(1) Function

This command stores the suppress history and operation history collected by JP1/Software Distribution in the netmdm_monitoring_security table so that the information can be managed in the Operation Log List window.

Storing operating information using automatic storage

If the settings below have been specified on the **Operation Monitoring** page in the setup, you can store operation information in the database whose retention period has elapsed by executing the dcmmonrst command:

- **Save the operation monitoring history** check box is selected
- **Store the operation monitoring history in the JP1/SD database** check box is selected
- **Enable automatic storage** check box is selected

Executing the dcmmonrst command places a hold status on the stored database information, and disables subsequent operation of the periodic storage execution process. However, you can still use this command to store operating information.

To release the hold status, execute the dcmmonrst command with the /r argument specified. This releases the hold status and re-enables the periodic storage execution process. Note that when you execute the dcmmonrst command with /r specified as an argument, operating information whose retention period specified at setup has elapsed is deleted from the database. Therefore, after you have finished storing the operating information, check the operation log in the Operation Log List window before you execute the dcmmonrst command with the /r argument specified.

You can delete operating information stored in the database by executing this command with the /c argument specified. However, with the /c argument, if the database information is in hold status, the hold status is not released even if you delete the operating information.

While storage or deletion of operating information is being performed via periodic execution or by means of a command, you can cancel the process by executing the dcmmonrst command with the /r argument specified. However, if you cancel a storage or deletion process, the operating information whose retention period specified at setup has elapsed is deleted from the database. If you cancel storage being performed via periodic execution, storage restarts the next time a periodic execution process executes. If you cancel a storage or deletion operation performed by means of a command, the next storage or deletion operation performed with the command executes normally. If you restart the Remote Install Server service, the hold status is released without requiring you to execute the dcmmonrst command with the /r argument specified, and execution periodic storage is enabled. This operation also deletes from the database operating information whose retention period has elapsed.

If you execute the dcmmonrst command with the /s argument specified in order to store operation information, you can output the processing status by specifying the /n argument.

Manually storing operating information

If the settings below have been specified on the **Operation Monitoring** page in the setup, you can store the operating information in the database by executing the dcmmonrst command with the /x argument specified:

- **Save the operation monitoring history** check box is selected
- **Store the operation monitoring history in the JP1/SD database** check box is selected
- **Compress and move the operation history to the storage directory** radio button is selected
- **Enable automatic storage** check box is cleared

Note that the stored operating information accumulates in the database unless it is deleted by the dcmmonrst command with the /c argument specified.

Operating information that has been stored once will not be stored again by subsequent execution of this command, unless you execute the dcmmonrst command with the /z argument specified.

If you execute the dcmmonrst command with the /x argument specified in order to store operation information, you can output the processing status by specifying the /n argument.

(2) Format

Storing operating information whose retention period has elapsed when automatic storage is being used

```
dcmmonrst.exe [/h connection-destination] [/u user-ID-of-administrator]
              [/p password] /s start-date
              [/e end-date] [/d operation-history-backup-directory]
              { [/H host-name] | [/I IP-address] }
                [/n output-units-count]
```

Releasing the database hold status or canceling storage processing

```
dcmmonrst.exe [/h connection-destination] [/u user-ID-of-administrator]
              [/p password] /r
```

Storing operating information when manual storage is being used

```
dcmmonrst.exe [/h connection-destination] [/u user-ID-of-administrator]
              [/p password] /x [/d operation-history-backup-directory]
              [/s start-date] [/e end-date]
              { [/H host-name] | [/I IP-address] }
                [/n output-units-count]
```

Storing operating information again after it has been stored once

```
dcmmonrst.exe [/h connection-destination] [/u user-ID-of-administrator]
              [/p password] /z [/d operation-history-backup-directory]
              { [/H host-name] | [/I IP-address] }
```

Deleting operating information stored in a database

```
dcmmonrst.exe [/h connection-destination] [/u user-ID-of-administrator]
              [/p password] /c deletion-date
```

(3) Arguments

- /h

  Specify the host name or IP address of the managing server system to be connected in 64 characters or fewer. If this argument is omitted, localhost is used.

- /u

  Specify the user ID of the administrator of the database to be connected in 30 characters or fewer. If this argument is omitted, this value defaults to the user ID of the administrator that was specified on the **Database Environment** page during setup.

- /p

  Specify the password of the database to be connected in 30 characters or fewer. If a password has not been set, this argument can be omitted.

- /s

  Specify the date on which storage to the database is to start. Operating information generated from the date specified here is stored in the database.

  If the /x argument is specified, this command first backs up operating information from the operation history storage directory to the operation history backup directory, and then, from the operation history backup directory, stores in the database the operating information acquired on or after the specified date that is not stored in the database.

  Specify the date in the *YYYYMMDD* format, with *YYYY* indicating the year, *MM* the month, and *DD* the day. Specify a date in the range from January 1, 1980, to December 31, 2099.

  You can omit this argument when you specify the /x argument. If you omit this argument, the operation information in the software operation history storage directory is stored in the database and then is saved in the operation history backup directory.

- /e

  Specify the date on which storage to the database is to end. Operating information generated up to the date specified here is stored in the database. If this argument is omitted, the operating information generated up to the latest date is stored in the database.

  If the /x argument is specified, this command first backs up operating information from the operation history storage directory to the operation history backup directory, and then, from the operation history backup directory, stores in the database the operating information acquired on or before the specified date that is not stored in the database.

  Specify the date in the *YYYYMMDD* format, with *YYYY* indicating the year, *MM* the month, and *DD* the day. Specify a date in the range from January 1, 1980, to December 31, 2099.

  If the specified date is earlier than the date specified in the /s argument, an error occurs. If the specified date is the same as the date specified in the /s argument, operating information for that date only is stored.

- /d

  This argument stores operating information to the database from an operation history backup directory other than the one specified at setup. Note that the operating information in the operation history storage directory specified during installation is not stored in the database. Specify the path of the operation history backup directory in 127 characters or fewer. If you omit this argument, the operation history backup directory that was specified in the setup is used.

  When a shared directory is specified for the operation history directory

  Specify a UNC path. The information entered in the Network Connection Settings dialog box or on the **Network Connection** page is set as the network drive authentication information.

- /H#

  Specify the host name if you want to target a specific host name when storing the operating information in the database. Upper-case and lower-case characters are not distinguished.

- /I#

  Specify the IP address if you want to target a specific IP address when storing operating information in the database.

- /n

  Specify this argument if you want to output the following processing status to the standard output when storing the operating information in the database, where the parentheses enclose the unit of processing status that is output:

  - Operating information storage processing in the operation history storage directory (directory)
  - Operating information storage processing in the operation history backup directory (directory)
  - Operating information storage processing in the operation history backup directory specified in the /d argument (directory)
  - Processing for storing the suppress history stored in the database (host)

  Specify a processing status output count (number of directories and hosts subject to storage processing), in the range from 1 to 10,000. Use as a guideline 5% to 20% of the number of hosts subject to storage processing. If the specified value is smaller than the number of directories and hosts subject to storage processing, only the final results are output.

- /r

  When the settings shown below have been specified on the **Operation Monitoring** page in the setup (to automatically store operation information in the database), this argument releases the operation information stored in the database from retained status by the command. It also cancels storage and deletion of operating information in the database.

  When the /r argument is specified, operating information whose retention period specified at setup has elapsed is deleted from the database.

  - **Save the operation monitoring history** check box is selected
  - **Store the operation monitoring history in the JP1/SD database** check box is selected
  - **Enable automatic storage** check box is selected

- /x

  This argument is enabled when the following settings have been specified on the **Operation Monitoring** page in the setup (to manually store operation information in the database):

- **Save the operation monitoring history** check box is selected
- **Store the operation monitoring history in the JP1/SD database** check box is selected
- **Compress and move the operation history to the storage directory** radio button is selected
- **Enable automatic storage** check box is cleared

Specify this argument to store operating information in the database. The stored operating information accumulates in the database unless it is deleted by the `dcmmonrst` command with the `/c` argument specified. Operating information that has been stored once will not be stored again.

When you execute the command, the operation information in the software operation history storage directory is stored in the database and then is saved in the operation history backup directory.

If you have specified in the `/s` and `/e` arguments a range of dates for the operating information that is to be stored in the database, only operating information that has not yet been stored is stored in the database (from among all the target operating information in the operation history backup directory).

If you have specified in the `/d` argument an operation history backup directory, only the operating information that has not yet been stored is stored in the database (from among all the operating information in the operation history backup directory).

Before you execute the `dcmmonrst` command specifying this argument, make sure that you have write permissions for the target operation history backup directory.

- `/z`

  By specifying this argument, you can store again to the database any operating information that, by means of the `dcmmonrst` command with the `/x` argument specified, has already been stored from the operation history backup directory to the database.

  Before you execute the `dcmmonrst` command specifying this argument, make sure that you have write permissions for the target operation history backup directory. Then, before you store the operating information again in the database, delete the existing operating information from the database; otherwise, the operating information will be duplicated in the database.

- `/c`

  This argument deletes operating information generated on or before the specified date from the operating information stored in the database. Using the *YYYYMMDD* format, specify a date that falls in the range from January 1, 1980, to December 31, 2099.

#: If both `/H` and `/I` are not specified as arguments, this command targets the operating information of all hosts.

(4) Return codes

The following explains the return codes that the `dcmmonrst` command may return:

Code	Meaning	Action
0	The restoration, release, or deletion of saved data was completed.	None
2	Invalid argument specified in command argument.	Check the settings for the command arguments.
3	Error during connection to managing server.	Check the operating status of the managing server.
5	Communication failure between client and managing server system.	Check the communications settings in the setup for the managing server.
7	Directory specified as storage directory not found or the user does not have access permission.	Check the specified path.
12	Other errors occurred.	Check the event log.
13	Invalid login name or password.	Check the login name and the password.
15	Data being stored in database or deleted from database.	Re-execute the command.

Code	Meaning	Action
20	Database storage or deletion was canceled because the dcmmonrst command with /r specified as argument was executed.	None
21	• When the dcmmonrst command with the /x or /z argument specified was executed, the specified operation history backup directory was not found. • When the dcmmonrst command with the /x or /z argument specified was executed, there was no write permission for the specified operation history backup directory.	Specify the operation history backup directory for which you have write permissions.
22	The options specified in the command arguments cannot be executed with the current server setup settings.	See the event log to check the server setup settings and the options specified in the command arguments.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Notes

- If storage processing is executed with a start date that is two or more days after the latest date of the operating information stored in the database, dates without operating information are produced between the earlier information and the newly stored information. If this occurs, you may not be able to add operating information for the dates without operating information until the retention period for those dates elapses.

  When storing the latest operating information, execute the command according to the following procedure:

  1. Execute dcmmonrst.exe /s *current-date* - *retention-period* + *1*.
  2. Execute dcmmonrst.exe /r.
- In the following cases, execute the dcmmonrst command with the /r argument specified to first release the operating information hold status, and then restore the operating information:
  - You wish to store operating information again after the dcmmonrst command has been used to store it in the database
  - You wish to store operating information again after an attempt to store it in the database has failed
- If operating information reception from the client and operating information storage to the database are executed at the same time, each process may take a while to complete. Therefore, set the execution times for operating information reception from the client and operation information storage to the database so that the processes are executed at different times.
- Depending on the amount of information involved, the time required for storing operating information to the database may take a while. Although the collected history contents and the system environment also affect the time, assume as a guideline that storing one day's worth of operating information for one client takes 10 seconds.
- You cannot specify reserved words in the command arguments.
- If you upgrade from JP1/Software Distribution Manager version 08-51 or earlier, allocate sufficient capacity to the operation monitoring database file, and upgrade the database as well.
- If you store operating information manually in an Embedded RDB environment, you must execute the netmdb_reclaim.bat command to free the area after you have used the dcmmonrst command to delete the operating information from the database. For details about the netmdb_reclaim.bat command, see *6.6.5 Deleting operation logs* in the manual *Administrator's Guide Volume 1*.
- If you have changed the settings for storing operating information in the database from automatic to manual, you must execute the dcmmonrst command with the /c argument specified to delete the operating information from the database before you store the operating information in the database by executing the dcmmonrst command.

- If you accumulate operating information in the database, you should periodically execute the `dcmmonrst` command with the `/x` argument specified in order to store the operating information in the database. If you do not execute the `dcmmonrst` command periodically, operating information will not be saved in the operation history backup directory.

  When the size of an operation history file exceeds 20 MB, a warning message is output to the event log. If a file containing more than 30 MB of operation history is stored, and then processing terminates due to an error, some of the data stored for the client being processed might be duplicated.
- If you output the processing status to the standard output by executing the `dcmmonrst` command with the `/n` argument specified, processing might require more time than when the processing status is not output. You should specify the `/n` argument only when you need to check the processing status.
- If you output the processing status to the standard output by executing the `dcmmonrst` command with the `/n` argument specified, new operating information might be uploaded while existing operating information is being stored in the database. In such a case, the uploaded operating information might be stored in the database, resulting in an increase only in the number of directories and hosts whose processing has been completed.

(6) Example

The following shows examples of using the `dcmmonrst` command:

- To store the operating information whose retention period has elapsed using automatic storage:

  ```
  dcmmonrst.exe /p p@ssw0rd /s 20070801
  ```
- To release the hold status of a database:

  ```
  dcmmonrst.exe /p p@ssw0rd /r
  ```
- To store operating information manually:

  ```
  dcmmonrst.exe /p p@ssw0rd /x /d D:\backup
  ```
- To store again operating information that has already been stored once:

  ```
  dcmmonrst.exe /p p@ssw0rd /z /d D:\backup
  ```
- To delete operating information stored in a database:

  ```
  dcmmonrst.exe /p p@ssw0rd /c 20071130
  ```

4.14 dcmpack.exe (executing a package)

This section explains the dcmpack command, which executes the packaging of user data or user programs. You can use this command in JP1/Software Distribution Manager (relay system manager), JP1/Software Distribution Client (relay system), and JP1/Software Distribution Client (client) in an environment in which Packager is installed.

(1) Function

This command packages user data or user programs for the managing server (JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system)).

Program products cannot be packaged.

(2) Format

```
dcmpack.exe [/k password]
            /i parameter-file-name [/o result-output-file-name]
            [/LC {ON|OFF}]
```

(3) Arguments

- /k

  Specify the password for the packaging of software for the managing server.

  Packaging for the Windows managing server

  Specify the password that was specified during the creation of a relational database in the managing server.

  Packaging for the UNIX managing server

  Specify the package upload password for the UNIX managing server.

- /i

  Specify the full path for the parameter file.

- /o

  Specify the full path for the output file. Upon normal termination of the command, attributes of the package that was created are written into a specified output file. You can use the resulting output file as a parameter file for the dcminst, dcmpkget, and dcmpkrm commands.

  The default is not to create an output file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

- Executing the command in JP1/Software Distribution Client (relay system)
  5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*
- Executing the command in JP1/Software Distribution Client (client)
  6.3 Registry settings (JP1/Software Distribution Client (client)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the contents of the parameter file used in this command. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–14: Correspondence between parameter file contents and arguments (dcmpack command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
PACKAGING_SOURCE	file_path	File to be packaged	O	/P *value*
	base_fullpath	Package base directory	R	/B *value*
PACKAGING_INFORMATION	package_name	Package name	R	/p *value*
	package_id	Package ID	R	/I *value*
	version_revision	Version/revision	R	/v *value*
	generation	Generation	R	/G *value*
	cabinet_name	Cabinet name	R	/c *value*
	cabinet_id	Cabinet ID	R	/C *value*
	package_code	Code type	X	--
SYSTEM_CONDITIONS	directory	Installation directory	O	/D *value*
	condition	System condition	O[#1, #2]	/O *value*
SOFTWARE_CONDITIONS	condition	Software condition	O[#1, #2]	/l *value*
FILE_PROPERTIES	permission	Restoration of file-access permission	O	/qY or /qN[#3]
SCHEDULE	expiration_date	Package expiration date in the relay system	O	/x *value*
	expiration_days	Package expiration days in the relay system	O	/ed *value*
	installation_date_and_time	Installation date and time	O	/d *value*
	installation_timing	Installation timing	O	/tS or /tN
INSTALLATION_METHOD	installation_mode	Installation mode	O	/mB or /mG
OPTION	compress	Compression, yes/no	O	/uY or /uN
	compress_type	Compression method	O	/ctN or /ctH[#4]
	restore	Restore operations during version upgrades	O	/RY or /RN

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
OPTION	encipher	Encryption yes/no	O[#5]	/encY or /encN
	reboot	Post-installation reboot	O	/reboot
	processing_dialog	Dialog display during installation	O[#1]	/procS, /procY, or /procN
USER_PROGRAM_INSTALLATION_CONDITIONS	external_program_executed_before_installation[#6]	External program that is started before installation	O	/b *value*
	external_program_executed_after_installation	External program that is started after installation	O	/a *value*
	external_program_error_handler[#7]	External program that is started upon an installation error	O	/e *value*
	external_program_handler	External program handler	X	--
	exit[#7]	Results-notification method	O	/rbR, /rbM, /raR, /raM, /reR, or /reM
	action[#7]	Disposition of processing error	O	/yaC, /yaS, /ybC, or /ybS
	wait[#7]	Notification method for external program processing results	O	/wbU, /wbT, /wbG, /waU, /waT, /waG, /weU, or /weY
	timeout	Monitoring time	O[#8]	/n *value*
	wait_code	Wait code	X	--
SCRIPTS	installation_script	Installation script path	O[#1, #9]	/Z *value*

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

Not specifiable with packages that are distributed to UNIX clients.

#2

If multiple system and software conditions are specified, the package is installed when all the conditions are met. When specifying in terms of command arguments, you can specify a total of 10 /O and /l.

#3

Specify /qN to distribute packages to UNIX clients.

#4

Specify /ctN to compress packages for distribution to UNIX clients.

#5

This parameter requires the installation of JP1/Software Distribution Encryption Option.

#6

For a package that is distributed to UNIX clients, this parameter, if specified with the `installation_date_and_time` parameter of the `SCHEDULE` tag, is ignored.

#7

This parameter is ignored if specified with packages distributed to UNIX clients.

#8

Any `U` specified in `wait` (specifying `/wbU`, `/waU`, and `/weU` in command arguments) is ignored.

#9

If this item is specified, any information that applies to the `SYSTEM_CONDITIONS` tag, the `SOFTWARE_CONDITIONS` tag, and the `USER_PROGRAM_INSTALLATION_CONDITIONS` tag is ignored.

(5) Format of the command without using a parameter file

The following shows the format of the command when you specify the command by using arguments only instead of using a parameter file.

```
dcmpack.exe [/k password]
              [/P file-to-be-packaged]
               /B package-base-directory
               /p package-name /I package-ID
               /v version/revision /G generation
               /c cabinet-name /C cabinet-ID
              [/D installation-directory]
              [/0 system-condition] [/1 software-condition]
              [{/qY|/qN}]
              [/x package-expiration-date-in-the-relay-system]
              [/ed package-expiration-days-in-the-relay-system]
              [/d installation-date-and-time] [ {/tS|/tN}]
              [{/uY | /uN}] [ {/RY | /RN}] [ {/encY | /encN}]
              [/reboot] [ {/procS | /procY | /procN}]
              [/b external-program-that-is-started-before-installation
              [{/rbR | /rbM}] [ {/ybC | /ybS}]
              [{/wbU | /wbT | /wbG}] [ /n monitoring-time] ]
              [/a external-program-that-is-started-after-installation
              [{/raR | /raM}]
              [{/yaC | /yaS}] [ {/waU | /waT | /waG}]
              [/n monitoring-time] ]
              [/e external-program-that-is-started-on-an-installation-error
              [{/reR | /reM}] [ {/weU | /weY}]
              [/n monitoring-time] ]
              [/Z installation-script-path]
              [/o result-output-file-name]
              [/LC {ON|OFF}]
```

(6) Return codes

The following explains the return codes that the `dcmpack` command may return:

Code	Meaning	Action
0	Normal termination.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the settings for the command argument or parameter file.
3	Error during connection to managing server.	Check the settings or communications environment for the PC on which the packaging is to be executed.
4	Unable to create output file, or automatic counting of versions/revisions and generations using a reserved word failed; however, registration of package is successful.	Check the path specifying the file to be packaged.
5	Connection to managing server failed.	Check to see if the managing server or the relational database has stopped.

Code	Meaning	Action
6	Data send/receive to and from managing server failed.	Check the communications environment.
7	One of the following: • File or directory to be packaged does not exist. • Number of files or directories to be packaged exceeds the maximum value.	• Check the path for the file or directory to be packaged. • Reduce the number of files or directories to be packaged.
9	The package to be packaged is already packaged.	Change one of the following items and then retry the packaging process: • Cabinet ID • Package ID • Version number • Generation
12	Other errors occurred.	Check the event log.
13	Invalid password.	Check the password.
14	Automatic counting of versions/revisions or generations produced a result that exceeds the maximum number of digits that can be specified; registration of package failed.	Check the settings for the reserved words for versions/revisions, and generation.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Notes

- Specifying a cabinet
  - Specifying a non-existent cabinet ID in a parameter file or a command argument creates a new cabinet.
  - If multiple combinations of different cabinet IDs and cabinet names are specified, the second and higher packages are stored in the cabinet that was specified in terms of a cabinet ID. No error occurs.
- Number of package specifications

  For each execution of the `dcmpack` command, you can specify one package (as is the case when the command argument is used).
- Automatic counting of versions/revisions and generations

  By using reserved words, you can execute the automatic counting of versions/revisions and generations. In this case, a specification from a parameter file and that from a command argument can produce different operations, as follows:

  Specifying from a parameter file

  The initial count-up value is reset when the `dcmpack` command is executed and the new value is overwritten on the parameter file. Re-executing the command using the same parameter file commences the counting process on a continued basis.

  Specifying from a command argument

  Executing the `dcmpack` command does not reset the initial value. Therefore, each time the command is executed, the counting is performed from the initial value.
- Connection target for the `dcmpack` command

  The user who has update permission for the `HKEY_LOCAL_MACHINE` registry starts Packager and the connected server becomes the connection target. To change the connection target, the user who has update permission for the `HKEY_LOCAL_MACHINE` registry must start Packager, change the connection target, and then execute the `dcmpack` command.
- When the parameter file is not used
  - Do not use a path containing a space for an external program.
  - If the distribution destination is WS (UNIX system), specify any drive as the drive of the installation destination directory or the directory to which external program is stored. During distribution, however, the

specified drive is ignored and the package is distributed according to the directory specification. For example, `c:` would be ignored in the following case:

Specification example: `c:/user/tmp`

If you use the backslash (`\`) for the directory delimiter, you do not need to specify a drive.

Specification example: `\user\tmp`

- Notes about using an installation-script file
  - The `dcmpack` command does not perform a syntax check on the installation-script file that was incorporated by the specification of the `SCRIPTS` tag of the parameter file.
  - Using an installation-script file nullifies any specification of system conditions (except for the installation directory), software conditions, and the start of an external program.
- Notes about not using an installation-script file

  If an installation-script file is not used, and system conditions, software conditions, and the start of an external program are specified simultaneously, the start of the external program is coded in the installation-script file. However, any results-notification method, processing error handling, monitoring method, or timeout for the external program specified is nullified.
- Notes about installing a new packager

  If a new Packager is installed, start Packager, and then specify the server before executing the `dcmpack` command.
- Notes about installing a package in the background installation mode

  Do not specify a drive on a network drive for the installation directory.

(8) Example

The following is an example of packaging a file under the `C:\Finance\data0401` directory as follows:

- Package name

  `Finance Data 2003 4`
- Storage cabinet name

  `FCAB01`

(a) Creating a parameter file

You can create a parameter file as follows:

```
** dcmpack Parameter File Sample

PACKAGING_SOURCE{
file_path=FD200304.dat
base_fullpath= C:\Finance\data0401
}
PACKAGING_INFORMATION
{
package_name=Finance Data 2003 4
package_id=FD200304
version_revision=000001
generation=0000
cabinet_name=FCAB01
cabinet_id=F1
package_code=P
}
SYSTEM_CONDITIONS{
condition=H:c>300
condition=C = PowerPC
directory=C:\Finance
}
USER_PROGRAM_INSTALLATION_CONDITIONS
{
external_program_executed_after_installation = C:\Dmbat\app\normal_exit.exe
}
```

(b) Command execution

When saving the parameter file in a file named `C:\Dmbat\para.txt`, code the command as follows:

```
Dcmpack.exe /i C:\Dmbat\para.txt
```

4.15 dcmpkget.exe (acquiring a backup of a package)

This section explains the dcmpkget command, which acquires a backup of a package. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

This command creates a backup of the specified package.

(2) Format

```
dcmpkget.exe /i parameter-file /o output-directory
             [/of result-output-file-name]
             [/LC {ON|OFF}]
```

(3) Arguments

- /i

  In *parameter-file*, specify the full pathname of the parameter file.

  You can use a file generated by the dcmpack command as the parameter file to be specified in this command. However, the command ignores package_name in the PACKAGING_INFORMATION tag.

- /o

  In *output-directory*, specify the full pathname of the directory for containing the backup file set that the command will create. If the specified directory does not exist, the command automatically creates the directory. You cannot specify a network drive as the output directory.

- /of

  In *result-output-file-name*, specify the base name of the backup file set you want to create in the output directory. This argument is optional, and the default is dcmpkget. The base name specified in this argument is combined with the package attributes (package type, cabinet ID, package ID, version, and generation) to create a backup file name. The command adds the extensions .DPF, .SCI, and .PKG to this backup file name to generate three files. Note that if / is included in Version, / is replaced by $ and a file name with $ is created.

  The backup file name can contain up to 256 characters. If the backup file name generated by adding the package attributes exceeds 256 characters, the command automatically truncates the name.

  In *result-output-file-name*, you can also specify the reserved words \CY, \CM, \CD, \CH, \CN, \CS, \VERSION, and \PKGID. For \VERSION and \PKGID, the command references the first package definition. If they are not found in the definition, the command ignores \VERSION and \PKGID. For details about the reserved words, see *4.27 Reserved word specification method*.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

- Executing the command in JP1/Software Distribution Manager
  4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*
- Executing the command in JP1/Software Distribution Client (relay system)
  5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the `/LC` specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the contents of the parameter file used in this command. The table below shows the correspondence between the contents of a parameter file and the command arguments.

If you use both a parameter file and a command argument to specify an item, the value of the command argument prevails over the value specified in the parameter file. However, if you use command arguments to specify only some of the package attributes, the first package information set of the `PACKAGING_INFORMATION` tag in the parameter file is used.

Table 4–15: Correspondence between parameter file contents and arguments (dcmpkget command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
`PACKAGING_INFORMATION`#1	`package_name`	Package name	X	--
	`package_id`	Package ID	R#2	`/I` *value*
	`version_revision`	Version/revision	R#2	`/v` *value*
	`generation`	Generation	R#2	`/G` *value*
	`cabinet_name`	Cabinet name	X	--
	`cabinet_id`	Cabinet ID	R	`/C` *value*
	`package_code`	Package code	O	`/KW` or `/KP`

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

This command does not accept the reserved words used in the parameters of the `PACKAGING_INFORMATION` tag.

#2

You can omit these parameters if you specify the cabinet ID only. If you specify the cabinet ID only, the command creates backups of all the packages in the cabinet.

(5) Format of the command without using a parameter file

The following shows the format of the command when you specify the command by using arguments only instead of using a parameter file:

```
dcmpkget.exe /I package-ID /v version/revision-number /G generation-number
             /C cabinet-ID [/KW|/KP] /o output-directory
            [/of result-output-file-name] [/LC {ON|OFF}]
```

(6) Return codes

The following explains the return codes that the `dcmpkget` command may return:

Code	Meaning	Action
0	The file output was successfully completed.	None.
1	The command cannot open the specified parameter file or the format of the specified parameter file is incorrect.	Check the pathname or format of the parameter file.
2	An invalid value is specified in a command argument or in the parameter file.	Check the values of command arguments or the values of the parameters in the parameter file.
3	Error during connection to managing server.	• Check the version of the managing server. • Check the job execution status.
4	The specified package does not exist.	• Ensure that the specified package exists in the managing server. • Check the job execution status.
12	Other errors occurred.	Check the event log.
14	The command could not create the output directory or output file.	Check the paths of the output directory and the output file.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Notes

- You can specify more than one package in this command. If one of the specified packages does not exist, the command skips creating a backup of the non-existent package and continues processing for the subsequent packages. If the `dcmpkget` command skipped the processing for a package, the command returns the return code `4`.
- If the `dcmpkget` command has more than one package specified and fails during processing, the command cancels creating the backups of the packages. The command deletes all the backups created before the error occurred and returns a code indicating an error.
- If a UNIX package that was created without specifying a script file is backed up, no SCI file is output.

(8) Example

The following is an example of making a backup of a package whose package ID is `0100`, version/revision number is `0100`, and generation number is `0000` in the cabinet whose cabinet ID is `01`.

(a) Creating a parameter file

Specify in a parameter file the package and cabinet to be backed up as described below, and save the parameter file with any name:

```
** dcmpkget Parameter File Sample

PACKAGING_INFORMATION{
package_id=0100
version_revision=0100
generation=0000
cabinet_id=01
package_code=P
}
```

(b) Command execution

To save the parameter file as `C:\Dmbat\dcmpkget.txt` and the backup file as `C:\Dmbat\backup`, specify the following command:

```
dcmpkget.exe /i C:\Dmbat\dcmpkget.txt /o C:\Dmbat\backup /of BackupFile
```

4.16 dcmpkput.exe (restoring a package from its backup)

This section explains the dcmpkput command, which restores a package from its backup. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system). This command does not use a parameter file.

(1) Function

This command restores a package from its backup file and stores the restored package in the specified cabinet.

(2) Format

```
dcmpkput.exe [/C cabinet-ID] /i input-directory
              [/of input-file-name] [/f] [/LC {ON|OFF}]
```

(3) Arguments

- /C

  In *cabinet-ID*, specify the identifier of the cabinet for storing the package restored from its backup. If the specified cabinet does not exist, the command automatically creates it. If you do not specify a cabinet ID, the command stores the restored package in the same cabinet as the cabinet in which the original package was stored.

- /i

  In *input-directory*, specify the full pathname of the output directory specified in the dcmpkget command. You cannot specify a network drive as the input directory.

- /of

  In *input-file-name*, specify the name of a backup file created by the dcmpkget command. You can use a wildcard (*) in this argument. The default is any backup file beginning with dcmpkget.

  If the directory specified in the /i argument contains more than one backup file, you can specify all the backup files in the directory by using the following command format:

  ```
  dcmpkput.exe /i C:\temp\pkg /of *
  ```

- /f

  If the output directory already contains a package that has the same name as the package you want to restore, the command overwrites it. If you do not specify this argument, the command returns the code 5, without overwriting the existing package.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

- Executing the command in JP1/Software Distribution Manager
  4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*
- Executing the command in JP1/Software Distribution Client (relay system)
  5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the `/LC` specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Return codes

The following explains the return codes that the `dcmpkput` command may return:

Code	Meaning	Action
0	The package(s) were successfully restored.	None.
1	The command cannot open the output file generated by the `dcmpkget` command. Alternatively, the format of the output file is incorrect.	Check the pathname or format of the output file.
2	An invalid value is specified in a command argument.	Check the values of command arguments.
3	Error during connection to managing server.	Check the version of the managing server.
4	The specified backup file does not exist.	Check the pathname of the backup file.
5	A package with the same name as the package you attempted to restore exists. Alternatively, the cabinet cannot contain more packages.	Check the names of the packages or the number of packages in the cabinet.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Notes

- If the `dcmpkput` command has more than one package specified and fails during processing, the command cancels restoring the packages and returns a code indicating an error.
- To restore from a backup of a UNIX version of a package, you must specify as the registration target an existing cabinet whose type is WS. Restoration from a backup is not possible when the cabinet type is PC or the specified cabinet does not exist.
- When restoring the backup for a UNIX package, specify an existing WS-type cabinet as a destination. Such a backup cannot be restored to a new cabinet or PC-type cabinet.

(6) Example

The following is an example of restoring the package from the backup file made with the `dcmpkget` command.

To restore all the backup files saved to `C:\Dmbat\backup` to the cabinet whose cabinet ID is `01`, specify the following command:

```
dcmpkput.exe /C 01 /i C:\Dmbat\backup /of *
```

4.17 dcmpkrm.exe (deleting a package)

This section explains the dcmpkrm command, which deletes a package. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

Deletes a package from a cabinet for the managing server.

(2) Format

```
dcmpkrm.exe /i parameter-file-name [/LC {ON|OFF}]
```

(3) Arguments

- /i

  Specify the full path for the parameter file to be used.

  You can also use the output file from the dcmpack command as a parameter file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

  - Executing the command in JP1/Software Distribution Client (relay system)

    5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file

The table below shows the contents of the parameter file for the dcmpkrm command. The contents of the parameter file used in this command cannot be specified by using command arguments.

Table 4–16: Contents of the parameter file (dcmpkrm command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
PACKAGING_INFORMATION	package_name	Package name	X	--
	package_id	Package ID	R	--
	version_revision	Version/revision	R	--
	generation	Generation	R	--
	cabinet_name	Cabinet name	X	--
	cabinet_id	Cabinet ID	R	--
	package_code	Package code	R	--

Legend:

R: required.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

Note

In this command, a reserved word cannot be used as a parameter for the PACKAGING_INFORMATION tag.

(5) Return codes

The following explains the return codes that the dcmpkrm command may return:

Code	Meaning	Action
0	Normal termination.	None.
1	No parameter file or invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in parameter file.	Check the values in the parameter file.
3	Error during connection to managing server.	Check the settings or communications environment for the PC on which the deletion of the package is executed.
5	Communication failure between client and managing server system.	Check the communications settings in the setup for the managing server.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

4.18 dcmrmgen.exe (deleting a job definition)

This section explains how to use the dcmrmgen command, which deletes job definitions. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

This command deletes job definitions that are specified in a parameter file.

(2) Format

```
dcmrmgen.exe /i parameter-file-name [/LC {ON|OFF}]
```

(3) Arguments

- /i

  Specify the full path of the parameter file.

  You can also use an output file from the dcminst command (with a /s specification) as a parameter file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

  - Executing the command in JP1/Software Distribution Client (relay system)

    5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the contents of the parameter file used in this command. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–17: Correspondence between parameter file contents and arguments (dcmrmgen command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator[#1]	Job name	R[#2]	/j
	jobno	Job number	X	--
	job_folder	Job folder path	R[#2]	/f
	unsuspended	Whether a distribution being suspended exists	X	--

Legend:

R: required.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

To specify multiple jobs, use the semi-colon (;) to delineate the job names.

#2

When you use a parameter file, you can specify either job_generator or job_folder, or both job_generator and job_folder.

If both job_generator and job_folder are specified, the system searches folders below the specified folder and deletes the first job definition that is found.

If only job_generator is specified, anything below the root folder is subject to a search. If only job_folder is specified, all job definitions, including their folders, below the folder specified in job_folder are deleted.

However, when you use command arguments to specify these parameters, you should specify both /j and /f.

(5) Format of the command without using a parameter file

The following shows the format of the command when you specify the command by using arguments only instead of using a parameter file.

```
dcmrmgen.exe /j job-name /f job-storage-folder-path [/LC {ON|OFF}]
```

When you specify two or more job definition names in /j *job-name*, separate them with semicolons (;).

Both /j *job-name* and /f *job-storage-folder-path* must be specified; if they are not both specified, an error may occur.

(6) Return codes

The following explains the return codes that the dcmrmgen command may return:

Code	Meaning	Action
0	Either job was deleted or specified job is not found.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in parameter file.	Check the values in the parameter file.
3	Error during connection to managing server.	Check the version of the managing server.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Notes

Job storage folders and job definitions cannot be deleted collectively just by specifying the root folder.

(8) Example

The following is an example of deleting an *invoice-file-0001-collection* job definition saved in the *batch-definition* of the managing server system folder.

(a) Creating a parameter file

Define the folder in which the job definition to be deleted is saved, and a job name in the parameter file as follows, and save the parameter file under any name:

```
** dcmjexe Parameter File Sample

JOB_ATTRIBUTE{
job_generator= invoice-file-0001-collection
job_folder= \batch-definition
}
```

(b) Command execution

When saving the parameter file that has been created in a file named `C:\Dmbat\dcmjexe.txt`, code the command as follows:

```
dcmrmgen.exe /i C:\Dmbat\dcmjexe.txt
```

4.19 dcmrtry.exe (retrying a job)

This section explains the dcmrtry command, which retries a job. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

This command re-executes the job startup program in a parameter file under the managing server.

(2) Format

```
dcmrtry.exe [retry-key]
             /i parameter-file-name /o result-output-file-name
            [/LC {ON|OFF}]
```

(3) Arguments

- *retry-key*

  Specify the job status of the job to be executed. Specify a key after the command name. You can specify ERROR, WAIT or PENDING in any combination. When specifying keys in combination, separate the keys with spaces. The default is ERROR.

  - ERROR

    Re-executes the job that ended in error.

  - WAIT

    Re-executes the job that is waiting for execution.

  - PENDING

    Re-executes the job in which a temporary communication error occurred.

- /i

  Specify the full path for the parameter file to be used.

  You can also use the output file from the dcminst command (without the /s specification), the dcmcoll command (without the /s specification), the dcmjexe command, or the dcmsusp command (without the /s specification) as a parameter file.

- /o

  Specify the full path for the output file. Upon normal completion of the command, the contents of a specified parameter file are output to the output file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

- Executing the command in JP1/Software Distribution Manager
  4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*
- Executing the command in JP1/Software Distribution Client (relay system)
  5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the `/LC` specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file

The table below shows the contents of the parameter file for the `dcmrtry` command. The contents of the parameter file used in this command cannot be specified by using command arguments.

Table 4–18: Contents of the parameter file (dcmrtry command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator	Job name	X	--
	jobno	Job number	R	--
	job_folder	Job folder path	X	--
	unsuspended	Whether a distribution being suspended exists	X	--

Legend:
R: required.
X: not required (ignored if specified).
--: Cannot be specified in a command argument.

(5) Return codes

The following explains the return codes that the `dcmrtry` command may return:

Code	Meaning	Action
0	Re-execution of job started.	None.
1	Unable to open parameter file. Invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the values in the parameter file.
3	Error during connection to managing server.	Check the version of the managing server.
4	Unable to open output file.	Check the specification for the output file.
5	Communication failure between client and managing server system.	Check the communications settings in the setup for the managing server.
12	Other errors occurred.	Check the event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(6) Notes

- In the parameter file, specify the job number that was output to the output file as a result of execution of the `dcmcoll` (no `/s` specification), `dcminst` (no `/s` specification), `dcmjexe`, or `dcmsusp` (no `/s` specification) command.
- The `dcmrtry` command cannot be executed if there is an unknown job number for the job to be re-executed. In this case, you should re-execute the applicable job in the Job Status window of the managing server.

(7) Example

The following is an example of re-executing jobs executed using the `dcminst` command that are waiting for execution or that have ended in error.

(a) Creating a parameter file

In the parameter file, code the job number of the job that was output to the output file from the `dcminst` command as follows:

If the output file from the `dcminst` command has been saved, you can specify that file as a parameter file.

```
JOB_ATTRIBUTE{
job_generator= NETM_INSTALL_2003_12_11_13_34_36
jobno= JB03121113315383
job_folder= \
}
```

(b) Command execution

If the output file from the `dcminst` command is saved in `C:\Dmbat\out.txt`, you can specify the command as follows:

```
dcmrtry.exe WAIT ERROR /i C:\Dmbat\out.txt /o C:\temp\retryout.txt
```

4.20 dcmstat.exe (getting the job status)

This section explains the `dcmstat` command, which acquires the execution results from a job. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

The managing server system obtains the execution status of the jobs specified in a parameter file. The status of a job can be determined from the return code.

Job status	Return code
All jobs terminated normally.	0
Some jobs terminated with an error.	30
Jobs are being executed.	31
Jobs are being executed, and some jobs have terminated with an error.	32
Jobs are being deleted, and some jobs are waiting for completion of the deletion process.	33

This command checks the number of hosts that are in the execution status by specifying the execution status of jobs on a managing server for JP1/Software Distribution Manager. The number of hosts in the specified execution status is equal to 10,000 minus the return code value.

(2) Format

```
dcmstat.exe [job-status] /i parameter-file-name [/LC {ON|OFF}]
```

(3) Arguments

- *job-status*

  Specify the execution status of a job to determine the number of hosts that are in a specific execution status. Use one or more items from the following arguments after the command name. The total number of hosts +10,000 that are in the specified job status is returned as a return code. This argument can be specified only on the management server at the local host. If this argument is specified for JP1/Software Distribution Client (relay system), operation fails with return code 3.

Job status	Description
TRANS_WAIT	The job is waiting for transmission in the managing server.
TRANSMITTED	The job is either being transmitted to a client or being executed.
REGISTERED	The ID group job is being transferred to the relay managing the ID group.
CLT_NOTREADY	The job failed to be started.
CLT_SERVICE_OFF#	The job failed to be started because JP1/Software Distribution is stopped.
CLT_POWER_OFF#	The job failed to be started because the power for the PC is off.
CLT_NETWORK_ERR#	Due to a network error and other reasons, the job failed to be started.
SUSPENDED	A suspend specification was received at a relay system.
INST_WAIT	The job is waiting for installation or collection.
HOLD_EXEC	The job has been put on hold.
REJECTED	The installation was rejected.

Job status	Description
ID_NOPKG	The ID group job deleted a relay-storage package.
CANCEL	The job was cancelled by the client.
CONNECT_ERROR	A communication error occurred.
ERROR	A job execution error occurred.
DELETING	The job is being deleted by the relay manager/system or client.

#

This can be specified when the **Break down the reason for a starting failure** check box was selected on the **Server Customization** page during JP1/Software Distribution Manager setup. This argument, however, is ignored if it is specified together with CLT_NOTREADY.

If specified when the checkbox is off, these arguments are not counted as part of the total number of hosts.

If a job execution status is not specified, the command checks the execution status of the jobs specified in the parameter file, and returns a return code (0-33) associated with the execution status.

- /i

Specify the full path for the parameter file to be used.

You can also use the output file from the dcmcoll command (without the /s specification), the dcminst command (without the /s specification), the dcmjexe command, or the dcmsusp command (without the /s specification) as a parameter file.

- /LC

Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

- ON

  Continues command processing even after logging off from Windows.

- OFF

  Forcibly terminates command processing once Windows is logged off.

This argument is effective when the command is executed from a service under any of the following OSs:

- Windows NT 4.0
- Windows 2000
- Windows XP
- Windows Server 2003 (excluding Windows Server 2003 (IPF))

Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

- Executing the command in JP1/Software Distribution Manager

  4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

- Executing the command in JP1/Software Distribution Client (relay system)

  5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file

The table below shows the contents of the parameter file for the dcmstat command. The contents of the parameter file used in this command cannot be specified by using a command argument.

Table 4–19: Contents of the parameter file (dcmstat command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator	Job name	X	--
	jobno	Job number	R	--
	job_folder	Job folder path	O#	--
	unsuspended	Whether a distribution being suspended exists	X	--

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#

By default, the dcmstat command displays the job status by searching all the folders or files that lie below the root folder.

(5) Return codes

The following explains the return codes that the dcmstat command may return:

Code	Meaning	Action
0	All jobs completed normally.	None.
1	Unable to open parameter file, or invalid file format.	Check the specification or coding format for the parameter file.
2	Invalid value specified in parameter file.	Check the parameter file value.
3	Error during connection to managing server, or an execution status was specified in either a basic database environment or JP1/Software Distribution Client (relay system).	Check the version of the managing server. When specifying an execution status, check to see if the managing server is JP1/Software Distribution Manager.
5	Communication failure between client and managing server system.	Check the communications settings in the setup for the managing server.
12	Other errors occurred.	Check the event log.
30	Errors in at least some jobs.	None.
31	Jobs being executed; no errors detected.	None.
32	Jobs being executed; errors detected in some jobs.	None.
33	Jobs being deleted; some jobs waiting to complete deletion.	None.

If the job status is specified, the total number of hosts +10,000 that are in the specified job status is returned as a return code.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(6) Notes

- In the parameter file, specify the job number that was output to an output file by the dcmcoll (no /s specification), dcminst (no /s specification), dcmjexe, or dcmsusp (no /s specification) command.
- The dcmstat command cannot be issued if there is an unknown job number for the job for which the job status is to be determined. In this case, you should verify the job status of the job in the Job Status window of the managing server.

(7) Example

The following is an example of determining the job status of the *invoice-file-0001-collection* job that was executed using the dcmjexe command.

(a) Creating a parameter file

Specify the job number that was output to the output file by the dcmjexe command in the parameter file, as follows:

If the output file from the dcmjexe command has been saved, that file can be specified as a parameter file.

```
** dcmjexe output -> dcmstat input

JOB_ATTRIBUTE{
job_generator= invoice-file-0001-collection
jobno= JB03121113315383
job_folder= \batch-definition
}
```

(b) Command execution

If the output file from the execution of the dcmjexe command is saved in C:\Dmbat\out.txt, specify the command as follows:

```
dcmstat.exe /i C:\Dmbat\out.txt
```

The dcmstat command enables you to check the number of hosts that are in a specific status. For example, to determine the number of hosts that have failed to start and the number of hosts that have received a suspension instruction, you can specify the following:

```
dcmstat.exe CLT_NOTREADY SUSPENDED /i C:\Dmbat\out.txt
```

4.21 dcmstdiv.exe (loading offline machine information)

This section explains the dcmstdiv command, which loads offline machine information. You can execute this command on the managing server for JP1/Software Distribution Manager.

(1) Function

This command loads the offline machine information files acquired from offline machines into the managing server.

(2) Format

```
dcmstdiv.exe  /d offline-machine-information-file-storage-directory
              [/o output-file-name]
```

(3) Arguments

- /d

  Specify the full path of the directory in which the offline machine information files are stored. The offline machine information files in this directory are loaded into the managing server.

- /o

  Specify the full path for an output file. The execution results for all the offline machine information files are output to this output file. If this argument is omitted, no output file is created.

(4) Return codes

The following explains the return codes that the dcmstdiv command may return:

Code	Meaning	Action
0	The command terminated normally.	None.
2	Invalid value in command argument.	Check the values specified in the command arguments.
3	Connection to managing server resulted in an error.	Check the operating status of the managing server.
4	Unable to open output file.	Check the specification for the output file.
5	Error during connection to managing server.	Check the operating status of the managing server.
7	The offline machine information file storage directory does not contain the specified directory, or the user does not have access permissions.	Check the specified path.
11	No offline machine information file was found.	Check the specified path.
12	Other error occurred.	Check the event log.
15	At least one offline machine information file was skipped during loading.	See the output file and event log.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Notes

- If there is more than one offline machine information file for the same offline machine, the most recent information might be overwritten by older information because the files are loaded into the managing server in ascending order of the file names. To avoid this, add unique information, such as the acquisition date and time, to the file names.
- Before you place an offline machine in online status, or before you re-execute the `dcmstdiv` command, you should delete offline machine information files that have already been loaded in order to ensure that these files will not be loaded again.
- Do not access the directory specified in the `/d` argument while the `dcmstdiv` command is executing.

(6) Example

This following is an example of loading the offline machine information files stored in the `A:\` folder to JP1/Software Distribution:

```
dcmstdiv.exe /d A:\ /o C:\Dmbat\out.txt
```

4.22 dcmstsw.exe (monitoring the job status)

This section explains the dcmstsw command that monitors the job execution status. You can execute this command on the managing server for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system).

(1) Function

In the managing server, this command monitors the execution status of the job that is specified in a parameter file or in a command line, and starts an external program when a specified execution status is reached.

(2) Format

```
dcmstsw.exe [monitoring-interval] [monitoring-condition] /i parameter-filename
            [/LC {ON|OFF}]
```

(3) Arguments

- *monitoring-interval*

  Specify the interval in which the job execution status is to be monitored. The default is 900 seconds (15 minutes).

- *monitoring-condition*

  Specify the timing when an external program is started.

  - The ALL specification starts an external program when all lower clients have reached a specified execution status.
  - The default is to start an external program when one or more destinations has reached a specified execution status.

- /i

  Specify the full path for the parameter file.

  You can also use the output file from the dcmcoll (no /s specification), dcminst (no /s specification), or dcmjexe command as a parameter file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see the following sections:

  - Executing the command in JP1/Software Distribution Manager

    4.6 Registry settings (JP1/Software Distribution Manager) in the manual *Setup Guide*

  - Executing the command in JP1/Software Distribution Client (relay system)

    5.4 Registry settings (JP1/Software Distribution Client (relay system)) in the manual *Setup Guide*

Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the template used for exporting and outputting file format instead of specifying these parameters in a parameter file. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–20: Correspondence between parameter file contents and arguments (dcmstsw command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator	Job name	X	--
	jobno	Job number	R	/jn *value*
	job_folder	Job folder path	O#1	/l *value*
	unsuspended	Whether a distribution being suspended exists	X	--
USER_PROGRAM_INSTALLATION_CONDITIONS	external_program_executed_before_installation	External program executed before installation (collection)	X	--
	external_program_executed_after_installation	External program executed after installation (collection)	X	--
	external_program_error_handler	External program error handler	X	--
	external_program_handler	External program handler	R	/ep *value*
	exit	Notification method for the results of an external program	X	--
	action	Disposition of processing error	X	--
	wait	Monitoring method	X	--
	timeout	Maximum execution limit	O#2	/wt *value*
	wait_code	Wait code	O#3	/wc *value*

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

The default is to monitor the job execution status by searching all folders or files at and below the root folder level.

#2

Specify a value greater than the monitoring interval. The default is 86,400 seconds (1 day).

#3

Specify either *job execution status* or *maintenance code*. A job execution status, however, can be specified only for a managing server for JP1/Software Distribution Manager. If you specify a job execution status for JP1/Software Distribution Client (relay system), an error occurs and return code 3 is returned.

Specify either *Job status* or *Maintenance code*. For details about the values that can be specified, see *4.26.21 USER_PROGRAM_INSTALLATION_CONDITIONS (specifying an external program)*.

This parameter is optional on the managing server for JP1/Software Distribution Manager. The default is to execute an external program upon the occurrence of a job execution error.

This parameter cannot be omitted on the managing server for JP1/Software Distribution Client (relay system).

(5) Command format not using a parameter file

The following is the command format to be used when an argument only is specified without using a parameter file:

```
dcmstsw.exe [monitoring-interval] [monitoring-condition]
            /jn job-number [/l job-folder-path]
            /ep external-program-handler [/wt maximum-execution-limit] [/wc
wait-code]
            [/LC {ON|OFF}]
```

(6) Return codes

The following explains the return codes that the `dcmstsw` command may return:

Code	Meaning	Action
0	Normal termination.	None.
1	Unable to open parameter file, or invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument.	Check the settings for the command argument.
3	Error during connection to managing server, or an execution status was specified in a basic database environment or in JP1/Software Distribution Client (relay system).	Check the version of the managing server. If an execution status is specified in the monitoring code, check to see if the managing server is JP1/Software Distribution Manager.
4	Specified external program not found.	Check the path for the external program.
5	Maximum execution limit exceeded; job not terminated.	Check the job execution status.
12	Other errors occurred.	Check the event log. Possible causes of error include a system error, invalid command argument syntax, and denied processing.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(7) Notes

- In the parameter file or command argument, specify the job number that was output to the output file by the `dcmcoll` (no `/s` specification), `dcminst` (no `/s` specification), or `dcmjexe` command.
- This command terminates under the following conditions:
  - When an external program is started
  - When the time specified in maximum execution limit is exceeded
  - When a code other than `NORMAL` is specified in the wait code and all jobs being monitored have terminated normally
  - When the job being monitored is deleted
  - When the managing server stops
- If either an ID job or an all-lower-client job is specified as the job to be monitored, do not specify `ALL` in the monitoring condition. Specifying `ALL` causes a return code `12` error.

(8) Example

The following is an example of executing an external program C:*aaa*.exe when all jobs executed in the local managing server have terminated normally, with a command monitoring interval of 5 minutes and a maximum execution limit of 1 hour.

(a) Creating a parameter file

Specify the job number that was output to the result output file for the dcmjexe command in a parameter file as follows:

If the result output file for the dcmjexe command is saved, the file can be specified as a parameter file.

```
** dcmstsw Parameter File Sample

JOB_ATTRIBUTE{
job_generator= invoice-file-0001-collection
jobno= JB02100720481602
job_folder= \batch-definition
}
```

(b) Command execution

If the result output file from execution of the dcmjexe command is saved in the file C:\DMbat\para\.txt, specify the dcmstsw command as follows:

```
dcmstsw.exe 300 ALL /i C:\DMbat\para.txt /ep C:\aaa.exe /wt 3600 /wc NORMAL
```

4.23 dcmsusp.exe (suspending and resuming a file transfer)

This section explains the dcmsusp command that suspends or resumes the transfer of a file. You can execute this command on the managing server for JP1/Software Distribution Manager.

(1) Function

This command connects to the managing server running on a local host, and suspends and resumes file transfer between a specified relay system and a system below it. This command also suspends and resumes file transfer between the connection-destination managing server and a system below it.

(2) Format

```
dcmsusp.exe [processing-key] [/s] /i parameter-file1
            [parameter-file2] [/o result-output-filename] [/LC {ON|OFF}]
```

(3) Arguments

- *processing-key*

  This key specifies the type of processing to be executed. Specify one of the following four processing keys after the command name. The default is NETM_SUSPEND.

  - NETM_SUSPEND

    This key, which executes a *Suspend file transfer* job, suspends the file transfer between a specified relay system and a system below it. Use a parameter file (or a command argument) to specify a job destination (the client function of the relay system).

  - NETM_RESUME

    This processing key, which executes a *Resume file transfer* job, resumes the file transfer between a specified relay system and a system below it. Use a parameter file (or a command argument) to specify a job destination (the client function of the relay system).

  - NETM_MANSUSP

    This processing key suspends the file transfer between the connection destination managing server and the system below it. If this processing key is specified, all arguments other than the processing key are ignored.

  - NETM_MANRESU

    This processing key resumes the file transfer between the connection destination managing server and the system below it. If this processing key is specified, all arguments other than the processing key are ignored.

- /s

  This argument saves a created job without executing it. If the processing key is either NETM_MANSUSP or NETM_MANRESU, this argument, if specified, is ignored.

  If a job registration date/time, execution date/time, or expiration date is specified, this argument also saves such schedule information.

- /i

  Specify one or two full paths for the parameter file to be used. Delimit two full paths with spaces. The command fails if three or more full paths are specified.

- /o

  Specify the full path for the result output file. This argument is required if the processing key is either NETM_SUSPEND or NETM_RESUME. If the processing key is NETM_MANSUSP or NETM_MANRESU, this argument, if specified, is ignored.

  If either NETM_SUSPEND or NETM_RESUME is specified, the following items are output to a specified result output file upon normal termination of the command; if a result output file already exists, it is overwritten:

  - Job name
  - Job number

- Job storage folder path

The output file created by a /s specification can be used as a parameter file for the dcmjexe command. The output file without a /s specification can be used as a parameter file for the dcmjbrm, dcmrtry, and dcmstat commands.

- /LC

Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

- ON

  Continues command processing even after logging off from Windows.

- OFF

  Forcibly terminates command processing once Windows is logged off.

This argument is effective when the command is executed from a service under any of the following OSs:

- Windows 2000
- Windows XP
- Windows Server 2003 (excluding Windows Server 2003 (IPF))

Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Parameters in a parameter file and corresponding command arguments

You can also use command arguments to specify the template used for exporting and output file format instead of specifying these parameters in a parameter file. The table below shows the correspondence between the contents of a parameter file and the command arguments.

Table 4–21: Correspondence between parameter file contents and arguments (dcmsusp command)

Parameter file specification contents		Description	Specification	Command argument
Tag	Parameter			
JOB_ATTRIBUTE	job_generator	Job name	O#1	/j *value*
	jobno	Job number	X	--
	job_folder	Job folder path	O	/l *value*
	unsuspended	Whether a distribution being suspended exists	X	--
JOB_DESTINATION	group	Group	R#2	/g *value*
	host_name	Host name	R#2	/h *value*
	lower_clients	Whether there is any specified destination	X	--
JOB_DESTINATION_ID	destination_id	Destination ID	R#2	/X *value*
JOB_SCHEDULE	job_entry_date	Job registration date/time	O	/jst *value*
	job_execution_date	Job execution date/time	O	/jsx *value*
	job_expiration_date	Job expiration date	O	/jsp *value*

Legend:

R: required.

O: optional.

X: not required (ignored if specified).

--: Cannot be specified in a command argument.

#1

If you omit `job_generator` or `/j`, *processing-key+job-execution-date-and-time* is automatically set as the job name. If you execute multiple commands with the same processing key, job names may be duplicated and jobs may not be executed correctly. If you execute multiple commands with the same processing key, Hitachi recommends that you specify different job names using `job_generator` or `/j`.

#2

Either `JOB_DESTINATION` (`/g` and `/h`) or `JOB_DESTINATION_ID` (`/X`) must be specified, but the two cannot be specified together. For `JOB_DESTINATION`, you can specify either `group` or `host_name` (`/g` and `/h`), or you can specify both arguments together.

(5) Return codes

The following explains the return codes that the `dcmsusp` command may return:

Code	Meaning	Action
0	The managing server started a job, or the suspended state of the managing server itself was changed.	None.
1	Unable to open parameter file, or invalid file format.	Check the parameter file specification or coding format.
2	Invalid value in command argument or parameter file.	Check the settings for the command argument or parameter file.
3	Error during connection to the managing server.	Check the version of the managing server.
4	Unable to open result output file.	Check the result output file specification.
5	Communication failure between client and managing server.	Check the communication environment settings for the setup for the managing server.
12	Other errors occurred.	Check the event log. Possible causes of error include a system error, invalid command argument syntax, or denied processing due to specification of a value not defined in connection-destination managing server.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(6) Notes

Note the following items when specifying either `host_name` for the `JOB_DESTINATION` tag or the command argument `/h`:

- If either a host name or an IP address is specified in either `host_name` or `/h` in an environment where a host ID is used, the job is executed by assigning the specified host name or IP address to the host ID.
- If the node for the host name or IP address specified in `host_name` or `/h` does not exist in the system configuration, the job is executed using the specified destination name. In this case, because a destination node does not exist in the system configuration, when the job terminates normally, the remote installation manager cannot verify the suspension status of the destination node.
- If multiple host names or IP addresses specified in `host_name` or `/h` (nodes with the same name but different host IDs) exist in the system configuration, the job is executed for all applicable relay systems. When executing a job for some identically named nodes, register the destinations for which the job is to be executed as a host group, and execute the job with respect to the host group.

Note the following when you specify `job_folder` or the `/l` argument for the `JOB_ATTRIBUTE` tag:

- If you execute the command with specification of a job storage folder path for a folder that has not been defined in the Job Definition window, the specified folder is created. This job storage folder that is created is not deleted and remains after the command has executed. If you do not plan to use this folder, you should delete it after the job is completed.

4.24 dcmuidi.exe (batch input of user inventories)

This section explains the dcmuidi command, which inputs multiple user inventory items to the managing server from a CSV-formatted file. You can execute this command on the managing server for JP1/Software Distribution Manager. A parameter file is not used with this command.

(1) Function

This command connects to the managing server on the local computer and inputs multiple user inventories created in a CSV-formatted file in a single operation.

To create the user inventories, prepare a CSV-formatted file based on the user inventory information template, using the CSV output utility or dcmcsvu command. The file format is the same as the user inventory information template.

An example of a prepared CSV file is shown as follows:

```
"Host Name","IP Address","Host ID","Employee. No.","Name","Asset No."
"dmp491","192.168.24.11","#G5H8EURFJIC54T5CTPPR9MJJ1CG","A00001","John Smith","R11403"
"dmp492","192.168.24.12","#GJ4M9NNNIEVD4380T8F67NJD4HK","A00002","Mary Smith","7AC004"
```

When you execute the dcmuidi command, the entries in the file are checked against existing user inventories in the managing server, using either the host name, IP address or host ID, according to whichever is used as the ID key for operations. If user inventories already exist on the managing server for a particular host, the new information from that host is entered.

This means that you cannot enter new user inventories for a host that is not already registered in the system configuration of the managing server.

(2) Format

```
dcmuidi.exe /if CSV-formatted-input-file [/LC {ON|OFF}]
```

(3) Arguments

- /if

  In *CSV-formatted-input-file*, specify the full path of the input file.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Return codes

The following explains the return codes that the `dcmuidi` command may return:

Code	Meaning	Action
0	Normal termination. No matching host exists, or there were no changes to the user inventories.	None.
2	Invalid value in command argument.	Check the value in the command argument.
3	Error during connection or access to managing server.	Check that the managing server and database server are running and that all settings are correct.
4	Open error occurred in the CSV-formatted input file.	Check the file path.
12	Other errors occurred.	Check the event log. Possible causes include a system error, invalid data in the CSV file, or a processing denied error.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(5) Notes

Note the following points when inputting user inventories from a CSV-formatted file using the `dcmuidi` command:

- Before executing batch input, ensure that no *Get system information from client* jobs are running. In the case of batch input of user inventory while a *Get system information from client* job is running, the database may be updated by the information acquired by the *Get system information from client* job.
- When performing the batch input, update the client information too. If you do not update the client information, the information collected from the clients at execution of a *Get system information from client* job is reflected in the database.
- The system does not check the following at input of a CSV-formatted file:
  - Whether the value entered for a list item is included in a selection item
  - Whether any invalid characters are entered in text-input items that have character restrictions
  - Whether values are entered for required items
  - Whether the higher and lower selection items are correctly related in hierarchical items

  If an invalid value has been entered in the data sent to a client, that item is displayed as a blank field when the client user enters user information. In hierarchical items, if the value entered in a higher item is invalid, the lower items will all be blank fields.
- When deleting unnecessary information from a CSV-formatted file, delete the information in row units (client units). If the host name, IP address, or host identifier column (item) is deleted, an error occurs.

(6) Example

The following is an example of the command specified when the CSV-formatted input file resides in the `C:\temp` folder:

```
dcmuidi.exe /if C:\temp\dcmuidi.csv
```

4.25 dcmwsus.exe (executing WSUS synchronization)

This section explains the `dcmwsus` command, which synchronizes a downstream WSUS server with the top-level WSUS server when linked in a chained WSUS server environment. You can execute this command on the managing server for JP1/Software Distribution Manager. This command does not use a parameter file.

(1) Function

This command includes three functions.

- WSUS synchronization

  This command function copies to a specified downstream WSUS server the WSUS computer group configuration and update approval status from the highest level WSUS server to which JP1/Software Distribution is connected. However, this command function does not register clients into a WSUS computer group.

  When synchronization is executed, updates that have been downloaded to the top-level WSUS server are transferred to the specified downstream WSUS server.

- Registering clients into a WSUS computer group

  On a downstream WSUS server, this command function registers clients into the WSUS computer group that has the same name as the specified host group. Of the clients included in the specified host group, only clients that are managed by the WSUS server on which the command was executed are registered into the WSUS computer group.

  If this command function is executed for the top-level WSUS server, a WSUS computer group with the same name as the specified host group is created. Any clients managed by the top-level WSUS server that are included in the specified host group are registered into the WSUS computer group that is created.

- Output of a list of clients registered in a WSUS computer group

  This command function outputs to a specified file a list of the clients that are registered in a specified WSUS computer group.

(2) Format

Performing WSUS synchronization

```
dcmwsus.exe SYNCHRONIZE /w URL-of-WSUS-server
                        /o full-path-of-execution-result-output-file
                        [/u user-name][/p password]
                        [/LC {ON|OFF}]
```

Registering clients into a WSUS computer group

```
dcmwsus.exe GROUP_CREATE /w URL-of-WSUS-server
                         /g name-of-host-group
                         /o full-path-of-execution-result-output-file
                         [/u user-name][/p password]
                         [/LC {ON|OFF}]
```

Output of a list of clients registered in a WSUS computer group

```
dcmwsus.exe CLIENT_LIST   /w URL-of-WSUS-server
                          /g name-of-WSUS-computer-group
                          /o full-path-of-execution-result-output-file
                          [/u user-name][/p password]
                          [/LC {ON|OFF}]
```

(3) Arguments

- `/w`

  Specify the URL of the WSUS server targeted by the command, as no more than 127 characters. The following shows the format for specification of a URL:

  `http://`*name-of-WSUS-server*`[:`*port-number*`]/`*name-of-virtual-directory*

- `/o`

  Specify the full path to the file to which the command's execution result is to be output.

- /u

  Specify a user name if authentication is required for connection to the WSUS server.

- /p

  Specify a password if authentication is required for connection to the WSUS server.

- /g

  For registering clients into a WSUS computer group, specify the host group name that matches the name of the target WSUS computer group.

  For output of a list of clients, specify the name of the target WSUS computer group.

  Note that when you register clients into a WSUS computer group, you cannot specify **All Computers** or **Unassigned Computers**, because these are the default WSUS computer groups.

- /LC

  Specify ON or OFF to indicate whether the command's processing is to continue after logging off from Windows when Task Scheduler or JP1/AJS is used to execute commands in the background.

  - ON

    Continues command processing even after logging off from Windows.

  - OFF

    Forcibly terminates command processing once Windows is logged off.

  This argument is effective when the command is executed from a service under any of the following OSs:

  - Windows 2000
  - Windows XP
  - Windows Server 2003 (excluding Windows Server 2003 (IPF))

  Do not specify /LC ON when you execute the command from the command prompt, because in this case the command is executed as a foreground program.

  You can use a registry setting to specify whether command processing is to continue after Windows is logged off. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

  Note that operation may differ depending on the combination of the /LC specification and the registry setting. For details, see *4.28 Command operation at logoff that depends on a registry setting and logoff option*.

(4) Notes

- If you are connected to the WSUS server that is specified in the /w option and you are performing operations in the Create WSUS Computer Group dialog box or the Update Program Authentication Settings dialog box, you cannot use the dcmwsus command to perform synchronization or client registration for that WSUS server.
- You cannot use the dcmwsus command to perform synchronization or client registration for a WSUS server on which the dcmwsus command is currently executing.
- Before you execute the dcmwsus command with GROUP_CREATE specified for a downstream WSUS server, you should first execute the dcmwsus command with SYNCHRONIZE specified to synchronize that downstream WSUS server with the top-level WSUS server.
- If the WSUS computer group is not created for the downstream WSUS server even after you have performed synchronization, an error may have occurred at the top-level WSUS or in the network. If this happens, check the following and take the appropriate corrective action:
  - The startup status of the top-level WSUS server
  - Whether an error has occurred at the top-level WSUS server
  - The upstream WSUS server that is specified at the downstream WSUS server
  - The status of the network between the WSUS servers
- You should perform WSUS synchronization on a regular basis, so that untransferred updates do not accumulate at the top-level WSUS server.

  As the number of updates not downloaded from the upstream WSUS server increases, the larger becomes the number of updates that must be downloaded when synchronization is executed and the longer it will take for the command to execute.

- Although the command will terminate normally if synchronization is re-executed while it is already executing, depending on the exact time the synchronizations are executed, the WSUS computer group configuration or update approval status may not be copied.

(5) Return codes

The following explains the return codes that the `dcmwsus` command may return:

Code	Meaning	Action
0	The command terminated normally.	None.
2	Invalid value in command argument.	Check the values specified in the command arguments.
3	A connection to the specified WSUS server (WSUS Linkage) could not be established.	Check for the following to determine if there is a problem with the WSUS server or WSUS Linkage: • Invalid URL for the WSUS server • Problem with the startup status of the WSUS server • Error at the WSUS server • WSUS Linkage not installed • Incorrect Microsoft .Net Frameworks configuration • Incorrect Microsoft .Net Frameworks version • Abnormality in the network between WSUS servers
4	Unable to open the result output file.	Check the result output file specification.
5	A communication error at a WSUS server (WSUS Linkage) occurred while processing was underway.	Check for the following to determine if there is a problem with a WSUS server: • Problem with the startup status of a WSUS server • Error at a WSUS server • Abnormality in the network between WSUS servers
6	The specified group does not exist, an invalid character was specified, or too many characters were specified.	Check the group name specified in the arguments.
7	No computer group was created.	Check if a WSUS computer group was created for the top-level WSUS server. If one was created, perform synchronization. If one was not created, create a WSUS computer group for the top-level WSUS, and then execute synchronization. Wait a while, then re-execute the command.
8	An error occurred at a WSUS server.	Check the result output file.
12	Some other error occurred.	Check the event log.
13	The user name or password is invalid.	Check the specification of the user name and password.
15	Another process is currently performing processing targeting the WSUS server.	Wait a while, and then re-execute the command.

If JP1/Base is linked to manage JP1/Software Distribution users, see *1.3.3 Setting for executing commands*.

(6) Examples

The following are examples of performing WSUS synchronization, of registering clients into a WSUS computer group, and of output of a list of clients registered in a WSUS computer group.

To perform WSUS synchronization:

```
dcmwsus.exe SYNCHRONIZE /w http://wssrv001:80/netmWS /o C:\temp\wsussync.txt
```

To register clients into a WSUS computer group:

```
dcmwsus.exe GROUP_CREATE /w http://wssrv001:80/netmWS /g Group1 /o C:\temp
\wsuscreate.txt
```

To output a list of clients registered in a WSUS computer group:

```
dcmwsus.exe CLIENT_LIST /w http://wssrv001:80/netmWS /o C:\temp
\wsuscltlist.txt
```

4.26 Creating a parameter file

A parameter file codes the information (the package to be distributed, destination information, and so forth), which is referred to as a tag. The tag is necessary for the execution of a command. Depending on the type of the command to be executed, you need to code appropriate tags in a parameter file.

4.26.1 Types of tags

The table below shows types of tags and the information to be coded in them.

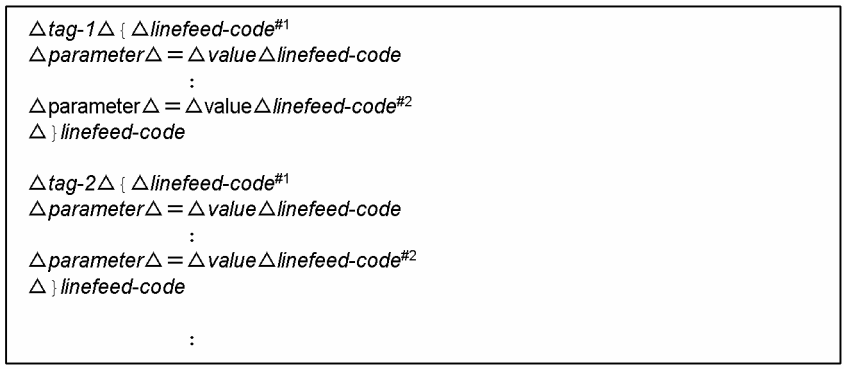
Table 4–22: Types of tags

No.	Tag	Description
1	FILE_COLLECTION	Specifies files to be remotely collected
2	FILE_PROPERTIES	Specifies the restoration of file-access authority
3	INSTALLATION_METHOD	Specifies an installation mode
4	JOB_ATTRIBUTE	Specifies job attributes
5	JOB_CLIENT_CONTROL	Specifies the client control
6	JOB_DESTINATION	Specifies a job destination (host, host group, or Directory Information)
7	JOB_DESTINATION_ID	Specifies a job destination (ID)
8	JOB_SCHEDULE	Specifies a job schedule
9	JOB_SPLIT_DELIVERY	Specifies split distribution of a package
10	OPTION	Specifies an option
11	OUTPUT_CONSTRAINTS	Specifies the output information
12	PACKAGING_INFORMATION	Specifies package attribute information
13	PACKAGING_SOURCE	Specifies the file to be packaged
14	SCHEDULE	Specifies a remote installation/collection schedule
15	SCRIPTS	Specifies an installation script
16	SOFTWARE_CONDITIONS	Specifies software conditions
17	SYSTEM_CONDITIONS	Specifies system conditions
18	USER_PROGRAM_INSTALLATION_CONDITIONS	Specifies an external program

4.26.2 Parameter file format

You can code more than one tag in a parameter file. The figure below shows the format of the parameter file.

Figure 4–5: Parameter file format



△: Stands for 0 or more spaces.

#1 This linefeed code can be coded before the {.

#2 This linefeed code is optional.

A tag consists of two or more statements. In a statement, parameters that represent settings are coded on the left-hand side and the corresponding settings are coded on the right-hand side.

The following are the rules for creating a parameter file and notes that you need to observe when creating it:

- Only one statement can be coded per line.
- A statement cannot extend from one line to another.
- Curly brackets ({ }) can be used only to delimit data.
- The maximum allowable length of a line is 4,096 bytes.
- When coding a comment, place an * at the beginning of the comment. Blank lines and any lines consisting of a comment only are ignored.
- Any tag name must be coded in uppercase alphabetic characters and the character _. Parameter names must be coded in lowercase alphabetic characters and the character _.
- You can code tags in any order per parameter file. Tag names must all be distinct, or a file-format error (return code 1) may result.
- The JOB_DESTINATION tag and the JOB_DESTINATION_ID tags are mutually exclusive.
- If the SCRIPTS tag is specified, the dcmpack command ignores any values that are specified in the SOFTWARE_CONDITIONS, USER_PROGRAM_INSTALLATION_CONDITIONS, or SYSTEM_CONDITIONS tag.

4.26.3 Tag specification method

This section explains how to specify tags in a parameter file.

In the dcmcoll, dcmcsvu, dcminst, dcmpack, dcmpkget, dcmrmgen, and dcmsusp commands, you can directly write arguments to specify the same contents as the parameter file. The following also shows the correspondence between parameters and arguments. While the same coding rules apply to both argument specifications and parameter specifications, there are rules that are unique to argument specifications. For details about argument-specific rules, see *4.2.4 Command input format*.

Reserved words can be used as parameters or command arguments. For details about how to use reserved words, see *4.27 Reserved word specification method*.

4.26.4 FILE_COLLECTION (specifying files to be collected)

In the FILE_COLLECTION tag, you can specify the files to be collected and the directory in which collected files are to be stored. This tag is used in the dcmcoll command.

The following shows specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
source_path	File to be collected	/y *source-path*
dmz_path	Folder for storing collected files	/z *dmz-path*
unarc_path	Folder for storing restored files	Folder for storing /r-restored files

(1) Format

```
FILE_COLLECTION{
source_path=files-or-folders-to-be-collected
dmz_path=folder-for-storing-collected-files
unarc_path=folder-for-storing-restored-files
}
```

(2) Explanation

- source_path=*files-or-folders-to-be-collected*

  Specify a full path of no more than 256 bytes for the file or folder to be collected.

  When specifying multiple files or folders, either separate paths with semicolons (;) or specify source_path multiple times. It can be specified a maximum of 100 times. A specification value can contain a space. However, specifying a space before or after a ; may result in an error with a return code of 2. In addition, a specification value should not be enclosed in double quotation marks (" "). However, if you use a command argument to specify a value, a specification value that includes a space must be enclosed in double quotation marks (" ").

- dmz_path=*folder-for-storing-collected-files*

  When collecting files (that is, when the processing key of the dcmcoll command is NETM_COLLECT), specify a full path of no more than 256 bytes for the storage location for the files and folders to be collected. You can only specify one path.

  When restoring an archive file (that is, when the processing key of the dcmcoll command is NETM_UNARC), specify a full path of no more than 256 bytes for the archive file to be restored (dmz extension) or for the folder where the archive file is stored. In this case, you can specify multiple files or folders by separating the paths with semicolons (;), or by coding dmz_path multiple times.

- unarc_path=*folder-for-storing-restored-files*

  When restoring an archive file (if the processing key in the dcmcoll command is NETM_UNARC), specify the folder for storing the restored file or folder as a path 256 bytes long or less, beginning with the drive. Only one path can be specified.

4.26.5 FILE_PROPERTIES (specifying the restoration of file access authority)

The FILE_PROPERTIES tag specifies whether the access authority for a remotely installed file or directory is to be restored. This tag can be used in the dcmpack command.

The following shows specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
permission	Restoring file-access authority	/qY or /qN

(1) Format

```
FILE_PROPERTIES{
permission=restoring file-access authority
}
```

(2) Explanation

- permission=*restoring file-access authority*

  Specify either of the following parameters to indicate whether the access privileges for the installed file or directory are to be restored:

  - S

    The access authority for the source of the packaging is restored at the installation destination.

  - T

    Access authority cannot be restored. The file is created according to the access authority that is applicable to the destination installation directory.

  When using a command argument, specify either Y or N after /q. The default is Y (restore). For distribution to UNIX clients, specify N (do not restore).

4.26.6 INSTALLATION_METHOD (specifying an installation mode)

The INSTALLATION_METHOD tag specifies the installation mode.

This tag can be used in the dcmpack command. The following shows specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
installation_mode	Installation mode	/mB or /mG

(1) Format

```
INSTALLATION_METHOD{
installation_mode=installation mode
}
```

(2) Explanation

- installation_mode=*installation mode*

  Specify the installation mode for the package. When using a command argument, specify either G or B after /m. The default is B (background installation mode).

  - G (GUI installation mode)

    This installation mode uses a special installer (an interactive installer). An installer that does not have a GUI but has a graphic device interface API uses this mode.

    For a Windows NT client, remote installation requires that the user who installed the client be logged on. However, installation can proceed if the client uses the facility for installation with non-Administrator user permissions. For details about the facility for installation with non-Administrator user permissions, see *11.2.3 Installing software using non-Administrator user permissions under Windows NT* in the manual *Administrator's Guide Volume 1*.

  - B (background installation mode)

    This installation mode, which does not require a special installer, can be used in those situations for which installation involves only the copying of files. In this mode, remote installation can proceed even if the user who installed the client is not logged on, provided that Windows NT has been started.

4.26.7 JOB_ATTRIBUTE (specifying job attributes)

In the JOB_ATTRIBUTE tag, you can specify the attributes of a job. This tag can be used in the following commands: dcmcoll, dcminst, dcmjbrm, dcmjexe, dcmrmgen, dcmrtry, dcmstat, dcmstsw, and dcmsusp.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
job_generator	Job name	/j *job-name*
jobno	Job number	/jn *jobno*
job_folder	Job storage folder path	/l *job-storage-folder-path*
unsuspended	Distribute when suspended	/uns *whether-to-distribute-when-suspended*

(1) Format

```
JOB_ATTRIBUTE{
job_generator = job-name
jobno=jobno
job_folder = job-storage-folder-path
unsuspended=whether-to-distribute-when-suspended
}
```

(2) Explanation

- job_generator = *job-name*

  Specify the job name that was defined in the managing server. The default is processing key + execution date and time (for the dcmcoll, dcminst, or dcmsusp command).

  This parameter is required in the dcmjexe command.

- jobno=*jobno*

  This is a job ID that is automatically assigned by the managing server.

- job_folder = *job-storage-folder-path*

  Specify the folder name for the managing server, beginning with the letter and \ that denotes the root folder. Hierarchical folders should be specified, separated by \. The following is a specification example of folder names up to four levels. The following is an example of a folder specification:

  job_folder=*folder1**folder2**folder3**folder*

  The default is to search for a specified job name beginning with the root folder and to process the first job that is found. If jobs with the same name are in different folders, specify the name of the folder in which the desired job is stored.

  If more than one parameter file is used in the dcmcoll or dcminst command, specify parameter files so that the same folder name is not contained in different parameter files. For example, the following specifications should be avoided:

  - Specifying parameter file A:

    job_folder=*folder1**folder2**folder3*
  - Specifying parameter file B:

    job_folder=*folder1**folder2*

- unsuspended=*whether-to-distribute-when-suspended*

  Specify whether the package is to be distributed when the file transfer is suspended, as Y or N.

  Y

  This specification distributes packages even when a file transfer is suspended.

  N

  This specification suspends the distribution if a file transfer is suspended.

  The default is N.

  This parameter can be specified only in the dcminst command; in any other command, it causes an error when specified.

(3) Specifiable reserved words

Reserved words that can be specified depend on the command that is being executed:

Reserved words specifiable in the dcmcoll command:

\CY, \CM, \CD, \CH, \CN, \CS, \HOST, \GROUP, \ZDIR

Reserved words specifiable in the dcminst command:

\CY, \CM, \CD, \CH, \CN, \CS, \VERSION, \HOST, \GROUP, \DSTID, \PKGID

Reserved words specifiable in the dcmsusp command:

\CY, \CM, \CD, \CH, \CN, \CS, \HOST, \GROUP, \DSTID

4.26.8 JOB_CLIENT_CONTROL (specifying the client control)

In the JOB_CLIENT_CONTROL tag, you can specify the client control. You can use this tag in the dcminst command only. This tag is ignored in any other command.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
client_wake_up	Whether to activate the client	/WWU
client_shutdown	Whether to shut down the client	/WUS

(1) Format

```
JOB_CLIENT_CONTROL {
client_wake_up=whether-to-activate-the-client
client_shutdown=whether-to-shut-down-the-client
}
```

(2) Explanation

- client_wake_up=*whether-to-activate-the-client*

  In *whether-to-activate-the-client*, specify Y or N to determine whether or not to activate the client.

  Y

  Activate the client.

  N

  Do not activate the client.

  If you do not specify this parameter, client_wake_up=N is used by default.

- client_shutdown=*whether-to-shut-down-the-client*

  In *whether-to-shut-down-the-client*, specify Y or N to determine whether or not to shut down the client.

  Y

  Shut down the client.

  N

  Do not shut down the client.

  If you do not specify this parameter, client_shutdown=N is used by default.

4.26.9 JOB_DESTINATION (specifying a job destination)

In the JOB_DESTINATION tag, you can specify the destination for a job. This tag can be used in the dcmcoll, dcminst, and dcmsusp commands.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
directory_com[#1, #2]	Directory information (computer hierarchy)	/dc *computer-hierarchy*
directory_group[#1, #2]	Directory information (group hierarchy)	/dg *group-hierarchy*
directory_ou[#1, #2]	Directory information (organizational unit (OU) hierarchy)	/do *OU-hierarchy*
group	Group name	/g *group-name*
host_name	Host name	/h *host-name*
lower_clients	Whether to specify all lower clients	--

Legend:

--: Cannot be specified in a command argument.

#1

Cannot be used with the dcmsusp command.

#2

You cannot specify group or host_name together with directory_com, directory_group, or directory_ou. However, you can specify group and host_name together. You can also specify any combination of directory_com, directory_group, and directory_ou.

(1) Format

```
JOB_DESTINATION{
directory_com=computer-hierarchy
directory_group=group-hierarchy
directory_ou=OU-hierarchy
group=group-name
host_name=host-name
lower_clients=whether-to-specify-all-lower-clients
}
```

(2) Explanation

- directory_com=*computer-hierarchy*

  Specify a computer hierarchy for the directory information acquired by the managing server. The following is an example of a computer hierarchy specification:

  directory_com=CN=COM001,OU=Hitachi,DC=Domain001,DC=xx,DC=jp

  To specify multiple computer hierarchies, use the semi-colon (;) to delimit the computer hierarchies. You can also code directory_com on multiple lines to specify multiple computer hierarchies. Combined, you can specify directory_com, directory_group, and directory_ou a maximum of 200 times.

- directory_group=*group-hierarchy*

  Specify a group hierarchy for the directory information acquired by the managing server. The following is an example of a group hierarchy specification:

  directory_group=XX=Group001,OU=Hitachi,DC=Domain001,DC=xx,DC=jp

  To specify multiple group hierarchies, use the semi-colon (;) to delimit the group hierarchies. You can also code directory_group on multiple lines to specify multiple group hierarchies. Combined, you can specify directory_group, directory_com, and directory_ou a maximum of 200 times.

- directory_ou=*OU-hierarchy*

  Specify an organizational unit (OU) hierarchy for the directory information acquired by the managing server. The following is an example of an OU hierarchy specification:

  directory_ou=OU=Hitachi,DC=Domain001,DC=xx,DC=jp

To specify multiple organizational unit (OU) hierarchies, use the semi-colon (`;`) to delimit the OU hierarchies. You can also code `directory_ou` on multiple lines to specify multiple OU hierarchies. Combined, you can specify `directory_ou`, `directory_com`, and `directory_group` a maximum of 200 times.

- `group=`*group-name*

  Specify the group name defined in the managing server in terms of a path beginning with the root directory. The following is an example of a group name specification:

  `group=\`*`group1`*`\`*`group2`*`\`*`group`*

  When specifying multiple groups, use semicolons (`;`) to separate the groups. You can also code `group=` in multiple lines to specify multiple group names. A total of 200 groups and host names can be specified.

- `host_name=`*host-name*

  Specify the host name of the client defined in the managing server. When not using a host ID, you can specify the host name of the destination client to execute the job. When using a host ID, specify host ID or a path including the target client for the destination. (Do not specify only a host name.) Regardless of whether a host ID is used, when specifying a destination in terms of a path including the target client, begin with a `\` and separate the relay systems with `\` characters, shown as follows:

  `host_name=\`*`Submanager1`*`\`*`Submanager2`*`\`*`Submanager3`*`\`*`host1`*

  When specifying a destination path in a job specifying a relay system as a destination, specify the name of the relay system in both the path and the destination, shown as follows:

  `host_name=\`*`Submanager1`*`\`*`Submanager1`*

  When specifying multiple hosts, use semicolons (`;`) to separate the hosts. You can also code `host_name=` in multiple lines to specify multiple host names. A total of 200 host names and groups can be specified.

  When managing clients in terms of IP addresses, you should specify IP addresses.

  When specifying the `Y` parameter in the `lower_clients` parameter, specify the relay manager in the `host_name` parameter.

- `lower_clients=`*whether-to-specify-all-lower-clients*

  Indicate either `Y` or `N` to specify whether all clients subordinate to the relay manager are to be the destination.

  `Y`

  This specifies that all clients specified in `host_name` subordinate to the managing server are to be destinations.

  Although more than one host can be specified in `host_name`, only relay managers can be specified. If you specify a `group` parameter, the `group` parameter is ignored.

  `N`

  Hosts specified in `host_name` and destination groups specified in `group` are to be destinations for the job.

  If you do not specify this parameter, `lower_clients=N` is used by default.

  This parameter is ignored in any command other than `dcminst`. Also, this parameter is ignored if it is specified in JP1/Software Distribution Client (relay system).

(3) Notes

- The `JOB_DESTINATION` and `JOB_DESTINATION_ID` tags are mutually exclusive. In command-argument specifications, `/h`, `/g`, `/dc`, `/dg`, and `/do` cannot be specified together with `/X`.
- When you use host IDs and use ID keys as host names, you cannot use the `host_name` parameter in either of the following cases:
  - In the **ID Key for Operations** page of the Software Distribution Manager Setup dialog box, **Use Network in Windows** is specified as the method used to resolve addresses, but address resolution fails.
  - In the **ID Key for Operations** page of the Software Distribution Manager Setup dialog box, **Use the system configuration of Software Distribution Manager** is specified as the method used to resolve addresses.

4.26.10 JOB_DESTINATION_ID (specifying an ID)

The JOB_DESTINATION_ID tag specifies an ID name as a job destination. This tag can be used in the dcmcoll, dcminst, and dcmsusp commands.

The following shows specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
destination_id	ID name	/X *ID-name*

(1) Format

```
JOB_DESTINATION_ID{
destination_id=ID-name
}
```

(2) Explanation

- destination_id=*ID-name*

  Specify an existing ID name. You can also specify relays managing the ID to limit the relay systems that execute the ID group job. If you specify relays managing the ID, begin each specified relay with a backslash (\). The ID name itself begins with a backslash (\) and a percent sign (%).

  If you do not specify a relay managing the ID, execution is performed on all relays managing the ID to which that ID group is registered.

  The following is an example of an ID name specification:

  ```
  destination_id=\dmp202\%ID0001
  ```

  Specify the names of the relays managing the ID according to the working key of each of the relays managing the ID that is specified. For example, if the working key of the higher-level relay managing the ID is its host name, and the working key of the lower-level relay managing the ID is its IP address, specify the destination as follows: *host-name**IP-address*\%*ID-name*.

  To specify multiple ID groups, use the semi-colon (;) to delimit the ID names. You can also code destination_id= on multiple lines to specify multiple ID groups. A total of 200 ID groups can be specified.

(3) Notes

- The JOB_DESTINATION and JOB_DESTINATION_ID tags are mutually exclusive. In command-argument specifications, /h, /g, /dc, /dg, and /do cannot be specified together with /X.
- You cannot specify a relay managing the ID if you are using a parameter file with the dcmcoll command or the dcmsusp command. If you do specify one, an error results when the command executes.
- If you specify a relay managing the ID, the length of the destination string must not exceed 256 bytes, including the ID name.
- If you execute the command with specification of a relay system that does not exist, the job is created but will not execute.

4.26.11 JOB_SCHEDULE (specifying a job schedule)

The JOB_SCHEDULE tag specifies the job schedule: registration date and time, execution date and time, and execution time limit. This tag can be used in the following commands: dcmcoll, dcminst, dcmjexe, and dcmsusp.

The following shows specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
job_entry_date	Job registration date and time	/jst *value*

Parameter	Description	Command argument
job_execution_date	Job execution date and time	/jsx *value*
job_expiration_date	Job execution time limit	/jsp *value*

(1) Format

```
JOB_SCHEDULE{
job_entry_date=job-registration-date-and-time
job_execution_date=job-execution-date-and-time
job_expiration_date=job-execution-time-limit
}
```

(2) Explanation

- job_entry_date=*job-registration-date-and-time*

  Specify the job registration date and time in the *YYMMDDhh*:*mm* format.

  Last two digits of the year (00 to 36, 70 to 99)

  MM: Month (01 to 12)

  DD: Day (01 to 31)

  hh: Hours (00 to 23)

  mm: Minutes (00 to 59)

  If you omit this parameter, the command execution date and time are assumed as the job execution date and time.

- job_execution_date=*job-execution-date-and-time*

  Specify the job execution date and time in the *YYMMDDhh*:*mm* format.

  The format of the job execution date and time is the same as job_entry_date.

  The default is immediate execution of the job. This parameter can be omitted only if both job_entry_date and job_expiration_date are also omitted.

- job_expiration_date=*job-execution-time-limit*

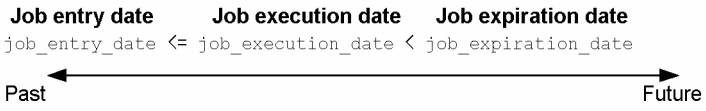
  Specify the job execution time limit in the *YYMMDDhh*:*mm* format.

  The format of the job execution time limit is the same as job_entry_date.

  The default is unlimited job execution time.

(3) Notes

- The job_execution_date, job_entry_date, and job_expiration_date specification values result in an error if they do not satisfy the following conditions:



- If you specify the job registration date and time, execution date and time, or execution time limit, the job definition is stored on the server. If you delete the stored job definition before a job is created (before the specified registration date and time), the job can no longer be created.
- If you specify the job registration date and time, execution date and time, or execution time limit, but specify a nonexistent destination, host group, or ID group, the command terminates normally, but the job is not executed.
- The following shows the meanings of the last two digits of the year:

  70 to 99: 1970 to 1999

  00 to 36: 2000 to 2036

4.26.12 JOB_SPLIT_DELIVERY (specifying split distribution of a package)

In the JOB_SPLIT_DELIVERY tag, you can specify split distribution of a package. You can use this tag in the dcminst command only. This tag is ignored in any other command.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
split_size	Split size	/sds *value*
wait_time	Transfer interval	/sdt *value*

(1) Format

```
JOB_SPLIT_DELIVERY {
split_size=split-size
wait_time=transfer-interval
}
```

(2) Explanation

- split_size=*split-size*

  In *split-size*, specify the size of the divisions of the package. You can specify 1 to 2,097,151 in kilobytes. If you do not specify this parameter, 1,024 (kilobytes) is set by default.

- wait_time=*transfer-interval*

  In *transfer-interval*, specify the interval of split distribution. You can specify 1 to 1,440 in minutes. If you do not specify this parameter, 60 (minutes) is specified by default.

4.26.13 OPTION (specifying an option)

The OPTION tag specifies options for remote installation. This tag can be used in the dcmcoll and dcmpack commands.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
compress	Compression	/uY or /uN
compress_type	Compression method	/ctN or /ctH
restore	Restore operations for version upgrades	/RY or /RN
encipher	Encryption	/encY or /encN
reboot	Reboot after installation	/reboot
processing_dialog	Processing dialog during installation	/procS, /procY, or /procN

(1) Format

```
OPTION{
compress=compression
compress_type=compression-method
restore=restore-operations-for-version-upgrades
encipher=encryption
reboot=reboot-after-installation
```

```
processing_dialog=processing-dialog-during-installation
}
```

(2) Explanation

- `compress=`*compression*

  `Y` or `N` specifies, for the `dcmpack` command, whether the software is to be packaged with compression, and for the `dcmcoll` command, whether files are to be collected with compression.

  For a command argument specification, specify either `Y` or `N` after `/u`. The default is `N` (no compression).

  - `Y`

    This compresses the package or the file during the packaging or file collection.

    Any package that is compressed is automatically decompressed during its remote installation. Compressing a package speeds up the file transfer and saves space when the package is stored in a cabinet, at the expense of an increased compression/decompression processing time during the packaging or remote installation.

  - `N`

    This skips the compression of the package or file during the packaging or file collection.

- `compress_type=`*compression-method*

  For the `dcmpack` command, you can specify the compression method to be used in terms of either `N` (compatible mode compression) or `H` (high compression). This parameter cannot be specified in the `dcmcoll` command.

  To specify this parameter in a command argument, code either `N` or `H` after `/ct`.

  The default is `N` (compatible-mode compression).

  - `N`

    This compresses the file in the compatible mode so that the file can be distributed to Windows clients with version 05-22 or earlier, as well as to UNIX clients.

  - `H`

    This compresses the file at a high compression ratio, which achieves greater package-space savings than the compatible-mode compression. This option, which can be used to distribute files to Windows clients with version 05-23 or later, is not compatible with clients with version 05-22 or earlier nor with UNIX clients.

    For notes about when a system before version 05-22 or a UNIX system is used, see *2.2.8 Options page* in the manual *Administrator's Guide Volume 1*.

- `restore=`*restore-operations-for-version-upgrades*

  Specify whether the files are to be restored during a version upgrade in terms of either `Y` or `N`. This parameter cannot be specified in the `dcmcoll` command.

  For a command-argument specification, specify either `Y` or `N` after `/R`. The default is `N` (do not restore).

  - `Y`

    This restores the backup file for the previous version from the remote installation destination during a software version-upgrade operation. If the remote installation fails, the previous version of software is restored based on the backup.

  - `N`

    This does not restore the file during the version-upgrade operation.

- `encipher=`*encryption*

  When registering a package, specify whether it is to be encrypted in terms of either `Y` or `N`. This parameter cannot be specified in the `dcmcoll` command. Encryption requires the installation of the JP1/Software Distribution Encryption Option.

  In a command argument, specify either `Y` or `N` after `/enc`. The default is `N` (do not encrypt).

- `reboot=`*reboot-after-installation*

  Specify whether the client computer is to be automatically rebooted after the package is installed, as `Y` or `N`. This parameter cannot be specified in the `dcmcoll` command. The default for this parameter is `N` (do not restart), which is automatically set.

  - `Y`

After the package is installed, the restart confirmation dialog box is displayed on the client. Clicking the **OK** button on the client starts the rebooting process.

- N

  Does not restart the client computer after the package is installed.

In a command argument specification, code /reboot to restart, or omit it not to restart.

Only the client can automatically restart the computer. To cause an automatic restart of the client, the **If requested by the administrator, shut down or restart the computer** check box on the **Job option** page must be on.

The relay manager or relay system cannot automatically restart the client even if the installed package specifies a reboot.

For notes about when the client is restarted automatically or when the client cannot be started automatically, see *2.2.8 Options page* in the manual *Administrator's Guide Volume 1*.

- processing_dialog=*processing-dialog-during-installation*

  In SETUP, Y, and N, specify whether a processing dialog is to be displayed during the installation of a package. This option is applicable to the Downloading dialog and the Installation in Progress dialog. This option cannot be specified in the dcmcoll command.

  When using a command argument, specify S, Y, or N after /proc. The default is the automatic setting of SETUP (use the client settings) (/procS for a command argument).

  - SETUP

    The action of the processing dialog is determined according to the settings that are provided in the **Processing dialog** page at the client. Even if the Downloading dialog and the Installation in Progress dialog have different settings, this option displays the dialog according to the **Processing dialog** page.

  - Y

    Displays the Downloading dialog and the Installation in Progress dialog, irrespective of the settings that are provided in the **Processing dialog** page at the client.

  - N

    Hides the Downloading dialog and the Installation in Progress dialog, irrespective of the settings that are provided in the **Processing dialog** page at the client.

  The following table shows whether or not the **Processing dialog** page is displayed when the processing_dialog parameter and the **Processing dialog** page in the client setup are set:

Settings in Processing dialog page in client setup	processing_dialog parameter settings for the package		
	SETUP	Y	N
Display	O	O	--
Do not display	--	O	--

Legend:
O: Display.
--: Do not display.

The following are notes about the display of the **Processing dialog** page:

- In Windows clients 06-71 or earlier, any specification of the display of the **Processing dialog** page in a package is ignored.
- When the display of the **Processing dialog** page is specified for a package, whether or not the **Installation in progress** dialog is to be displayed at the top depends on the client settings (this option is also enabled when the dialog is inactive).

4.26.14 OUTPUT_CONSTRAINTS (specifying the output information)

In the OUTPUT_CONSTRAINTS tag, you can specify the kinds and comparison condition for the information you want to output. You can use this tag in the dcmcsvu command only.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
template	Template used for exporting	*template-key*
format	Format of the output file	csv or par
row	Item (row) to be output	--
group_membership	Group to which the targets belongs	--
condition	Comparison condition	--
unicode	Whether a CSV file in Unicode is to be output	/uniY or /uniN

Legend:
--: Cannot be specified in a command argument.

Use a template provided by JP1/Software Distribution to specify the items you want to output. This template is the same as the template that the CSV output utility uses. Information is output for the items included in the specified template (the columns in the template). For some templates, you can also perform the following operations:

- Exporting only the specified information items (valid only when exporting information to a file in CSV format)
- Extracting the output information by specifying the comparison condition expression or host group

(1) Format

```
OUTPUT_CONSTRAINTS{
template = template-key
format = export-file-format (csv or par)
row = items-to-be-output (row)
group_membership = group-of-the-host
condition = condition
unicode = Y-or-N-indicating-whether-a-CSV-file-in-Unicode-is-to-be-output
}
```

(2) Explanation

- template=*template-key*

  In *template-key*, specify the template key for the template you want to use for exporting the inventory information. The items you can export with the template are the same as the items that the CSV output utility outputs to a CSV-formatted file. For details, see *9.1.1 Items eligible for output to a CSV-formatted file* in the manual *Administrator's Guide Volume 1*.

  You can specify any template when exporting inventory information in CSV format. However, some templates cannot be specified when you export inventory information in the parameter file format. The following shows the templates and the export formats that can be specified.

  Table 4–23: Export file formats and templates that can be specified

Template key	Corresponding template	CSV format	Parameter file format
HOST_ATTR	Host attributes	Y	Y#
PKG_INFO	Package attributes	Y	Y
PKG_FILES	Package contents	Y	N
SYS_INFO	System information	Y	N
USR_INV	User inventory information	Y	N
INSTLD_PKG	Installed package information	Y	Y#
J_STAT	Job status	Y	Y
REG_DEFS	Registry acquisition item	Y	N

Template key	Corresponding template	CSV format	Parameter file format
USER	User information	Y	N
SOFT_INV	Software inventory	Y	N
LICENSE	License information	Y	N
MS_OFFICE	Microsoft Office products	Y	N
VIRUS	Anti-virus products	Y	N
NO_CLIENT	Information on hosts on which JP1/Software Distribution is not installed	Y	N
DISCOVERY_INFO	Host search results	Y	N
DETER_HIST	Boot suppression history	Y	N

Legend:

Y: Specifiable.

N: Not specifiable

#

Outputs information on the host having the same operating key as the managing server that executes the command. If a relay manager having a different operating key exists, host information on that relay manager and any subordinate hosts is not output.

When you export inventory information to a file in the parameter file format by specifying a template that is indicated in Table 4-23 as being not specifiable, the command results in an error.

- format=*export-file-format*

  Specify either of these keywords as the export format of the output file:

  csv

  Exports the inventory information to the result output file in CSV format.

  par

  If you specify this keyword, the command exports the inventory information to the result output file in the parameter file format. When you export the inventory information to a file in the parameter file format, the tag information to be output differs depending on the template you use. The following shows the template keys and the tags that are displayed.

  Table 4–24: Tags to be output to a file in the parameter file format

Template key	Tag to be output
HOST_ATTR (host attribute)	JOB_DESTINATION
PKG_INFO (package attribute)	PACKAGING_INFORMATION
INSTLD_PKG (installed package information)	JOB_DESTINATION
J_STAT (job status)	JOB_DESTINATION

If you specify the export format in both a command argument and the parameter file, the command argument prevails. If you specify the export format in neither a command argument nor the parameter file, csv is used by default.

- row=*items-to-be-output* (row)

  To output inventory information to a CSV-formatted file, individually specify the items (rows) in the template that are to be output. Use a semicolon (;) to separate each item. The spaces before and after semicolons are ignored. The following shows the format of the row parameter:

  row = *item-1*;*item-2*;*item-3*...

  If you do not specify the row parameter, the command outputs the information for all items.

  The output item specification by the row parameter is valid only when you use any of the following templates to export the inventory information to a file in the CSV format:

- HOST_ATTR (host attribute)
- SYS_INFO (system information)
- INSTLD_PKG (installed package information)
- J_STAT (job status)
- VIRUS (anti-virus products)
- NO_CLIENT (information on hosts on which JP1/Software Distribution is not installed)
- DISCOVERY_INFO (host search results)

When you use a template other than the preceding to export the inventory information to a file in CSV format, you cannot specify the items you want to output. The command outputs the information for all items. If you export the inventory information to a file in the parameter file format, the row parameter is ignored.

Tables 4-25 to 4-31 list the items you can specify in the row parameter in each template.

Table 4–25: Items that can be specified in the row parameter with the HOST_ATTR (host attribute) template

Items that can be specified in the row parameter	Explanation
host	Host name
ipaddr	IP address
hid	Host ID
macaddr	MAC address
type	Type
route	Route
group	Group to which the host belongs
holdrep	Notification hold
suspended	File transfer suspended at relay system
cmnt	Comment
cdate	Creation date/time
date	Update date/time
pkgupdate	Installed package information last update date
syupdate	System information last update date
uupdate	User inventory information last update date
rupdate	Registry information last update date
sfupdate	Software inventory information last update date
smiupdate	Software operation information last update date
smpolicy	Operation monitoring policy for the applied software and the policy's version

Table 4–26: Items that can be specified in the row parameter with the SYS_INFO (system information) template

Items that can be specified in the row parameter	Explanation
host	Host name
ipaddr	IP address (value of a system configuration key item)

Items that can be specified in the row parameter	Explanation
hid	Host ID
cpu	CPU type
copr	Coprocessor
ram	Installed RAM
memslot	Memory slot capacity
freephymem	Available physical memory
totalvirmem	Total capacity of virtual memory
freevirmem	Available virtual memory
pagefile	Page file capacity
mtype	Workstation type
clocks	CPU clock speed
extclock	Clock speed of external CPU
processor	Number of processors
maker	Maker name
model	Model
muuid	Machine UUID
msernum	Machine serial number
biosmaker	BIOS manufacturer
biosdate	BIOS release date
biosver	BIOS version
smbiosver	BIOS version (SMBIOS)
amtfmvr	AMT firmware version
pribus	Type of primary bus
secbus	Type of secondary bus
os	OS
distribution	Linux distribution name
ospatch	OS build number/OS patch information
osl	OS license
osv	OS version
ossv	OS sub-version
ossernum	OS serial number
locale	Locale
oslang	OS language
timezone	Current time zone

Items that can be specified in the row parameter	Explanation
insdate	OS installation date/time
lastbootdate	Last startup time/date
bootdev	Boot device
windir	Windows directory
sysdir	System directory
wmi	WMI
wininst	Windows Installer
mbsa	MBSA
wua	Windows Update Agent
ie	Internet Explorer version
iepatch	IE patch
domain_wrkgrp	Domain/Workgroup
domain	Domain type
owner	Owner
org	Company name
pcname	Computer name
comdesc	Computer description
logonname	Logon user name
username	Full name of user
userdesc	User description
cltver	Client version
disk	Disk details[#1]
filesystem	File system[#2]
totalsize	Total sizes[#3]
hdmodel	Model of hard disk
hdesize	Hard disk capacity
hdinterface	Hard disk interface
hdpartition	Number of hard disk partitions
cdrom	CD-ROM drive
umem	Available user memory size
sysres	Available system resource size
keyboard	Keyboard
mouse	Mouse
mousenum	Number of mouse buttons

Items that can be specified in the row parameter	Explanation
monitor	Monitor type
vdriver	Video driver
vchip	Video chip
vram	VRAM
display	Display
soundmaker	Sound card manufacturer
soundname	Sound card product name
macaddr	MAC address
nwkad	Network adapter
defra	Default router address
subnet	Subnet mask
ipaddr_inv	IP address (inventory information)
pridns	Primary DNS server address
secdns	Secondary DNS server address
dhcp	DHCP
dhcpsrv	DHCP server address
dhcpexp	DHCP lease expiration date
dhcpobt	DHCP lease acquired date/time
wins	WINS server address
prtname	Printer name
prtdrv	Printer driver
prtpaper	Printer sheet size
prtkind	Printer type
prtshare	Shared name of printer
prtserver	Printer server name
prtport	Printer port
guestaccount	Guest account
weakpasswod	Weak password[#4]
account	Account[#5]
dayupdpass	Elapsed days since a password modification[#5]
indefinitepass	Non-expiring password[#4]
autologon	Autologon setting
sharedfolder	Shared folder
anonymousrefer	Anonymous connection

Items that can be specified in the row parameter	Explanation
screensaver	Screensaver
scrpassword	Screensaver password protection function
poweronpass	Power on password
winfirewall	Windows Firewall settings
winautoupdate	Windows Automatic Updates
needlesssrv	Unnecessary service
bitlocker	BitLocker settings
driveencryption	Drive encryption information
turnoffmonitor_ac	Turn off monitor (AC)
turnoffmonitor_dc	Turn off monitor (DC)
procsthrottle_ac	Processor throttle (AC)
procsthrottle_dc	Processor throttle (DC)
turnoffharddisks_ac	Turn off hard disk (AC)
turnoffharddisks_dc	Turn off hard disk (DC)
standby_sleep_ac	System standby/sleep (AC)
standby_sleep_dc	System standby/sleep (DC)
systemhibernate_ac	System in hibernate status (AC)
systemhibernate_dc	System in hibernate status (DC)

#1

This is a generic representation of the information items for a single drive. The information items include the logical drive name, device name, free space, and partition size. Specifying `disk` outputs these four data items.

#2

This is the information for a single drive. If you specify `disk` (note 1 above) and also `filesystem`, the information is output as a single disk details item.

#3

This is a generic representation of the information items about the total size of all drives. The information items include total free space and total size of partitions (each partition size is output by specifying `disk`). Specifying `totalsize` outputs these two data items.

#4

Use the semi-colon (`;`) to specify conditions for consecutive character strings.

#5

A condition specified here outputs information for all targeted machines.

Table 4–27: Items that can be specified in the row parameter with the INSTLD_PKG (installed package information) template

Items that can be specified in the row parameter	Explanation
host	Host name
ipaddr	IP address
hid	Host ID
pname	Package name

Items that can be specified in the row parameter	Explanation
pid	Package ID
install	Installation
newver	New version
newgen	New generation
oldver	Old version
oldgen	Old generation
date	Installation or software search date/time

Table 4–28: Items that can be specified in the row parameter with the J_STAT (job status) template

Items that can be specified in the row parameter	Explanation
folder	Folder name
jname	Job name
jattr	Job attribute
execdate	Execution date/time at the server
execsch	Scheduled execution date/time at the server
sduedate	Execution time limit at the server
sregdate	Scheduled registration date/time at the server
dstname	Job destination name
jtype	Job type
dexecdate	Job execution date/time by destination
pname	Package name
pid	Package ID
cabid	Cabinet ID
dmcode	DM ID code
pver	Version
pgen	Generation
cexecdate	Installation date/time at the client
result	Result
status	Status

Table 4–29: Items that can be specified in the row parameter (VIRUS (anti-virus product) template)

Items that can be specified in the row parameter	Explanation
host	Host name
ipaddr	IP address
hid	Host ID
sname	Software name

Items that can be specified in the row parameter	Explanation
sver	Software version
org	Company name
lang	Language
path	Path
size	Size
sdate	Search date/time
idate	Date installed
regorg	Registered company name
reguser	Name of registered owner
virusver	Virus detection engine version
vfilever	Virus definition file version
vstation	Virus detection resident/non-resident
softwareid	Software indicator ID

Table 4–30: Items that can be specified in the row parameter (NO_CLIENT (information on hosts on which JP1/Software Distribution is not installed) template)

Items that can be specified in the row parameter	Explanation
ipaddr	IP address
type	Node type
host	Node name
macaddr	MAC address
subnet	Subnet mask
netaddr	Network address
datetime	Detection date/time
lastupdate	Last update date/time
cmnt	Comment on node

Table 4–31: Items that can be specified in the row parameter (DISCOVERY_INFO (host search result) template)

Items that can be specified in the row parameter	Explanation
ipaddr	IP address
type	Node type
host	Node name
macaddr	MAC address
subnet	Subnet mask
netaddr	Network address
lastupdate	Last update date/time

Items that can be specified in the row parameter	Explanation
cmnt	Comment on node

- group_membership=*group-of-the-host*

  In *group-of-the-host*, specify the group to which the target host belongs as a condition for extracting the information to be output. You can specify one of the group types: relay manager/system, host group, and ID group. You can specify more than one group of the same type. When you specify more than one group, use a semicolon (;) to separate each of the groups or write more than one group_membership parameter line. The specified groups are evaluated with the OR condition. The following shows the format of the group_membership parameter:

  group_membership = [*relay-manager/systems* | *host-groups* | *ID-groups*]

  relay-manager/systems

  In *relay-manager/systems*, specify one or more relay managers/systems. You can specify paths consisting of names delimited by backslashes (\).

  host-groups

  In *host-groups*, specify one or more host group names that begin with a backslash (\). You can specify paths consisting of names delimited by backslashes (\).

  ID-groups

  In *ID-groups*, specify an ID group name that begins with \%.

  The templates that allow you to use the group_membership parameter for extracting information differ depending on the export file format. The following shows the export file formats for which the template supports the group_membership parameter.

  Table 4–32: Templates supporting the group_membership parameter

Template key	Corresponding template	CSV format	Parameter file format
HOST_ATTR	Host attributes	O	O
PKG_INFO	Package attributes	X	X
PKG_FILES	Package contents	X	--
SYS_INFO	System information	O	--
USR_INV	User inventory information	O	--
INSTLD_PKG	Installed package information	O	X
J_STAT	Job status	X	X
REG_DEFS	Registry acquisition item	O	--
SOFT_INV	Software inventory	O	--
LICENSE	License information	X	--
USER	User information	O	--
MS_OFFICE	Microsoft Office products	O	--
VIRUS	Anti-virus products	O	--
NO_CLIENT	Information on hosts on which JP1/Software Distribution is not installed	X	--
DISCOVERY_INFO	Host search results	X	--
DETER_HIST	Boot suppression history	O	--

  Legend:

  O: Can specify the group_membership parameter.

  X: Cannot specify the group_membership parameter.

--: Template that cannot be used in parameter file format.

- `condition`=*condition*

  In *condition*, specify a comparison condition expression for limiting the range of values you want to output. You can use items (rows) of the template as the keys for extracting information to create a comparison condition expression.

  The templates that allow you to use the `condition` parameter differ depending on the export file format. You can use the `condition` parameter for all the templates available for exporting to a file in the parameter file format. The table below shows the export file formats for which the template supports the `condition` parameter.

  Table 4–33: Templates supporting the condition parameter

Template key	Corresponding template	CSV format	Parameter file format
HOST_ATTR	Host attributes	X	O#
PKG_INFO	Package attributes	X	O#
PKG_FILES	Package contents	X	--
SYS_INFO	System information	O	--
USR_INV	User inventory information	X	--
INSTLD_PKG	Installed package information	O	O
J_STAT	Job status	O	O
REG_DEFS	Registry acquisition item	X	--
SOFT_INV	Software inventory	X	--
LICENSE	License information	X	--
USER	User information	X	--
MS_OFFICE	Microsoft Office products	X	--
VIRUS	Anti-virus products	O	--
NO_CLIENT	Information on hosts on which JP1/Software Distribution is not installed	O	--
DISCOVERY_INFO	Host search results	O	--
DETER_HIST	Boot suppression history	X	--

Legend:

O: Can specify the `condition` parameter.

X: Cannot specify the `condition` parameter.

--: Template that cannot be used in parameter file format.

#

You can only extract the information by using a command, but not by using the CSV output utility.

The following shows the format of the `condition` parameter:

`condition = condition [{AND|OR} condition [{AND|OR} condition] ]...`

Use the `AND` and/or `OR` operators to combine operands to create a condition expression. The conditional expression `AND` is executed first. The following shows examples of expressions:

X `AND` *Y* `AND` *Z*

The program extracts the information that satisfies all of the conditions *X*, *Y*, and *Z*.

X `AND` *Y* `OR` *Z*

The program extracts the information that satisfies both the conditions *X* and *Y*, and extracts the information that satisfies the condition *Z*.

X OR *Y* AND *Z*

The program extracts the information that satisfies both the conditions *Y* and *Z*, or the condition *X*.

X OR *Y* OR *Z*

The program extracts the information that satisfies any of the conditions *X*, *Y*, and *Z*.

When you use more than one comparison condition, remember the following points:

- A single condition statement line can include up to 15 combined comparison conditions.
- When writing more than one condition statement line, use AND operators to combine them.
- You can write up to 15 condition statement lines.

The table below shows the formats of the comparison conditions you can use.

Table 4–34: Formats of comparison conditions

Comparison condition	Explanation
A=X	The value of the item A is equal to the condition value X.
A<X	The value of the item A is less than the condition value X.
A>X	The value of the item A is greater than the condition value X.
A<=X	The value of the item A is less than or equal to the condition value X.
A>=X	The value of the item A is greater than or equal to the condition value X.
A<>X	The value of the item A is not the condition value X.
A: X1-X2	The value of the item A is within the range of the condition values X1 to X2.
A: X1, X2, ... X*n*	The value of the item A is any of the condition values X1, X2, ... and X*n*.
A=[*]X*	The value of the item A includes the character string X. An asterisk (*) stands for an indefinite number of characters. A question mark (?) stands for a single character (1 byte). Examples: dmp60?: Information such as dmp600, dmp601, and dmp602 is output. dmp?00: Information such as dmp100, dmp300, and dmp600 is output. dmp60*: Information such as dmp600, dmp6000, and dmp60000 is output.
A<>X1-X2	The value of the item A is not within the range from the condition values X1 to X2.
A<>X1, X2, ... X*n*	The value of the item A is not any of the condition values X1, X2, ... and X*n*.
A<>[*]X*	The value of the item A does not include the character string X. An asterisk (*) stands for an indefinite number of characters. A question mark (?) stands for a single character (1 byte). <>dmp60?: Information other than strings such as dmp600, dmp601, and dmp602 is output. <>dmp60*: Information other than strings such as dmp600, dmp6000, and dmp60000 is output.

Notes

- The value A in the comparison condition indicates an item used as a key for extracting information. For the items that can be specified in the condition parameter, see Tables 4-35 to 4-44.
- If a required entry is missing or there is a conflict in the condition expression, the program returns a syntax error and outputs an error message to the event log.
- You can place 0 or more spaces between a value and an operator (=, >, etc.).
- You can use wildcards only when the comparison condition is in an A =[*]X* or A <>[*]X* format.
- If you want to use an asterisk (*) as a wildcard in a condition expression, always append a semicolon (;) to the expression. You can write a comment after the semicolon. If you do not append a semicolon, the program skips the portion after an asterisk, assuming the portion to be a comment.
- If you want to use =, <, >, :, -, AND, or OR as a character string in a condition expression, prefix a backslash (\) to them.

For example, if you want to use a host with the name AND as a condition, specify:

```
host=\AND
```

The items that can be specified in the condition expression of a condition parameter differ depending on the export file format (the CSV format or parameter file format). If you use an item that cannot be used as a comparison condition, an error occurs and a return code 2 is returned.

Tables 4-35 to 4-40 list the items you can specify in the condition parameter when exporting information to a file in CSV format.

Table 4–35: Items that can be specified in the condition parameter with the SYS_INFO (system information) template when exporting to a file in CSV format

Item	Explanation	Setting the values and conditions
host	Host name	Inclusion of , or > causes a syntax error.
ipaddr	IP address (key value in the system configuration)	Inclusion of , or > causes a syntax error. The number of periods is not checked.
hid	Host ID	Inclusion of , or > causes a syntax error.
cpu	CPU type[#1]	Use a code consisting of numbers only. You can use the following comparison condition formats: A=X, A<>X, A:X1,X2,... X*n*, and A<>X1,X2, ... X*n*.
ram	Installed RAM	Use only a number in megabytes without including the unit. You cannot include * or ? in the condition. If you use * or ?, an error occurs.
memslot	Memory slot capacity	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
freephymem	Available physical memory	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
totalvirmem	Total capacity of virtual memory	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
freevirmem	Available virtual memory	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
pagefile	Page file capacity	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
mtype	Workstation type	Inclusion of , or > causes a syntax error.
cpuspeed	CPU clock speed	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
extclock	Clock speed of external CPU	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
processor	Number of processors	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
maker	Maker name	Inclusion of , or > causes a syntax error.
model	Model	Inclusion of , or > causes a syntax error.
muuid	Machine UUID	Inclusion of , or > causes a syntax error.
msernum	Machine serial number	Inclusion of , or > causes a syntax error.
biosmaker	BIOS manufacturer	Inclusion of , or > causes a syntax error.

Item	Explanation	Setting the values and conditions
biosver	BIOS version	Inclusion of , or > causes a syntax error.
smbiosver	BIOS version (SMBIOS)	Inclusion of , or > causes a syntax error.
amtfmvr	AMT firmware version	Inclusion of , or > causes a syntax error.
pribus	Type of primary bus	Inclusion of , or > causes a syntax error.
secbus	Type of secondary bus	Inclusion of , or > causes a syntax error.
os	OS type[#1]	Use a code consisting of numbers only. You can use the following comparison condition formats: A=X, A<>X, A:X1,X2,... X*n*, and A<>X1,X2,... X*n*.
distribution	Linux distribution name	Inclusion of , or > causes a syntax error.
osv	OS version	Inclusion of , or > causes a syntax error.
ossernum	OS serial number	Inclusion of , or > causes a syntax error.
bootdev	Boot device	Inclusion of , or > causes a syntax error.
windir	Windows directory	Inclusion of , or > causes a syntax error.
sysdir	System directory	Inclusion of , or > causes a syntax error.
wmi	WMI	Inclusion of , or > causes a syntax error.
wininst	Windows Installer	Inclusion of , or > causes a syntax error.
mbsa	MBSA	Inclusion of , or > causes a syntax error.
wua	Windows Update Agent	Inclusion of , or > causes a syntax error.
ie	Internet Explorer version	Inclusion of , or > causes a syntax error.
iepatch	IE patch	Inclusion of , or > causes a syntax error.
domain_wrkgrp	Domain Work group	Inclusion of , or > causes a syntax error.
domain	Domain type[#1]	Use a code consisting of numbers only. You can use the following comparison condition formats: A=X, A<>X, A:X1,X2,... X*n*, and A<>X1,X2,... X*n*.
owner	Owner	Inclusion of , or > causes a syntax error.
org	Company name	Inclusion of , or > causes a syntax error.
pcname	Computer name	Inclusion of , or > causes a syntax error.
comdesc	Computer description	Inclusion of , or > causes a syntax error.
logonname	Logon user name	Inclusion of , or > causes a syntax error.
username	Full name of user	Inclusion of , or > causes a syntax error.
userdesc	User description	Inclusion of , or > causes a syntax error.
client	Client[#1]	Use a code indicating a client. You can use the following comparison condition formats: A=X, A<>X, A:X1,X2,... X*n*, A<>X1,X2,... X*n*.
clientv	Client version	Inclusion of , or > causes a syntax error.
device	Device name	Inclusion of , or > causes a syntax error.
freedisk	Free space	Use only a number in megabytes without including the unit.

Item	Explanation	Setting the values and conditions
freedisk	Free space	Inclusion of * or ? causes a syntax error.
dcapa	Partition size	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
hdmodel	Model of hard disk	Inclusion of , or > causes a syntax error.
hdesize	Hard disk capacity	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
hdinterface	Hard disk interface	Inclusion of , or > causes a syntax error.
hdpartition	Number of hard disk partitions	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
cdrom	CD-ROM drive	Inclusion of , or > causes a syntax error.
umem	Available user memory size	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
sysres	Available system memory size	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
usp	UNIX special file[#2]	Inclusion of , or > causes a syntax error.
umt	UNIX mount path[#2]	Inclusion of , or > causes a syntax error.
keyboard	Keyboard	Inclusion of , or > causes a syntax error.
mouse	Mouse	Inclusion of , or > causes a syntax error.
mousenum	Number of mouse buttons	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
monitor	Monitor type	Inclusion of , or > causes a syntax error.
vdriver	Video driver	Inclusion of , or > causes a syntax error.
vchip	Video chip	Inclusion of , or > causes a syntax error.
vram	VRAM	Use only a number in megabytes without including the unit. Inclusion of * or ? causes a syntax error.
display	Display	Inclusion of , or > causes a syntax error.
soundmaker	Sound card manufacturer	Inclusion of , or > causes a syntax error.
soundname	Sound card product name	Inclusion of , or > causes a syntax error.
macaddr	MAC address	No limit; the number of spaces is not checked.
nwkad	Network adapter	Inclusion of , or > causes a syntax error.
defra	Default router address	Inclusion of , or > causes a syntax error.
subnet	Subnet mask	Inclusion of , or > causes a syntax error.
ipaddr_inv	IP address (inventory information)	Inclusion of , or > causes a syntax error.
pridns	Primary DNS server address	Inclusion of , or > causes a syntax error.
secdns	Secondary DNS server address	Inclusion of , or > causes a syntax error.
dhcp	DHCP	Specify either of the following codes:

Item	Explanation	Setting the values and conditions
dhcp	DHCP	0: Invalid 1: Valid
dhcpsrv	DHCP server address	Inclusion of , or > causes a syntax error.
wins	WINS server address	Inclusion of , or > causes a syntax error.
prtname	Printer name	Inclusion of , or > causes a syntax error.
prtdrv	Printer driver	Inclusion of , or > causes a syntax error.
prtpaper	Printer sheet size	Inclusion of , or > causes a syntax error.
prtkind	Printer ID	Inclusion of , or > causes a syntax error.
prtshare	Shared name of printer	Inclusion of , or > causes a syntax error.
prtserver	Printer server name	Inclusion of , or > causes a syntax error.
prtport	Printer port	Inclusion of , or > causes a syntax error.
guestaccount	Guest account	Specify one of the following codes: 0: Disabled 1: Enabled 2: No guest account
weakpasswod	Weak password	Inclusion of , or > causes a syntax error. Specify @None to indicate no weak password as a condition.
account	Account	Inclusion of , or > causes a syntax error.
dayupdpass	Elapsed days since a password modification	Specify numeric characters only (unit: days). You do not need to enter the unit. Inclusion of * or ? causes a syntax error.
indefinitepass	Non-expiring password	Inclusion of , or > causes a syntax error. Specify @None to indicate a non-expiring password as a condition.
autologon	Autologon setting	Specify either of the following codes: 0: Not present 1: Present
sharedfolder	Shared folder	Specify either of the following codes: 0: Not present 1: Present
anonymousrefer	Anonymous connection	Specify either of the following codes: 0: Enabled (anonymous connections are restricted) 1: Disabled (anonymous connections are not restricted)
screensaver	Screensaver	Specify either of the following codes: 0: Disabled 1: Enabled
scrpassword	Screensaver password protection function	Specify either of the following codes: 0: Disabled 1: Enabled
poweronpass	Power on password	Specify one of the following codes:

Item	Explanation	Setting the values and conditions
poweronpass	Power on password	0: Setting is not present 1: Setting is present 2: Not implemented 3: Unknown
winfirewall	Windows Firewall settings	Specify one of the following codes: 0: Disabled 1: Enabled (exceptions allowed) 2: Enabled (exceptions not allowed)
winautoupdate	Windows Automatic Updates	Specify either of the following codes: 0: Disabled 1: Enabled
needlesssrv	Unnecessary service	Specify either of the following codes: 0: Not present 1: Present
harddiskencryption	Hard disk encryption information	Specify either of the following codes: 0: None 1: Partial 2: All
turnoffmonitor_ac	Turn off monitor (AC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.
turnoffmonitor_dc	Turn off monitor (DC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.
procsthrottle_ac	Processor throttle (AC)	Specify one of the following codes: • NONE: None • ADAPTIVE: Adaptive • DEGRADE: Degrade • CONSTANT: Constant • N/A: Unknown
procsthrottle_dc	Processor throttle (DC)	Specify one of the following codes: • NONE: None • ADAPTIVE: Adaptive • DEGRADE: Degrade • CONSTANT: Constant • N/A: Unknown
turnoffharddisks_ac	Turn off hard disk (AC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.
turnoffharddisks_dc	Turn off hard disk (DC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit.

Item	Explanation	Setting the values and conditions
turnoffharddisks_dc	Turn off hard disk (DC)	Specification of a condition that includes * or ? is not allowed; if specified, an error results.
standby_sleep_ac	System standby/sleep (AC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.
standby_sleep_dc	System standby/sleep (DC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.
systemhibernate_ac	System in hibernate status (AC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.
systemhibernate_dc	System in hibernate status (DC)	Specify numeric characters only (unit: seconds). You do not need to enter the unit. Specification of a condition that includes * or ? is not allowed; if specified, an error results.

#1

For a list of the codes that can be specified, see the dm_systeminf value of each item in *C.23 netmdm_inventry* in the manual *Description and Planning Guide*. For client items, see the values of dm_exkind in the client version (0x21). When specifying NETM/DM/P as a condition, specify a 0 instead of a space.

#2

The template does not include this item but you cannot specify this item in the condition parameter.

Table 4–36: Items that can be specified in the condition parameter with the INSTLD_PKG (installed package information) template when exporting to a file in CSV format

Item	Explanation	Setting the values and conditions
host	Host name	Inclusion of , or > causes a syntax error.
ipaddr	IP address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
hid	Host ID	Inclusion of , or > causes a syntax error.
pname	Package name	Inclusion of , or > causes a syntax error.
pid	Package ID	Inclusion of , or > causes a syntax error.
newver	New version	Inclusion of , or > causes a syntax error.
newgen	New generation	Inclusion of , or > causes a syntax error.
oldver	Old version	Inclusion of , or > causes a syntax error.
oldgen	Old generation	Inclusion of , or > causes a syntax error.
date	Installation or software search date/time	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#

#

In *YYYY* (year), specify a value in the range from 1970 to 2038. If you do not specify a value within this range, an error occurs and the return code 2 is returned. You can omit the portions other than *YYYY*. The omitted portions are set to their minimum values. If you specify a single-digit value, prefix a 0 to align the digits. If you do not align the digits, an error occurs. The following examples show you how to use date representation correctly:

200
Error

2004
0:00 on January 1, 2004

2003101
Error

20031010
0:00 on October 10, 2003

200401010101
1:01 on January 1, 2004

200312312359
23:59 on December 31, 2003

If you use a date/time representation in the following comparison conditions, an error occurs: A=X, A<>X, A:X1,X2,... X*n*, A=[*]X*, A<>X1,X2,... X*n*, or A<>[*]X*.

Table 4–37: Items that can be specified in the condition parameter with the J_STAT (job status) template when exporting to a file in CSV format

Item	Explanation	Setting the values and conditions
jname	Job name	Inclusion of , or > causes a syntax error.
execdate	Execution date/time at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
execsch	Scheduled execution date/time at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
sduedate	Execution time limit at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
sregdate	Scheduled registration date/time at the server.	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
dstname	Job destination name	Inclusion of , or > causes a syntax error. Use ! or \ for hierarchical representation.
dexecdate	ob execution date/time by destination	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
pname	Package name	Inclusion of , or > causes a syntax error.
pid	Package ID	Inclusion of , or > causes a syntax error.
cabid	Cabinet ID	Inclusion of , or > causes a syntax error.
pver	Version	Inclusion of , or > causes a syntax error.
pgen	Generation	Inclusion of , or > causes a syntax error.
status	Status	You can specify the first 1 to 6 characters of the maintenance code for Remote Installation Manager. You can use * or ? in the condition. If you include , or >, a syntax error occurs. The following comparison conditions cannot be specified: A:X1-X2, A:X1,X2,... X*n*, A<>X1-X2, and A<>X1,X2,... X*n*.

#
For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

Table 4–38: Items that can be specified in the condition parameter during output to a CSV-formatted file (VIRUS (anti-virus product) template)

Item	Explanation	Setting the values and conditions
host	Host name	Inclusion of , or > causes a syntax error.
ipaddr	IP address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
hid	Host ID	Inclusion of , or > causes a syntax error.
sname	Software name	Inclusion of , or > causes a syntax error.
sver	Software version	Inclusion of , or > causes a syntax error.
org	Company name	Inclusion of , or > causes a syntax error.
lang	Language	Specify a numeric-only code. Comparison conditions can be specified in the following formats: A=X, A<>X, A:X1, X2, ... X*n*, and A<>X1, X2, ... X*n*.
path	Path	Inclusion of , or > causes a syntax error.
size	Size	Specify *size* in numeric only (in bytes). The unit is not required. A condition containing * or ? cannot be coded; if specified, such a code can cause an error.
sdate	Search date/time	Specify year, month, day, hour, minute in the *YYYYMMDDhhmm* format, using numeric only.#1
idate	Installation date	Specify year, month, day in the *YYYYMMDD* format, using numeric only.#2
regorg	Registered company name	Inclusion of , or > causes a syntax error.
reguser	Name of registered owner	Inclusion of, or > causes a syntax error.
virusver	Virus detection engine version	Inclusion of , or > causes a syntax error.
vfilever	Virus detection file version	Inclusion of , or > causes a syntax error.
vstation	Virus detection resident/non-resident	Specify in the following code: 0: non-resident 1: resident

#1

For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

#2

The date format to be used is *YYYYMMDD*. Although dates require the same specification method as the *YYYYMMDDhhmm* format, entering *hh* and *mm* parts can cause an error. For details about how to represent the date/time, see Table 4-36.

Table 4–39: Items that can be specified in the condition parameter during output to a CSV-formatted file (NO_CLIENT (information on a host on which JP1/Software Distribution is not installed) template)

Item	Explanation	Setting the values and conditions
ipaddr	IP address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
type	Node type#1	Specify a numeric-only code. Comparison conditions can be specified in the following formats: A=X, A<>X, A:X1, X2, ... X*n*, and A<>X1, X2, ... X*n*.
host	Node name	Inclusion of , or > causes a syntax error.

Item	Explanation	Setting the values and conditions
macaddr	MAC address	No limit; the number of spaces is not checked.
subnet	Subnet mask	Inclusion of , or > causes a syntax error.
netaddr	Network address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
datetime	Detection date/time	Specify year, month, day, hour, minute in the *YYYYMMDDhhmm* format, using numeric only.#2
lastupdate	Explanation	Specify year, month, day, hour, minute in the *YYYYMMDDhhmm* format, using numeric only.#2
cmnt	Comment on node	Inclusion of, or > causes a syntax error.

#1

For details about the codes that can be specified, see the dm_nodetype values in *C.18 netmdm_host_withoutdm* in the manual *Description and Planning Guide*.

#2

For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

Table 4–40: Items that can be specified in the condition parameter during output to a CSV-formatted file (DISCOVERY_INFO (host search results) template)

Item	Explanation	Setting the values and conditions
ipaddr	IP address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
type	Node ID#1	Specify a numeric-only code. Comparison conditions can be specified in the following formats: A=X, A<>X, A:X1, X2, ... X*n*, and A<>X1, X2, ... X*n*.
host	Node name	Inclusion of , or > causes a syntax error.
macaddr	MAC address	No limit; the number of spaces is not checked.
subnet	Subnet mask	Inclusion of , or > causes a syntax error.
netaddr	Network address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
lastupdate	Last update date/time	Specify year, month, day, hour, minute in the *YYYYMMDDhhmm* format, using numeric only.#2
cmnt	Comment on node	Inclusion of, or > causes a syntax error.

#1

For details about the codes that can be specified, see the dm_nodetype values in *C.12 netmdm_discovery_info* in the manual *Description and Planning Guide*.

#2

For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

Tables 4-41 to 4-44 list the items you can specify in the condition expression of a condition parameter when exporting to a file in the parameter file format. Unlike when the CSV output utility is used, when you use a command to output a file in parameter file format, you can use the **Host** attributes and **Package** attributes template to narrow the conditions.

Table 4–41: Items that can be specified in the condition parameter with the HOST_ATTR (host attribute) template when exporting to a file in the parameter file format

Item	Explanation	Setting the values and conditions
host	Host name	Inclusion of , or > causes a syntax error.

Item	Explanation	Setting the values and conditions
ipaddr	IP address	Inclusion of , or > causes a syntax error. The number of periods is not checked.
cmnt	Comment	Inclusion of , or > causes a syntax error.
cdate	Creation date/time	Use only numbers to represent the date/time in the *YYYYMMDDhhmm* format.#
date	Update date/time	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
pkgupdate	Installed package information last update date	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
syupdate	System information last update date	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
uupdate	User inventory information last update date	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
rupdate	Registry information last update date	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
sfupdate	Software inventory information last update date	Use only numbers to represent the date/time in the *YYYYMMDDhhmm* format.#

#

For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

Table 4–42: Items that can be specified in the condition parameter with the PKG_INFO (package attribute) template when exporting to a file in the parameter file format

Item	Explanation	Setting the values and conditions
pname	Package name	Inclusion of , or > causes a syntax error.
pid	Package ID	Inclusion of , or > causes a syntax error.
cabid	Cabinet ID	Inclusion of , or > causes a syntax error.
dmcode	DM ID code	Specify PC or WS. Any other specification causes an error.
pver	Version	Inclusion of , or > causes a syntax error.
pgen	Generation	Inclusion of , or > causes a syntax error.
cabname	Cabinet name	Inclusion of , or > causes a syntax error.

#

The template does not include this item, but it can be specified in the condition parameter.

Table 4–43: Items that can be specified in the condition parameter with the INSTLD_PKG (installed package information) template when exporting to a file in the parameter file format

Item	Explanation	Setting the values and conditions
host	Name of the host where the package is installed	Inclusion of , or > causes a syntax error.
ipaddr	IP address of the host where the package is installed	Inclusion of , or > causes a syntax error. The number of periods is not checked.
pname	Package name	Inclusion of , or > causes a syntax error.
pid	Package ID	Inclusion of , or > causes a syntax error.

Item	Explanation	Setting the values and conditions
install	Installation	Inclusion of , or > causes a syntax error.
newver	New version	Inclusion of , or > causes a syntax error.
newgen	New generation	Inclusion of , or > causes a syntax error.
oldver	Old version	Inclusion of , or > causes a syntax error.
oldgen	Old generation	Inclusion of , or > causes a syntax error.
date	Installation or software search date/time	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#

#

For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

Table 4–44: Items that can be specified in the condition parameter with the J_STAT (job status) template when exporting to a file in the parameter file format

Item	Explanation	Setting the values and conditions
folder	Folder name	Inclusion of , or > causes a syntax error.
jname	Job name	Inclusion of , or > causes a syntax error.
jattr	Job attribute	Inclusion of , or > causes a syntax error.
execdate	Execution date/time at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
execsch	Scheduled execution date/time at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
sduedate	Execution time limit at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
sregdate	Scheduled registration date/time at the server	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
dstname	Job destination name	There are no restrictions. Use ! or \ for hierarchical representation.
jtype	Job type	Inclusion of , or > causes a syntax error.
dexecdate	Job execution date/time by destination	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
pname	Package name	Inclusion of , or > causes a syntax error.
pid	Package ID	Inclusion of , or > causes a syntax error.
cabid	Cabinet ID	Inclusion of , or > causes a syntax error.
dmcode	DM ID code	Specify PC or WS. Any other specification causes an error.
pver	Version	Inclusion of , or > causes a syntax error.
pgen	Generation	Inclusion of , or > causes a syntax error.
cexecdate	Installation date/time at the client	Use numbers only to represent the date/time in the *YYYYMMDDhhmm* format.#
result	Result	Inclusion of , or > causes a syntax error.
status	Status	You can specify the first 1 to 6 characters of the maintenance code for Remote Installation Manager. You can use * or ? in the condition.

Item	Explanation	Setting the values and conditions
`status`	Status	If you include `,` or `>`, a syntax error occurs. The following comparison conditions cannot be specified: `A:X1-X2`, `A:X1,X2,`... X*n*, `A<>X1-X2`, and `A<>X1,X2,`... X*n*

#

For details about how to represent the date/time and examples of date/time representation, see Table 4-36.

- `unicode=`*Y-or-N-indicating-whether-a-CSV-file-in-Unicode-is-to-be-output*

Specify `Y` or `N` to indicate whether a CSV file in Unicode is to be output.

`Y`

Outputs a CSV file in Unicode. Note that only UTF-8 encoding is supported for output of CSV files in Unicode.

This parameter is effective only when the following conditions are satisfied:

- JP1/Software Distribution Manager is used for command execution
- The following relational database is used in JP1/Software Distribution:
- Microsoft SQL Server 2005 or later
- One of the following output templates is specified:
- **System information**
- **Installed package information**
- **Registry collection item**
- **Microsoft Office products**
- **Anti-Virus products**

If you have specified `par` in the `format` parameter, `Y` is ignored, if specified.

`N`

Outputs a CSV file that has not been converted to Unicode.

Note that an error results if you make the specification for output of a CSV file in Unicode both as a command argument and in the parameter file. If you omit this specification from both the command argument and the parameter file, the registry setting for output of CSV files in Unicode becomes effective. For details about the registry setting, see *4.6 Registry settings (JP1/Software Distribution Manager)* in the manual *Setup Guide*.

When a CSV file is output in Unicode, the conversion rules are applied. The conversion rules are the same as for the CSV output utility. For details, see *9.1.4 Conversion rules for outputting CSV files in Unicode* in the manual *Administrator's Guide Volume 1*.

(3) Notes

If the number of specified comparison conditions or groups to which the targets belongs increases, an RDB access error might occur depending on the limitations of DBMS. In case of the error, reduce the number of them.

For your reference, see the following sample maximum values of "Host name" conditions that can be specified.

DBMS type	Version	Maximum value of "Host name" conditions that can be specified
Embedded RDB	08-51#	255
Microsoft SQL Server	7.0	2,041
Oracle	9i	1,000

#

Version of Job Management Partner 1/Software Distribution Manager

4.26.15 PACKAGING_INFORMATION (specifying package attribute information)

The PACKAGING_INFORMATION tag specifies information for the identification of a package. This tag can be used in the following commands: dcminst, dcmpack, dcmpkget, and dcmpkrm.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
package_name	Package name	/p *package-name*
package_id	Package ID	/I *package-ID*
version_revision	Version/revision	/v *version-revision*
generation	Generation	/G *generation*
cabinet_name	Cabinet name	/c *cabinet-name*
cabinet_id	Cabinet ID	/C *cabinet-ID*
package_code	Code type	/KW or /KP

(1) Format

```
PACKAGING_INFORMATION{
package_name=package-name
package_id=package-id
version_revision=version/revision
generation=generation
cabinet_name=cabinet-name
cabinet_id=cabinet-id
package_code=package-code
}
```

(2) Explanation

- package_name=*package-name*

  Specify the user program and the name of the data to be packaged. You can code a package name in up to 50 characters. The character \ and a space cannot be used.

- package_id=*package-id*

  Assign a unique package ID. JP1/Software Distribution identifies packages based on these IDs. Use 1 to 44 uppercase alphanumeric characters (uppercase only for alphabetic characters), hyphens (-), or underscores (_).

- version_revision=*version/revision*

  Code version/revision information about the package in up to 6 alphanumeric characters (uppercase only for alphabetic characters) and / (slash). In addition, by specifying an *increment* [:*starting-value*], you can cause the system to automatically count up when the dcmpack command is executed. In this case, you can specify any alphanumeric character before *increment*, provided that the total number of digits in those characters and the numeric characters assigned in *increment* do not exceed 6.

  In the operation of the automatic count-up process, beginning with the starting value, the system increments each count by the specified increment until the registration is successful (until the version/revision value of the new package is different from that of the previously registered package). The default starting value is 0. A value exceeding 6 digits may result in an error.

  If automatic counting is specified in the parameter file, each time packaging is executed by the dcmpack command, the next starting value (registered value + increment) is overwritten after the :. A starting value exceeding 6 digits is reset to 0. If automatic counting is specified in a command argument, the starting value is reset to the initial value each time.

- generation=*generation*

In addition to version/revision information, you can assign a generation number. Using a generation number, you can distinguish packages with the same version/revision.

Code generation information in up to 4 alphanumeric characters (uppercase only) and / (slash). In addition, by specifying an *increment* [:*starting-value*], you can cause the system to automatically count up when the dcmpack command is executed. In this case, you can specify any alphanumeric character before *increment*, provided that the total number of digits in those characters and the numeric characters assigned in *increment* does not exceed 4.

In the operation of the automatic count-up process, beginning with the starting value, the system increments each count by the specified increment until the registration is successful (until the generation value of the new package is different from that of the previously registered package). The default starting value is 0. A value exceeding 4 digits may result in an error.

If automatic counting is specified in the parameter file, each time packaging is executed by the dcmpack command, the next starting value (registered value + increment) is overwritten after the :. A starting value exceeding 4 digits is reset to 0. If automatic counting is specified in a command argument, the starting value is reset to the initial value each time.

For packages that are distributed to UNIX clients, you must set a 4-digit value. Otherwise, although the packaging will succeed, an error may result during remote installation.

- cabinet_name=*cabinet-name*

  Specify a unique cabinet name in up to 32 characters. The following characters cannot be used: \ / * " : ; and space.

- cabinet_id=*cabinet-id*

  For each cabinet, assign a unique ID consisting of two alphanumeric characters (uppercase only).

- package_code=*package-code*

  If you omit this parameter when executing the dcminst command, P (PC) is assumed but you can perform remote installation on a UNIX client. To perform remote installation of a package created with JP1/Software Distribution for UNIX systems, you must specify W (WS). If you omit this parameter when executing the dcmpkget command, P (PC) is assumed. This is a required item in the dcmpkrm command. In the dcmpack command, this item, if specified, is ignored.

  - P

    A PC package.

  - W

    A WS package.

(3) Specifiable reserved words

The following reserved words can be used in this tag: \CY, \CM, \CD, \CH, \CN, \CS, \BY, \BM, \BD, \BH, \BN, \BS, \VERSION, \PKGID, \FILE, \SIZE, and \BASE, subject to the following restrictions:

- A reserved word can be used only when this tag or argument is used in the dcmpack command. Reserved words cannot be used in the dcminst, dcmpkget, or dcmpkrm command.
- The reserved words \VERSION and \PKGID cannot be used in package_id (/I).
- \VERSION cannot be used in place of version_revision (/v).
- *increment* and a reserved word cannot be used together with version_revision (/v) and generation (/G).

(4) Notes

If you want to specify more than one package in the dcminst or dcmpkget command, you can specify more than one package parameter set in a PACKAGING_INFORMATION tag. Enclose each package parameter set in a pair of braces ({}).

The following is an example of specifying multiple packages in a PACKAGING_INFORMATION tag.

```
PACKAGING_INFORMATION{
{* Information about package 1
package_name=PACKAGE1
```

```
package_id=PACK01
        :
}
{* Information about package 2
package_name=PACKAGE2
package_id=PACK02
        :
}
}
```

4.26.16 PACKAGING_SOURCE (specifying the file to be packaged)

The PACKAGING_SOURCE tag specifies the file or directory to be packaged. This tag can be used in the dcmpack command.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
file_path	Name of the file to be packaged	/P *file-path*
base_fullpath	Base directory path for packages	/B *base-fullpath*

(1) Format

```
PACKAGING_SOURCE{
file_path=file-path
base_fullpath=base-fullpath
}
```

(2) Explanation

- file_path=*file-path*

  Specify the file or directory to be packaged in terms of a relative path from the directory specified in base_fullpath. During the installation of the package, the directory structure from base_fullpath is restored below the installation directory.

  When specifying multiple files or subdirectories under the same directory (including the root directory), either separate the paths with semicolons (;) or code multiple file_path parameters.

  Although a specified value may contain a space, specifying a space either before or after the semicolon (;) may produce a return code 2 error. In addition, be careful not to code a specification value by enclosing it in double quotation marks (" "). However, if you use a command argument to specify a value, a specification value that includes a space must be enclosed in double quotation marks (" ").

  If file_path is not specified, all the files that are in the path specified in base_fullpath (if a file is specified in base_fullpath, only the specified file) are packaged.

- base_fullpath=*base-fullpath*

  Specify the full path for the base directory for the file or directory to be packaged.

  Any drive must be specified with a colon (:). For example, to package in the floppy disk in A drive, code as follows:

  ```
  base_fullpath = A:
  ```

  The following coding may result in an error:

  ```
  base_fullpath = A:\
  ```

4.26.17 SCHEDULE (specifying a remote installation schedule)

The SCHEDULE tag specifies remote installation schedules. This tag can be used in the dcmcoll and dcmpack commands.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
`expiration_date`	Package expiration date in the relay system	`/x` *expiration-date*
`expiration_days`	Package expiration days in the relay system	`/ed` *expiration-days*
`installation_date_and_time`	Installation date and time	`/d` *installation-date-and-time*
`installation_timing`	Installation timing	`/tS` or `/tN`

(1) Format

```
SCHEDULE{
expiration_date=package-expiration-date-in-the-relay-system
expiration_days=package-expiration-days-in-the-relay-system
installation_date_and_time=installation-date-and-time
installation_timing=installation-timing
}
```

(2) Explanation

- `expiration_date=`*package-expiration-date-in-the-relay-system*

  Specify the retention period for the package in the relay system in the *YYMMDD* format.

  YY: the last two digits of the year (00-35)

  MM: month (01-12)

  DD: day (01-31)

  When it reaches the expiration date specified in this tag, the package stored in the relay system is automatically deleted. Any packages past their expiration dates or falling on their expiration dates that are distributed are deleted on the following day.

  In actual operations, packages need to be retained in all the clients under the relay system until the current installation process is completed. For example, if the distribution and installation of a package requires three weeks, an expiration date longer than three weeks should be specified.

  The default is the packaging date plus the number of days specified for *package-expiration-days-in-the-relay-system* for Packager.

  Example:

  Condition 1: Packaging date: August 22, 2001

  Condition 2: Specification of *package-expiration-days-in-the-relay-system*: ten (days)

  In this case, the date set for this parameter is September 1, 2001.

  If you do not specify the value for Packager, the date 90 days after the packaging date is used by default.

- `expiration_days=`*package-expiration-days-in-the-relay-system*

  Specify the number of days you want to store the package. You can specify 1 to 32,000. If the specified value after conversion falls on a date after December 31, 2035, December 31, 2035 is always used by default.

  The specification of the `expiration_date` parameter overrides the `expiration_days` parameter if you specify both.

  If you specify neither the `expiration_days` nor the `expiration_date` parameter, the default of Packager is used. If the default of Packager has not been specified, 90 days after the packaging date is used.

  If you specify a value beyond the range of specification, an `invalid command value` error occurs, and a message is displayed in Event Viewer.

- `installation_date_and_time=`*installation-date-and-time*

  Specify the date and time of remote installation of the package in the *YYMMDDhh*:*mm* format.

  YY: the last two digits of the year (00-99)

  MM: month (01-12)

  DD: day (01-31)

hh: hour (00-23)
mm: minute (00-59)

- `installation_timing=`*installation-timing*

  For the `dcmcoll` command, specify the package-installation timing. For the `dcmpack` command, specify the package installation timing in terms of either `S` (system startup time) or `N` (system running). For a command argument, specify either `S` or `N` after `/t`. The default is `N` (system running).

  - `S` (system startup time)

    Collection or installation is performed when the client system is started. If an installation date and time is specified, the package is installed when the system is started for the first time after the specified date and time.

  - `N` (system running)

    Collection or installation is when the client system is running. If an installation date and time is specified, the package is installed at the specified date and time. If the client is not started at the specified date and time, the package is installed next time the system is started.

4.26.18 SCRIPTS (specifying an installation script)

In the `SCRIPTS` tag, specify the full path for a user-created installation script file (`User.sci`). Any script file that is read from a command should be named `User.sci`.

This tag is used in the `dcmpack` command, but it cannot be specified for packages that are distributed to UNIX clients.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
`installation_script`	Installation script path	`/Z` *installation-script-path*

(1) Format

```
SCRIPTS{
installation_script=installation-script-path
}
```

(2) Explanation

- `installation_script=`*installation-script-path*

  When using a user-created installation script, specify its full path. A path that contains a semicolon (`;`) or equal sign (=) cannot be specified.

  If an installation script is not used, the path is automatically created.

4.26.19 SOFTWARE_CONDITIONS (specifying software conditions)

The `SOFTWARE_CONDITIONS` tag specifies software conditions that are prerequisite to the execution of a remote installation. This tag can be used in the `dcmpack` command.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
`condition`	Software condition	`/l` *software-condition*

(1) Format

```
SOFTWARE_CONDITIONS{
condition=software-condition
}
```

(2) Explanation

- `condition=`*software-condition*

  Specify software conditions that are prerequisite to the remote installation in the following format:

  package-ID equality-sign comparison-version/revision: *comparison-generation*

  package-ID

  Specify the software package ID that is prerequisite to the remote installation. For the package ID, specify the ID that was specified in `package_id` of the `PACKAGING_INFORMATION` tag.

  equality-sign

  Specify one of the following symbols:

  =, >, >=, <, <= or <>

  comparison-version/revision

  Specify the version/revision to be compared in a maximum of 8 numeric characters.

  comparison-generation

  Specify the generation to be compared in a maximum of 4 numeric characters.

(3) Notes

- This tag cannot be specified for packages that are distributed to UNIX clients.
- Multiple software conditions can be specified. If multiple software conditions are specified, their logical product (AND) is taken. The installation is executed only if all the conditions are met.
- A total of 10 software conditions and system conditions (`/O`) can be specified through the use of a command argument (`/I`).

(4) Specification examples

`condition=P-2412-3554>0500:0000`

Executes the installation process if software with a version 05-00 and a package ID `P-2412-3554` with a version and generation greater than `0000` is already installed.

`condition=P-2412-3554<>0510:0000`

Executes the installation process if software with a version 05-10 and a package ID `P-2412-3554` with a version and generation different from `0000` is already installed.

4.26.20 SYSTEM_CONDITIONS (specifying system conditions)

In the `SYSTEM_CONDITIONS` tag, you can specify an installation directory for remote installation, and client system conditions that are prerequisite to the installation. This tag can be used in the `dcmpack` command.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
`directory`	Installation directory	`/D` *installation-directory*
`condition`	System conditions	`/O` *system-condition*

(1) Format

```
SYSTEM_CONDITIONS{
directory=installation-directory
condition=system-condition
}
```

(2) Explanation

- `directory=`*installation-directory*

  Specify the path for an installation directory. A path that contains a double-quotation mark (") cannot be specified. The following are specification examples:

  Example 1: Distributing to a PC client:

  ```
  directory=C:\temp\data
  ```

  Example 2: Distributing to a UNIX client:

  ```
  directory=/temp/data
  ```

  The default is the base directory path for the package (the directory specified in `base_fullpath` of `PACKAGING_SOURCE` tag or the command argument `/B`).

- `condition=`*system-condition*

  Specify the system conditions for the client receiving the distribution. Specify this item if the destination is a PC. Items (3)-(7) as follows show system condition specification methods.

(3) Available hard disk space as a condition

You can use the following method to specify available hard disk space as a system condition:

`condition=H:` *drive-name equality-sign capacity*

drive-name

Specify one alphanumeric character that denotes a drive.

equality-sign

Specify one of the following symbols, depending on the specific condition:

=, >, >=, <, or <=

capacity

Specify a capacity in units of MB.

Specification example:

Specify the condition C drive with a minimum available free space of 1 gigabyte as follows:

```
condition=H:C> 1000
```

(4) Specifying a CPU type as a condition

You can use the following method to specify a CPU type as a system condition:

`condition=C:` *equality-sign CPU-type*

equality-sign

Specify = or <>.

CPU-type

Specify one of the following character strings:

- For AMD64 or Intel EM64T: `AMD64/Intel EM64T`
- For Intel i386 or an equivalent CPU: `intel 80386`
- For Intel i486 or an equivalent CPU: `intel 80486`
- For Intel Pentium or an equivalent CPU: `intel Pentium`
- For COMPAQ Alpha or HP Alpha: `DEC Alpha`

- For Intel IPF or an equivalent CPU: `Intel IPF`
- For PowerPC: `PowerPC`

Specification example:

Specify the condition a Pentium CPU or equivalent as follows:

```
condition=C=intel Pentium
```

Notes

- You cannot specify system conditions on a client that uses an Intel 80486 CPU under Windows NT, Windows 98, or Windows 95, or an installation error may result.

(5) Specifying the presence or absence of a coprocessor as a condition

Specify the following to make the presence or absence of a coprocessor a condition:

A coprocessor provided:

```
condition=E=Y
```

A coprocessor not provided:

```
condition=E=N
```

(6) Specifying the size of real memory, user memory, or GDI system resources as a condition

When specifying the size of real memory, user memory, or GDI system resources as a condition, you can specify system conditions as follows:

`condition=` *size-type equality-sign size*

size-type

`R`: real memory size

`U`: user memory size

`G`: GDI system resources size

equality-sign

Specify one of the following symbols, depending on the specific condition:

=, >, >=, <, or <=

size

Specify real memory and user memory sizes in megabytes. A GDI system resources size should be specified in kilobytes.

Specification example

Specify the condition a minimum real memory size of 16 MB as follows:

```
condition=R>=16
```

(7) Specifying the OS version as a condition

When specifying the OS version as a condition, you can specify system conditions as follows:

`condition=O` *equality-sign OS-version*

equality-sign

Specify one of the following symbols depending on the specific condition:

=, >, >=, <, or <=

OS

Specify one of the following items depending on the specific condition:

`Any`, `Windows`, `Windows8`, `WindowsServer2012`, `Windows7`, `WindowsServer2008R2`, `WindowsServer2008`, `WindowsVista`, `WindowsServer2003`, `WindowsXP`, `Windows2000`, `WindowsNT`, `WindowsMe`, `Windows98`, `Windows95`, or `MSDOS`. `Any` means any Windows.

version

Specify the OS version, revision, or generation in a *vvrr* format using a maximum of 4 numeric characters.

vv

Version

rr

Revision

Specification example:

Specify the condition Windows with an OS version 4.00 or higher as follows:

```
condition=O>=Any 0400
```

(8) Notes

- When you create a package for UNIX clients, note the following:
  - System conditions cannot be specified for packages that are distributed to UNIX clients. Although directory specifications are accepted, any drive specifications are ignored.
  - Specify the installation directory as 64 (half-width) characters or less (including the drive letter and the colon (:)). If the directory exceeds 64 characters, the package will be installed under the root directory.
- Multiple system conditions can be specified. If multiple system conditions are specified, their logical product (`AND`) is taken. The installation is executed only if all the conditions are met.
- A total of 10 system conditions and software conditions (`/l`) can be specified through the use of a command argument (`/O`).

4.26.21 USER_PROGRAM_INSTALLATION_CONDITIONS (specifying an external program)

The `USER_PROGRAM_INSTALLATION_CONDITIONS` tag specifies the external program that is to be started before or after the installation or in the event of an installation error. This tag can be used in the `dcmcoll`, `dcmpack`, and `dcmstsw` commands.

The following shows the contents of specifiable parameters and the correspondence between parameters and command arguments:

Parameter	Description	Command argument
`external_program_executed_before_installation`[#1]	Before-installation external program	`/b` *external-program-executed-before-installation*
`external_program_executed_after_installation`	After-installation external program	`/a` *external-program-executed-after-installation*
`external_program_error_handler`[#2]	Error-triggered external program	`/e` *external-program-error-handler*
`external_program_handler`	External program handler	`/ep` *external-program-handler*
`exit`[#2]	Notification method for the results of an external program	`/rbR`, `/rbM`, `/raR`, `/raM`, `/reR`, `/reM`
`action`[#2]	Disposition of processing error	`/ybC`, `/ybS`, `/yaC`, `/yaS`
`wait`[#2]	Monitoring method	`/wbU`, `/wbT`, `/wbG`, `/waU`, `/waT`, `/waG`, `/weU`, `/weY`
`timeout`	• Monitoring time • Maximum execution time limit (`dcmstsw` command)	• `/n` *timeout* • `/wt` *maximum-execution-time limit* (`dcmstsw` command)
`wait_code`	Wait code	`/wc` *wait-code*

#1

For a package distributed to UNIX clients, this parameter, when specified with the `installation_date_and_time` parameter of the `SCHEDULE` tag, is ignored.

#2

This parameter is ignored when specified for a UNIX client.

For the external program to be started, specify a program that does not have a GUI. Starting a GUI program does not cause the display of a GUI.

Be careful not to specify a 16-bit application as an external program. Remotely installing a package in the background installation mode on a Windows NT client and specifying a 16-bit application as an external program can cause the client to freeze.

(1) Format

```
USER_PROGRAM_INSTALLATION_CONDITIONS{
{
external_program_executed_before_installation=
external-program-executed-before-installation
exit=external-program-processing-results-notification-method
action=disposition-of-processing-error
wait=monitoring-method (U, T, or G)
}
{
external_program_executed_after_installation=
external-program-executed-after-installation
exit=external-program-processing-results-notification-method
action=disposition-of-processing-error
wait=monitoring-method (U, T, or G)
}
{
external_program_error_handler=
external-program-error-handler
exit=external-program-processing-results-notification-method
wait=monitoring-method (U or Y)
timeout=timeout
}
{
external_program_handler=
external-program-handler
timeout=maximum-execution-time-limit
wait_code=wait-code
}
}
```

(2) Explanation

- `external_program_executed_before_installation=`*external-program-executed-before-installation*

  Specify the full path for the external program to be started before the installation (or file collection). You should enclose a path name that contains a space in double quotation marks (`" "`).

  The path for an external program can be coded in a maximum of 256 characters. Exceeding this limit may result in a return code `2` error.

- `external_program_executed_after_installation=`*external-program-executed-after-installation*

  Specify the full path for the external program to be started after the installation (or file collection). You should enclose a path name that contains a space in double quotation marks (`" "`).

  The path for an external program can be coded in a maximum of 256 characters. Exceeding this limit may result in a return code `2` error.

- `external_program_error_handler=`*external-program-error-handler*

  Specify the full path for the external program to be started in the event of an installation (or file collection) error. You should enclose a path name that contains a space in double quotation marks (`" "`).

  The path for an external program can be coded in a maximum of 256 characters. Exceeding this limit may result in a return code `2` error.

- external_program_handler=*external-program-handler*

  Specify the full path for the external program to be started when a specified execution status occurs. You should enclose a path name that contains a space in double quotation marks (" ").

  The path for an external program can be coded in a maximum of 256 characters. Exceeding this limit may result in a return code 2 error.

- exit=*external-program-processing-results-notification-method*

  Specify the notification method for external program processing results in terms of either R (return code) or M (message). For a command-argument specification, specify either R or M after /rb (for before-installation external program), /ra (for after-installation external program), or /re (for error-triggered external program).

  The default varies with the installation mode that is specified in installation_mode (or the command argument /m) of the INSTALLATION_METHOD tag. For the GUI installation mode, the default is M; for the background installation mode, the default is R.

  - R

    Reports a return code from the external program.

  - M

    The external program generates a defined message.

- action=*disposition-of-processing-error*

  Specify whether the installation is to be continued if the processing results from the external program indicate an error, in terms of either C (continue) or S (suspend). For a command-argument specification, specify either C or S after /yb (for before-installation external program) or /ya (for after-installation external program). The default is S.

  - C

    Treat any error as being normal; continue the installation process.

  - S

    Treat the installation process as an error; stop the installation process.

- wait=*monitoring-method*

  Specify the disposition of the installation processing until the external program reports processing results in terms of U, T, G, or Y. For a command-argument specification, specify U, T, G, or Y after /wb (for before-installation external program), /wa (for after-installation external program), or /we (for error-triggered external program). The default is U.

  When specifying T, G, or Y, specify in timeout a maximum limit on monitoring the response from the external program.

  - U

    Suspend the installation process until processing results are reported.

  - T

    If the suspended time period has exceeded the timeout value, treat the installation process as an error, and cancel the installation process.

  - G

    If the suspended time period has exceeded the timeout value, treat the installation process as being normal, and continue the installation process.

  - Y

    If the suspended time period has exceeded the timeout value, continue the processing of the installation error-triggered program.

- timeout=*timeout* (*maximum-execution-time-limit* for the dcmstsw command)

  dcmpack command

  Specify a maximum limit on monitoring the response from the external program in units of seconds in a 0-21,600 range (6 hours). If responses are not to be monitored, specify 0. The default is 1.

  Any monitoring time specification applies on a common basis to all external programs that are started *Before installation*, or *On installation error*.

  The specification of a monitoring time is nullified if the U option is specified in *monitoring-method*.

`dcmstsw` command

Specify the maximum execution time limit for the monitoring of the job execution status. Specify the execution limit in seconds, in a 1 to 10,000,000 range. The default is 86,400 (1 day).

- `wait_code=`*wait-code*

Specify the job execution status or the maintenance code that starts an external program. Use commas (,) to delimit multiple items. Multiple specifications form an `OR` condition.

However, you can specify the job execution status only on the managing system of JP1/Software Distribution Manager.

Specifying a job execution status

Specify one of the following values; the default is `ERROR`.

- `NORMAL`

Normal termination

- `TRANS_WAIT`

The managing server is waiting for a transfer.

- `TRANSMITTED`

The job is either being transmitted to a client or is being executed.

- `REGISTERED`

The ID job is being transmitted to the ID management relay system.

- `CLT_NOTREADY`

Startup failed.

- `CLT_SERVICE_OFF`#

JP1/Software Distribution stopped; startup failed.

- `CLT_POWER_OFF`#

The power for the PC is off; startup failed.

- `CLT_NETWORK_ERR`#

Startup failed because of a network error.

- `SUSPENDED`

The relay system sent a suspension command.

- `INST_WAIT`

Waiting for installation/collection.

- `HOLD_EXEC`

The job was placed on hold.

- `REJECTED`

The installation process was rejected.

- `ID_NOPKG`

The package stored at the relay system was deleted by the ID job.

- `CANCEL`

The client cancelled the job.

- `CONNECT_ERROR`

A communication error occurred.

- `ERROR`

A job execution error occurred.

- `DELETING`

The job is being deleted at the relay system or the client.

#

This parameter can be specified when the **Startup failure details** checkbox is selected in the **Server Customization Option** page in the JP1/Software Distribution Manager setup. However, this parameter, when specified with `CLT_NOTREADY`, is ignored.

If the checkbox is not selected, an external program cannot be started, even when these execution status options are specified.

Specifying a maintenance code

Specify a maintenance code in 12 digits, including a wildcard.

Example:

The 9th digit from the left of the maintenance code is 8, and the 10th digit is 2: "????????82??"

(3) Notes

- *external-program-executed-before-installation*, *external-program-executed-after-installation*, and *external-program-error-handler* can be specified one occurrence each.
- When specifying an external program that is to be started either before or after installation, and if either a system condition (SYSTEM_CONDITIONS) or a software condition (SOFTWARE_CONDITIONS) is specified, any specification of exit, action, or wait is ignored.
- In the dcmcoll command, any specification of external_program_handler, exit, action, wait, or timeout is ignored.
- In the dcmstsw command, any specification other than external_program_handler, timeout, or wait_code is ignored.

(a) Notes about starting an external program on a UNIX client

When using the dcmpack command to specify the startup of an external program for a package to be distributed to UNIX clients, note the following points:

- Unlike with the package for a Windows client, you cannot use the external_program_error_handler, exit, action, or wait parameter.
- The external_program_executed_before_installation and external_program_executed_after_installation parameters require different external program path specification methods, depending on whether the installation_date_and_time parameter is specified in the SCHEDULE tag.
- Do not use characters that have special meaning in a shell program, such as <, >, |, &, and $.

The following table shows differences in specification methods:

installation_date_and_time specification	Path specification method for external program	
	external_program_executed_before_installation	external_program_executed_after_installation
Yes	Not specifiable	• Specify with 40 characters or less. • A path containing a space cannot be specified. • If an argument exists in the post-processing program, enclose all of the paths and arguments in double quotation marks ("). • If an argument contains a space, enclose the argument, including the space, in single quotation marks (').
None	• When only specifying the parameter external_program_executed_before_installation, specify the path in 60 characters or less. • When only specifying the parameter external_program_executed_after_installation, specify the path in 64 characters or less. • When specifying both external_program_executed_before_installation and external_program_executed_after_installation, specify the path in a total of 60 characters or less. • A maximum of 18 character strings (arguments) can be specified. • Consecutive multiple spaces are treated as a single delimiter character. • The character (') (single quote) is not treated as an argument.	

installation_date_and_time specification	Path specification method for external program	
	external_program_executed_before_installation	external_program_executed_after_installation
None	• Because they are treated as character strings, shell variables are ignored. • Processing that requires a response wait should not be specified.	

When using the `dcmcoll` command to specify the startup of an external program for a UNIX client, observe the following notes:

- Unlike Windows clients, the `external_program_error_handler` parameter cannot be specified for a UNIX client.
- Specify the path for the external program to be started in 64 characters or less. If any additional characters are specified, the first 64 characters take effect.
- A space cannot be included in the path for the external program to be started.
- Arguments cannot be specified for the external program to be started.

If an error is made in a path specification method, both the packaging and the job can be executed, but the external program does not start on the distribution destination UNIX client. Note that in this case, the job terminates normally without generating an error.

4.27 Reserved word specification method

Reserved words can be used as specification values in the JOB_ATTRIBUTE and PACKAGING_INFORMATION tags, as well as in the equivalent command arguments. Commands replace reserved words with actual values before processing them.

4.27.1 Reserved words available in JP1/Software Distribution commands

The table below shows reserved words that can be used in JP1/Software Distribution commands and the corresponding values after replacement.

Table 4–45: Reserved words available in JP1/Software Distribution commands

Reserved word	Replaced value
\CY	Last 2 digits of the year at time of command execution
\CM	Month, in 2 digits, at time of command execution
\CD	Day, in 2 digits, at time of command execution
\CH	Hour, in 2 digits, at time of command execution
\CN	Minute, in 2 digits, at time of command execution
\CS	Second, in 2 digits, at time of command execution
\BY	Last 2 digits of the year, at time of last updating of base_fullpath specification value
\BM	Month, in 2 digits, at time of last updating of base_fullpath specification value
\BD	Day, in 2 digits, at time of last updating of base_fullpath specification value
\BH	Hour, in 2 digits, at time of last updating of base_fullpath specification value
\BN	Minute, in 2 digits, at time of last updating of base_fullpath specification value
\BS	Second, in 2 digits, at time of last updating of base_fullpath specification value
\VERSION	The first value specified in version_revision of PACKAGING_INFORMATION.
\GROUP	The first value specified in group of JOB_DESTINATION. This reserved word is ignored if group is empty. If the replaced character string contains a \, the reserved word is further changed into a character string with the \ removed.
\HOST	The first value specified in host_name of JOB_DESTINATION. This reserved word is ignored if host_name is empty. If the replaced character string contains a period (.) , the reserved word is further changed into a character string with the period removed.
\DSTID	The first value specified in destination_id of JOB_DESTINATION_ID. This reserved word is ignored if destination_id is empty.
\PKGID	The first value specified in package_id of PACKAGING_INFORMATION.
\FILE	A file name derived by removing the relative directory portion and any items following the period (.) from the first value of file_path in PACKAGING_SOURCE. This reserved word is ignored if file_path is empty.
\SIZE	File size of the first file_path of PACKAGING_SOURCE. This reserved word is ignored if file_path is empty. The command fails if a non-existent file is specified in file_path.
\BASE	A file name derived by removing the relative directory portion and any items following the period (.) from the value of base_fullpath in PACKAGING_SOURCE.
\ZDIR	A file name derived by removing the relative directory portion and any items following the period (.) from the value of dmz_path in FILE_COLLECTION.

4.27.2 Notes about using a reserved word

The following notes apply to the use of reserved words in parameter files and commands.

- Use care so that the length of the replaced character string does not exceed the maximum number of digits that can be specified as a parameter (or an argument). If the maximum number of digits for a parameter is exceeded, the reserved word or the character string is truncated for processing.

  Example:

  If a job name *distribute**PKGID-from-relay-system**HOST* is specified, and if a 32-byte limit is reached in a non-reserved word character string, i.e., in the midst of *relay-system* or *distribute*, everything beginning with that character string is truncated. In other words, the job name is a character string up to *PKGID* or *HOST* before the replacement.

  If a 32-byte limit is reached in the midst of the reserved word *HOST* after the replacement, the job name is *XXXXXX-from-relay-system*.

- Use care so that the replaced character string does not contain any of the prohibited characters for the parameter (or argument).

4.27.3 Examples of use of reserved words

The following sections show examples of parameter files coded using reserved words.

(1) Example parameter file to be used with the dcminst command

```
JOB_ATTRIBUTE{
job_generator=Distribute \PKGID and other file to departments
*The final string is truncated if the length exceeds 32 bytes after replacement
*Fails if a defined name is used for the job storage folder
job_folder=\Distribute\CMMonth\CDDay\CHHour
*Creates a folder within the root folder of this example.
*Deletes the newly created hierarchy after execution, if Save (/s) is not
specified.
}
JOB_DESTINATION{
*Specify the destination using either JOB_DESTINATION or JOB_DESTINATION_ID.
host_name=host1;host2;host3
host_name=host4;host5;host6
group=\Company\Sales department;\Company\Materials department;\Company
\Engineering department
group=\Company\Personnel department
}

PACKAGING_INFORMATION{      * Example of distributing three packages
{
* You can write packaging information
* in a file separate from the file for the other tags.
* or you can execute dcmpack first, and specify the output file.
package_name=1
package_id=1
version_revision=1
generation=1
cabinet_name=CAB01
cabinet_id=01
package_code=P
}
{
package_name=2
package_id=2
version_revision=2
generation=2
cabinet_name=CAB01
cabinet_id=02
package_code=P

}
{
package_name=3
```

```
package_id=3
version_revision=3
generation=3
cabinet_name=CAB01
cabinet_id=03
package_code=P
}
}
```

(2) Example parameter file to be used with the dcmpack command

```
PACKAGING_SOURCE{
file_path= pack1.txt;pack2.txt;pack 3.txt;pack4.txt
base_fullpath=C:\dir1
}
PACKAGING_INFORMATION
{
package_name=\FILE\SIZEbytes\CMMonth\CDDay\CHHour\CNMinute
package_id=\BASE-\BM\BD\BH\BM
version_revision=V0\10:0
generation=G\1
cabinet_name=\PKGID
cabinet_id=\CD
}
INSTALLATION_METHOD{
installation_mode=G
}
USER_PROGRAM_INSTALLATION_CONDITIONS{
{
external_program_executed_before_installation="C:\test B.exe" "-B" bbb
exit=R
action=C
wait=T
}
{
external_program_executed_after_installation=C:\testA.exe -c "a aa"
exit=R
action=C
wait=T
}
{
external_program_error_handler="C:\test E.txt" -c "e e"
exit=R
wait=Y
}
timeout=404
}
SYSTEM_CONDITIONS{
directory=C:\DestDir
condition=H:c>1000
condition=C=PowerPC
}
OPTION{
compress=Y
compress_type=H
restore=Y
}
FILE_PROPERTIES{
permission=N
}
SCHEDULE{
expiration_date=001231
installation_date_and_time=04020100:50
installation_timing=S

}
```

(3) Example parameter file to be used with the dcmcoll command

```
JOB_ATTRIBUTE{
job_generator=\FILE from \HOST to \ZDIR
*Fails if a defined name is used for the job storage folder of the server
```

```
job_folder=\\GROUP\\CM\\CD\\CH
*Creates folders (4 levels) within the root folder of this example
*Deletes the newly created folder hierarchy after execution, if Save (/s) is
not specified.
}

JOB_DESTINATION{
host_name=dmp492
* \HOST in JOB_ATTRIBUTE is replaced by "dmp492".
host_name=dmp491
group = \Group\grp1
* \GROUP in JOB_ATTRIBUTE is replaced by "Group grp1"
group = \Group\grp2;\Group\grp3
}
SCHEDULE{
installation_timing = S
}
OPTION{
compress=Y
}
USER_PROGRAM_INSTALLATION_CONDITIONS{
*Enclose strings containing spaces within double quotation marks (")
external_program_executed_before_installation = "C:\test B.exe"
external_program_executed_after_installation = C:\testA.exe -x "a aa"
external_program_error_handler = "C:\test E.exe"
}
FILE_COLLECTION{
source_path= C:\tmp\SDerror.dir
* \FILE in JOB_ATTRIBUTE is replaced by "SDerror".
source_path= C:\tmp\SDerror2.dir;C:\tmp\SDerror3.dir
dmz_path= C:\
* \FILE in JOB_ATTRIBUTE is replaced by "ROOT".
}
```

4.28 Command operation at logoff that depends on a registry setting and logoff option

When you execute a command from a service, the command's operation at logoff depends on the combination of a registry setting (`CmdLogoffContinue`) and the logoff option (command's `/LC` argument). It also depends on the OS of the PC where the command is executed.

When the command is executed from a service under any of the following OSs, the command's operation at logoff depends on the combination of the registry setting and the logoff option:

- Windows NT 4.0
- Windows 2000
- Windows XP
- Windows Server 2003 (excluding Windows Server 2003 (IPF))

The following table shows the command operation at logoff for these OSs, depending on the combination of the registry setting and the logoff option.

Table 4–46: Command operation at logoff depending on the combination of registry setting and logoff option

Registry setting		Logoff option		
		Omitted	Specified	
			ON	OFF
Omitted		Forced termination	Processing continues	Forced termination
Specified	YES	Processing continues	Processing continues	Forced termination
	NO	Forced termination	Processing continues	Forced termination

When the command is executed from a service under any of the following OSs, the command's operation continues even if Windows is logged off, regardless of the registry setting and logoff command option:

- Windows Vista
- Windows Server 2008
- Windows 7
- Windows Server 2012
- Windows 8

5 System Maintenance

This chapter describes the system maintenance that becomes necessary once system operation has commenced.

5.1 Changing system settings

This section describes how to change the managing server settings after operation has begun.

5.1.1 Changing settings for the managing server's tuning items

You can use the **Server Customization** page in the server setup to specify the tuning items, such as CPU, memory, and network. You change items as appropriate, taking into account performance and the network configuration of the PC on which the managing server is running.

If you change the option **Number of subsystems that can be connected at one time** while you are using an Embedded RDB relational database, you must perform the operation described below.

To perform the operation:

1. Stop the Remote Install Server service.
2. Execute the `netmdb_setup.bat` command stored in *JP1/Software-Distribution-installation-directory*`\BIN`.
   When the `netmdb_setup.bat` command terminates, the system is placed on keyboard entry wait status. To terminate the command without making an entry from the keyboard, execute the command with `/nopause` specified as the option.
3. Start the Remote Install Server service.

For details about the **Server Customization** page, see *4.2.4 Server Customization page* in the manual *Setup Guide*.

5.1.2 Changing the cluster system settings

If you change the JP1/Software Distribution Manager settings in a cluster environment while you are using an Embedded RDB relational database, you must use the procedure described below to change settings for both the active server and the standby server.

To change settings for the active and standby servers:

1. Delete the **Registry Copy** setting for the generic-service resource for Remote Install Server.
2. Place the following generic-service resources offline:
   - Remote Install Server
   - Asset Information Synchronous Service#
   - Microsoft Internet Information Services#
3. Execute the `netmdb_stop.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`.
   Check the message to make sure that Embedded RDB has terminated.
4. Place the generic-service resource for HiRDB/ClusterService_JN1 offline.
5. Change the JP1/Software Distribution Manager setup.
6. Execute the `netmdb_setup.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory*`\BIN`.
   The KFPS01863-E message appears in the command prompt window. However, this appears because the generic service HiRDB/ClusterService_JN1 is placed offline and does not cause any problem.
7. Execute the `netmdb_stop.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`.
   Check the message to make sure that Embedded RDB has terminated.
8. Place the following generic-service resources online:
   - HiRDB/ClusterService_JN1
   - Remote Install Server

9. Start Remote Installation Manager.
   Make sure that Remote Installation Manager can start.
10. Exit the Remote Installation Manager.
11. Place the generic-service resources for Remote Install Server offline.
12. Execute the `netmdb_stop.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`.
    Check the message to make sure that Embedded RDB has terminated.
13. Place the generic-service resource for HiRDB/ClusterService_JN1 offline.
14. Use the cluster system administrator to move the group and set the owner as the standby server.
15. On the standby server, perform steps 5 through 13.
16. Use the cluster system administrator to move the group and set the owner as the active server.
17. Place the following generic-service resources online:
    - HiRDB/ClusterService_JN1
    - Microsoft Internet Information Services#
    - Asset Information Synchronous Service#
    - Remote Install Server
18. Enter the **Registry Copy** setting for the generic-service resource for Remote Install Server.

#: This step is required if Asset Information Manager Subset is used.

How to rename a host after operation has begun

To rename a logical host, you must use the **Logical host name** option on the **Cluster Settings** page in the setup according to the procedure described in *Changing the setup configuration*, regardless of the type of database.

If you are using an Embedded RDB database and rename a logical or physical host, you must edit various definition files. For details about the definition files that must be edited and how to edit them, see *7.3.1(1) Renaming the host after operation has started* in the manual *Setup Guide*.

5.2 Database maintenance

This section describes the required database maintenance for each type of relational database used in JP1/Software Distribution. It also describes the required database maintenance when Asset Information Manager Subset is used.

5.2.1 Maintenance of Embedded RDB databases

This subsection describes the database maintenance procedures required when an Embedded RDB database is used. For details about backing up a database and restoring a database from a backup, see *5.3 Backing up and restoring the system*.

You use Database Manager to maintain a database. For details about how to start Database Manager, see *7.4 How to use Database Manager (for Embedded RDB)* in the manual *Setup Guide*.

(1) Upgrading the database

You must use Database Manager to upgrade the database in the following cases:

- A message indicating a shortage of database capacity is displayed even after the database has been reorganized (when the database capacity is to be extended)
- JP1 Version 7i JP1/Software Distribution Manager Embedded RDB Edition is to be migrated to JP1 Version 8 JP1/Software Distribution Manager that uses Embedded RDB.
- A version of JP1/Software Distribution Manager is to be upgraded

For details about how to upgrade a database, see *7.4.3 Upgrading the database* in the manual *Setup Guide*.

We recommend that you make a backup of your relational database before you upgrade it. For details about making a backup, see *5.3 Backing up and restoring the system*.

(2) Reorganizing the database

(a) Determining the database's area usage rate

In an Embedded RDB, an area from which records have been deleted becomes unusable. As the size of the unusable area in the database increases, the database area usage rate might become poor.

When the database area usage rate reaches 80%, you should reorganize the database to make the unusable area usable again.

You can reorganize databases by using Database Manager or by using commands. For details about each method, see *7.4.6 Reorganizing the database* in the manual *Setup Guide*.

If a message indicating a shortage of database capacity is displayed even after the database has been reorganized, you must extend the database's capacity. Increase the size of database area file as instructed in **Upgrade database**.

You can determine the database's area usage rate (whether or not it has reached 80%) by checking the following messages in the event log:

- `KFPA12300-I`
- `KFPH00211-I`
- `KFPH22037-W`

For details about the messages, see the manual *HiRDB Version 8 Messages*. The following table shows the correspondence among the RDAREA name displayed in a message, the range of database reorganization, and the database area files to be extended.

Table 5–1: Correspondence among RDAREA name displayed in message, range of database reorganization, and database area files to be extended

RDAREA name in message[#1]	Range of reorganization[#2]	Database area files to be extended[#3]
NETMDM_NETM_TABLES	All	Resident table files
NETMDM_NETM_INDEXES	All	Index files
NETMDM_COLLECT_SERVPATH NETMDM_EXECUTION_SITE_SYSINF NETMDM_EXECUTION_SYSINF NETMDM_JOBGEN_COLLECT_DIR NETMDM_JOBGEN_COLLECT_SCRPTF NETMDM_JOBGEN_COLLECT_SYSINF NETMDM_JOBGEN_PACK_ATTRINF NETMDM_JOBGEN_PACK_SCRPTF NETMDM_JOBGEN_SOFT_CONDF NETMDM_JOBSCRIPT_SCRPTF NETMDM_SYSTEMJOB_REQUESTFILE NETMDM_SYSTEMJOB_RESULTFILE NETMDM_MNGLIST_LIST NETMDM_SCHEDULE_SYSINF NETMDM_JOBGEN_MESSAGE	Job	Job-related binary object files
NETMDM_CABINET_SYSINF NETMDM_PACKAGE_INF_SYSINF NETMDM_PACKAGE_PACKAGE NETMDM_PACKAGE_SCRPTF NETMDM_INSPACKAGE_SYSINF NETMDM_USERINVLIST_ITEMVALS NETMDM_USERINVLIST_SYSINF	Package or inventory	Asset information-related binary object files
NETMDM_NETM_MONITORING	Operation monitoring history	Software operation monitoring log files
NETMDM_OSPATCH_FILE NETMDM_OSPATCH_SCRIPT	Security update	Security program management files
NETMDM_NETM_TEMP_TABLES NETMDM_NETM_TEMP_INDEXES NETMDM_T6_DIR*n*[#4] NETMDM_T6_SCRPTF*n*[#4] NETMDM_T7_CONDF*n*[#4] NETMDM_T11_ATTRINF*n*[#4] NETMDM_T11_SCRPTF*n*[#4] NETMDM_T12_UINVINF*n*[#4] NETMDM_T14_ITEMVALS*n*[#4] NETMDM_T15_ITEMVALS*n*[#4] NETMDM_T30_MESSAGE*n*[#4]	All	Temporary table files

#1

The NETMDM part in an RDAREA name represents the administrator user ID. You will have specified the administrator user ID in the Database Settings Settings dialog box during installation.

#2

Setting for reorganizing the database.

#3

Setting for upgrading the database when a shortage of capacity is not improved by reorganization.

#4

n indicates a number from 1 to 5.

To check the database usage status after the database has been reorganized, you must obtain the sizes of the available RDAREAs, the sizes of the RDAREAs that are in use, and the sizes of the empty RDAREAs. The user who performs the following steps must have administrator permissions.

To obtain each of these RDAREA sizes:

1. Start the command prompt.
2. Execute the `pdntcmd.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\NETMDB\BIN`.
3. Use a command to execute `set pduser=`*administrator-user-ID*`/`*password*.
4. Use a command to execute `pddbst -r` *RDAREA-name* `-k logi -d`.

   For the names of the RDAREAs to be specified, see Table 5-1.

   The number of segments, segment size, unused segments, and size of one page are displayed. The following shows an example:

```
Total Segment : 2624 Segment Size : 20 Pages
Unused Segment: 2563 Page Size : 4096 Bytes
```

5. Obtain the size of the RDAREA from the displayed information.

   The following shows the formula for obtaining each value:

   Size of available RDAREA (bytes) =

   Total Segments **x** Segment Size **x** Page Size

   Size of RDAREA in use (bytes) =

   (Total Segments - Unused Segments) **x** Segment Size **x** Page Size

   Size of empty RDAREA (bytes) =

   Unused Segments **x** Segment Size **x** Page Size

To check the usage status of the entire database, repeat steps 4 and 5 for each applicable RDAREA name shown in Table 5-1.

Also, we recommend that you back up the relational database before reorganizing it. For details about the backup, see *5.3 Backing up and restoring the system*.

(b) Estimating the space required for database area files when reorganizing the database

To prevent an error because of insufficient disk space while you are reorganizing the database, we recommend that you estimate the space required for the database area files before reorganizing the database. The following procedure shows how to estimate the required space for each database area file:

1. Start the command prompt.
2. Execute the `pdntcmd.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\NETMDB\BIN`.
3. Use a command to execute `set pduser=`*administrator-user-ID*`/`*password*.
4. Use a command to execute pdfstatfs *path for the database area*. Specify a file path you specified during the creation of the database for *path-for-the database area* in the Detailed Settings of Database dialog box.

   Figure 7-8 Detailed Settings of Database dialog box

   For details of the Detailed Settings of Database dialog box, see the Figure 7-8 Detailed Settings of Database dialog box in *7.4.1 Creating a new database in the manual Setup Guide*.

The following information is displayed:

Total space used by the database area files assigned to a user

Free space for the database area files

The following shows a sample of the command output:

```
user area capacity 246756[kB]
remain user area capacity 1508[kB]
```

The above sample shows 1,508 KB of free space out of a total capacity of 246,756 KB available for the database area files assigned to a user.

The following shows the free space required for reorganizing the database for each type of database file:

1. Resident table file (bytes) = 102400
2. Index file (bytes) = 102400
3. Job-related binary object file (bytes) = 102400 + [2 **x** *size-of-largest-installation-script-file-in-remote-installation-job*] + *size-of-largest-search-list-in-software-search-list*#
   + *size-of-largest-message-in-report-message-job*
4. Asset information-related binary object file (bytes) = 102400 + [3 **x** *Total of the largest selected items in the user inventory item lists*] + *Size for the largest package among packages*
   + *Size for the largest installation script in packages*
5. Software operation monitoring log file (bytes) = 102400
6. Security update management file = *sum-of-sizes-of-largest-saved-patch-data-and-script-file*
7. Temporary table file (bytes) = 102400

#If you have not created any optional software lists, replace this with `12000`. If you have, estimate the approximate size required for the optional software list based on the number of and size of the files registered in the standard software list.

(3) Changing the password

We recommend that you use Database Manager to periodically change the database password.

For details about how to change the database password, see *7.4.7 Changing the database password* in the manual *Setup Guide*.

(4) Deleting unneeded inventory information

When a host is deleted, its inventory information may remain in the database. This can occur when a file is used to update system configuration information. Such inventory information wastes available database space because it will not be used in JP1/Software Distribution.

You can delete such unneeded inventory information from Database Manager in the batch mode. For details about how to delete unneeded inventory information, see *7.4.8 Deleting unneeded inventory information from the database* in the manual *Setup Guide*.

Unneeded inventory information results in the following cases:

- A file was created to update the system configuration and the hosts that were not specified in the file were deleted.
- A host was deleted from the System Configuration window, but its related inventory information was not deleted.
- Inventory information was reported from a host that is not in the system configuration.

If you have deleted many hosts, a large amount of unneeded inventory information might remain in the system. In such a case, we recommend that you delete the unneeded inventory information.

You can use Database Manager to delete inventory information for hosts that are not in the system configuration, as shown in the following table.

Table 5–2: Inventory information that is deleted

Classification	Inventory item
System information	System information
	Registry information
Software information	Installed package information
	Software inventory information
	Anti-virus product information
	Microsoft Office product information
User inventory information	User inventory information

5.2.2 Maintenance of Microsoft SQL Server and Oracle databases

This subsection describes the database maintenance procedures required when a Microsoft SQL Server or Oracle database is used. For details about backing up a database and restoring a database from a backup, see *5.3 Backing up and restoring the system*.

You use Database Manager to maintain a database. For details about how to start Database Manager, see *7.5 How to use Database Manager (for Microsoft SQL Server or Oracle)* in the manual *Setup Guide*.

(1) Upgrading the database

You must use Database Manager to upgrade the database in the following case:

- A version of JP1/Software Distribution Manager is to be upgraded

For details about how to upgrade a database, see *7.5.4 Upgrading the database* in the manual *Setup Guide*.

We recommend that you make a backup of your relational database before you upgrade it. For details about making a backup, see *5.3 Backing up and restoring the system*

(2) Reorganizing the database

If the relational database has become fragmented due to addition, change, and deletion of managed data, the database's data storage efficiency becomes poor. To maintain operational efficiency, you should reorganize the relational database periodically.

For details about how to check for fragmentation of a relational database and how to reorganize a relational database, see the RDBMS documentation.

(3) Recovering the database (Microsoft SQL Server)

JP1/Software Distribution Manager provides functions for repairing a database that has lost logical integrity and for recovering a database from a failure.

Usually when a relational database failure occurs, the database is recovered automatically by rollback. If the database is not recovered automatically for some reason, you must use Database Manager to effect recovery.

Note that Database Manager can be used to recover only Microsoft SQL Server relational databases.

For details about how to recover a database, see *7.5.5 Recovering the database (Microsoft SQL Server)* in the manual *Setup Guide*.

(4) Deleting unneeded inventory information

When a host is deleted, its inventory information may remain in the database. This can occur when a file is used to update system configuration information. Such inventory information wastes available database space because it will not be used in JP1/Software Distribution.

You can delete such unneeded inventory information from Database Manager in the batch mode. For details about how to delete unneeded inventory information, see *7.4.8 Deleting unneeded inventory information from the database* in the manual *Setup Guide*.

Unneeded inventory information results in the following cases:

- A file was created to update the system configuration and the hosts that were not specified in the file were deleted.
- A host was deleted from the System Configuration window, but its related inventory information was not deleted.
- Inventory information was reported from a host that is not in the system configuration.

If you have deleted many hosts, a large amount of unneeded inventory information might remain in the system. In such a case, we recommend that you delete the unneeded inventory information.

You can use Database Manager to delete inventory information for hosts that are not in the system configuration, as shown in the following table.

Table 5–3: Inventory information that is deleted

Classification	Inventory item
System information	System information
	Registry information
Software information	Installed package information
	Software inventory information
	Anti-virus product information
	Microsoft Office product information
User inventory information	User inventory information

5.2.3 Maintenance of Asset Information Manager Subset databases

This subsection describes the database maintenance procedures required when Asset Information Manager Subset is used. For details about backing up a database and restoring a database from a backup, see *5.3 Backing up and restoring the system*.

You use Database Manager to maintain a database. For details about how to start Database Manager, see *10.3 Setting up the Asset Information Manager Subset database* in the manual *Setup Guide*.

(1) Upgrading the database

You must use Database Manager to upgrade the Asset Information Manager Subset database in the following case:

- Version of the Asset Information Manager Subset component is to be upgraded

For details about how to upgrade a database, see *10.3.2 Upgrading the database* in the manual *Setup Guide*.

(2) Reorganizing the database

In an Embedded RDB, an area from which records have been deleted becomes unusable. As the size of the unusable area increases, the database area usage rate might become poor. You must reorganize the database to make the unusable area usable again.

For details about how to reorganize an Embedded RDB relational databases, see *10.3.7 Reorganizing the database in an Embedded RDB environment* in the manual *Setup Guide*.

For details about reorganizing Microsoft SQL Server or Oracle relational databases, see the RDBMS documentation.

(3) Changing the size of an Embedded RDB

In order to change the size of an Embedded RDB, you must re-create the Asset Information Manager Subset database. This subsection describes how to change the size of an Asset Information Manager Subset database. This method enables you to inherit in the re-created database the database data before the size was changed. If you do not wish to inherit the existing data, perform only step 2, which will only change the size of the Asset Information Manager Subset database.

To change the size of an Asset Information Manager Subset database:

1. Make a backup of the Asset Information Manager Subset database as a CSV file.
   For details about how to make a backup of an Asset Information Manager Subset database as a CSV file, see *10.3.3 Backing up the database as CSV files* in the manual *Setup Guide*.
2. Create an Asset Information Manager Subset database.
   Create an Asset Information Manager Subset database with the desired size specified. For details about how to create an Asset Information Manager Subset database, see *10.3.1 Creating a new database* in the manual *Setup Guide*.
3. Restore the Asset Information Manager Subset database.
   Restore the CSV backup file made in step 1. For **Backup folder name**, specify the path of the backup file. For details about how to restore an Asset Information Manager Subset database, see *10.3.6 Restoring the database in an Embedded RDB environment* in the manual *Setup Guide*.

(4) Renaming the Embedded RDB host

Notes

- Before you rename the Embedded RDB host, terminate all Asset Information Manager Subset services, commands, and tasks on the Asset Information Manager Subset server.
- Stop the Asset Information Manager Subset services in the following order:
  1. World Wide Web Publishing Service or World Wide Web Publishing
  2. Asset Information Synchronous Service and Asset Information Manager Subset commands and tasks
  3. JP1/Client Security Control - Manager (applicable if JP1/CSC is linked)

  When you use Asset Information Manager Subset after you have renamed the Embedded RDB host, start the services in the reverse order they were stopped.

To rename the Embedded RDB host when the Asset Information Manager Subset database being used is Embedded RDB (this method also applies when logical hosts are renamed in a cluster environment):

1. Terminate the Embedded RDB.
   For details about how to terminate the Embedded RDB, see *(5) Starting and terminating an Embedded RDB*.
2. Use a text editor to open the `pdsys` file that is stored in *JP1/Software-Distribution-Manager-installation-folder*`\jp1asset\aimdb\conf`
3. In the `pdsys` file, change *host-name* in `pdunit -x` *host-name* `-u unt1 -d "`*JP1/Software-Distribution-Manager-installation-folder*`\jp1asset\aimdb"`.
   Make sure that every line (other than the last line) ends with a backslash (\) and that no line exceeds 80 bytes. The following shows an example specification:
   ```
   pdunit -x host-name -u unt1\
   -d "JP1/Software-Distribution-Manager-installation-folder\jp1asset\aimdb"
   ```
4. Use a text editor to open the following files that are stored in *JP1/Software-Distribution-Manager-installation-folder*`\jp1asset\aimdb\conf\emb`:
   - `HiRDB.ini`
   - `reorganization_al.bat`
   - `reorganization_tb.bat`
5. Change *host-name* in `PDHOST=`*host-name* in each file.

6. If a host name is specified in URL for Asset Information Manager on the AIM page of Server Setup for JP1/Software Distribution, change the *host-name*.
7. Rename the OS host.
8. Restart the OS.

(5) Starting and terminating an Embedded RDB

The process for starting and terminating an Embedded RDB is described below. If you execute the Asset Information Manager Subset commands on a 64-bit version of the OS, you must use a 32-bit command prompt to execute the commands. For details about the execution procedure, see *10.11 Notes on using Asset Information Manager Subset on a 64-bit OS* in the manual *Setup Guide*.

1. Start Embedded RDB.
   Execute **jamemb_dbstart.bat** with a user account that has Administrators priviliages to start Embedded RDB.
   jamemb_dbstart.bat is stored in the following path:
   JP1/Software-Distribution-Manager-installation-directory`\jp1asset\exe`
2. Stop Embedded RDB
   Execute **jamemb_dbstop.bat** with a user account that has Administrators priviliages to stop Embedded RDB.
   jamemb_dbstop.bat is stored in the following path:
   JP1/Software-Distribution-Manager-installation-directory`\jp1asset\exe`

5.2.4 Database maintenance in a cluster system environment

This subsection describes the database maintenance procedures required in a cluster system environment. For details about backing up a database and restoring a database from a backup, see *5.3 Backing up and restoring the system*.

You use Database Manager to maintain a database. For details about how to start Database Manager when an Embedded RDB relational database is used, see *7.4 How to use Database Manager (for Embedded RDB)* in the manual *Setup Guide*. For details about how to start Database Manager when a Microsoft SQL Server or Oracle relational database is used, see *7.5 How to use Database Manager (for Microsoft SQL Server or Oracle)* in the manual *Setup Guide*.

(1) Reorganizing the database (cluster system environment)

To reorganize an Embedded RDB database in a cluster system environment:

1. Place the following generic-service resources offline:
   - Asset Information Synchronous Service#
   - Microsoft Internet Information Services#
   - Remote Install Server
2. Using Database Manager, reorganize the database from **Reorganize the database**.
   For details about Database Manager, see *7.4.6 Reorganizing the database* in the manual *Setup Guide*.
3. Place the following generic-service resources online:
   - Remote Install Server
   - Microsoft Internet Information Services#
   - Asset Information Synchronous Service#

#: This item is required when Asset Information Manager Subset is used.

If you use a Microsoft SQL Server or Oracle relational database, see the RDBMS documentation for details about reorganizing the database.

(2) Upgrading the database (cluster system environment)

This subsection describes how to upgrade a database in a cluster system environment. You must upgrade the databases on both the active server and the standby server.

To upgrade a database:

1. Place the following generic-service resources offline:#
   - Asset Information Synchronous Service
   - Microsoft Internet Information Services
2. Delete the **Registry Copy** setting for the generic-service resource for Remote Install Server.
3. Place the generic-service resources for Remote Install Server offline.
4. Using Database Manager, upgrade the database from **Upgrade database**.
   In the Cluster System Environment Settings dialog box, specify the same settings as for new creation.
   If this is a Microsoft SQL Server or Oracle database, go to step 14. Steps 5 through 13 are required for an Embedded RDB database.
5. Execute the `netmdb_stop.bat` command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`.
   Check the message to make sure that Embedded RDB has terminated.
6. Place the generic-service resource for HiRDB/ClusterService_JN1 offline.
7. Execute the `jamemb_dbstop.bat` command that is stored in *JP1/Software-Distribution-installation-directory* `\jp1asset\exe`.#
   Check the message to make sure that Embedded RDB has terminated.
8. Place the generic-service resources for HiRDB/ClusterService_AM1 offline.#
9. Use the cluster system administrator to move the group and set the owner as the standby server.
10. Place the generic-service resource for HiRDB/ClusterService_JN1 online.
11. On the standby server, perform steps 4 through 8.
12. Use the cluster system administrator to move the group and set the owner as the active server.
13. Place the following generic-service resources online:
    - HiRDB/ClusterService_AM1#
    - HiRDB/ClusterService_JN1
14. Place the generic-service resources for Remote Install Server online.
15. Enter the **Registry Copy** setting for the generic-service resource for Remote Install Server.
16. Place the following generic-service resources online:#
    - Microsoft Internet Information Services
    - Asset Information Synchronous Service

#: This step is required when Asset Information Manager Subset is used.

5.3 Backing up and restoring the system

JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system) manage various information such as system information, software information, and packages in a database. If a problem arises in the database, the accumulated information will be lost.

In addition, JP1/Software Distribution Manager (relay manager) and JP1/Software Distribution Client (relay system and client) store in files information that depends on the user environment, such as information about higher systems and installed software. If these files become corrupted, valid management operations become impossible.

To prevent information from being lost, you must make backups in JP1/Software Distribution Manager and JP1/Software Distribution Client.

Before you back up or restore JP1/Software Distribution, make sure that the following services and programs are stopped:

- For JP1/Software Distribution Manager
  - Remote Install Server service
  - World Wide Web Publishing Service or World Wide Web Publishing (applicable if Asset Information Manager Subset is used)
  - Asset Information Synchronous Service and Asset Information Manager Subset commands and tasks (applicable if Asset Information Manager Subset is used)
  - JP1/Client Security Control - Manager (applicable if JP1/CSC is linked)
- For JP1/Software Distribution Client

  Use Client Manager to stop the client.

5.3.1 Manually backing up JP1/Software Distribution Manager

This subsection describes the data that needs to be backed up from JP1/Software Distribution Manager (central manager or relay manager).

The components to be backed up are Server and Asset Information Manager Subset. Because various data and files contain defined relationships, back up everything at the same time.

(1) Registry (installation and setup information)

This subsection describes when and how to acquire a registry backup.

If you are migrating to a different environment, for example after a PC has been replaced, make a record of the various settings before migration because the registry contains machine-specific information.

(a) When to acquire a backup

Acquire a backup after installation (including re-installation, such as when installed components are changed) and after setup (including changes made during setup). There is no need to acquire a backup periodically.

(b) Acquisition method

Use Registry Editor to export the following registry items to a file:

- In a 32-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM`
- In a 64-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM`

For a relay manager, export the following registry items to a file:

- In a 32-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P`
- In a 64-bit version of the OS

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P

If you are using Asset Information Manager Subset, export the following registry items to a file:

- In a 32-bit version of the OS
  HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\JP1/Asset Information Manager
- In a 64-bit version of the OS
  HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\JP1/Asset Information Manager

(2) JP1/Software Distribution Manager database

This subsection describes when and how to acquire a relational database backup.

(a) When to acquire a backup

Hitachi recommends that you acquire this backup periodically after jobs have terminated or overnight.

If you use Microsoft SQL Server, acquire a backup periodically because the system databases (`master` and `msdb` databases) contain user information such as `sa`.

(b) Acquisition method

Using Embedded RDB

Use Database Manager or the `netmdb_backup.bat` command to acquire a backup. For details, see *7.4.4 Backing up the database* in the manual *Setup Guide*.

If you are migrating the database to a different machine or environment, use the `netmdb_unload.bat` command. For details, see *5.3.9(2) netmdb_unload.bat command*.

Using Microsoft SQL Server

Use Management Studio or execute the command to acquire a backup.

Using Oracle

Acquire an offline backup. The target to be backed up includes control files, data files, `Redo` log files, and all database files in parameter files.

You can back up some files individually by using the import/export function. For details about the data that can be imported/exported, see *A.2(2) Transferable data* in the manual *Setup Guide*.

(3) Asset Information Manager Subset

Acquire a backup if you use Asset Information Manager Subset.

(a) When to acquire a backup

Hitachi recommends that you acquire this backup periodically after jobs have terminated or overnight.

(b) Acquisition method

To acquire a backup from **Back up the database to CSV files** of Database Manager of Asset Information Manager Subset, see *10.3.3 Backing up the database as CSV files* in the manual *Setup Guide*.

To acquire a backup from **Back up Embedded RDB** when you are using Embedded RDB, see *10.3.5 Backing up the database in an Embedded RDB environment* in the manual *Setup Guide*.

(4) Various files

This subsection describes various JP1/Software Distribution files that need to be backed up.

(a) When to acquire a backup

Hitachi recommends that you back up these files periodically after jobs have terminated or overnight.

Note that you must back up the host ID management file after installation or after you have changed the operation mode to use host IDs. There is no need to acquire a backup of this particular file periodically.

(b) Acquisition method

Package files and operation history files

Acquire a backup if you have registered packages and acquired operation history.

- Using Embedded RDB

  You can back up the package files and operation history files when you back up the database.

- Using Microsoft SQL Server or Oracle

  Execute the `netmfile_backup.bat` command. For details about the `netmfile_backup.bat` command, see *5.3.9(4) netmfile_backup.bat command*.

Operation history files (operation history backup directory)

Acquire a backup if you have registered operation history files in the operation history backup directory.

Acquire a backup of the operation history files in the operation history backup directory that was specified on the **Operation Monitoring** page in the Server Setup dialog box.

Audit log files

Acquire a backup if you are collecting audit logs.

Acquire a backup of audit log files in the audit log output destination directory that was specified on the **Audit Log** page in the Server Setup dialog box.

Files obtained by remote collection (applicable to relay manager only)

Acquire a backup if you have collected the files that were obtained by remote collection by the relay manager.

Acquire a backup of the files obtained by remote collection, which are stored in the work directory for remote file collection, which was specified in the Specify Work Directories dialog box during installation. The value specified for the work directory for remote file collection is set in the following registry:

- In a 32-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\CollectionSitePath`

- In a 64-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hitachi\NETM/DM/P\CollectionSitePath`

Various management files (applicable to relay manager only)

Acquire a backup of the management files that are located in the following directories:

- *JP1/Software-Distribution-Manager-installation-directory*`\MASTER\DB`
- *JP1/Software-Distribution-Manager-installation-directory*`\SITESRV`

Host ID management file (applicable to relay manager only)

Acquire a backup if host IDs are used during operations.

Back up the `netmdmp.hid` file that is located in the Windows installation directory.

(5) Environment variables (during linkage with JP1/Base to manage JP1/Software Distribution users)

Acquire a backup if you have registered a JP1 user name that is authorized to execute the JP1/Software Distribution commands in the `NETM_USERID` system environment variable.

(a) When to acquire a backup

Obtain a backup when you register a JP1 user name in the `NETM_USERID` environment variable, or when you change or delete a JP1 user name. There is no need to acquire a backup periodically.

(b) Acquisition method

Use the command to obtain the JP1 user name that was registered in the `NETM_USERID` environment variable, and make a note of it.

5.3.2 Automatically backing up JP1/Software Distribution Manager

Of the data that is to be acquired as a backup of JP1/Software Distribution Manager (central manager and relay manager), the following items can be acquired automatically using the Windows task function and JP1/AJS:

- JP1/Software Distribution Manager database
- Asset Information Manager Subset (applicable if Asset Information Manager Subset is used)
- Various files
  - Package files and operation history files
  - Operation history files (operation history backup directory)
  - Audit log files
  - Files obtained by remote collection (applicable to relay manager only)
  - Various management files (applicable to relay manager only)

For details about the data to be acquired, see *5.3.1 Manually backing up JP1/Software Distribution Manager*.

(a) When to acquire a backup

Hitachi recommends that you back up data periodically after jobs have terminated or overnight. Because this data contains defined relationships, back up everything at the same time.

(b) Acquisition method

The following shows an example of a batch file for acquiring a backup in batch mode (for Microsoft SQL Server).

```
rem ********************************************************
rem * JP1/SD Manager Backup Script                         *
rem * SDBackUp.bat DMINSTALL_PATH BACKUP_PATH DATABASE_NAME  *
rem * DMINSTALL_PATH: Specifies the JP1/SD installation path *
rem * BACKUP_PATH   : Specifies the backup acquisition target*
rem * DATABASE_NAME : Specifies the name of JP1/SD database  *
rem ********************************************************

echo Starting the backup of JP1/Software Distribution Manager (%DATE% %TIME%)


rem Set the JP1/Software Distribution installation directory
set ARG1=%~1
set DMINSTALL_PATH=%ARG1%

rem Set the backup acquisition target
set ARG2=%~2
set BACKUP_PATH=%ARG2%

rem Set the database name
set ARG3=%~3
set DATABASE_NAME=%ARG3%


:SERVICE_STOP
echo Stopping the service "Remote Install Server"
net stop "Remote Install Server"
IF %ERRORLEVEL%==0 goto DB_BACKUP
  echo Stopping of the service "Remote Install Server" failed
  set BACKUP_RC=-1
  goto BACKUP_EXIT


:DB_BACKUP
echo Backing up the JP1/Software Distribution Manager database
echo (Using SQL Server's osql command to execute the BACKUP DATABASE statement
and acquire a database backup)
osql -U sa -P password -Q "BACKUP DATABASE %DATABASE_NAME% TO
DISK='%BACKUP_PATH%\NETMDB.bak'"
IF %ERRORLEVEL%==0 goto FILE_BACKUP
  echo Backup of the JP1/Software Distribution Manager database failed
  set BACKUP_RC=-1
```

```
  goto SERVICE_START


:FILE_BACKUP
echo Backing up JP1/Software Distribution packages and operation history files
call "%DMINSTALL_PATH%\bin\netmfile_backup.bat" /P /h /i "%DMINSTALL_PATH%" /b
%BACKUP_PATH% /o %BACKUP_PATH%\Backup.log
IF %ERRORLEVEL%==0 goto OPERATION_SAVEFILE_BACKUP
  echo Backup of JP1/Software Distribution packages and operation history
files failed
  set BACKUP_RC=-1
  goto SERVICE_START


:OPERATION_SAVEFILE_BACKUP
echo Backing up the JP1/Software Distribution operation history files (storage
directory)
echo (applicable if operation history is backed up to the backup directory)
echo Source: Location specified for Storage directory on the Operation
Monitoring page in the Server Setup dialog box
XCOPY C:\NETMDM\OPERATION_SAVE\* %BACKUP_PATH%\OPERATION_SAVE /I /S /E
IF %ERRORLEVEL%==0 goto AIM_DB_BACKUP
  echo Backup of the JP1/Software Distribution operation history files
(storage directory) failed
  set BACKUP_RC=-1
  goto SERVICE_START


:AIM_DB_BACKUP
echo Backing up Asset Information Manager Subset (CSV format)
rem  If you use Asset Information Manager Subset, back up Asset Information
Manager Subset to CSV files
 rem  When you back up Asset Information Manager Subset, stop the services in
the following order:
 rem   1. World Wide Web Publishing Service or World Wide Web Publishing
 rem   2. Asset Information Synchronous Service and Asset Information Manager
Subset commands and tasks
rem   3. JP1/Client Security Control - Manager (applicable if JP1/CSC is
linked)
call "%DMINSTALL_PATH%\jp1asset\exe\jamdbexport.bat" %BACKUP_PATH%\AIMLimited -
rp
rem  After the backup is acquired, start the services in the reverse order
they were stopped.
IF %ERRORLEVEL%==0 goto AUDIT_LOG
  echo Backup of Asset Information Manager Subset (CSV format) failed
  set BACKUP_RC=-1
  goto SERVICE_START


:AUDIT_LOG
echo Backing up audit logs
echo (applicable if audit logs are collected)
echo Source: Location specified for Output directory for audit logs on the
Audit Log page in the Server Setup dialog box
XCOPY C:\NETMDM\AUDIT\* %BACKUP_PATH%\AUDIT
IF %ERRORLEVEL%==0 goto COLLECT_FILE
  echo Backup of audit logs failed
  set BACKUP_RC=-1
  goto SERVICE_START


:COLLECT_FILE
echo Backing up the files obtained by remote collection (for relay manager)
echo (applicable if files are collected by the Collect files from client to
relay system job)
echo Source: Work directory for remote file collection, which was specified in
the Specify Work Directories dialog box during installation
echo          Setting path to the following registry:
echo          HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\CollectionSitePath
echo          Default: JP1/Software-Distribution-installation-directory\DMPSITE
\COLLECTION
XCOPY "%DMINSTALL_PATH%\DMPSITE\COLLECTION\*" %BACKUP_PATH%\COLLECTION /I /S /E
IF %ERRORLEVEL%==0 goto SITE_MNG_FILE1
  echo Backup of the files obtained by remote collection failed
```

```
  set BACKUP_RC=-1
  goto SERVICE_START


:SITE_MNG_FILE1
echo Backing up various management files (for relay manager)
echo Source: JP1/Software-Distribution-installation-directory\MASTER\DB
echo           JP1/Software-Distribution-installation-directory\SITESRV
XCOPY "%DMINSTALL_PATH%\MASTER\DB\*" %BACKUP_PATH%\MASTER_DB /I /S /E
IF %ERRORLEVEL%==0 goto SITE_MNG_FILE2
  echo Backup of management files failed
  set BACKUP_RC=-1
  goto SERVICE_START

:SITE_MNG_FILE2
XCOPY "%DMINSTALL_PATH%\SITESRV\*" %BACKUP_PATH%\SITESRV /I /S /E
IF %ERRORLEVEL%==0 goto SERVICE_START
  echo Backup of management files failed
  set BACKUP_RC=-1


:SERVICE_START
echo Starting the service "Remote Install Server"
net start "Remote Install Server"
set BACKUP_RC=0
IF %ERRORLEVEL%==0 goto BACKUP_EXIT
  echo Starting of the service "Remote Install Server" failed
  set BACKUP_RC=-1


:BACKUP_EXIT
echo End of JP1/Software Distribution Manager backup (%DATE% %TIME%)

exit /b %BACKUP_RC%
```

5.3.3 Backing up JP1/Software Distribution Client (relay system)

This subsection describes the data from JP1/Software Distribution Client (relay system) that needs to be backed up.

(1) Registry (installation and setup information)

This subsection describes when and how to acquire a registry backup.

If you are migrating to a different environment, for example after a PC has been replaced, make a record of the various settings before migration because the registry contains machine-specific information.

(a) When to acquire a backup

Acquire a backup after installation (including re-installation, such as when installed components are changed) and after setup (including changes made during setup). There is no need to acquire a backup periodically.

(b) Acquisition method

Use Registry Editor to export the following registry to a file:

- In a 32-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P`
- In a 64-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P`

(2) Various files

This subsection describes various JP1/Software Distribution files that need to be backed up.

(a) When to acquire a backup

Hitachi recommends that you acquire this backup periodically after jobs have terminated or overnight. Because the files discussed here contain defined relationships, back up everything at the same time.

Note that you must back up the host ID management file after installation or after you have changed the operation mode to use host IDs. There is no need to acquire a backup of this file periodically.

(b) Acquisition method

Package files

If packages have been registered, back up the package files.

Back up the package files from the directory used for storing relayed packages, which was specified in the Specify Work Directories dialog box during installation. The location of the directory specified for storing relayed packages is set in the following registry item:

- In a 32-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\ResourcePathName`
- In a 64-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P\ResourcePathName`

Files obtained by remote collection

If the relay manager collects the files that are obtained by remote collection, back up those files.

Back up the files obtained by remote collection from the work directory for remote file collection, which was specified in the Specify Work Directories dialog box during installation. The location of the work directory specified for remote file collection is set in the following registry:

- In a 32-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\CollectionSitePath`
- In a 64-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P\CollectionSitePath`

Various management files

Back up the management files from the following directories:

- *JP1/Software-Distribution-Client-installation-directory*`\MASTER\DB`
- *JP1/Software-Distribution-Client-installation-directory*`\SCHEDULE`
- *JP1/Software-Distribution-Client-installation-directory*`\SERVER`
- *JP1/Software-Distribution-Client-installation-directory*`\SITESRV`

Host ID management file

If host IDs are used during operations, back up the host ID management file.

Back up the `netmdmp.hid` file from the Windows installation directory.

5.3.4 Backing up JP1/Software Distribution Client (client)

This subsection describes the data that needs to be backed up from JP1/Software Distribution Client (client).

(1) Registry (installation and setup information)

This subsection describes when and how to acquire a registry backup.

If you are migrating to a different environment, for example after a PC has been replaced, make a record of the various settings before migration because the registry contains machine-specific information.

(a) When to acquire a backup

Acquire a backup after installation (including re-installation, such as when installed components are changed) and after setup (including changes made during setup). There is no need to acquire a backup periodically.

(b) Acquisition method

Use Registry Editor to export the following registry item to a file:

- In a 32-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P`
- In a 64-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P`

(2) Various files

This subsection describes various JP1/Software Distribution files that need to be backed up.

(a) When to acquire a backup

Hitachi recommends that you acquire this backup periodically after jobs have terminated or overnight.

Note that you must back up the host ID management file after installation or when you have changed the operation mode to use host IDs. There is no need to acquire a backup of this file periodically.

(b) Acquisition method

Various management files

Back up the management files from the following directory:

- *JP1/Software-Distribution-Client-installation-directory*`\MASTER\DB`

Host ID management file

If host IDs are used for operation, back up the host ID management file.

Back up the `netmdmp.hid` file from the Windows installation directory.

5.3.5 Restoring JP1/Software Distribution Manager

This subsection describes how to restore the backup data for JP1/Software Distribution Manager (central manager or relay manager).

Because various data and files contain defined relationships, restore the backed up data and files at the same time.

(1) Registry (installation and setup information)

Use Registry Editor to import the exported registry file.

However, if you are migrating to a different environment, for example after a PC has been replaced, do not import the registry file because the registry contains machine-specific information.

(2) JP1/Software Distribution Manager database

Using Embedded RDB

Use Database Manager's Restore Database dialog box to restore the backup files that were acquired using Database Manager or the `netmdb_backup.bat` command. For details, see *7.4.5 Recovering the database from a backup* in the manual *Setup Guide*.

To restore the backup files that were acquired using the `netmdb_unload.bat` command, use the `netmdb_reload.bat` command. For details, see *5.3.9(3) netmdb_reload.bat command*.

Using Microsoft SQL Server

Use Management Studio to restore the backup files.

Using Oracle

Restore from backup files acquired by offline backup. The target files to restore include control files, data files, `Redo` log files, and all database files in parameter files.

(3) Asset Information Manager Subset

If you have acquired CSV files as backup files, restore the backup files using Database Manager's **Restore the database from CSV files** in Asset Information Manager Subset. For details, see *10.3.4 Restoring the CSV database files* in the manual *Setup Guide*.

If you are using Embedded RDB and you acquired the backup from **Back up Embedded RDB**, see *10.3.6 Restoring the database in an Embedded RDB environment* in the manual *Setup Guide*.

(4) Various files

This subsection describes various JP1/Software Distribution files that need to be restored.

(a) Package files and operation history files

- Using Embedded RDB

  When you restore the database, you can also restore package files and operation history files from the backup at the same time.
- Using Microsoft SQL Server or Oracle

  Execute the `netmfile_restore.bat` command. For details about the `netmfile_restore.bat` command, see *5.3.9(5) netmfile_restore.bat command*.

(b) Operation history files (operation history backup directory)

Store the operation history backup files in the operation history backup directory that was specified on the **Operation Monitoring** page in the Server Setup dialog box.

(c) Audit log files

Store the audit log backup files in the audit log output destination directory that was specified on the **Audit Log** page in the Server Setup dialog box.

(d) Files obtained by remote collection (applicable to relay manager only)

Store the backed up files obtained by remote collection under the work directory for remote file collection, which was specified in the Specify Work Directories dialog box during installation. The value specified for the work directory for remote file collection is set in the following registry:

- In a 32-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\CollectionSitePath`
- In a 64-bit version of the OS

  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P\CollectionSitePath`

(e) Various management files (applicable to relay manager only)

Store the backup of the management files in the following directories:

- *JP1/Software-Distribution-Manager-installation-directory*`\MASTER\DB`
- *JP1/Software-Distribution-Manager-installation-directory*`\SITESRV`

(f) Host ID management file (applicable to relay manager only)

Store the backup of the `netmdmp.hid` file under the Windows installation directory.

(5) Environment variables (during linkage with JP1/Base to manage JP1/Software Distribution users)

In the `NETM_USERID` environment variable, register the JP1 user name that was obtained earlier.

5.3.6 Restoring JP1/Software Distribution Client (relay system)

This subsection describes how to restore the backup data for JP1/Software Distribution Client (relay system).

(1) Registry (installation and setup information)

Use Registry Editor to import the exported registry file.

Note that if you are migrating to a different environment, for example after a PC has been replaced, the registry cannot be restored because it contains machine-specific information.

(2) Various files

This subsection describes various JP1/Software Distribution files that need to be restored. Because various files contain defined relationships, restore the acquired backup files at the same time.

(a) Package files

Store the backup of the package files under the directory used for storing relayed packages, which was specified in the Specify Work Directories dialog box during installation. The value specified for the directory used for storing relayed packages is set in the following registry:

- In a 32-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\ResourcePathName`
- In a 64-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P\ResourcePathName`

(b) Files obtained by remote collection

Store the backup of the files obtained by remote collection under the work directory for remote file collection, which was specified in the Specify Work Directories dialog box during installation. The value specified for the work directory for remote file collection is set in the following registry:

- In a 32-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI\NETM/DM/P\CollectionSitePath`
- In a 64-bit version of the OS
  `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI\NETM/DM/P\CollectionSitePath`

(c) Various management files

Store the backup of the management files under the following directories:

- *JP1/Software-Distribution-Client-installation-directory*`\MASTER\DB`
- *JP1/Software-Distribution-Client-installation-directory*`\SCHEDULE`
- *JP1/Software-Distribution-Client-installation-directory*`\SERVER`
- *JP1/Software-Distribution-Client-installation-directory*`\SITESRV`

(d) Host ID management file

Store the backup of the `netmdmp.hid` file under the Windows installation directory.

5.3.7 Restoring JP1/Software Distribution Client (client)

This subsection describes how to restore the backup data for JP1/Software Distribution Client (client).

(1) Registry (installation and setup information)

Use Registry Editor to import the exported registry file.

However, if you are migrating to a different environment, for example after a PC has been replaced, do not import the registry file because the registry contains machine-specific information.

(2) Various files

This subsection describes various JP1/Software Distribution files that need to be restored.

(a) Various management files

Store the backup of the management files under the following directory:

- *JP1/Software-Distribution-Client-installation-directory*\MASTER\DB

(b) Host ID management file

Store the backup of the netmdmp.hid file under the Windows installation directory.

5.3.8 Backing up and restoring a cluster system

To back up and restore JP1/Software Distribution Manager (central manager) when failover occurs on JP1/Software Distribution:

1. Place the generic-service resource Remote Install Server offline.
2. Place the generic-service resource Asset Information Synchronous Service offline (applicable if Asset Information Manager Subset is used).
3. Stop the Remote Install Server service.
4. Stop the products that are accessing the JP1/Software Distribution database:
   - World Wide Web Publishing Service or World Wide Web Publishing (applicable if Asset Information Manager Subset is used)
   - Asset Information Synchronous Service and Asset Information Manager Subset commands and tasks (applicable if Asset Information Manager Subset is used)
   - JP1/Client Security Control - Manager (applicable if JP1/CSC is linked)
5. In the executing system, acquire a backup of the following data or restore the backup data:
   - Registry (installation and setup information)
   - JP1/Software Distribution Manager database
   - Asset Information Manager Subset (applicable if Asset Information Manager Subset is used)
   - Various files

     Package files and operation history files, operation history files (operation history backup directory), and audit log files

   For details about how to back up each type of data, see *5.3.1 Manually backing up JP1/Software Distribution Manager*.

   For details about how to restore the backup data, see *5.3.5 Restoring JP1/Software Distribution Manager*.
6. Place the generic-service resource Remote Install Server online.
7. Place the generic-service resource Asset Information Synchronous Service online (applicable if Asset Information Manager Subset is used).

5.3.9 Commands used for backing up and restoring the system

This subsection describes the commands that are used to back up and restore the system.

(1) netmdb_backup.bat command

This command acquires a backup of Embedded RDB. To restore the database from the backup acquired by this command, use Database Manager.

For details about this command, see *7.4.4 Backing up the database* in the manual *Setup Guide*.

(2) netmdb_unload.bat command

This command acquires a backup of Embedded RDB for migration purposes when a new database needs to be created in a different environment, for example after a PC has been replaced. To restore the database from the backup files acquired by this command, use the `netmdb_reload.bat` command.

This command is stored in *JP1/Software-Distribution-Manager-installation-directory*`\bin`.

Note that if the Operation Log List window is used, it may take time to back up the database depending on the amount of operation logs to be managed.

Before you execute this command, first stop JP1/Software Distribution Manager's **Remote Install Server** service by choosing **Services** from **Administrative Tools** on **Control Panel**.

If you are using Asset Information Manager Subset, also stop the Asset Information Manager Subset services in the following order:

1. World Wide Web Publishing Service or World Wide Web Publishing
2. Asset Information Synchronous Service and Asset Information Manager Subset commands and tasks
3. JP1/Client Security Control - Manager (applicable if JP1/CSC is linked)

If a connection pool has been set up in the ODBC data source, the connection is maintained until the timeout value specified in the connection pool is reached after an Asset Information Manager Subset job has terminated. You must wait until the connection is released before executing the command.

Function

This command acquires a backup needed to migrate the database. It also automatically acquires a backup of package files and operation history storage directory.

Format

```
netmdb_unload.bat  port-number
                   administrator-ID
                   password
                   /i JP1/Software-Distribution-Manager-installation-
directory
                   /b backup-file-storage-target-directory-for-migration
                   /o execution-result-output-file-name
```

Options

- *port-number*

  Specifies the port number used to connect the database.

- *administrator-ID*

  Specifies the administrator ID used to log in to the database.

- *password*

  Specifies the password used to log in to the database.

- `/i`

  Specifies the full path of the JP1/Software Distribution Manager installation directory.

- `/b`

  Specifies the full path of the target directory in which the backup file for migration is to be stored. Hitachi recommends that you specify the storage directory as a string of no more than 150 bytes. If the specified path is extremely long, directory creation may fail. For the storage directory, specify the local drive. You can specify the storage directory using alphanumeric characters, the space, and the following symbols:

  `: . \ # @ ( )`

- `/o`

  Specifies the full path name of the file to which the execution result is to be output.

Return code

The following table shows the return codes of the `netmdb_unload.bat` command:

Return code	Description
`0`	Normal termination
`-1`	Abnormal termination

Notes

- Do not change the contents of the `BAT` file for this command. If the file contents are changed, the command may no longer be executable.
- This command must be executed by a user with Administrator permissions.
- Specify the same administrator user ID in the `netmdb_unload.bat` and `netmdb_reload.bat` commands.
- If you unload the database, the following file and folders are created in the storage directory:
  - `netmdbreplece` file
  - `RESOURCE` folder
  - `MONITORING` folder

  If any of these items already exist on the specified storage directory path at the time backup processing is performed, the existing file or folders will be overwritten.
- Specify the command options in the order shown in the format.
- Do not execute this command more than once at the same time.

Example

This example acquires a backup for migration using Embedded RDB.

The example specifies the directories as follows:

- JP1/Software Distribution Manager installation directory
  `C:\Program Files\Hitachi\NETMDM`
- Directory for storing the backup files for migration
  `C:\NETMDB`
- Execution result output file
  `C:\NETMDB\unload.txt`

Before executing the command, you must create the directory for storing the backup files for migration and the directory for storing the execution result output file.

The following shows an example of command execution:

```
netmdb_unload.bat port-number user-ID-of-administrator password /i "C:
\Program Files\Hitachi\NETMDM" /b C:\NETMDB /o C:\NETMDB\unload.txt
```

(3) netmdb_reload.bat command

This command restores Embedded RDB from its backup files for migration.

This command is stored in *JP1/Software-Distribution-Manager-installation-directory*`\bin`.

Note that if the Operation Log List window is used, it may take time to restore the database depending on the amount of operation logs to be managed.

Before you execute this command, first stop JP1/Software Distribution Manager's **Remote Install Server** service by choosing **Services** from **Administrative Tools** on **Control Panel**.

If you are using Asset Information Manager Subset, also stop the Asset Information Manager Subset services in the following order:

1. World Wide Web Publishing Service or World Wide Web Publishing
2. Asset Information Synchronous Service and Asset Information Manager Subset commands and tasks
3. JP1/Client Security Control - Manager (applicable if JP1/CSC is linked)

If a connection pool has been set up in the ODBC data source, the connection is maintained until the timeout value specified in the connection pool is reached after an Asset Information Manager Subset job has terminated. You must wait until the connection is released before executing the command.

Function

This command restores the database from the migration backup that was acquired by the `netmdb_unload.bat` command. It also restores the package files and operation history storage directory.

Format

```
netmdb_reload.bat  port-number
                   administrator-ID
                   password
                   /i JP1/Software-Distribution-Manager-installation-
directory
                   /b backup-file-storage-target-directory-for-migration
                   /o execution-result-output-file-name
```

Options

- *port-number*

  Specifies the port number used to connect the database.

- *administrator-ID*

  Specifies the administrator ID used to log in to the database.

- *password*

  Specifies the password used to log in to the database.

- `/i`

  Specifies the full path of the JP1/Software Distribution Manager installation directory.

- `/b`

  Specifies the full path of the directory in which the backup file for migration is to be stored. For the storage directory, specify the local drive. You can specify the storage directory using alphanumeric characters, the space, and the following symbols:

  `: . \ # @ ( )`

- `/o`

  Specifies the full path name of the file to which the execution result is to be output.

Return code

The following table shows the return codes of the `netmdb_reload.bat` command:

Return code	Description
`0`	Normal termination
`-1`	Abnormal termination

Notes

- The backup file acquired prior to database upgrading cannot be restored because the database structure is different before and after the upgrading. After upgrading the database, acquire its backup again.
- Do not change the contents of the `BAT` file for this command. If the file contents are changed, the command may no longer be executable.
- This command must be executed by a user with Administrator permissions.
- Specify the same administrator user ID in the `netmdb_unload.bat` and `netmdb_reload.bat` commands.
- Specify the command options in the order shown in the format.
- Do not execute this command more than once at the same time.

Example

This example restores Embedded RDB from the backup for migration that was acquired by the `netmdb_unload.bat` command.

The example specifies the directories as follows:

- JP1/Software Distribution Manager installation directory
  `C:\Program Files\Hitachi\NETMDM`
- Directory storing the backup files for migration
  `C:\NETMDB`
- Execution result output file
  `C:\NETMDB\unload.txt`

Before executing the command, you must create the directory for storing the execution result output file.

The following shows an example of command execution:

```
netmdb_reload.bat port-number user-ID-of-administrator password /i "C:
\Program Files\Hitachi\NETMDM" /b C:\NETMDB /o C:\NETMDB\unload.txt
```

(4) netmfile_backup.bat command

When Microsoft SQL Server or Oracle is used as the JP1/Software Distribution Manager relational database, this command is used to back up package files and operation history files.

This command is stored in *JP1/Software-Distribution-Manager-installation-directory*`\bin`.

Before you execute this command, first stop JP1/Software Distribution Manager's **Remote Install Server** service by choosing **Services** from **Administrative Tools** on **Control Panel**.

Function

The `netmfile_backup.bat` command backs up the package files and operation history files to the specified storage directory.

Format

```
netmfile_backup.bat  /P /h [/d]
                     /i JP1/Software-Distribution-Manager-installation-
directory
                     /b backup-file-storage-directory
                     /o execution-result-output-destination-file-name
```

Regarding the `/P` and `/h` options, make sure that you specify one or both of them.

Options

- `/P`

  Specifies that the package files are to be backed up. Note that if you use Microsoft SQL Server and store packages in the database, this option is ignored if it is specified.

  If this option is specified, the command creates the `RESOURCE` folder in the storage directory and stores a backup of the package files.

- `/h`

  Specifies that the operation history files are to be backed up.

  If this option is specified, the command creates the `MONITORING` folder in the storage directory and stores a backup of the operation history files.

- `/d`

  Specifies that the backup files are to be stored in separate folders according to command execution date and time. When this option is specified, the command creates folders that indicate the command execution date and time in the format *YYYYMMDDhhmmss* (*year-month-date-hour-minute-second*) under the backup file storage directory, and then acquires backup files in the appropriate folders.

- `/i`

  Specifies the full path of the JP1/Software Distribution Manager installation directory.

- `/b`

  Specifies the full path of the backup file storage directory. Hitachi recommends that you specify the storage directory as no more than 150 bytes in length. If the specified path is too long, creation of the directory may fail.

- `/o`

  Specifies the full path of the execution result output file name. If the specified file already exists, it will be overwritten.

Return codes

The following table lists and describes the return codes that are set during execution of the `netmfile_backup.bat` command.

Return code	Description	Action
`0`	Normal termination	None
`-1`	Invalid parameter	Check and, if necessary, revise the parameters.
`-2`	Acquisition of registry information failed.	• Check whether the user who executed the command is authorized to access the registry. • Make sure that JP1/Software Distribution Manager was installed correctly.
`-3`	File copy operation failed.	• Make sure that the specified path is correct. • Check whether the user who executed the command is authorized to access the specified directory. • Check the result output file for the execution result.
`-4`	Access to the network drive failed.	Check and, if necessary, revise the settings (login ID, password, and domain name) specified on the **Network Connection** page at setup.
`-5`	An open error occurred in the result output file.	• Make sure that the specified path is correct. • Check whether the user who executed the command is authorized to access the specified directory.

Notes

- Do not change the contents of the `BAT` file for this command. If the file contents are changed, the command may no longer be executable.
- This command must be executed by a user with Administrator permissions.
- Specify the command options in the order shown in the format.
- Do not execute this command more than once at the same time.
- If you omit the `/d` option and if the `RESOURCE` or `MONITORING` folder already exists on the path specified for the storage directory, the folder will be overwritten.

Example

This example backs up the package files and operation history files by creating a command execution date/time folder when Microsoft SQL Server or Oracle is used.

The example specifies the following directories:

- JP1/Software Distribution Manager installation directory
  `C:\Program Files\Hitachi\NETMDM`
- Backup file storage directory
  `C:\Backup`
- Execution result output file name
  `C:\Backup\Backup.txt`

Before you execute the command, create the backup file storage directory and the directory for storing the execution result files.

The following shows an example of command execution:

```
netmfile_backup.bat /P /h /d /i "C:\Program Files\Hitachi\NETMDM" /b C:
\Backup /o C:\Backup\Backup.txt
```

(5) netmfile_restore.bat command

When Microsoft SQL Server or Oracle is used as the JP1/Software Distribution Manager relational database, this command is used to restore package files and operation history files from their backup files.

This command is stored in *JP1/Software-Distribution-Manager-installation-directory*\bin.

Before you execute this command, first stop JP1/Software Distribution Manager's **Remote Install Server** service by choosing **Services** from **Administrative Tools** on **Control Panel**.

Function

The netmfile_restore.bat command restores the package files and operation history files from their backup files, which are stored in the specified directory.

Format

```
netmfile_restore.bat  /P /h
                      /i JP1/Software-Distribution-Manager-installation-
directory
                      /b backup-file-storage-directory
                      /o execution-result-output-destination-file-name
```

Regarding the /P and /h options, make sure that you specify one or both of them.

Options

- /P

  Specifies that the package files are to be restored. Note that if you use Microsoft SQL Server and store packages in the database, this option is ignored if it is specified.

  If this option is specified, the command restores the package files from the RESOURCE folder in the backup file storage directory.

- /h

  Specifies that the operation history files are to be restored.

  If this option is specified, the command restores the operation history files from the MONITORING folder in the backup file storage directory.

- /i

  Specifies the full path of the JP1/Software Distribution Manager installation directory.

- /b

  Specifies the full path of the backup file storage directory. If the execution date/time folders were created during backup processing, specify the appropriate folder.

- /o

  Specifies the full path of the execution result output file name. If the specified file already exists, it will be overwritten.

Return codes

The following table lists and describes the return codes that are set during execution of the netmfile_restore.bat command.

Return code	Description	Action
0	Normal termination	None
-1	Invalid parameter	Check and, if necessary, revise the parameters.
-2	Acquisition of registry information failed.	• Check whether the user who executed the command is authorized to access the registry. • Make sure that JP1/Software Distribution Manager was installed correctly.
-3	File copy operation failed.	• Make sure that the specified path is correct. • Check whether the user who executed the command is authorized to access the specified directory.

Return code	Description	Action
-3	File copy operation failed.	• Check the result output file for the execution result.
-4	Access to the network drive failed.	Check and, if necessary, revise the settings (login ID, password, and domain name) specified on the **Network Connection** page at setup.
-5	An open error occurred in the result output file.	• Make sure that the specified path is correct. • Check whether the user who executed the command is authorized to access the specified directory.

Notes

- Do not change the contents of the BAT file for this command. If the file contents are changed, the command may no longer be executable.
- This command must be executed by a user with Administrator permissions.
- Specify the command options in the order shown in the format.
- Do not execute this command more than once at the same time.

Example

This example restores the package files and operation history files from the backup files in the backup execution date/time folder 20081217120030 when Microsoft SQL Server or Oracle is used.

This example specifies the following directories:

- JP1/Software Distribution Manager installation directory
  C:\Program Files\Hitachi\NETMDM
- Backup file storage directory
  C:\Backup\200812170030
- Execution result output file name
  C:\Backup\Backup.txt

Before you execute this command, create the directory for storing the execution result files.

The following shows an example of command execution:

```
netmfile_restore.bat /P /h /i "C:\Program Files\Hitachi\NETMDM" /b C:\Backup
\200812170030 /o C:\Backup\Backup.txt
```

5.4 Operational maintenance

This section explains how to perform maintenance on a software distribution system after operation has started.

5.4.1 Starting and terminating the managing server in a cluster system environment

The following steps show how to terminate and start the managing server in a cluster system environment in which Embedded RDB is used as the relational database:

1. Place the following generic-service resources offline:
   - Asset Information Synchronous Service#
   - Microsoft Internet Information Services#
   - Remote Install Server
2. Execute the netmdb_stop.bat command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`. Check the message to make sure that Embedded RDB has terminated.
3. Place the generic-service resource HiRDB/ClusterService_JN1 offline.
4. Execute the jamemb_dbstop.bat command that is stored in *JP1/Software-Distribution-installation-directory* `\jp1asset\exe`.#
   Check the message to make sure that Embedded RDB has terminated.
5. Place the generic-service resource HiRDB/ClusterService_AM1 offline.#
6. Use the cluster system administrator to move the group and set the owner as the standby server.
7. Shut down the OS on the active server.
8. Shut down the OS on the standby server.
9. Start the OS on the standy server.
10. Start the OS on the active server.
11. Use the cluster system administrator to move the group and set the owner as the active server.
12. Place the following generic-service resources online:
    - HiRDB/ClusterService_AM1#
    - HiRDB/ClusterService_JN1
    - Remote Install Server
    - Microsoft Internet Information Services#
    - Asset Information Synchronous Service#

#: Required when Asset Information Manager Subset is used.

While you are operating the system in a cluster system environment in which Embedded RDB is used as the relational database, if you wish to restart the OSs on the active server and the standby server, do the following steps:

1. Place the following generic-service resources offline:
   - Asset Information Synchronous Service#
   - Microsoft Internet Information Services#
   - Remote Install Server
2. Execute the netmdb_stop.bat command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`. Check the message to make sure that Embedded RDB has terminated.
3. Place the generic-service resource HiRDB/ClusterService_JN1 offline.
4. Execute the jamemb_dbstop.bat command that is stored in *JP1/Software-Distribution-installation-directory* `\jp1asset\exe`.#

Check the message to make sure that Embedded RDB has terminated.

5. Place the generic-service resource HiRDB/ClusterService_AM1 offline.
6. Use the cluster system administrator to move the group and set the owner as the standby server.
7. Place the following generic-service resources online:
   - HiRDB/ClusterService_AM1#
   - HiRDB/ClusterService_JN1
   - Remote Install Server
   - Microsoft Internet Information Services#
   - Asset Information Synchronous Service#
8. Restart the OS on the active server.
9. On the standby server, perform steps 1 through 5.
10. Use the cluster system administrator to move the group and set the owner as the active server.
11. Place the following generic-service resources online:
    - HiRDB/ClusterService_AM1#
    - HiRDB/ClusterService_JN1
    - Remote Install Server
    - Microsoft Internet Information Services#
    - Asset Information Synchronous Service#
12. Restart the OS on the standby server.

5.4.2 Deleting unnecessary data

If you use the database for a long period of time, a massive amount of inventory and operational information will accumulate in the database. This affects not only the disk space that is used but also search and update processing, which can cause the response time of the database to decrease. We recommend that you periodically check the number of data items listed in this subsection by using CSV output (or some other means), and delete any unnecessary data. For details about the CSV output utility, see *9.1.1 Items eligible for output to a CSV-formatted file* in the manual *Administrator's Guide Volume 1*. Also, we recommend that you reorganize the database after deleting any unnecessary data in order to prevent database fragmentation, which is caused by deleting data. For details on how to reorganize Embedded RDB that is used as the relational database, see *5.2.1 (2) Reorganizing the database*. If you are using Microsoft SQL Server or Oracle software for the relational database, see the relevant RDBMS documentation for details on how to reorganize the database.

(1) System configuration

- System configuration information

You can output destination types by using the CSV output utility, and check the number of registered items. Also, you can perform the maintenance operation on the system configuration to delete unneeded hosts. For details on how to maintain the system configuration, see *2.10.4 Maintaining system configuration information* in the manual *Description and Planning Guide*. For details on how to delete unneeded deletion history, see *9.6.4 Deleting deletion history* in the manual *Setup Guide*.

(2) Inventory information

- Software information
  - Installed packages

    You can output the data about the installed packages by using the CSV output utility, and check the number of registered items.

For details on how to delete the information about the installed packages, see *3.2.7 Deleting software information* in the manual *Administrator's Guide Volume1*.

- Software inventory

  You can output the data about the software inventory by using the CSV output utility, and check the number of registered items.

  For details on how to delete the software information from the software inventory dictionary, see *3.2.5 Filtering a software inventory* in the manual *Administrator's Guide Volume 1*.

By using Database Manager, you can delete the inventory information for the unneeded hosts at once.

For details, see *2.2.8 (2) Notes on inventory information of hosts not in the system configuration* in the manual *Description and Planning Guide*.

(3) Jobs

- Job definitions

  From the **Job Definition** window of Remote Installation Manager, you can check the number of registered jobs. Also, you can create a folder for saving jobs so that you can efficiently manage jobs. For details, see *8.3.2 Managing saved jobs and folders* in the manual *Administrator's Guide Volume 1*.

- Job execution results

  You can output the results of job executions by using the CSV output utility, and check the number of registered items. Also, you may excute and delete jobs in the **Job Status** window, however, commands enable you to excute and delete jobs. For details on how to delete the jobs, see *8.5.1 Deleting a job* in the manual *Administrator's Guide Volume 1*. If you disable the recording of unnecessary job execution results, you can save disk space. For details, see *4.2.6 Log Options page* in the manual *Setup Guide*.

(4) Packages

You can output package types by using the CSV output utility, and check the number of registered items. Also, you may excute and delete jobs in the **Package** window. Also, commands enable you to excute and delete packages. For details on how to delete the jobs, see *2.4.4 Deleting cabinets and deleting packages (managing packages)* in the manual *Administrator's Guide Volume 1*.

(5) Software operation information

- Operation logs

  You can check the number of registered items from the MONRST.LOG log file that records the storage processing for the operation information. For details on how to store and delete the operation information such as the suppression and operation logs, and operation time, see *6.4 Collecting operation information* in the manual *Administrator's Guide Volume 1*. If you set automatic storage for the operation information, any storage operations are not required because the operation information is automatically stored to, and deleted in the database.However, if you set manual storage for the operation information, execute the command to save and delete the operation information. For details on how to delete unnedded operation information, see *2.6.5 Examples of managing operation information* in the manual *Description and Planning Guide*.

- Backup directory for operation history

  On the Operation Monitoring page, selecting the following check box enables you to check the size of the operation history that is saved in the backup directory.

  Output a message to Event Viewer when the threshold value is reached

  For details, see *4.2.14 Operation Monitoring page* in the manual *Setup Guide*.

(6) Patches that are applied to client

In the **Software Update Management** dialog box, you can check the number of registered pathes. For details on how to delete unneeded patches that have already been acquired, see *7.1.1 Acquiring patches* in the manual *Administrator's Guide Volume 1*.

6 Troubleshooting

This chapter describes how to confirm information or take action in the event of an error when JP1/Software Distribution is being used.

6.1 Action to be taken when an error occurs

If an error occurs when JP1/Software Distribution is being used, the following procedures should be employed to resolve it.

To resolve an error:

1. Check to see whether a message is displayed.
   - If a job fails, you can check the contents of the error by using the Advanced dialog box. Take an appropriate action by referring to *6.2 Job troubleshooting*.
   - When an error occurs, JP1/Software Distribution collects a log. You can take an appropriate action by checking the contents of the log. For details about how to check the logs of JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system), see *6.3.1 Checking log files*. For details about how to check the log of JP1/Software Distribution Client (client), see *6.4.1 Checking log files*.
2. Check to see whether the symptoms are applicable to those that are described in Actions to be taken when JP1/Software Distribution does not operate normally.

   For details about symptoms in JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system), see *6.3.2 Actions to be taken when JP1/Software Distribution does not operate normally* and take the appropriate actions. For details about symptoms in JP1/Software Distribution Client (client), see *6.4.2 Actions to be taken when JP1/Software Distribution does not operate normally* and take the appropriate actions.
3. If the actions taken in Steps 1 and 2 do not solve the problem, collect maintenance data and notify the system administrator.

   See *6.7 Collecting maintenance data*, and collect the data necessary to investigate the cause of the problem. The system administrator should investigate the cause of the problem based on the collected data and take appropriate action.

Messages about transient errors that do not cause problems are also output to the log file. For the messages that should be checked, see *7.1.4 Event log messages that should be monitored, their causes, and the actions to be taken*.

6.2 Job troubleshooting

This section explains how to check detailed information and take corrective action when a job executed in JP1/Software Distribution fails.

6.2.1 Method for checking detailed information about an erroneous job

If a job executed under JP1/Software Distribution ends in error, you can check detailed information about the error using the Detailed Information dialog box, which is displayed on the Job Status window of Remote Installation Manager.

The Job Status window displays job information for each level. The Detailed Information dialog box displays the lowest level information. You can confirm the job status by choosing **View** and then **Display Detailed Job Information** (or double-clicking the job) after selecting the job on the right pane of the Job Status window.

For example, for a remote installation job, you can double-click a package (operations program) that is the lowest level information to display the Detailed Information dialog box.

Figure 6–1: Job Status window

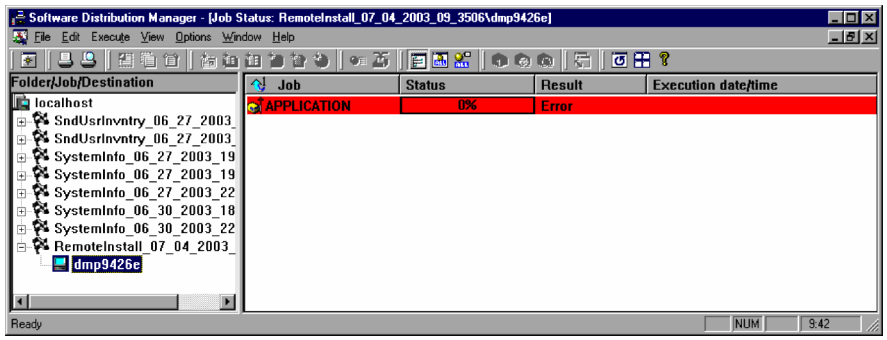
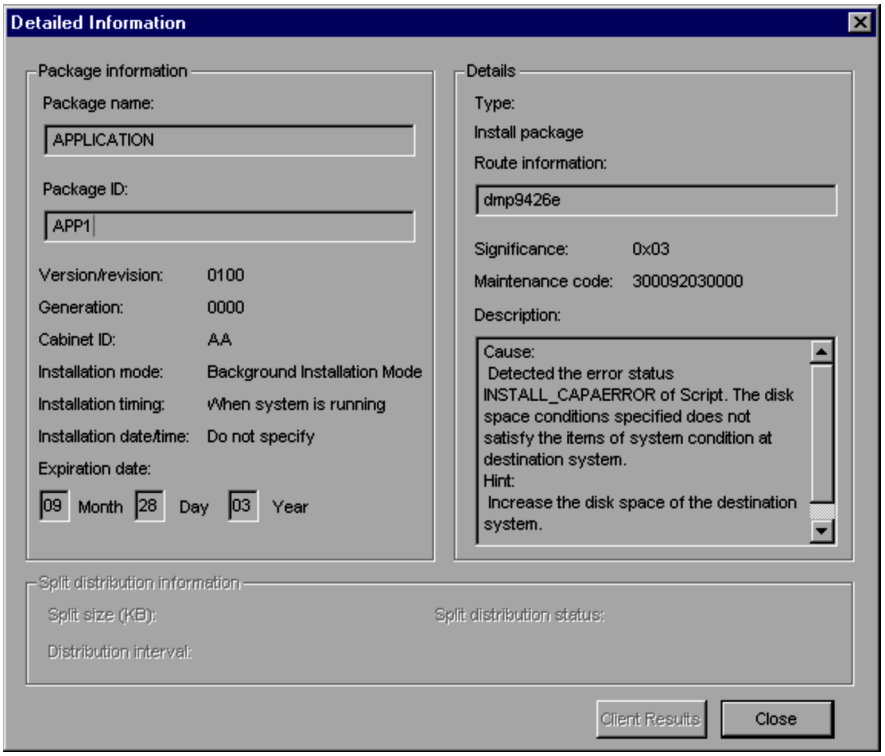


Figure 6–2: Detailed Information dialog box



The Description column shows the cause of the error and the action to be taken. The cause of an error is indicated as a maintenance code. For details about maintenance codes, see *6.2.3 List of maintenance codes*.

If the **Error function** is indicated as **UNIX**, and a number is indicated as **Reason** in the **Description** column, the number, when divided into four digits each, indicates a message ID that is sent from either JP1/Software Distribution Workstation or JP1/Software Distribution Client, which are UNIX clients. For details about the message ID contents, see the following JP1/Software Distribution manuals for UNIX systems: *Job Management Partner 1/Software Distribution Client Description and User's Guide*, for UNIX systems, and *Job Management Partner 1/Software Distribution Workstation Description and Operator's Guide*.

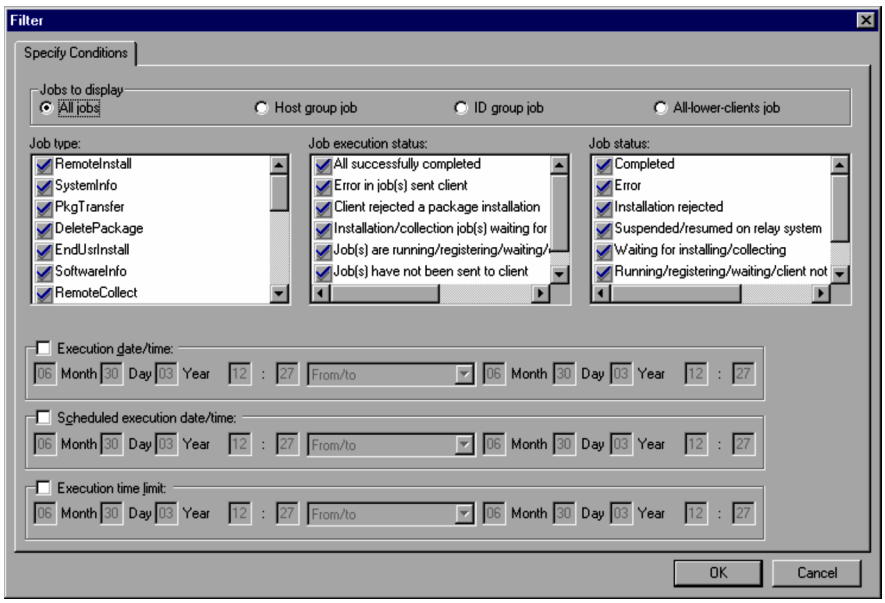
6.2.2 Facilitating the checking of job status

When using a relational database, you can specify a job status display method to facilitate the checking of job status on the Job Status window. This section explains how to facilitate the checking of job status.

To check job status:

1. From the Job Status window, choose **View** and then **All Job Details** from the menu.
2. From the Job Status window, choose **View** and then **Filter** from the menu to display the Filter dialog box.
   The Filter dialog box is displayed.

   Figure 6–3: Filter dialog box



3. In **Job status**, select **Error** only.

With the previous selections, the Job Status window only displays error information under the selected level, which makes it easier to check error-terminating jobs.

In addition, double-clicking an error-terminating job displays the Detailed Information dialog box, which allows you to check detailed information about the error.

6.2.3 List of maintenance codes

If an error occurs in a remote installation job, the cause of the error is displayed as a maintenance code. You should check the maintenance code in the Detailed Information dialog box, which is displayed from the Job Status window.

This section explains the cause of the error and the action to be taken for each maintenance code.

The 9th and 10th digits from the left in the maintenance code represent the user status, where return codes from the JP1/Software Distribution execution result, from a non-JP1/Software Distribution installer, and from an external program are displayed. If a 32-bit value is returned as a return code, the lower 1 byte is displayed. For return codes

that are generated by programs other than JP1/Software Distribution, contact the developer of the installer or the external program.

(1) An ordinary installation job fails

The table below shows the cause of principal maintenance codes that are returned from ordinary installation jobs, and procedures for resolving the problems.

If the destination is a UNIX client, a value other than 00 is displayed as the user status even when the external program processing is successful and the remote installation job ends normally. However, this does not indicate a problem and can be ignored.

Table 6–1: Remote installation maintenance codes

Maintenance code	Cause	Action
300092020000	Large software was remotely installed; the client is unable to allocate the disk space necessary for installation and work space.	See *5.3.3 Disk space requirements* in the manual *Description and Planning Guide*. Calculate the hard-disk space required on the client during the remote installation. If the remote installation is on a PC that does not have adequate hard-disk space, delete any unneeded files before proceeding. Install the JP1/Software Distribution Client only on a drive that has adequate free space.
300093010000	The package to be installed remotely is not supported by the client.	Upgrade the client to a version that supports the package to be installed remotely.
300097010000	Files to be remotely installed cannot be created for the following reasons: 1. A file to be remotely installed is being used. 2. A duplicate name directory exists. 3. The user does not have access permission for the files. 4. The software was distributed to a client that does not support high-compression packages.	Resolve the cause indicated in reasons 1 through 3. If the client executes an **Install when system starts** remote installation on a program that is registered in the **Startup** group, the installation fails due to reason 1. In this case, move any programs that have started since the startup time to **Software Distribution Client Startup**; the system starts the program after executing the installation processing. For details about how to move the NETM_DM_P Startup folder, see *11.2.2(2) Moving startup programs* in the manual *Administrator's Guide Volume 1*. For reason 4, distribute any high-compression packages after packaging them in a compatible compression mode.
3000980E*xx*00#	The pre-processing program failed to start.	None.
3000980F0000	The external program monitoring timed out without a response from the pre-processing program.	Check the pre-processing program. Make sure that external program monitoring time is set to an appropriate value.
30009A01*xx*00#	The post-processing program failed to start.	When *xx* is 00, check the path of the external program. When *xx* is other than 00, check the user status.
30009A060000	The external program monitoring timed out without a response from the post-processing program.	Check the post-processing program. Make sure that external program monitoring time is set to an appropriate value.
30009F090000	The power for the client PC was turned off during the downloading or installation of the package; the installation of the package failed.	None.
900090009000	• Even if the installation has not been executed, the managing server is notified that the installation process ended. The same software as the remotely installed software is already installed on the client system.	When creating a job, specify **Replace existing package** to install an identical package to that which may exist in the remote installation destination. The existing package is overwritten.

Maintenance code	Cause	Action
900090009000	• The file was not created after the installation was completed. The data remote-installed on the client system was deleted.	When creating a job, specify **Replace existing package** to install an identical package to that which may exist in the remote installation destination. The existing package is overwritten.

#: *xx* denotes a return code from the pre- or post-processing program.

(2) Remote installation of a Hitachi program product fails

Tables 6-2 and 6-3 show maintenance codes, their meanings, and actions to be taken when JP1/Software Distribution Client, or other Hitachi program products are installed remotely.

The *xx* part of the maintenance code that is returned in the 3000AF00*xx*00 format is a *job result return code*. A return code also is displayed on the client screen upon termination of the remote installation of JP1/Software Distribution Client (client).

Table 6–2: Maintenance codes from remote installation of JP1/Software Distribution Client

Maintenance code	Cause	Action
300077030000	A JP1/Software Distribution Client (client) that was not compatible with the destination OS was distributed; the installation failed.	Check the OS at the destination and the applicable OS for JP1/Software Distribution Client (client); remotely install the JP1/Software Distribution Client (client) that is compatible with the destination OS.
3000AF000000	Normal termination.	None.
3000AF008000	Analysis of installation setup file (setup.inf) failed.	Notify the system administrator.
3000AF008100	Installation file not found on the medium (no PP files).	Possibly invalid media. Notify the system administrator.
3000AF008200	Registration of icon failed (post-installation error).	The operating environment for JP1/Software Distribution may be invalid. Manually perform overwrite installation.
	Program folder for remote control agent missing.	The operating environment for JP1/Software Distribution may be invalid. Manually perform overwrite installation.
3000AF008300	Registration of registry for remote control agent failed.	The operating environment for JP1/Software Distribution may be invalid. Manually perform overwrite installation.
	Registration of permitted controller for remote control agent failed.	The operating environment for JP1/Software Distribution may be invalid. Manually perform overwrite installation.
	Installation directory in the registry missing.	The operating environment for JP1/Software Distribution may be invalid. Manually perform overwrite installation.
	Registration of a module required for searching for information about Microsoft Office and anti-virus products failed.	COM Object Save Command Failed is output to *Windows-directory*\Temp\DMPINST.LOG. Take one of the following actions: • Re-install JP1/Software Distribution Client. • Start the command prompt and execute the following command: REGSVR32.EXE "*JP1/Software-Distribution-installation-directory*\BIN\dmpComSW.dll".
3000AF008500	Error during file copy (disk-access error).	Make sure that the hard disk is operating normally. If the hard disk is operating normally, it is possible that the installation directory is being used. Either close all applications that are using the installation directory or reboot the PC.
3000AF008500	Creation of file copy directory failed during automated distribution of JP1/Software Distribution Client (client).	Make sure that the hard disk is operating normally.

Maintenance code	Cause	Action
3000AF008500	Creation of file copy directory failed during automated distribution of JP1/Software Distribution Client (client).	If the hard disk is operating normally, it is possible that the installation directory is being used. Either close all applications that are using the installation directory or reboot the PC.
3000AF008600	Insufficient free hard-disk space for installation directory.	Either rerun the remote installation after increasing the amount of free hard-disk space or rerun the remote installation by specifying another installation drive.
3000AF008600	Backup of execution file failed.	Rerun the remote installation after increasing the amount of free hard-disk space.
3000AF008700	Reading of installer DLL failed.	Notify the system administrator.
	Disk replacement requested during automated distribution of JP1/Software Distribution Client (client).	Notify the system administrator.
	Invalid disk number during automated distribution of JP1/Software Distribution Client (client).	Check the disk number and try packaging again.
	Error during decompression of installation file.	Notify the system administrator.
	Remote control agent failed to read installation DLL (file open error).	Notify the system administrator.
3000AF008B00	Error in integrated installer flag settings	Notify the system administrator.
3000AF008C00	JP1/Software Distribution Client (client) was installed on a computer on which one of the following relay system products was already installed: • JP1/Software Distribution Client (relay system) • JP1/Software Distribution SubManager • Software Distribution SubManager • Software Distribution Relay System • Software Distribution/P-AF • Groupmax Remote Installation Client Relay System	Take one of the following actions: • Uninstall the relay system product • Install JP1/Software Distribution Client (client) on a different PC
	JP1/Software Distribution Client (client) was installed on a computer on which Software Distribution Light was already installed.	Uninstall Software Distribution Light, or install JP1/Software Distribution Client (client) on a different computer.
	Integrated installer operation error	Notify the system administrator.
	Invalid OS version on installation destination (installation rejected).	Remote installation of JP1/Software Distribution Client may have been attempted on a system on which it cannot be installed. Check the OS version of the installation destination.
	Invalid installation destination OS in remote control agent.	Remote installation of JP1/Software Distribution Client may have been attempted on a system on which it cannot be installed. Check the OS version of the installation destination.
	JP1/Software Distribution Client (client) Remote Control Agent was installed on a PC on which JP1/Remote Control Agent or JP1/Software Distribution Manager Remote Control Agent was already installed.	Notify the system administrator.
3000AF009000	The installation component is invalid (it was installed remotely on a PC on which *Client installation by Web* was already installed).	If the JP1 Version 7i component Client Installation by Web is installed on the PC, install the installation component manually.

Maintenance code	Cause	Action
3000AF009200	JP1/Software Distribution Client (client) busy.	Re-try remote installation of JP1/Software Distribution Client (client).
3000AF009300	Hard disk-space shortage occurred during installation of JP1/Software Distribution Client from Web browser (installation from ActiveX-compatible page).	Delete any unneeded files; re-try the installation.
3000AF009400	Installation pre-processing error.	Notify the system administrator.
	Driver setting by remote control agent failed.	Notify the system administrator.
	Remote control agent failed to read the dialog box.	Notify the system administrator.
	Remote control agent service control error.	Notify the system administrator.
3000AF009500	Attempt was made to install JP1/Software Distribution Client (client) from Web browser. However, components other than a client or remote control agent are already installed.	Uninstall the non-client, non-remote control agent components.
	JP1/Software Distribution Client (client) was remotely installed on a PC on which JP1/Software Distribution Manager (relay manager) was already installed.	Uninstall JP1/Software Distribution Manager, or install JP1/Software Distribution Client (client) on a different PC.
	JP1/Software Distribution Client (relay system) was remotely installed on a PC on which JP1/Software Distribution Manager was already installed.	Uninstall JP1/Software Distribution Manager, or install JP1/Software Distribution Client (relay system) on a different PC.
3000AF009600	The transfer of management files from the relay system failed.	Re-execute remote installation.
3000AF009800	JP1/Software Distribution Client was remotely installed on a PC on which *Startup Kit Support Tool* was already installed.	If *Startup Kit Support Tool* is already installed on the PC, the installation should be performed manually.
	JP1/Software Distribution Client (relay system) was remotely installed on a PC on Differing Components Extractor was already installed.	If Differing Components Extractor is installed on the PC, install JP1/Software Distribution Client (relay system) manually.

Table 6–3: Maintenance codes from remote installation of other Hitachi program products

Code	Meaning	Action
300077030000	A Hitachi program product not compatible with the destination OS was distributed; the installation failed.	Check the destination OS and the applicable OS for the Hitachi program product. Remotely install a Hitachi program product compatible with the destination OS.
3000AF008000, 3000AF008100	The installation terminated abnormally.	Notify the system administrator.
3000AF008200	An external program error occurred after installation. • Addition of an icon failed • Addition of a group failed	Check to see that the path for the program to be executed after the packaging process is correctly specified. If the path is correct, it is possible that the program that was executed terminated abnormally.
3000AF008300	The installation terminated abnormally.	Notify the system administrator.
3000AF008400	Memory shortage during installation.	Close other programs to free memory, and retry.
3000AF008500	Hard disk access error occurred.	Confirm that the hard disk is operating normally.

Code	Meaning	Action
3000AF008500	Hard disk access error occurred.	If the hard disk is OK, it is possible that the installation destination folder is busy, in which case close the application using the folder or reboot your PC.
3000AF008600	Not enough free space on the hard disk.	Make sure that the hard disk has enough free space, and then retry.
3000AF008700	The installation terminated abnormally.	Notify the system administrator.
3000AF008800	The startup parameter is invalid Example: Although an update installation was specified, the applicable program is not installed.	If the error situation is as explained in the example at the left, try installation again. In other cases, notify the system administrator.
3000AF008A00	The new PP cannot be reinstalled.	Since the old version is already installed on the distribution destination, try remote update installation again.
3000AF008B00	The installation terminated abnormally.	Notify the system administrator.
3000AF008C00	The installation was rejected Example: No prerequisite program found. No prerequisite programs are installed.	If the error situation is as explained in the example at the left, install the prerequisite program and then try installation again. In other cases, notify the system administrator.
3000AF008D00, 3000AF008E00, 3000AF008F00	The installation job terminated abnormally.	Notify the system administrator.
3000AF009000 to 3000AF009900, 3000AF009A00 to 3000AF009F00	The installation job terminated abnormally due to a Hitachi PP-specific reason.	Check the release notes or the README file for the program product whose installation failed. Alternatively, notify the system administrator for the affected program product.

(3) Remote installation of other companies' software fails

The table below shows the maintenance codes that are returned from the remote installation of other companies' software, their causes, and actions to be taken.

Table 6–4: Maintenance codes from remote installation of other companies' software

Maintenance code	Cause	Action
300091070000	An error occurred during installation on the destination system. The following causes can be suspected: • In the packaging, a recorder file is not specified in the recorder file specification field. Alternatively, the extension for the specified file is not recognizable. • No recorder or AIT files are found. • An attempt was made to remote-install a package using an AIT file on a client that does not support AIT files.	In the **Software Distribution Packaging** dialog box, open the **Recorder File** page, confirm that a recorder file is specified in the recorder file directory specification field, and execute the job. Note that file extensions vary depending upon the destination environment and the method of installation employed. Make sure that the destination system supports AIT files. Also, make sure that the package is not damaged.
300094060000	An error occurred during the copying of the installation definition file.	Check the amount of available disk space in the destination system. If the problem persists when the job is rerun, notify the system administrator.
300097020000	**Destination system: a PC**	**Destination system: a PC**

Maintenance code	Cause	Action
300097020000	An error occurred during installation on the destination system. The following causes can be suspected: • The path for the installer specified in the installation definition file in the recorder file is invalid. • The path for the installer specified in package information in the AIT file is invalid. • System error. **Destination system: UNIX** The installation password file is damaged.	Check the path for the installer specified in the installation definition file. Check the path for the installer specified in the package information in the AIT file. If the problem persists even after the preceding checks are made, notify the system administrator. **Destination system: UNIX** Register the installation password file, and then rerun the job.
30009F070000	An error occurred during installation on the destination system. The following causes can be suspected: • Invalid installation destination directory • Insufficient installation destination disk space • An error during execution of the recorder file • An error during execution of the AIT file • Invalid version of the Visual Test or Automatic Installation Tool • A distribution facility based on Visual Test is not installed on the destination system. • The destination system does not support a distribution facility based on Visual Test. • Windows Installer is not installed on the destination system.	• Check the specification of the installation destination directory, the capacity of the distribution destination desk, and the directory. • Check the execution results of the recorder or AIT file. The user status value in the maintenance code (the 9th and 10th digits from the left) contains a return code from the execution of the recorder or AIT file. • Check the version of Visual Test by which the recorder file was created. • Check the version of the Automatic Installation Tool by which the AIT file was created. • Make sure that a distribution facility based on Visual Test is installed on the destination system. • Make sure that Windows Installer is installed on the destination system.
30009F0B0000	During installation on the distribution system, the processing of the recorder or AIT file timed out. The following causes can be suspected: • Invalid coding for the processing of the recorder or AIT file. • During the distribution of software, the user on the client side manipulated the installer screen.	• Check to see if the recorder file or AIT file monitoring time specified using Packager or the remote installer is adequate. • After revising the recorder or AIT file, re-do the packaging. • If the installation screen is active on the client side, close the screen, and then rerun the job.
300099020000	**Distribution system: a PC** An error occurred during execution of the installation script on the distribution system. The following causes can be suspected: • Processing of the `Setup()` function failed. • System error. **Distribution system: UNIX** An error during the include processing.	**Distribution system: a PC** Make sure that the system is operating in the GUI installation mode and that the contents of the recorder or AIT file do not have an error. If the problem persists even after the preceding checks are made, notify the system administrator. **Distribution system: UNIX** Investigate the cause of the problem by checking the log file for the distribution system.

(4) Get software information from client job fails

The table below shows maintenance codes that are returned, their causes, and actions to be taken, when **Search for Microsoft Office products** and **Search for anti-virus products** in a *Get software information from client* job are executed.

Table 6–5: Maintenance codes from the execution of a get software information from client job

Maintenance code	Cause	Action
3000EF200000	An error occurred during the acquisition of software information on the distribution system. The following causes can be suspected: • Memory shortage • Disk I/O error	Delete any unneeded files on the distribution system and increase the available hard disk space. In addition, stop any applications that are not needed.
3000EF210000	A script execution error occurred for the acquisition of software information on the distribution system. The following causes can be suspected: • Invalid script • Invalid client installation status	If the same error occurs when other scripts are executed, re-install the client. If only this script produces an error, notify the system administrator.
3000EF220000	A disk space shortage occurred during the acquisition of software information on the distribution system.	Delete any unneeded files on the distribution system to increase the available hard disk space, and rerun the job.
3000EF230000	A memory shortage occurred during the acquisition of software information on the distribution system.	Stop any unneeded applications on the distribution system, and rerun the job.
3000EF240000	The processing of a script for the acquisition of software information timed out on the distribution system.	The script that was executed contains an error. Notify the system administrator.
3000EF250000	The execution of a script for the acquisition of software information failed on the distribution system. The Windows scripting host may not have been installed or may have been installed incorrectly.	Re-install the Windows scripting host on the distribution destination system. If this re-installation does not resolve the problem, re-install the client.
3000EF300000	Detection of patch information by Windows Update Agent or MBSA failed in the distribution-destination system. The following causes can be suspected: • A required program is not installed. • The job was executed by a user who did not have proper permissions. • Workstation and Server services are down.	Confirm whether the required programs are installed. Re-run the job by enabling the following settings in the Client setup: • If the client is resident, **Run the client with non-Administrator user permissions** • If the client is non-resident Make sure that the Workstation and Server services are not down.

(5) Transfer user inventory schema to client job fails

The table below shows maintenance codes that are returned, their causes, and actions to be taken, from a *Transfer user inventory schema to client* job.

Table 6–6: Maintenance codes from a transfer user inventory schema to client job

Maintenance code	Cause	Action
300073002290, 300093012290, 3000e5012290, 3000e7012290	The relay system or the client that is the target of the job does not support the execution of *Transfer user inventory schema to client* jobs.	*Transfer user inventory schema to client* jobs can be used in the versions indicated below. Make sure that the relay system or the client you are using is one of the following versions: • Software Distribution SubManager Version 3.0 03-10 or later • Software Distribution/Workstation Version 3.0 03-10 or later • Software Distribution Client Version 3.0 03-10 or later

(6) Set the software monitoring policy job fails

The table below shows maintenance codes that are returned, their causes, and actions to be taken, from a *Set the software monitoring* job.

Table 6–7: Maintenance codes from a Set the software monitoring job

Maintenance code	Cause	Action
300093010000	The relay system or the client that is the target of the job does not support the execution of *Set the software monitoring* jobs.	*Set the software monitoring* jobs can be used in the versions indicated below. Make sure that the relay system or the client you are using is one of the following versions: • Software Distribution SubManager 07-50 or later • Software Distribution Client 07-50 or later

6.3 Troubleshooting for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system)

This section explains methods for checking information and the corrective action to be taken when an error occurs in either JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system). This section also explains how to make a backup and restore from a backup to guard against errors.

6.3.1 Checking log files

JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system) collect logs on an event-by-event basis. The following nine logs are available for inspection by users:

1. Windows NT event log
2. `MAIN.LOG` file
3. `RDBSRV.LOG` file
4. Inventory viewer-related log (`INVODBC.log` file)
5. AMT Linkage log (`DCMAMT.LOG` file)
6. Operation information storage processing log (`MONRST.LOG` file)
7. Basic client facility log (`USER_CLT.LOG` file)
8. Installation script-related log (`SCRIPT.LOG` file)
9. Installation script `LogFile` function output log (`USER.LOG` file)

Logs 7, 8, and 9 are created when the client facility of JP1/Software Distribution Manager (relay manager) and JP1/Software Distribution Client (relay system) is used.

Windows NT event logs can be checked from Windows NT Event Viewer. The other log files are stored in the installation directory, `\LOG`, for JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system), and this log file can be checked using a text editor. For the relay manager, log files 2 to 4 are stored in the installation directory, `\LOG_S`.

Note that if a command is executed, a GUI operation is performed, or a connection request is issued from a lower system before the Microsoft SQL Server or Oracle relational database server has started (such as immediately after the PC has started), any error messages that result might be output to the Windows event log, `MAIN.LOG`, and `RDBSRV.LOG`.

An explanation of the logs follows. For details about logs 7, 8, and 9, see *6.4.1 Checking log files*.

(1) Checking a Windows NT event log

For a Windows NT operating system, event logs that are collected during use of JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system) can be displayed using Event Viewer. You should check the following events that are displayed in the source column in Event Viewer:

- Software Distribution

  This event log is collected during use of JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system).
- Netmdm Utility

  This log contains execution results from JP1/Software Distribution commands.

By selecting **Select Computer** in the **Log** menu of Event Viewer, you can also check events on other hosts on which Windows NT is running. For details about how to operate Event Viewer, see either the Windows NT documentation or help files.

Numbers (event IDs) that are displayed in the event column of Event Viewer are associated with message IDs. These numbers have the following meanings:

Table 6–8: Event IDs and their meanings (JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system))

Event ID	Description
0-999	Windows NT interface
1000-1999	TCP/IP-related
7000-7999	Installation-related
8000-8999	Relay-related
10000-19999	Managing server-related
30000-39999	Client alert-related

Double-clicking an event in the Event Viewer window produces the display of detailed explanations on each event. For example, if a system error occurs due to a disk space shortage on the managing server or the relay system, a message indicating a disk space shortage is displayed in the Event Viewer system log. In this case, you should allocate enough disk space by deleting files that are no longer needed, and rerun the job.

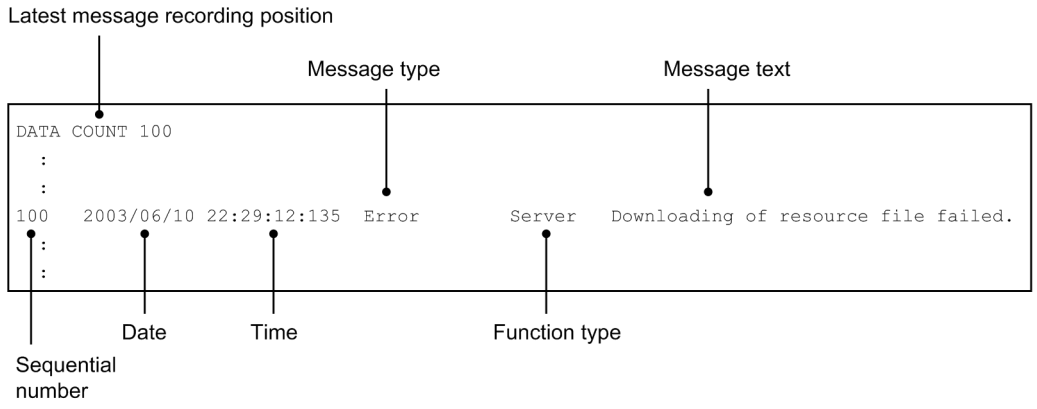
For some events, memory dump information may be output in the event details. If you contact Hitachi regarding a JP1/Software Distribution error, please provide this information along with any other pertinent information.

For event log messages that are output by JP1/Software Distribution, see *7.1 Lists of event log messages*.

(2) Checking the MAIN.LOG file

JP1/Software Distribution also collects a log in a `MAIN.LOG` file, using the following file format:

Figure 6–4: Format of the MAIN.LOG file



The message type and function type that are displayed in the `MAIN.LOG` file have the following meanings:

Table 6–9: Main.log file message types (JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system))

Message type	Meaning
Informational	Information message
Warning	Warning message
Error	Error message

Table 6–10: Main.log file function types (JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system))

Function type	Meaning
Setup	JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system) setup-related
TCP/IP	TCP/IP interface
System	Windows NT interface
Server	JP1/Software Distribution event

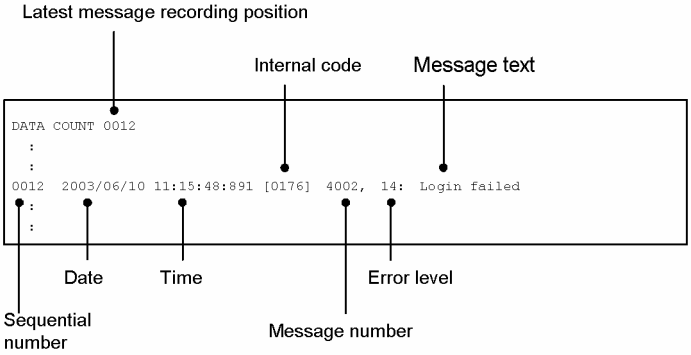
(3) Checking the RDBSRV.LOG file

When using a relational database, JP1/Software Distribution collects a log in a file called `RDBSRV.LOG`. If the remote installation manager is installed in a host separate from the managing server, the `RDBSRV.LOG` file can be checked from either host.

For message numbers and error levels that are displayed in the log, see the manual for relational database system administrators.

The `RDBSRV.LOG` file has the following format:

Figure 6–5: Format of the RDBSRV.LOG file



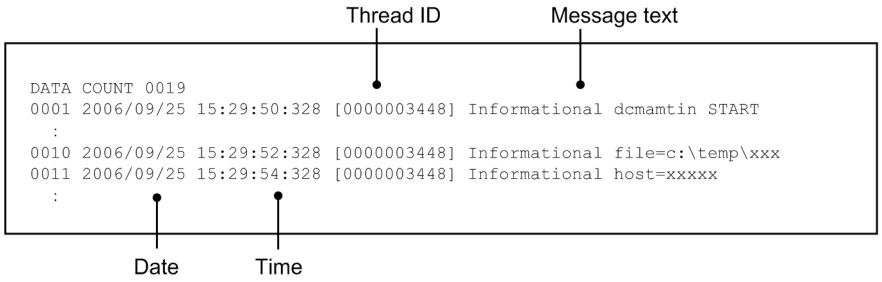
(4) Checking an inventory viewer-related log

If an error occurs during the use of the inventory viewer, an RDBMS error message is output to an `INVODBC.log` file. When the size of the `INVODBC.log` file grows to 400 kilobytes, the file is renamed as `INVODBC.log`*n* (where *n* is either `1` or `2`), and a new log file is created. The old log files are saved up to two generations. The date and time when a log was output in the log file can be identified in terms of the date and time that are displayed next to a line number.

(5) Checking the AMT Linkage log

When you execute the `dcmamtin`, `dcmamtwc`, or `dcmamtrc` command for AMT Linkage, the `DCMAMT.LOG` file log is acquired. The `DCMAMT.LOG` file format is as follows:

Figure 6–6: Format of the DCMAMT.LOG file



The following table lists and explains the message text strings that may be output to the DCMAMT.LOG file when the dcmamtin command is executed.

Table 6–11: Message texts output to the DCMAMT.LOG file when the dcmamtin command is executed

Type	Message	Meaning
Informational	dcmamtin START	Command execution has started.
Informational	file=*xxx*	System configuration file specified in the /f argument
Informational	host=*xxx*	Host name specified in the /H argument
Informational	ipaddress=*xxx*	IP address specified in the /I argument
Informational	dcmamtin RETURN=*xx* END	The command terminated with return code *xx*.
Error	The input file can't be opened.	The input file cannot be opened. Check the input file specified in the argument.
Error	The input file format is invalid.	The input file is invalid. Check the description format of the input file.
Error	Arguments are invalid.	Check the command's arguments.
Error	The output file can't be opened.	The output file cannot be opened. Check the output file specified in the argument.
Error	System error occurred.	A system error occurred. Check the command execution environment.
Error	Access error occurred. Host=*xxx*	Connection error occurred. The specified host may not support AMT or may not exist on the network. Also, **Enterprise** may be specified for the Provision model of AMT.
Error	Authentication error occurred. Host=*xxx*	An authentication error occurred. Check the AMT management user name and password of the specified host.

The following table lists and explains the message text strings that may be output to the DCMAMT.LOG file when the dcmamtwc command is executed.

Table 6–12: Message texts output to the DCMAMT.LOG file when the dcmamtwc command is executed

Type	Message	Meaning
Informational	dcmatmwc START	Command execution has started.
Informational	file=*xxx*	Name of the file specified in the /f argument that is output from the CSV output utility.
Informational	profilename=*xxx*	Name of the wireless profile specified in the /n argument.
Informational	The profile is deleted.	Indicates that the /r argument was specified.

Type	Message	Meaning
Informational	mode=*xxx*	Indicates that the /w argument was specified.
Informational	priority=*xxx*	Priority of the wireless profile specified in the /p argument.
Informational	SSID=*xxx*	SSID specified in the /i argument.
Informational	Communication Method=*xxx*	Communication method specified in the /s argument.
Informational	Encryption Method=*xxx*	Encryption method specified in the /e argument.
Informational	Key=*xxx*	Key specified in the /k argument.
Informational	dcmamtwc RETURN=*xx* END	The command terminated with return code *xx*.
Error	The input file can't be opened.	The input file cannot be opened. Check the input file specified in the argument.
Error	The input file format is invalid.	The input file is invalid. Check the description format of the input file.
Error	Arguments are invalid.	Check the command's arguments.
Error	System error occurred.	A system error occurred. Check the command execution environment.
Error	Access error occurred. Host=*xxx*	A connection error occurred. The specified host may not support AMT or may not exist on the network. Also, **Enterprise** may be specified as the Provision model of AMT.
Error	Authentication error occurred. Host=*xxx*	An authentication error occurred. Check the AMT management user name and password for the specified host.

The following table lists and explains the message text strings that may be output to the DCMAMT.LOG file when the dcmamtrc command is executed.

Table 6–13: Message texts output to the DCMAMT.LOG file when the dcmamtrc command is executed

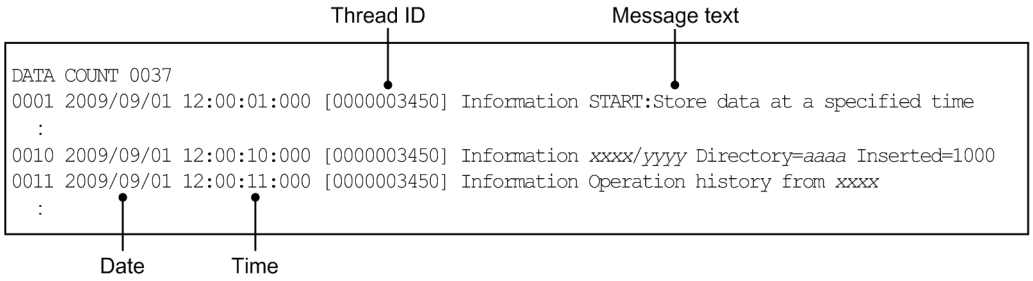
Type	Message	Meaning
Informational	dcmamtc START	Command execution has started.
Informational	host=*xxx*	Host name specified in the /h argument.
Informational	ipaddress=*xxx*	IP address specified in the /i argument.
Informational	BIOS configuration started.	Client BIOS configuration has started.
Informational	IDER session is opened.	Client diagnostic program has started.
Informational	dcmamtrc RETURN=*xx* END	The command terminated with return code *xx*.
Error	Socket error occurred.	A socket error occurred. Check if the SOL driver is installed on the client.
Error	Failed to open IDER session.	The IDE redirection connection failed. Check if the file is on the floppy disk.
Error	The SOL session has already been opened.	A new SOL connection cannot be established, because one has already been established.
Error	The IDER session has already been opened	A new IDE redirection connection cannot be established, because one has already been established.
Error	Client PC is up	The client is running. Turn off the power to the client.

Type	Message	Meaning
Error	`Arguments are invalid.`	Check the command's arguments.
Error	`System error occurred.`	A system error occurred. Check the command execution environment.
Error	`Access error occurred. Host=`*xxx*	A connection error occurred. The specified host may not support AMT or may not exist on the network. Also, **Enterprise** may be specified for the Provision model of AMT.
Error	`Authentication error occurred. Host=`*xxx*	An authentication error occurred. Check the AMT management user name and password of the specified host.

(6) Checking the MONRST.LOG file

When you store operation information (suppress history and operation history) acquired by JP1/Software Distribution in the database, logs are output to the `MONRST.LOG` file. The `MONRST.LOG` file format is as follows.

Figure 6–7: Format of the MONRST.LOG file



The following table lists and explains the message text strings that may be output to the `MONRST.LOG` file when operation information acquired by JP1/Software Distribution is stored in the database.

Table 6–14: Message texts output to the `MONRST.LOG` file when operation information is stored in the database

Type	Message	Meaning
Information	`START:Store data at a specified time`	Time-specified database storage processing has started.
Information	`END:Store data at a specified time`	Time-specified database storage processing has ended.
Information	`START:Store data at a fixed interval`	Interval-specified database storage processing has started.
Information	`END:Store data at a fixed interval`	Interval-specified database storage processing has ended.
Information	`START:dcmmonrst` *xx*	Command execution with argument *xx* specified has started.
Information	`END:dcmmonrst` *xx*	Command execution with argument *xx* specified has ended.
Information	`Time=`*xx*`:`*xx*[#1]	Start time for time-specified database storage processing.
Information	`Interval=`*xx*[#1]	Interval at which operation information is to be stored in the database. The unit is days for time-specified storage processing and hours for interval-specified storage processing.
Information	`Preservation=`*xx*[#1]	Retention days for the operation information stored in the database
Information	`Start=`*YYYYMMDD*[#1]	Date specified in the `/s` argument
Information	`End=`*YYYYMMDD*[#1]	Date specified in the `/e` argument

Type	Message	Meaning
Information	`Clear=`*YYYYMMDD*[#1]	Date specified in the `/c` argument
Information	`Directory=`*xxxx*[#1]	Operation history backup directory name specified in the `/d` argument
Information	`Host=`*xxxx*[#1]	Host name specified in the `/H` argument
Information	`IPAddress=`*xxx.xxx.xxx.xxx*[#1]	IP address specified in the `/I` argument
Information	`Operation history from` *xxxx*	Storing of operation history from the *xxxx* operation history storage directory has started.
Information	`Suppress history from RDB`	Storing of suppress history has started.
Information	*xxxx*`/`*yyyy*[#2]	Number (*xxxx*) of directories and hosts whose storage processing has been completed out of the total number (*yyyy*) of directories and hosts subject to storage processing
Information	`Directory=`*xxxx*[#2]	Name of directory whose storage processing has been completed
Information	`Host=`*xxxx*[#2]	Name of host whose storage processing has been completed
Information	`Inserted=`*xxxx*[#2]	Number of new operation logs stored
Information	`Total=`*xxxx*	Number of operation logs contained in the Microsoft SQL Server or Oracle database after storage processing was performed
Information or Warning	`Total=`*xxxx*`/`*yyyy*	Total estimated number (*yyyy*) of operation information items that can be stored, based on the number (*xxxx*) of operation information items stored in the Embedded RDB after storage processing was performed and the size of the database file. If *xxxx* is 80% or more of *yyyy*, `Warning` is displayed. In such a case, upgrade the database and extend the capacity of the software operation monitoring log file. The database capacity must be extended by at least 10% of the existing size. In order to avoid a database access error, do not re-organize the database.
Error	`STOP:Error occurred`	An error occurred during storage processing. Check the command's return code and event log.

#1

Any combination of these items is output as a single message.

#2

Any combination of these items is output as a single message.

6.3.2 Actions to be taken when JP1/Software Distribution does not operate normally

In some cases, the JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system) may fail to operate properly or generate errors. This section explains possible causes of problems and actions to be taken to resolve them.

For details about action to be taken when JP1/Software Distribution Manager (relay manager) and the JP1/Software Distribution Client (relay system) client facility fail, see items *(1)-(3)* in *6.4.2 Actions to be taken when JP1/Software Distribution does not operate normally*.

(1) Execution of job does not go beyond 0%-50%

If the execution of a job does not advance beyond the range between 0% (the system under the control of the managing server does not receive the job) and 50% (the job does not reach beyond the relay system), the following problems can be suspected:

(a) PC/WS for relay system or client stopped

The service (*Client Install Service*) for the relay system or the client may have stopped.

(b) Client's own host name invalid

A client's own host name cannot begin with a numeric character.

If the client is under direct control of the managing server, the client's own host name should not be more than 64 characters long.

If the host name of the managing server is more than 64 characters, the relay system cannot return job results to the managing server.

Host names are not case sensitive. Therefore, make sure that a case-sensitive host name is not assigned (e.g., `DMP011` vs. `dmp011`).

(c) Inconsistent IP addresses between the hosts file for the managing server and a lower system

A job cannot be executed if the IP address of the hosts file for the managing server and the IP address of a lower system are not in agreement.

(d) Invalid hosts file

In some cases, remote installation fails because the IP address of a higher system is unknown. If this problem occurs, check the following items:

- Whether the host name of the higher system is defined in the hosts file
- Whether the last line in the hosts file ends with a line feed

(e) Inconsistency between client's own host name and the destination specified in managing server

If the name of the client is different from the name specified in the system configuration of the managing server or in a destination, the remote installation process does not terminate. In this case, you should make sure that the correct client name is used.

(f) Abnormal termination of remote installation post-processing, AIT file, or recorder-file processing

If remote installation post-processing or the processing of the AIT file or recorder file does not terminate normally, the installation on the client side falls into an endless wait state.

If the remote installation process hangs, the following problems can be suspected:

- During the termination process, a `RegisterWindowMessage` is not issued to the AIT or recorder file.
- The program-termination code specified in the installation script is not correctly specified.

(g) Invalid host-name specification in DNS environment

If the client belongs in a domain, the host name of the client managed by JP1/Software Distribution is *hostname*`.`*domainname*. If, for example, the client's host name is `client-111`, and the name of the domain in which the client belongs is `net02.abc.co.us`, then the host name managed by JP1/Software Distribution is:

`client-111.net02.abc.co.us`

(h) There is a duplicate destination with different host IDs

If a duplicated client exists during operations in which host IDs are used, a job may be executed for an incorrect destination, resulting in a hung job.

If this is the case, delete the unneeded client and then re-execute the job. For details about how to search for and delete unneeded clients, see *9.1.6(3) Example of deleting duplicate clients* in the manual *Setup Guide*.

(2) Execution of job stops at 70%

If the installation process has completed on the client side but the execution of the job stops at 70% on the managing server side, it is possible that the user program that is started before or after the installation process has not terminated.

(3) Jobs fail

If a remote installation job fails due to error, the cause of the error is displayed as a maintenance code. Check the maintenance code in the Detailed Information dialog box that is displayed from the Job Status window. For details about maintenance codes, see *6.2.3 List of maintenance codes*.

(4) Jobs in relay system, but packages missing

Packages that are stored in the managing server are automatically deleted after a certain period of time. If a retention period is not specified during the packaging or job creation, the package is deleted the day after it is installed. Even if a retention period is specified, if the day after the remote installation falls on a holiday or the client has been turned off for several days, the package may be deleted. In this case, a situation arises in which the job exists in the relay system but the associated package does not.

To avoid such a situation, be sure to specify an adequate retention period for the package during the packaging or job creation. Note, however, that excessively long retention periods can waste relay system hard-disk space.

The following maintenance code is displayed:

Maintenance code: `300097030000`

(5) Icon-registration failure

Even when the registration of an icon is specified during the installation, in some cases the icon fails to be registered. In this case, it is possible that the Windows Shell (or Explorer under Windows) for the client PC is acting as a program separate from user programs.

(6) Remote installation of ODBC driver always fails

In situations in which an English `OBDCINST.DLL` file with relatively new data is installed, the screen is not correctly displayed and the installation of the ODBC driver fails. In this case, you should delete the `OBDCINST.DLL` file and then execute the remote installation process.

(7) Error during the acquisition of system information

(a) Presence/absence of a coprocessor not correctly indicated

The presence or absence of a coprocessor is determined according to the type of CPU being used, as follows:

- i486DX, i486DX2, or Pentium
  A coprocessor is installed.
- i386SX, i386DX, or i486SX
  A coprocessor is not installed.

Add-on coprocessors are not recognized. The correct display of a coprocessor is not guaranteed for Intel-compatible CPUs.

(8) Error in the embedded RDB environment

(a) The database area is insufficient

JP1/Software Distribution may not operate normally if there is insufficient database area. When the database area for Embedded RDB is insufficient, use **Upgrade database** in Database Manager to expand the size of the database area.

(b) A database access error occurs during Inventory Viewer or CSV output utility operations

The work table area may be insufficient. Check if the following message was output to `CSVODBC.log` or `INVODBC.log`:

```
KFPA11713-E Unable to expand work file due to insufficient HiRDB file system
area path-of-work-table-area/rdsys03
```

path-of-work-table-area

Path for the work table area specified when the database was created.

When this message is output it means that there is insufficient space for the database work table area. Re-estimate the size of the work table area, and then use **Upgrade database** in Database Manager to expand the size of the work table area.

If the currently allocated work table area size is the same as the estimated size, use the automatic expansion setting.

(c) RD area of the database is shut down

If an error occurs during access to the database (for example, an error occurs during database maintenance or you are not able to open the Remote Installation Manager screen), check the event log to see if either of the following messages is output:

```
KFPH00306-E RDAREA "RD area name" held due to error
```

```
KFPH00307-E RDAREA "RD area name" HELD(CMD) due to error
```

If the message is output, the RD area is shut down. Perform the following steps to open the shut-down RD area.

1. If the KFPH00306-E message is output, use the facility **Recover the database from backup** of Database Manager to restore data from a backup file created by the netmdb_backup.bat.

   Restriction:

   You can perform this step only if you have backed up data.
2. Start the command prompt.
3. Execute the pdntcmd.bat command that is stored in *JP1/Software-Distribution-Manager-installation-directory* `\BIN`.
4. Execute the following command.
   - To resolve the KFPH00306-E error:

     Execute *pdrels -r ALL -o*
   - To resolve the KFPH00307-E error:

     Execute *pdrels -r RD area name* .

   When the command succeeds, the message `KFPH00110-I pdrels command completed.`is displayed and the command prompt becomes active again.

(9) Microsoft SQL Server environment error

(a) Screen drawing and job creation by Remote Installation Manager suddenly slows down

If a job was deleted before the slowdown, it is possible that the deletion of the job is being executed in the background, in which case you should select the **Specify when jobs will be deleted** check box in the JP1/Software Distribution Manager setup, and specify a time that does not interfere with normal operations. However, jobs waiting for execution are immediately deleted upon the specification of job deletion, irrespective of whether a delayed job deletion is specified.

It is also possible that an applications program is running in the background.

(b) JP1/Software Distribution server and Remote Installation Manager hang

It is possible that a database is damaged, in which case you should execute the following DBCC statement.

To check the condition of the database:

1. From the Microsoft SQL Server program group, start the Query analyzer.
2. Use a DBCC statement to check the integrity of the database:
   `DBCC CHECKDB (JP1/Software Distribution` *database-name*`)`

If an error message is output, it is an indication that the database is damaged, in which case you should restore the database from its backup or notify the system administrator.

(c) A management database access error message is displayed during the operation of Remote Installation Manager

Check to see whether the following message is found in the `RDBSRV.LOG` file for JP1/Software Distribution:

`1105,17: '`*segment-name*`' segment full; area for object '`*object-name*`' for database '`*database-name*`' cannot be allocated. If the area in Syslogs is exhausted, dump the transaction log. Otherwise, use either ALTER DATABASE or sp_extendsegment to increase segment size.`

If this message is displayed, it is an indication that the transaction log is full, in which case you should dump the transaction log. The log can be deleted as follows:

- Microsoft SQL Server 2012, Microsoft SQL Server 2008 and Microsoft SQL Server 2005

  From Management Studio, right-click the database. Then, from the displayed menu, choose **Task** and then **Backup** to display the Database Backup dialog box. From the **General** page of the Database Backup dialog box, obtain a backup of the transaction log. The transaction log for the portion that was backed up is truncated.
- Microsoft SQL Server 2000

  From the **Database backup** menu for Enterprise Manager, create a backup for the transaction log. The transaction log equal in size to the backup that is created is truncated.
- Microsoft SQL Server 7.0

  From the **Truncate log** menu for Enterprise Manager, truncate the transaction log. Alternatively, code a `DUMP` statement (`DUMP TRANSACTION` *database-name* `WITH NO_LOG`) in the Query analyzer to delete the transaction log.

If there is no need to periodically create a backup for the transaction log, the truncation of the log can also be automatically executed. For details about how to set up automatic execution, see *7.3.2(7) Setting the transaction log* in the manual *Setup Guide*.

(d) Errors occur only when large software is packaged using Packager

It is possible that the database has run out of space. Review the database size; increase the device size as necessary.

(10) Errors in an Oracle environment

(a) If the maximum number of processes connected to the database server is exceeded

If the maximum number of processes connected to the database server is exceeded, JP1/Software Distribution outputs the following message to `RDBSRV.LOG`:

`maximum number of processes` *xxx* `exceeded`

In *xxx*, the current number of processes is output.

If this message is output, change the value of `processes` in the initialization parameter file (`INIT.ORA`) to increase the maximum number of connected users. You must restart the Oracle service to apply the change.

6.4 Troubleshooting for JP1/Software Distribution Client (client)

This section explains how to check information and what actions to take in the event of an error in JP1/Software Distribution Client (client).

6.4.1 Checking log files

If an error occurs, a log is collected in JP1/Software Distribution Client (client). You should check the contents of the log before taking an action. The contents of the log can be checked for each PC.

JP1/Software Distribution Client (client) collects the following five types of logs:

- Basic client log (`USER_CLT.LOG` file)
- Entire JP1/Software Distribution Client (client) log (Windows NT event log and `MAIN.LOG` file)
- Installation script-related log (`SCRIPT.LOG` file)
- `LogFile` function output log for the installation script (`USER.LOG` file)
- Log related to updating the connection destination automatically (`USER.LOG` file)

You can check the Windows NT event log from Windows NT Event Viewer. All other log files, which are stored in the installation directory `\LOG` for JP1/Software Distribution Client, can be checked by using a text editor.

The following is an explanation of logs.

(1) Basic client log

Basic log messages related to the operation of a client are output to the `USER_CLT.LOG` file for each PC. When checking the operation of a client, this file is the first source of information that you should refer to. This file contains brief messages about the start and termination of each process. If processing fails, the cause of the error is also output to this file.

The following operations can have information output to the `USER_CLT.LOG` file:

- Starting and termination of a product or process
- Log on and off
- Receipt of a job execution request
- Polling
- Receiving and executing a job
- Downloading a package
- Uploading a file
- Automatic registration in the system configuration information
- Addition to and deletion from an ID
- Packaging
- Internal errors and application exceptions

For details about file formats and messages, see *7.2 Lists of basic client log messages*.

(2) Log for entire JP1/Software Distribution Client (client)

The log for the entire JP1/Software Distribution Client (client) is produced in the event log for Windows NT and in the `MAIN.LOG` file.

(a) Checking Windows NT event logs

For Windows NT operating system, event logs that are collected during the use of JP1/Software Distribution Client (client) can be displayed using Event Viewer. You should check the event that is indicated as *Software Distribution* in the source column of Event Viewer. You can also check events on other hosts on which Windows NT is running by selecting **Select Computer** in the **Log** menu of Event Viewer. For details about how to use Event Viewer, see the Windows NT documentation or Help files.

The numbers (event IDs) that are displayed in the event column of Event Viewer correspond to message IDs, and they have the following meanings:

Table 6–15: Event IDs and their meanings (JP1/Software Distribution Client (client))

Event ID	Description
0-999	Windows NT interface
1000-1999	TCP/IP-related
5000-5999	Setup-related
6000-6999	Packaging-related
7000-7999	Installation-related
60000 and above	User output

Double-clicking an event in the Event Viewer window displays detailed information about the event.

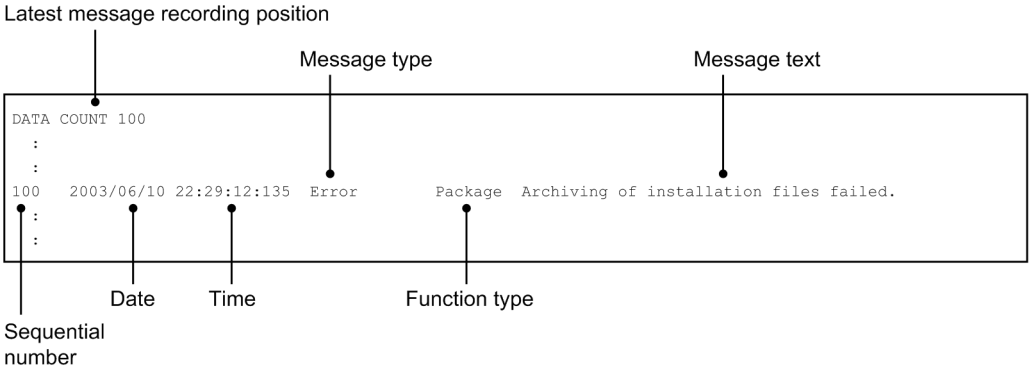
Some events produce memory-dump information in the event details. When contacting Hitachi regarding a JP1/Software Distribution Client (client) error, please provide this information along with other pieces of relevant information.

For event log messages that are output by Software Distribution, see *7.1 Lists of event log messages*.

(b) Checking the MAIN.LOG file

JP1/Software Distribution Client (client) produces a message log for each PC in the MAIN.LOG file, in the following file format:

Figure 6–8: Format of the MAIN.LOG file



The message type and function type that are displayed in the MAIN.LOG file have the following meanings:

Table 6–16: MAIN.LOG file message type (JP1/Software Distribution Client (client))

Message type	Meaning
Informational	Information message
Warning	Warning message
Error	Error message

Table 6–17: MAIN.LOG file function type (JP1/Software Distribution Client (client))

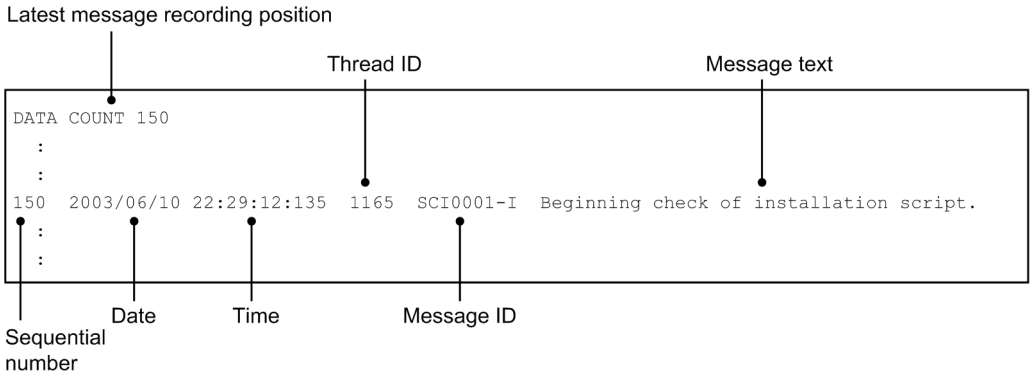
Function type	Meaning
Package	Packaging (an error within JP1/Software Distribution Client)
Install	Installing (an error within JP1/Software Distribution Client)
Setup	Installing in GUI installation mode (an error within JP1/Software Distribution Client)
TCP/IP	TCP/IP interface
System	Windows NT interface
User	User log (output from the `LogFile` function of installation script)
Server	Relaying (an error within JP1/Software Distribution Client)

(3) Installation script-related log

Syntax errors and runtime errors from installation scripts and collect scripts are collected in the `SCRIPT.LOG` file for each PC. Because the contents of this log are also output to the log (the `MAIN.LOG` file) for the entire JP1/Software Distribution Client (client), you should check the `MAIN.LOG` file when checking how the installation script log relates to the JP1/Software Distribution Client (client) log. The `SCRIPT.LOG` file has the following format:

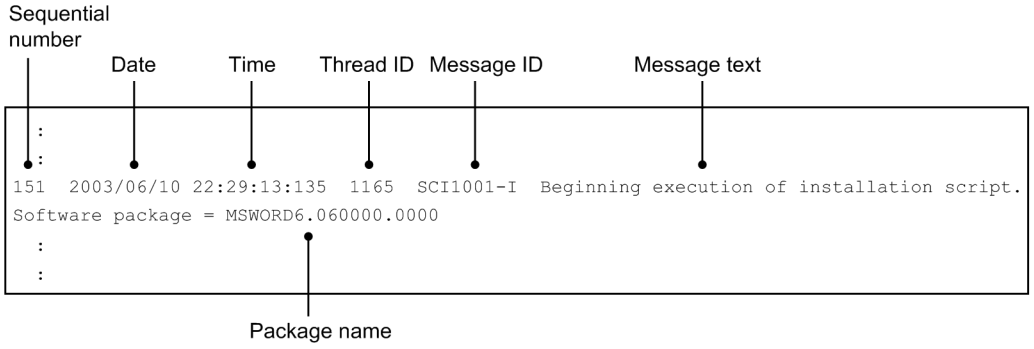
■ Script syntax check starting message

Figure 6–9: Format of the SCRIPT.LOG file (script syntax check starting message)



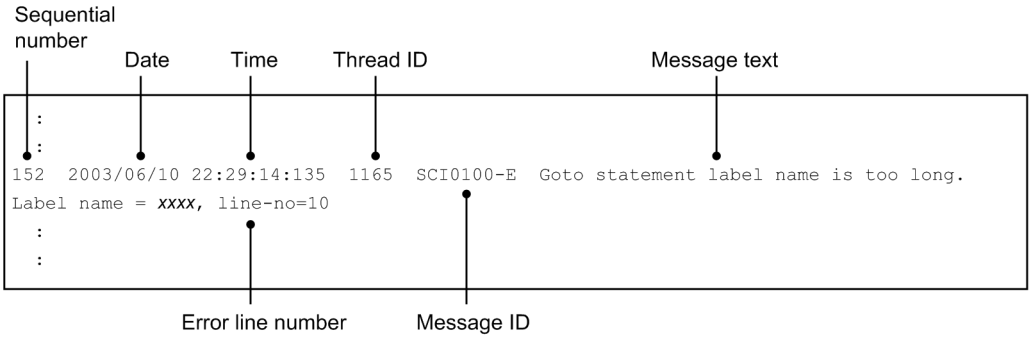
■ Script execution starting message

Figure 6–10: Format of the SCRIPT.LOG file (script execution starting message)



■ Script syntax error message

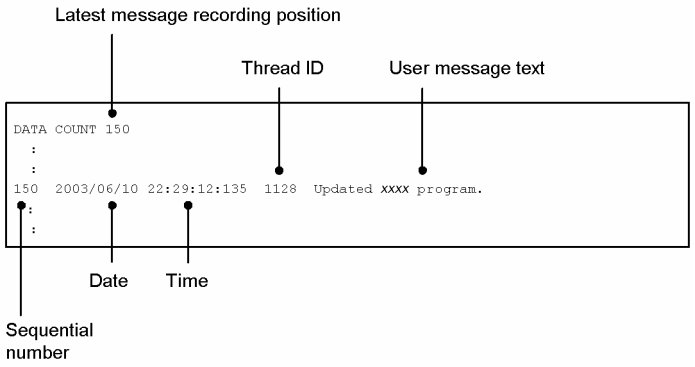
Figure 6–11: Format of the SCRIPT.LOG file (script syntax error message)



(4) LogFile function output log for the installation script

When the user outputs a log by using the `LogFile` function of an installation script, the contents of the log are collected in the `USER.LOG` file for each PC. Because the contents of this log are also output to the log (the `MAIN.LOG` file) for the entire JP1/Software Distribution Client (client), you should check the `MAIN.LOG` file when checking how the installation script log relates to the JP1/Software Distribution Client (client) log. The `USER.LOG` file has the following format:

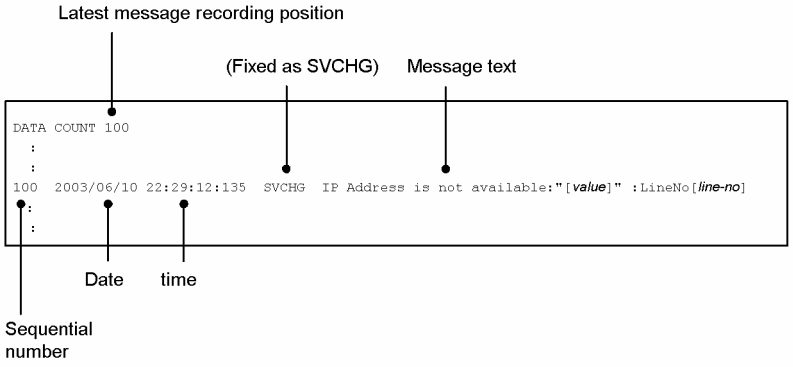
Figure 6–12: Format of the USER.LOG file



(5) Log related to updating the connection destination automatically

When client connection destinations are automatically set or changed by an information file for higher connection destinations, log is collected in the `USER.LOG` file for each PC. The `USER.LOG` file has the following format:

Figure 6–13: Format of the USER.LOG file



The messages that are displayed and their meanings are summarized as follows:

Message	Meaning
Match *smallest-IP-address*-*largest-IP-address*: Change *old-connection-destination*: *old-connection-destination-product-type* -> *new-connection-destination*: *new-connection-destination-product-type*	The connection destination for the client was successfully changed.
Match *smallest-IP-address*-*largest-IP-address*: No Changed *existing connection-destination*: *existing-connection-destination-type*	The connection destination that is already specified matches the definition in the information file for higher connection destinations. The connection destination is not changed.
No Match IP Address List, No Changed *existing connection-destination*: *existing-connection-destination-type*	The client IP address is not in the definition range of the information file for higher connection destinations. The connection destination is not changed.
Not exist No. *item-sequence* Value: LineNo *line-number*	An *item-sequence* item is not specified in the *line-number* line of the information file for higher connection destinations. The definition in the line is invalid.
IP Address is not available:"*specified-value*" :LineNo *line-number*	An invalid IP address is specified in the *line-number* line of the information file for higher connection destinations. The definition in the line is invalid.
Higher manager value is over 64 character:"*specified-value*" :LineNo *line-number*	A value containing more than 65 characters is specified in the *line-number* line of the information file for higher connection destinations. The definition in the line is invalid.
Connection type value is not "netmdm" or "netmdmw":"*specified-value*" :LineNo *line-number*	A value other than netmdm or netmdmw is specified as a connection destination product type in the *line-number* line of the information file for higher connection destinations. The definition in the line is invalid.
Match *smallest-IP-address*-*largest-IP-address*: Change Multicast IP Address *old-multicasting-address* -> *new-multicasting-address*	The client's multicasting address was changed normally.
Match *smallest-IP-address*-*largest-IP-address*: No Changed Multicast IP Address *multicasting-address*	The multicasting address that is already specified matches the definition in the information file for higher connection destinations. The multicasting address is not changed.
Multicast IP Address is not available:"*multicasting-address*":LineNo *line-number*	An invalid multicasting address is specified in the *line-number* line of the information file for higher connection destinations. The definition in the line is still valid, but the multicasting address specification is invalid.
Multicast IP Address is under 224.0.0.0:"*specified-value*" :LineNo *line-number*	A multicasting address with a value less than 224.0.0.0 is specified in the *line-number* line of the information file for higher connection destinations. The definition in the line is still valid, but the multicasting address specification is invalid.
Multicast IP Address is over 239.255.255.255:"*specified-value*" :LineNo *line-number*	A multicasting address with a value greater than 239.255.255.255 is specified in the *line-number* line of the information file for higher connection destinations. The definition in the line is still valid, but the multicasting address specification is invalid.
Use Option "MultiBoard Environment": Not Execution	**Set multiple network adapters** is selected in the client setup; connection destinations cannot be changed automatically.
Use Option "Auto Change higher manager by instructions to execute job": Not Execution	**Automatically set the higher system that sent an execution request as a connection destination** is selected in the client setup; connection destinations cannot be changed automatically.

6.4.2 Actions to be taken when JP1/Software Distribution does not operate normally

Problems, such as failure to operate normally, and errors can occur during the operation of JP1/Software Distribution Client (client). This section explains possible problems that can occur and how to resolve them, according to each operating system.

(1) Locating services and hosts files to be edited

(a) Windows NT

If the default installation directory for Windows is `\WINNT`, the hosts and services files are located in the following directory:

```
\WINNT\system32\drivers\etc
```

Specifying a host name

Windows Server 2003 or Windows XP

1. In **Control Panel**, choose **System**.
2. On the **Computer Name** page, click the **Change** button.
3. In the Computer Name Changes dialog box, enter the computer name.

Windows 2000

1. In **Control Panel**, choose **System**.
2. On the **Network ID** page, click the **Properties** button.
3. In the Identification Changes dialog box, enter the computer name.

Windows NT 4.0

1. In **Control Panel**, choose **Network**.
2. Choose **TCP/IP protocol** from **Network Protocol** on the **Protocol** page, and then click the **Properties** button.
3. On the **DNS** page of the TCP/IP Protocol dialog box, specify the host name.

(b) Windows Me or Windows 98

The hosts and services files are located in the Windows installation directory, which is `C:\WINDOWS`.

The following procedures describe how to set an IP address normally, and how to set it using DNS

Normal setting method

1. In **Control Panel**, choose **Network**.
2. Specify your settings in the **User identification** page.

Using DNS

1. In **Control Panel**, choose **Network**.
2. In the **Configuration** page, choose **TCP/IP**, and then click **Properties**.
3. In the **DNS configuration** page, specify DNS settings.

(2) Client cannot communicate with the higher system

If a job error occurs, it may be because the client cannot communicate normally with the higher system. Use the method below to determine whether the communications environment has been set up properly.

(a) Windows NT

- Checking the current TCP/IP communications environment:
  From the command prompt, execute the `IPCONFIG /ALL` command.

- Checking a host name only:
  From the command prompt, execute the `HOSTNAME` command.

(b) Windows Me or Windows 98

To check the current TCP/IP communications environment, execute the `WINIPCFG` command from the command prompt.

(3) Installation and packaging fail

If the installation or packaging of a package fails, check to see if there is enough disk space. For required disk space, see *5.3.3(4) Disk space required for package installation* and *5.3.3(6) Disk space required for packaging* in the manual *Description and Planning Guide*.

(4) JP1/Software Distribution Client (client) hangs when a network hardware error, such as incorrect LAN cable connection, occurs

(a) Windows NT

Check the keep alive settings for the TCP/IP environment. The following settings in the register values should be checked:

- Value of `KeepAliveTime` in the `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters` key

This value specifies the length of time until an error is detected. The following setting range and default value apply:

Setting range:
`1` to `0xFFFFFFFF`

Default:
7,200,000 milliseconds (2 hours)

To reduce the length of time until an error is detected, reduce the value. This value affects all TCP/IP applications. A value that is excessively small can generate excessive communications errors. For further details, see books on the Windows NT resource kit.

In addition, you should check to see whether the keep alive settings in the `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\`*adapter-name*`\Parameters\Tcpip` key are enabled.

(b) Windows Me or Windows 98

Check the keep alive settings for the TCP/IP environment. The following registry settings should be checked:

- The `KeepAliveTime` value in the `HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\VxD\MSTCP` key.

This setting indicates the amount of time allowed until an error is detected. The following allowable range and default apply:

Setting range:
`1` to `0xFFFFFFFF`

Default:
7,200,000 milliseconds (2 hours)

To reduce the length of time until an error is detected, reduce the value. This value affects all TCP/IP applications. A value that is excessively small can generate excessive communications errors. For further details, see books on the resource kit for this operating system.

(5) AMT Linkage does not operate correctly

If use of AMT Linkage does not restore the host identifier when you are re-installing the client, consider the possible causes explained below.

(a) AMT does not exist on the PC

Check that the client PC supports AMT. If not, `N/A` is displayed in the system information's **AMT firmware version** item.

(b) The Provision model setting is incorrect

Check that **Small Business** is set for the Provision model of AMT. If the model setting is incorrect, `N/A` is displayed in the system information's **AMT firmware version** item.

(c) The user name or password set for AMT is incorrect

Check that the user name and password set for AMT are correct. If not, `N/A` is displayed in the system information's **AMT firmware version** item.

(d) The nonvolatile memory of AMT is not initialized

The host identifier cannot be restored from the nonvolatile memory of AMT when you reinstall the client. This is because the host identifier is not stored if the nonvolatile memory of AMT is not initialized before initial installation of the client.

If the nonvolatile memory of AMT has not been initialized, the version is displayed in the system information's **AMT firmware version** item.

(e) Restoration of the host identifier failed

When restoration of the host identifier fails, the host identifier stored in the nonvolatile memory of AMT is rewritten by the host identifier that was created during installation. The host identifier that was created is reported to higher systems.

In this case, you should use the managing server to search for a duplicate host. If a duplicate host is found, delete it.

6.5 Troubleshooting for Internet Options

This section describes the event log messages and the procedure for checking error information in the event of an error in Internet Gateway and HTTP Gateway.

6.5.1 Checking log files

Both Internet Gateway and HTTP Gateway output log files for different types of information. You can use this information to analyze errors.

The log files are in text format and are output to *installation-directory*`\log`. However, in Windows Server 2003, Windows XP, and Windows 2000, the files are output to the following directories in the drive on which the operating system is installed:

- Internet Gateway log file
  `\Documents and Settings\All Users\Application Data\hitachi\dmgwsvr`
- HTTP Gateway log file
  `\Documents and Settings\All Users\Application Data\hitachi\dmhttpgw`

At startup, five log files of each type are created with file names indicating the type of log and an appended numeric digit in the range 01-05. The extension is `.txt`. When all five files become full, they are overwritten beginning with file number 01. You can identify the most recent log information from the timestamp at the beginning of each line in the log file.

The output to the various types of logs are shown in the following tables.

- Log files common to both Internet Gateway and HTTP Gateway

Log file name	Output
`env`	At startup, Internet Gateway and HTTP Gateway output the following operating environment information. In contrast to other log files, only one `env` log file is output, and it is updated each time the software starts. OS, OS version, OS patch, CPU type, installed RAM, user usable memory size, free space, Microsoft Internet Explorer and Microsoft Internet Information Services version information, registry settings
`err`	Session status when an error occurs

- Internet Gateway log files

Log file name	Output
`client`	Communications status between higher system and Internet Gateway
`cltproto`	JP1/Software Distribution sync protocol between higher system and Internet Gateway

- HTTP Gateway log files

Log file name	Output
`main`	Information on program startup and termination. When the program starts, HTTP Gateway version information is output. When the program stops, the reason for termination is output. In Windows NT, the same information is also output to the event log. The event log can be checked using the Event Viewer. For details about using the Event Viewer, see the Windows NT documentation or online help.
`server`	JP1/Software Distribution sync protocol between HTTP Gateway and lower system
`http`	HTTP request and response status between HTTP Gateway and Internet Gateway

6.5.2 Event log messages for HTTP Gateway

The following table shows the event log messages that HTTP Gateway can output:

Event ID	Message type	Message text
4096	Information	Software Distribution HTTP Gateway Service has started. Ver. *xx*
4097	Information or Error#	Software Distribution HTTP Gateway Service has stopped. Cause: *xx*

Legend:

xx: Any character string

#

Output as an error message if a session error stopped the service; otherwise, output as an information message

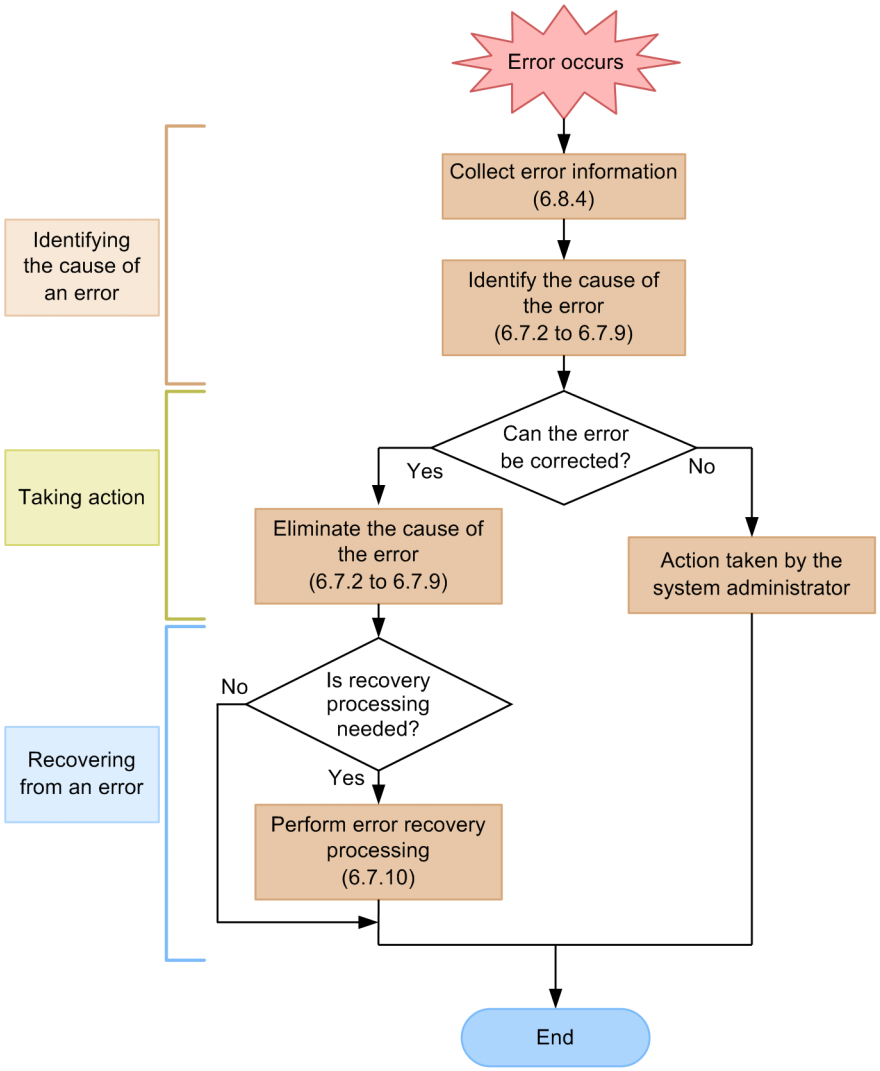
6.6 Troubleshooting for Asset Information Manager Subset

This section describes troubleshooting for Asset Information Manager Subset.

6.6.1 Flow of troubleshooting

This subsection describes the flow of troubleshooting for Asset Information Manager Subset. Subsections 6.7.2 through 6.7.9 describe the principal causes of errors and the action to be taken for each error.

Figure 6–14: Flow of troubleshooting (Asset Information Manager Subset)



- Collecting error information
  In the event of an error, first collect error information. For details about how to collect error information, see *6.7.4 Collecting Asset Information Manager Subset problem information*.
- Identifying the cause of the error
  Identify the cause of the error from the error message and the event that occurred.
- Eliminating the cause of the error
  If possible, eliminate the cause of the error.

- Action by the system administrator
  If the error cannot be corrected, have the system administrator eliminate the cause of the error.
- Error recovery processing
  Perform error recovery processing, if necessary.

Before starting troubleshooting, check that no other processing is executing. For details about Asset Information Manager Subset transaction processing, see *6.6.3 Asset Information Manager Subset transaction processing*.

6.6.2 Identifying the cause of an error

In the event of an error, before you can take appropriate action you must first identify the reason the error occurred from the displayed message and the event. This subsection explains how to check and interpret messages. It also describes limitations to the functions in the event of an error in Asset Information Manager Subset.

(1) How to identify the cause of an error

This subsection describes how to use the Asset Information Manager Subset server and the Web browser to check errors.

(a) How to check for errors using Asset Information Manager Subset

1. Check the message log file for any error messages.
2. Any error message that has been output will indicate one of the following causes:
   - Error in the Asset Information Manager Subset database
   - Error in a program linked to Asset Information Manager Subset
   - Error in Microsoft Internet Information Services
3. If an Asset Information Manager Subset database access error has occurred, check the message log.
4. If an error has occurred in a program linked to Asset Information Manager Subset, check the message log file and determine whether there is a problem with the program linkage.
5. If a Microsoft Internet Information Services error has occurred, check the Microsoft Internet Information Services log and determine whether there is a problem with the communication sequence.
   If there is no problem with the communication sequence, the error might have occurred between Microsoft Internet Information Services and the Web browser.

(b) How to check for errors using the Web browser

If a runtime error has occurred, your Microsoft Internet Explorer version might be too old. Make sure that an up-to-date version of Microsoft Internet Explorer and all required service packs have been installed. For details about the Microsoft Internet Explorer version, see *1.1.2(1) Components of JP1/Software Distribution Manager* in the manual *Setup Guide*.

(2) Checking messages

In the event of an error, first check the event log, standard output, and log file created by the Asset Information Manager Subset server for any error messages.

If an error message has been issued, you can identify the program resulting in the error and the cause of the error from the error message's message type. For details about error messages, see *(3) How to interpret messages*.

Asset Information Manager Subset messages related to serious errors are output to the event log file. Check the event log file.

Asset Information Manager Subset server outputs error messages as files that are stored at the following location:

JP1/Software-Distribution-Manager-installation-folder`\jp1asset\log`

The `log` folder is created by default when Asset Information Manager is installed. The following table lists and describes the message log files that are output by Asset Information Manager Subset to the `log` folder.

Table 6–18: Files created in the log folder

File name	Description
ASTCIM*n*.LOG	• Contains message logs for database access APIs.
ASTMES*n*.LOG	• Contains information messages (such as for Asset Information Manager Subset start and termination) and warning and error messages (such as for program, communication, and database errors). • You can use the message logs to check the operating status of Asset Information Manager Subset.

Legend:

n: A sequence number (1 to 9) that is part of the file name.

Logs are output to the current file until the maximum file size is reached, at which point another log file is created with the sequence number incremented by 1. When the file with sequence number 9 becomes full, the sequence numbering is reset to 1. You can identify the most recent log file from the date and time file attribute.

Do not change *JP1/Software-Distribution-Manager-installation-folder*\jp1asset\log\exp.def.

(3) How to interpret messages

This subsection describes how to interpret the standard output message logs and the messages that are output to the message log file.

(a) How to interpret standard message logs

Each message log output by the Asset Information Manager Subset server consists of a message ID followed by a message text, as shown below.

Message format

KDAM *nnnn*-*m message-text*

KDAM

Indicates that this message was issued from the Asset Information Manager Subset server.

nnnn

Indicates in the first *n* a code for the component that issued the message followed by a 3-digit sequence number. The following component codes are displayed:

- 7: Command
- 8: Import and export

m

Type of message:

- E (error)

  Fatal error occurred, resulting in program termination.
- W (warning)

  Error that does not result in program termination occurred, but some functions have been disabled.
- Q (question)

  Message requiring a response from the user.
- K (working)

  Message reporting continuation of processing.
- I (information)

  Message that provides information.

(b) How to interpret the message log file

The message log file output by the Asset Information Manager Subset server contains messages that consist of the message output time, a message ID, and a message text, as shown below.

Message format

yyyymmddhhmmss.ttt pid (*tid*) KDAM *nnnn-m message-text*

yyyymmddhhmmss.*ttt*

Date and time the message was issued.

pid

Process ID of the process that issued the message.

tid

Thread ID of the thread from which the message was issued.

KDAM

Indicates that this message was issued from the Asset Information Manager Subset server.

nnnn

Indicates in the first *n* a code for the component that issued the message followed by a 3-digit sequence number. The following component codes are displayed:

- 0: Installation and setup
- 1: Asset Information Manager Subset server
- 2 or 3: Extension
- 4 or 5: Database access DLL
- 6: Asset Information Manager Subset's LIB and DLL files
- 7: Command
- 8: Import and export
- 9: Common DLL

m

Type of message:

- E (error)
  Fatal error occurred, resulting in program termination.
- W (warning)
  Error that does not result in program termination occurred, but some functions have been disabled.
- Q (question)
  Message requiring a response from the user.
- K (working)
  Message reporting continuation of processing.
- I (information)
  Message that provides information

(4) Functions that are limited in the event of an error

When an error occurs in Asset Information Manager Subset, the Asset Information Manager Subset server issues a message whose message type is E. This subsection describes the Asset Information Manager Subset functions that are limited in the event of such an error.

(a) In the event of a serious system error requiring immediate attention

In the event of a serious system error requiring immediate attention, such as an unrecoverable error or an error that might cause data corruption if operation continues, all Asset Information Manager Subset services are stopped.

The following are serious system errors requiring immediate action:

- Specification errors or environment definition file loading errors
- Detection of meta table corruption
- Program exceptions (such as general protection exceptions)
- Program internal errors

(b) In the event of a non-urgent error

In the event of a non-urgent error that requires some time to correct but does not pose a threat of data corruption if operation continues, the processing resulting in the error is canceled.

The following are non-urgent errors:

- Invalid Web browser message format
- Message log output error
- Database disconnected from DBMS
- Error in a program linked to Asset Information Manager Subset
- Access error when asset information is to be added, changed, or deleted (except when there is no key property data)
- Program internal errors

(c) In the event of an operation-related error

The Asset Information Manager Subset services are not stopped in the event of an operation-related error, such as the following:

- Login error due to invalid user ID or password
- Inventory information loading error during Asset Information Manager Subset operation

(d) In the event of a transient error

In the event of a transient error that might be recoverable by waiting a while and then re-executing the operation, the processing resulting in the error is canceled and the session is closed.

The following are examples of transient errors:

- Memory allocation error or database connection error
- Database lock error
- Inventory information loading error during Asset Information Manager Subset operation

6.6.3 Asset Information Manager Subset transaction processing

This subsection describes Asset Information Manager Subset's transaction processing.

(1) Transactions using a Web browser

Asset Information Manager Subset handles each request from a Web browser as one processing unit, but it does not provide a function for managing transactions. A database management system's transaction management function is used to handle output access to the Asset Information Manager Subset database or addition and update operations in multiple related tables as a single transaction. This method enables you to protect the integrity of Asset Information Manager Subset database and discard active transactions in the event of an error on the Asset Information Manager Subset server.

For example, if an error is reported to the Web browser, Asset Information Manager Subset's database transaction is not discarded. If a timeout or communication error occurs in the Web browser, re-execute the processing that was underway immediately before the error.

6.6.4 Main causes of Asset Information Manager Subset errors and actions to be taken

If an error occurs during Asset Information Manager Subset environment setup, check the settings in the Server Setup dialog box and the DBMS settings for any error.

The following subsections discuss the errors that might occur during Asset Information Manager Subset environment setup and during operations after login, the main causes of errors, and the actions to be taken.

(1) Errors during Asset Information Manager Subset database creation

This subsection discusses the errors that might occur during creation of an Asset Information Manager Subset database, the main causes of errors, and the actions to be taken.

(a) A message such as Invalid value was specified for environment information is displayed

A setting might not have been specified in the Server Setup dialog box. Specify all settings in the Server Setup dialog box.

(b) A message such as Initial data creation failed on the asset management system is displayed

An `ASTCIM`*n*`.LOG` or `ASTMES`*n*`.LOG` file containing the following information is output to the `log` folder:

- `The datasource name not found and no default driver specified` (in Microsoft SQL Server or Embedded RDB)
- `Could not resolve service name` (in Oracle)

In the Server Setup dialog box, **Service name** in **Database Information** might not be specified correctly.

Check the database connection settings. Also specify the following information in **Service name** in the Server Setup dialog box:

- In Microsoft SQL Server
  Data source name specified when the data source or net service was created
- In Embedded RDB
  Service name specified in the server setup the first time the Asset Information Manager Subset database was created
- In Oracle
  Net service name

(c) A message such as Initial data creation failed on the asset management system is displayed

An `ASTMES`*n*`.LOG` file containing the following information is output to the `log` folder:

- `There was no SQL Server or access was denied` (in Microsoft SQL Server)
- `No listener` (in Oracle)

Check the following possibilities:

- The service might not have been created correctly when database connection was set up.
  Make sure that the service has been created correctly. Also, use the test function to check the connection.
- The DBMS might not be running.
  Start the DBMS.

(d) A message such as Initial data creation failed on the asset management system is displayed

An `ASTCIM`*n*`.LOG` or `ASTMES`*n*`.LOG` file containing the following information is output to the `log` folder:

- `User` *xxxx*[#] `was unable to log in` (in Microsoft SQL Server)
  #: User name
- `Invalid password for authorization identifier HiRDB` (in Embedded RDB)
- `Invalid username/password; logon denied` (in Oracle)

In the Server Setup dialog box, **Login ID** and **Password** in **Database Information** might not be specified correctly. In the Server Setup dialog box, specify the correct **Login ID** and **Password** in **Database Information**.

(e) A message such as Unable to add due to existing key is displayed

The database has already been created.

This message is displayed when an attempt is made to re-create an Asset Information Manager Subset database after it has already been created. This message has no effect on the database. To re-create tables, you must first delete all tables and views and then create an Asset Information Manager Subset database.

(f) Processing has terminated due to an error (in Embedded RDB)

The maximum capacity specified for the Embedded RDB during database creation might have been reached.

Uninstall Asset Information Manager Subset and then re-install it. The disk on which Asset Information Manager Subset is installed must be large enough for the database capacity specified during installation, plus the capacity required for the management area allocated automatically by Embedded RDB. For details about the capacity of the management area, see *Release Notes*.

(2) Errors during login to Asset Information Manager Subset

This subsection discusses the errors that might occur while logging in to Asset Information Manager Subset, the main causes of the errors, and the actions to be taken.

(a) Login window is not displayed

- Microsoft Internet Information Services might have been installed after Asset Information Manager Subset was installed.

  Re-install Asset Information Manager Subset after you have installed Microsoft Internet Information Services.
- World Wide Web Publishing Service or World Wide Web Publishing might not be running. Check that World Wide Web Publishing Service or World Wide Web Publishing is running.
- In Microsoft Internet Explorer, **Active scripting** might be set to **Disable**. In the Security Settings dialog box, which is displayed by clicking the **Custom Level** button on the **Security** page in the Internet Options dialog box, check the **Active scripting** setting.
- If Windows Server 2012, Windows Server 2008 or Windows Server 2003 is used as the server for Asset Information Manager, the Web service extension named `jp1asset` that is created when Asset Information Manager Subset is installed might have been deleted by mistake. If there is no Web service extension named `jp1asset`, re-create it. For details about how to create the `jp1asset` Web service extension, see *(4) Re-creating the jp1asset Web service extension*.

(b) A message such as Server is starting up. Wait a while and then log in again is displayed, and the status remains the same for a while

- Connection to DBMS might fail. Check the operating status of DBMS.
- Three possible causes are as follows:
  - No Asset Information Manager Subset database has been created.
  - The Asset Information Manager Subset database cannot be connected.
  - In Microsoft SQL Server, a data source is created in **User DSN**.

  Make sure that an Asset Information Manager Subset database has been created. Also, check that the correct user ID and password were specified during the connection process. Also in Microsoft SQL Server, create a data source in **System DSN**.
- There might be an error in the settings for Microsoft Internet Information Services. From Internet Information Services Manager, check the virtual directory settings.

(c) Login window is displayed, but login fails

- The server for Asset Information Manager Subset might be unable to connect to the Asset Information Manager Subset database. For details about creation of a data source or net service required for database connection, see *10.3.8 Creating a data source or net service* in the manual *Setup Guide*.
- In the settings for Microsoft Internet Explorer, **Allow per-session cookies** or **Submit nonencrypted form data** might be set to **Disable**. In **Internet Options**, check the settings for **Allow per-session cookies** or **Submit nonencrypted form data**.
- In Embedded RDB, an Asset Information Manager Subset database has not been created.

Make sure that you have already started the Server Setup dialog box and enter **Login ID** and **Password** in **Database Information**, then click the **OK** button. Do not use a reserved word or the login ID or service name (you can check the list of reserved words in `RESWORDS.TXT` that is stored in *JP1/Software-Distribution-Manager-installation-folder*`\jp1asset`). Now create an Asset Information Manager Subset database.

(d) User authentication fails

- Connection to DBMS might fail. Check the operating status of DBMS.
- The entered user ID and password might not have been registered. Register the user ID and password.
- An invalid user ID or password might have been entered by mistake. Enter the correct user ID and password.

(e) Message "Login failed because the product version does not match the database version" is issued

The Asset Information Manager Subset database might have not been migrated. Upgrade the Asset Information Manager Subset database.

(f) A message such as "The maximum number of users has been reached" is displayed

The maximum number of users that can use Asset Information Manager Subset concurrently might have been reached. Log out a user who is not using Asset Information Manager Subset, or change the value for **Number of concurrent user logins** in **Session Information** in the Server Setup dialog box.

(3) Errors during Asset Information Manager Subset operation

This subsection discusses the errors that might occur during Asset Information Manager Subset operation after login, the main causes of the errors, and the actions to be taken.

(a) Nothing is displayed when the CSV or PDF button is clicked in the window

- If you have applied the Microsoft Internet Information Services Lockdown tool, access permissions for the folder used to create intermediate files might have been changed.
  Check the access permission settings for the Asset Information Manager Subset server's *virtual-directory*`\csv` and grant write permissions to **Web Anonymous Users**. The default virtual directory for the Asset Information Manager Subset server is `C:\Program Files\Hitachi\NETMDM\jp1asset\wwwroot`.
- In Windows Server 2012, Windows Server 2008 or Windows Server 2003, the extension for a file to be downloaded might have not been registered as a MIME type. Register it. For details about how to set up a virtual directory, see *10.4 Setting the virtual directory* in the manual *Setup Guide*.

(b) Clicking a file name anchor from the Log job menu displays nothing

In Windows Server 2012, Windows Server 2008 or Windows Server 2003, the extension `.log` might not have been registered as a MIME type. In Microsoft Internet Information Services, set up a virtual directory for Asset Information Manager again. For details about how to set up a virtual directory, see *10.4 Setting the virtual directory* in the manual *Setup Guide*.

(4) Re-creating the jp1asset Web service extension

If the Asset Information Manager Subset server is running under Windows Server 2012, Windows Server 2008 or Windows Server 2003, the Web service extension named `jp1asset` is registered automatically when Asset Information Manager is installed. If you have deleted this Web service extension by mistake, re-create the `jp1asset` Web service extension and then create an application pool. For details about how to create an application pool, see one of the following subsections:

- When using Microsoft Internet Information Services 6.0
  10.6.1(1) Creating an application pool in the manual *Setup Guide*
- When using Microsoft Internet Information Services 7.0
  10.6.2(2) Creating an application pool in the manual *Setup Guide*

To create the jp1asset Web service extension in Windows Server 2003:

1. Start the Internet Information Service Manager.
2. Select **Web Service extension** for the Asset Information Manager Subset server.
3. Make sure that the **Advanced** tab is selected and then select **Add a new Web service extension**.
   The New Web Service Extension dialog box is displayed.
4. In **Extension name**, specify any desired name.
   For example, specify a name such as aim in **Extension name**.
5. Click the **Add** button.
   The Add Files dialog box is displayed.
6. Click the **Browse** button to display a dialog box in which you can select the desired files, then click the **Open** button.
   Use this procedure to add all the following files that are stored in the Asset Information Manager Subset server's virtual directory:
   - jamwscript.dll
   - bin\jamlogin.dll
   - jamenter.dll
   - jamfile.dll
   - jamhtmlfile.dll

   By default, the Asset Information Manager Subset server's virtual directory is C:\Program Files\Hitachi\NETMDM\jp1asset\wwwroot.
7. Select the **Set extension status to Allowed** check box.
8. Click the **OK** button.
   The New Web Service Extension dialog box closes and the Web service with the specified extension is added to the **Web service extension** list.

For details about how to create the jp1asset Web service extension in Windows Server 2012 or Windows Server 2008, see *10.6.2(4) Setting ISAPI restrictions* in the manual *Setup Guide*.

(5) Setting up the virtual directory again

If you have reconfigured Microsoft Internet Information Services, you must set up the virtual directory again. For details about how to set up a virtual directory, see *10.4 Setting the virtual directory* in the manual *Setup Guide*.

6.6.5 Main causes of Web server errors and actions to be taken

In the event of an error, check the system resources for any shortages and Microsoft Internet Information Services for any event log that indicates an error.

If you use another program whose application protection setting is **Low (IIS Process)** or **Medium (Pooled)** on the same Microsoft Internet Information Services, there might be a problem in that program.

Also check for any network errors and for errors in Microsoft Internet Information Services. If you are using Microsoft Internet Information Services 6.0 or later, check the Web server settings for errors by referencing *10.6 Settings for using Microsoft Internet Information Services 6.0 or later* in the manual *Setup Guide*.

6.6.6 Main causes of DBMS errors and actions to be taken

In the event of an error, check the client library of the DBMS used by Asset Information Manager Subset for any error. If you are using Embedded RDB, see *(2) Errors specific to Embedded RDB* because the error cause might be specific to Embedded RDB.

(1) Errors common to DBMS

This subsection discusses the causes and actions to be taken for each type of DBMS eror.

(a) The DBMS environment is invalid or corrupted

- Four possible causes are as follows:
  - The DBMS client's DLL cannot be loaded.
  - There is no DBMS driver.
  - The DBMS does not reach the Asset Information Manager Subset server on the network.
  - The number of concurrent connections to DBMS has reached the maximum.

  Check the specified settings for any error. If the Asset Information Manager Subset server is different from the Asset Information Manager Subset database server, make sure that the DBMS's client environment has been installed.
- Network settings might be specified in such a manner that the DBMS server or the network containing the DBMS server cannot be reached.
  Check the communication channel to the DBMS server.

(b) Attempt to connect to the Asset Information Manager Subset database results in an error

- The DBMS server might be inactive, shut down, or engaged in termination processing.
  Make sure that the DBMS is running correctly.
- The network settings might be specified in such a manner that the DBMS server or the network containing the DBMS server cannot be reached.
  Check the communication channel to the DBMS server.
- The user ID or password specified during connection establishment might be invalid.
  Make sure that the correct user ID and password are specified.
- A timeout or resource shortage might have occurred due to an error in the DBMS server.
  Check the DBMS operating status.

(c) Script execution results in an error

- The disk might be full.
  Check the free space on the drive where the disk space has been allocated, whether there are extensions, and the maximum value.
- The transaction logs might be full.
  If a message indicating that transaction logs are full is output to the Asset Information Manager Subset log, check the DBMS's transaction log settings. We recommend that you stop collecting transaction logs, or periodically back up the transaction logs.
- A lock error due to lock control or a database connection timeout might have occurred.
  Check the DBMS's operating status.
- Five possible causes are as follows:
  - Permissions are invalid for the request.
  - An overflow has occurred in the script buffer.
  - There is a syntax error in the script.
  - A disk I/O error occurred.
  - A target table does not exist.

  Restore the environment that existed before customization.

(2) Errors specific to Embedded RDB

For Embedded RDB, you must take into account the causes specific to Embedded RDB in addition to the causes discussed in *(1) Errors common to DBMS*.

This subsection discusses the causes and actions to be taken for each type of error.

(a) Creation of an Asset Information Manager Subset database stops due to an error

The disk space for database storage or the space for Embedded RDB specified during database creation might have become full.

Re-create the Asset Information Manager Subset database on a disk that has enough space for the capacity specified in **Size** for **Management area** and **Operation area** in the Detailed Database Settings dialog box that is displayed during database creation.

(b) The login window opens, but a message "Page cannot be displayed" is displayed, and you cannot log in

No Asset Information Manager Subset database has been created.

Make sure that you have already started the Server Setup dialog box and enter **Login ID** and **Password** in **Database Information**, then click the **OK** button.

Do not use a reserved word in the login ID or service name (you can check the list of reserved words in `RESWORDS.TXT` that is stored in *JP1/Software-Distribution-Manager-installation-folder*`\jp1asset`).

Now create an Asset Information Manager Subset database.

(c) Authentication for database connection fails

An error message beginning with the following character string is output to the log:

- `KDAM5001-E[HY000]` *character-string-displayed-according-to-the-status* `KFPA11561-E`

Login ID or **Password** in **Database Information** might have been changed after Asset Information Manager Subset operation was started.

Open the Server Setup dialog box and change **Login ID** and **Password** in **Database Information** to the values specified when the Asset Information Manager Subset database was created.

Login ID and **Password** in **Database Information** cannot be changed during operation.

(d) A database communication error has occurred or an error has occurred in the database

An error message beginning with one of the following character strings is output to the log:

- `KDAM5001-E[HY000]` *character-string-displayed-according-to-the-status* `KFPA11723-E`
- `KDAM5001-E[HY000]` *character-string-displayed-according-to-the-status* `KFPA11728-E`

The DBMS server might be running, be shut down, or have terminated. Check the following:

- Check if the **HiRDB/EmbeddedEdition _AM1** service is running. If it is not running, start it. After this service has started completely, re-start World Wide Web Publishing Service.

  For details about the logs, see the manual *HiRDB Version 8 Message*.
- Make sure that the network cable is connected securely to the Asset Information Manager Subset server. If the network cable is disconnected from the server, communication is not available between Embedded RDB and Asset Information Manager Subset.

(e) There is a shortage of database capacity

An error message beginning with the following character string is output to the log:

- `KDAM5001-E[HY000]` *character-string-displayed-according-to-the-status* `KFPA11756-E`

There might be a shortage of pages in the database area.

Reorganize the Asset Information Manager Subset database. If the same error message is displayed again after the database has been reorganized, re-create the Asset Information Manager Subset database and change its size.

For details about how to reorganize the Asset Information Manager Subset database, see *10.3.7 Reorganizing databases in an Embedded RDB environment* in the manual *Setup Guide*. For details about how to change the size of an Asset Information Manager Subset database, see *5.2.3(3) Changing the size of an Embedded RDB*.

(f) Free space has decreased on the drive where the Asset Information Manager Subset database was created

This might have been caused by automatic extension of the Embedded RDB work file (used to store temporary information required for executing SQL statements).

The size of the work file is extended automatically when a large volume of search results is output. If a space shortage has occurred on the drive where the Asset Information Manager Subset database has been created, you can release the area extended automatically for the work file by executing `jamemb_workcomp.exe`.

This subsection describes the function, format, and return values of `jamemb_workcomp.exe`, the command for releasing the area expanded automatically for the work file in Embedded RDB. The subsection also includes notes about command execution.

`jamemb_workcomp.exe` is stored in the following folder:

JP1/Software-Distribution-Manager-installation-folder`\jp1asset\exe`

Function

This command releases area that has been extended automatically for the work file in Embedded RDB.

Format

```
jamemb_workcomp.exe
```

Return value

The command returns one of the following values:

Return value	Description
`0`	Normal termination
`11`	Option format is invalid
`101` or greater	Terminated due to some other error

Notes about command execution

A user with Administrator permissions must execute `jamemb_workcomp.exe`.

6.6.7 Main causes of Web browser errors and actions to be taken

In the event of an error, check the execution environment for the Web browser used by Asset Information Manager Subset for any errors.

This subsection describes the main causes and actions to be taken for each Web browser error.

(1) Web browser might have frozen or terminated abnormally

- There might be an error in the execution environment for the Web browser, or the registry and required DLL might have been corrupted.

  Restore the correct environment, or re-install the Web browser.
- There might be a problem with the Web browser version.

  Use Microsoft Internet Explorer 6 SP1 or later, Windows Internet Explorer 7, or Windows Internet Explorer 8.
- A plug-in might have failed, or there might be a problem with a plug-in.

  If an updated version has been released, install that version of the Web browser.
- A control contained in the contents might have failed, or there might be a problem in a control contained in the contents.

  If an updated version has been released, install that version of the Web browser.
- A script might have failed or there might be a problem in a script.

  Check the operating status. If an updated version has been released, install that version of the Web browser.

- There might be a problem in the Web browser.
  If an updated version has been released, install that version of the Web browser.

(2) A communication error has occurred

- The routing table might have been corrupted, or a network failure might have occurred due to contention with other software for a communication port.
  Restore the correct routing table, or set up the communication port again so that contention will not occur with other software.
- Microsoft Internet Information Services or the proxy server might not be running or an error might have occurred.
  Make sure that operation is normal.

(3) GUI is not displayed correctly

- The Asset Information Manager Subset database might have been corrupted because of a change made to information by unauthorized access or due to corruption of the database's logical structure.
  If you have a backup, use it to restore the Asset Information Manager Subset database.
  If you do not have a backup, initialize the Asset Information Manager Subset database and re-create it.
- **Active scripting** might be set to **Disable**.
  In Microsoft Internet Explorer, in the Security Settings dialog box (which is displayed by clicking the **Custom Level** button on the **Security** page in the Internet Options dialog box), enable the **Active scripting** option.
- The **Binary and script behaviors** option might be set to **Disable** (in Windows Server 2003 SP1 or later or Windows XP SP2 or later).
  In Microsoft Internet Explorer, in the Security Settings dialog box (which is displayed by clicking the **Custom Level** button on the **Security** page in the Internet Options dialog box), enable the **Binary and script behaviors** option.

(4) Login window cannot be displayed

- World Wide Web Publishing Service might not be running.
  Make sure that World Wide Web Publishing Service is running.
- **Active scripting** might be set to **Disable**.
  In Microsoft Internet Explorer, in the Security Settings dialog box (which is displayed by clicking the **Custom Level** button on the **Security** page in the Internet Options dialog box), enable the **Active scripting** option.

(5) Login fails

- **Allow per-session cookies** might be set to **Disable**.
  Enable the **Allow per-session cookies** option.
- **Submit nonencrypted form data** might be set to **Disable**.
  Enable the **Submit nonencrypted form data** option.
- **Allow META REFRESH** might have been set to **Disable** (in Windows Server 2003).
  Enable **Allow META REFRESH**.
- The Asset Information Manager Subset server might not be connected to the Asset Information Manager Subset database.
  Make sure that the Asset Information Manager Subset server is connected to the Asset Information Manager Subset database.

(6) File download processing fails

- The extension of the file to be downloaded might not have been registered as MIME type (in Windows Server 2012, Windows Server 2008 or Windows Server 2003).
  Register the extension of the file to be downloaded as MIME type.

- In the Microsoft Internet Explorer settings, **File download** might be set to **Disable**.
  Enable **File download**.

(7) Graphs cannot be displayed

- The Microsoft Office Web component might not have been installed. Install the Microsoft Office Web component on the PC where graphs are to be displayed.
  To install the Microsoft Office Web component, either install Microsoft Office 2003 or earlier, or download the component from the Microsoft home page.
- **ActiveX controls and plug-ins** might be set to **Disable**. Enable **ActiveX controls and plug-ins**.

6.6.8 Main causes of managing server linkage errors and actions to be taken

This subsection discusses the errors that might occur when the managing server is linked, the main causes of errors, and the actions to be taken.

(1) Errors during inventory information loading

This subsection discusses the errors that might occur when inventory information is loaded from the managing server, the main causes of the errors, and the actions to be taken.

(a) A message such as Error occurred during command execution. For details, see the log file is displayed

An `ASTCIM`*n*`.LOG` file containing the following information is output to the `log` folder:

- `The datasource name not found and no default driver specified` (in Microsoft SQL Server)
- `There was no SQL Server or access was denied` (in Microsoft SQL Server)
- `Connection error occurred` (in Microsoft SQL Server)
- `Invalid password for authorization identifier HiRDB` (in Embedded RDB)
- `Could not resolve service name` (in Oracle)
- `No listener` (in Oracle)
- `Invalid username/password; logon denied` (in Oracle)

Check the following:

- In the Server Setup dialog box, one of the following settings might be invalid:
  - **Login ID** or **Password** in **Database Information**
  - **Service name** in **Database Information**
  - **JP1/SD database login ID** or **Password** in **Link with JP1/SD**
  - **Connection service for JP1/SD database** in **Link with JP1/SD**

  Specify each item correctly. Also check the database connection settings.
- If the Asset Information Manager Subset database has been created successfully, **Connection service for JP1/SD database** might not be specified correctly in **Link with JP1/SD** in the Server Setup dialog box.
  Specify **Connection service for JP1/SD database** correctly in **Link with JP1/SD** in the Server Setup dialog box.
- The service might not have been created correctly when database connection was set up.
  Make sure that the service has been created correctly. Also, use the test function to check the connection.
- The DBMS might not be running.
  Start the DBMS.

(b) A message such as Connection error occurred is displayed

An ASTMES*n*.LOG file containing the following information is output to the log folder:

- Connection error occurred (in Microsoft SQL Server)
- Invalid password for authorization identifier HiRDB (in Embedded RDB)
- Invalid username/password; logon denied (in Oracle)

Check the following:

- The DBMS server might be inactive, shut down, or engaged in termination processing.
  Make sure that the DBMS is running correctly.
- The user ID or password specified to establish connection might be invalid.
  Check the entries for any error.
- A timeout might have occurred due to a DBMS server error.
  Check the DBMS's operating status.
- Settings might not have been specified in the Server Setup dialog box.
  Specify the settings in the Server Setup dialog box.
- The connection target might not be a Managing server database.
  Specify the correct database connection settings; also specify in the Server Setup dialog box the correct value for **Connection service for JP1/SD database** in **Link with JP1/SD**.

(c) ASTMES.LOG file containing a message such as "Asset No. cannot be automatically assigned." is output to the log folder

If you have selected **Use asset number** in **Assign key for asset information** in **Link with JP1/SD** in the Server Setup dialog box, **Auto** cannot be specified for asset numbers.

Change the asset numbering setting from the Assign Inventory window or change **Assign key for asset information** to **Use working key**.

(d) A message such as Initialization failed is output to the log folder

The operating environment for Asset Information Manager Subset might have become corrupted.

Re-install Asset Information Manager Subset.

(2) Errors when inventory information is viewed

This subsection discusses the errors that might occur when inventory information is viewed by choosing the **Inventory** tab in the Device Details dialog box, the main causes of the errors, and the actions to be taken.

(a) A message such as There is no applicable device on JP1/Software Distribution is displayed, and no inventory information is displayed

- The device information might not have been imported from the managing server. Only device information imported from the managing server can be displayed.
- The managing server's database might not contain information about the corresponding device. Use JP1/Software Distribution's Remote Installation Manager to check for system configuration information and system information for that device.

(b) A message such as Inventory information cannot be displayed is displayed, and no inventory information is displayed

The connection target might not be the managing server's database, or the connection settings might be invalid.

Specify the correct database connection settings; also specify in the Server Setup dialog box the correct values for **JP1/SD database login ID** and **Connection service for JP1/SD database** in **Link with JP1/SD**.

(3) Errors during software distribution

This subsection discusses the errors that might occur during software distribution, the main causes of the errors, and the actions to be taken.

(a) When a package is added in the Software Applied window, an error message such as Unable to display JP1/Software Distribution Package is displayed

- The connection target might not be the managing server's database, or the connection settings might not be valid.
  Specify the correct database connection settings; also specify in the Server Setup dialog box the correct values for **JP1/SD database login ID** and **Connection service for JP1/SD database** in **Link with JP1/SD**.
- A database connection failure might have occurred in the managing server. Check the database and network status.

(b) When the contents of a cabinet are displayed in the Select Cabinet dialog box, an error message such as Unable to display JP1/Software Distribution Package is displayed

- The connection target might not be the managing server's database, or the connection settings might not be valid.
  Specify the correct database connection settings; also specify in the Server Setup dialog box the correct values for **JP1/SD database login ID** and **Connection service for JP1/SD database** in **Link with JP1/SD**.
- A database connection failure might have occurred in the managing server. Check the database and network status.

(c) When the Distribution Status job menu is selected or the execution status of a job is viewed in the Distribution Status window, an error message such as Unable to display distribution status is displayed

- The connection target might not be the managing server's database, or the connection settings might not be valid.
  Specify the correct database connection settings; also specify in the Server Setup dialog box the correct values for **JP1/SD database login ID** and **Connection service for JP1/SD database** in **Link with JP1/SD**.
- A database connection failure might have occurred in the managing server. Check the database and network status.

(d) Software distribution cannot be performed in the Software Applied window

The connection target might not be a Managing server database. Specify the correct database connection settings; also specify in the Server Setup dialog box the correct values for **JP1/SD database login ID** and **Password** in **Link with JP1/SD** and **Connection service for JP1/SD database**.

If a message that begins with `KDAM2G15-E` and reads `If the message An error occurred in dmAPIOpenEx() of JP1/Software Distribution. See the JP1/Software Distribution log.` is output to the log, install Remote Installation Manager on the Asset Information Manager Subset server and configure the Remote Installation Manager. For details, see *2.2 Installing Remote Installation Manager* in the manual *Setup Guide*.

For details about the error, see *4.10 dcminst.exe (creating and executing a job)*, *4.11 dcmjbrm.exe (deleting a job)*, and *4.19 dcmrtry.exe (retrying a job)*.

(e) Jobs cannot be deleted or re-executed in the Distribution Status window

The connection target might not be a Managing server database. Specify the correct database connection settings; also specify in the Server Setup dialog box the correct values for **JP1/SD database login ID** and **Password** in **Link with JP1/SD** and **Connection service for JP1/SD database**.

For details about the error, see *4.10 dcminst.exe (creating and executing a job)*, *4.11 dcmjbrm.exe (deleting a job)*, and *4.19 dcmrtry.exe (retrying a job)*.

(4) Errors during acquisition of operation logs

This subsection discusses the errors that might occur during acquisition of operation logs, the main causes of the errors, and the actions to be taken.

(a) The message "An error occurred during SQL issuance. (netmdm_monitoring_security:15)" is output to the log

The version of the managing server's database at the operation log reference target might be out of date.

Upgrade the managing server's database version to 08-00 or later.

(b) The message "The column name of the search condition is invalid. (netmdm_monitoring_security)" is output to the message log

This message is displayed when the managing server's database version is 08-51 or earlier and a search is performed with one of the following conditions specified in the Operation Log List window:

- Selecting **File operation log** in **Logs to display** and selecting **Printed**, **Printing suppression**, or **Print suppression released** in **Type**
- Selecting **File operation log** in **Logs to display** and specifying **Document name**
- Selecting **Web access log** in **Logs to display**
- Selecting **External media log** in **Logs to display**

Cancel the specification of the search condition.

(5) Errors that might occur when the Operation Log List window is displayed from Remote Installation Manager

This section describes possible causes of problems that may occur when Asset Information Manager Subset is installed or the Operation Log List window is used, as well as actions to be taken for such problems.

Table 6–19: Causes of problems with Asset Information Manager Subset and actions to be taken

Problem	Cause	Action
The Operation Log List window is not displayed.	An incorrect URL was specified on the **AIM** page during JP1/Software Distribution setup.	Check the URL, and specify the correct URL.
	World Wide Web Publishing Service is stopped in the connection destination server.	Start World Wide Web Publishing Service.
	In the browser settings, **Active scripting** is set to **Disable**.	Set to **Enable**.
	In the browser settings, **Allow per-session cookies** is set to **Disable**.	Set to **Enable**.
	In the browser settings, **Submit nonencrypted form data** is set to **Disable**.	Set to **Enable**.
	In the browser settings, **Allow META REFRESH** is set to **Disable** (for Windows Server 2003).	Set to **Enable**.
	In the browser settings, **Binary and script behaviors** is set to **Disable** (for Windows Server 2003).	Set to **Enable**.
The message `The maximum number of users has been reached` is displayed in the Operation Log List window.	The sessions connected to the Operation Log List window exceeded 300.	Wait awhile, and then open the Operation Log List window again.
The message `KDAM3208-E The connection to the server was released` is displayed in the Operation Log List window.	The session that connects to the Operation Log List window was disconnected.	If the Operation Log List window remains idle for one hour, all sessions are disconnected. Restart the Operation Log List window from Remote Installation Manager.

Problem	Cause	Action
The message KDAM3208-E The connection to the server was released is displayed in the Operation Log List window.	If the OS is Windows Server 2003, the setting for the application pool to be used for **Default Web Site** and the jplasset virtual directory was incorrectly specified in the Microsoft Internet Information Services settings.	For details about how to set Microsoft Internet Information Services, see *2.3 Installing Asset Information Manager Subset* in the manual *Setup Guide*.
The message An attempt to log in failed because the product version and the database version are different is displayed in the Operation Log List window.	The database version was not upgraded after version upgrade or a correction patch was applied to Asset Information Manager Subset.	Upgrade the version of the Asset Information Manager Subset database, and then reopen the Operation Log List window.
Search results are not displayed in the Operation Log List window.	An incorrect URL was specified on the **AIM** page for JP1/Software Distribution setup.	Check the URL, and specify the correct URL.

6.6.9 Error recovery

This subsection describes how to recover Asset Information Manager Subset from an error. For details about how to collect error information, see *6.7.4 Collecting Asset Information Manager Subset problem information*.

(1) How to recover from Asset Information Manager Subset errors

Check the collected error logs for errors. Correct any errors and then restart Microsoft Internet Information Services if the Asset Information Manager Subset server has shut down.

(2) How to recover from errors on the Asset Information Manager Subset server

This subsection describes how to recover from errors in Microsoft Internet Information Services.

(a) In the event of a Web server error

Check the collected error logs for errors. Correct any errors and then restart Microsoft Internet Information Services. If the error recurs, the database might be corrupted. Restore the database from a backup and then restart Microsoft Internet Information Services.

(b) If the Web server stops responding

Stop Microsoft Internet Information Services and then check the collected error logs for errors. Correct any errors and then restart Microsoft Internet Information Services. If the Web server stops responding again, the database might be corrupted. Restore the database from a backup and then restart Microsoft Internet Information Services.

(3) How to recover from DBMS errors

This subsection describes how to recover from DBMS errors.

(a) In the event of a DBMS error

Check the error logs for errors. Correct any errors and then restart the DBMS.

Once the DBMS starts, check the database for any data corruption. If necessary, recover the database by restoring it from backup data.

If the DBMS does not start, reconfigure the DBMS environment.

(b) In the event of corruption in the DBMS

Stop Microsoft Internet Information Services and then reconfigure the DBMS environment. Restart the DBMS, restore the database from backup data, and then restart Microsoft Internet Information Services.

(4) How to recover from Web browser errors

This subsection describes how to recover from Web browser errors.

(a) In the event the Web browser terminates abnormally

Restart the Web browser and log in again to check the status of the previous job processing. If the job was not completed, re-execute it.

If the Web browser does not respond again, obtain a hardcopy of the Web browser window. Provide this hardcopy to the system administrator together with the details of the operation that was underway at the time the browser terminated and the input data; request an investigation.

(b) In the event of abnormal Web browser display

Log out from the Web browser, log in again, and then execute the job that resulted in the error. If the same event occurs, ask the system administrator to investigate.

(5) How to recover from errors during command execution

Check the collected error logs for errors and then correct any errors.

6.7 Collecting maintenance data

If taking action according to *6.2 Job troubleshooting*, *6.3 Troubleshooting for JP1/Software Distribution Manager and JP1/Software Distribution Client (relay system)*, and *6.4 Troubleshooting for JP1/Software Distribution Client (client)* does not solve the problem, you should collect the following maintenance data and notify the system administrator. This section explains how to collect the following maintenance data:

- Log information
- JP1/Software Distribution settings
- JP1/Software Distribution problem information
- Asset Information Manager Subset problem information
- Directory information
- Communication settings
- WMI information

6.7.1 Collecting log information

You should collect the log file that is in the JP1/Software Distribution installation directory, `\log`. Because JP1/Software Distribution maintains several log files for the various types of information, you should collect the necessary log files. For details about the log types of JP1/Software Distribution and JP1/Software Distribution Client (relay system), see *6.3.1 Checking log files*. For details about the log types of JP1/Software Distribution Client (client), see *6.4.1 Checking log files*.

If JP1/Software Distribution is installed in its default directory, the log files are stored in the following directories:

Product name	Log file directory
JP1/Software Distribution Manager (central manager)	`C:\Program Files\hitachi\NETMDM\log`
JP1/Software Distribution Manager (relay manager)	`C:\Program Files\hitachi\NETMDM\log_s`
JP1/Software Distribution Client (relay system)	`C:\Program Files\HITACHI\NETMDMP\LOG`
JP1/Software Distribution Client (client)	`C:\Program Files\HITACHI\NETMDMP\LOG`

Note: If the OS is Windows Server 2003 (x64), `Program Files` becomes `Program Files (x86)`.

6.7.2 Collecting JP1/Software Distribution settings

To collect JP1/Software Distribution settings:

1. From the Windows **Start** menu, choose **Run**.
2. In **Open:**, enter `regedit`, and click **OK**.
   Start Registry Editor.
3. In `HKEY_LOCAL_MACHINE\SOFTWARE\HITACHI` (in 32-bit version of OS) or `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\HITACHI` (in 64-bit version of OS), select the sub-key that is associated with the desired product.
   Sub-keys are associated with the following products:

Product name	Subkey name
JP1/Software Distribution Manager (central manager)	`\NETM/DM`
JP1/Software Distribution Manager (relay manager)	`\NETM/DM`, `\NETM/DM/P`
JP1/Software Distribution Client (relay system)	`\NETM/DM/P`

Product name	Subkey name
JP1/Software Distribution Client (client)	\NETM/DM/P

4. Select **Registry - Write registry file**.
   This outputs JP1/Software Distribution settings.

6.7.3 Collecting JP1/Software Distribution problem information

You can collect all JP1/Software Distribution problem-related information at once by executing a batch file provided with the product.

The following procedure shows how to execute the batch file to collect problem information. Make sure that you acquire the problem information at the machine on which the problem occurred.

To collect problem information by executing the batch file:

1. Log into Windows with administrator permissions.
2. Execute SDTRBL.BAT.
   SDTRBL.BAT is stored under \BIN in the JP1/Software Distribution installation folder.
   When you execute this batch file, problem information at that time is output to the specified output folder.

Format of problem information acquisition (SDTRBL.BAT) batch file

The SDTRBL.BAT format is as follows:

SDTRBL.BAT "*installation-folder-name*" "*output-folder-name*"

installation-folder-name

Specify a full path for the name of the JP1/Software Distribution installation folder. You must specify an installation folder.

output-folder-name

Specify a full path or relative path for the name of the folder to which the acquired problem information is to be output. You must specify an output folder.

Only JP1/Software Distribution Manager can execute the problem information acquisition batch file (SDTRBL.BAT) to obtain error information.

6.7.4 Collecting Asset Information Manager Subset problem information

In the event of a problem, you execute a batch file that comes with the product to batch collect information about Asset Information Manager Subset.

You must execute problem information collection on the machine where Asset Information Manager Subset is running.

To collect problem information by executing the batch file:

1. Log into the managing server with administrator permissions.
2. Execute ASTTRBL.BAT.
   ASTTRBL.BAT is stored under the JP1/Software Distribution Manager installation folder \jp1asset\exe.
   When you execute the batch file, problem information at that time is output to the specified output folder.

Format of problem information acquisition (ASTTRBL.BAT) batch file

The ASTTRBL.BAT format is as follows:

ASTTRBL.BAT "*output-destination-folder-name*"

output-destination-folder-name

Specify a full or relative path for the name of the folder to which the acquired problem information is to be output. You must specify an output destination folder.

6.7.5 Collecting directory information

To collect JP1/Software Distribution directory information, enter the following commands in the command prompt, assuming that JP1/Software Distribution is installed in `C:\Program Files\HITACHI\NETMDMP`, and that directory information will be output to a `filed.txt` file:

```
> c:
> cd Program Files\HITACHI\NETMDMP
> dir /s /on > filed.txt
```

6.7.6 Collecting communications settings

The following explains how to collect communications settings.

■ Windows NT

Enter the following command in the command prompt:

```
ipconfig /all > any-file-name
```

■ Windows Me or Windows 98

To collect communications settings:

1. From the Windows **Start** menu, select **Run**.
2. In **Open:**, enter `winipcfg`, and click **OK**.
   The IP Settings dialog box is displayed.
3. Click the **Details** button, and obtain a hardcopy of the IP Settings dialog box.

6.7.7 Collecting WMI information

You can collect WMI information manually or remotely.

This subsection describes both collection methods.

(1) Manual collection

The following products must be installed on the client in order to collect WMI information manually:

- JP1/Software Distribution Client
- JP1/Software Distribution Manager#

#: Applicable only when the JP1/Software Distribution Manager is installed as a relay manager.

This set of products is referred to collectively as the *JP1/Software Distribution products*.

To collect WMI information manually, you must perform the procedure shown below on the corresponding PC.

To collect WMI information manually:

1. Open *JP1/Software-Distribution-product-installation-directory*`\BIN`.
2. Double-click `dmpwmitl.vbs`.
   `dmpwmitl.vbs` is stored in *JP1/Software-Distribution-product-installation-directory*`\BIN`.
   Double-clicking `dmpwmitl.vbs` starts collection of WMI information. When the collection processing is finished, a dialog box to that effect is displayed.
3. Click the **OK** button.

The WMI information is stored in *JP1/Software-Distribution-product-installation-directory*\LOG under the following name:

WMI information (output file):

WMIGETINFO_*YYYYMMDD_hhmmss*.txt#

#: The date and time the file was created are set in *YYYYMMDD* and *hhmmss*.

(2) Remote collection

To collect WMI information remotely:

1. Start Remote Installation Manager.
2. Create a job that executes remote collection.
   For details about job creation, see *5.1.1 Executing remote collection* in the manual *Administrator's Guide Volume 1*.
3. Specify the files to be collected.
   On the **Collect File** page, specify the following information:

   Target file

   Specify the following path:
   %NETMDMP%\LOG\WMIGETINFO.txt

   Directory for saving collected files

   Specify a desired directory.
4. On the **Collect File** page, click the **Details** button.
   The Detailed Options For Remote Collection dialog box is displayed.
5. Specify an external program.
   In **Specify external programs to start on destination client**, specify the following information:

   Before collection

   cscript "*JP1/Software-Distribution-Client-installation-directory*\BIN\dmpwmitl.vbs" /remote

   Specify remote in all lower-case letters.

   Specify the desired information for items other than **Before collection**.
6. Specify settings on other pages.
   Specify items other than those specified in steps 4 and 5.
   For details about the settings on other pages, see the description of each page in *5.1.1 Executing remote collection* in the manual *Administrator's Guide Volume 1*.
7. Click the **Execute** button to start remote collection for the PC where WMI information is to be collected.
   When remote collection is finished, the WMI information is stored in the directory specified in **Directory for saving collected files** under the following name:
   WMIGETINFO.txt

7 Messages

This chapter explains the event log messages that are issued during JP1/Software Distribution operation and the client's basic log (USER_CLT.LOG).

7.1 Lists of event log messages

This section shows event log messages that you can monitor using the Windows NT Event Viewer and other tools. For JP1/Software Distribution HTTP Gateway event log messages, see *6.5.2 Event log messages for HTTP Gateway*.

7.1.1 Event log messages for JP1/Software Distribution Manager

The following shows the event log messages that JP1/Software Distribution Manager can output.

(1) Messages related to the Windows NT interface

Event ID	Message type	Message text
0	Error	Windows NT API error occurred. Request: *xx*, Error *yy*

Legend: *xx*, *yy*: Any character string

(2) Messages related to the managing server

Event ID	Message type	Message text
10000#	Error	RDBMS is connected up to the maximum connection.
10004	Error	The communication between RDBMS erred.
10007	Error	An access timing error to RDBMS.
10008#	Error	Database format unmatched.
10009#	Error	Login to RDBMS failed.
10010#	Error	DataSourceName is invalid.
10011#	Error	An access error to RDBMS, because transaction log full.
10012#	Error	An access error to RDBMS, because capacity of database over.
10101	Error	System error occurred.
10106	Error	File close error.
11002	Error	System error occurred in the file transfer server.
11003	Error	Processing contradiction occurred in the file transfer server.
11004	Error	The processing sequence to the file transfer server is improper.
11005	Error	Processing request to a file transfer server is improper.
11006#	Error	While starting the Software Distribution server, a memory shortage had occurred.
11007	Error	It failed in creation of a directory in the file transfer server.
11010	Error	Interruption occurred.
11011	Error	The specified file does not exist.
11012	Error	The specified file is improper.
11017	Error	File error occurred in the management file.
11020#	Error	Setting of an operation environment is improper.

Event ID	Message type	Message text
11022	Error	Resource hangar is destroyed.
11023	Error	An illegal difference instruction file received from *xx*.
11024	Error	An illegal status notification file received from *xx*.
11025	Error	An illegal inventory file received from *xx*.
11026	Warning	A file(*yy*) of a client(*xx*) is illegal.
11027	Warning	The *yy* file to which an illegal host name was set was received from *xx*.
11028	Warning	There was a connection request from *xx* of illegal host name.
11029	Error	The offline machine information file (*xx*) on the client (*yy*) is being updated by another process.
12013#	Error	Environment for the resource management file access server is destroyed.
12014#	Error	Environment for the resource attribute file access server is destroyed.
12015#	Error	Environment for the execution management file access server is destroyed.
12016#	Error	Environment for the resource state file access server is destroyed.
12017#	Error	It failed in generation of an environment that a resource management file access server operates.
12018#	Error	Generation of an environment for the resource attribute file access server failed.
12019#	Error	Generation of an environment for the execution management file access server failed.
12020#	Error	Generation of an environment for the resource state file access server failed.
12032	Error	No space left on management file, no more space for writing is available.
12033	Error	It failed in creating an index of the management file.
12034	Error	It failed in creating an alternation index of the management file.
12035	Error	It failed in putting on the record key into index of a management file.
12036	Error	It failed in putting on the letter into index of a management file.
12037	Error	It failed in dividing index of a management file.
12038	Information	System is suspended. Download request is denied.
13003	Information	Software Distribution server was started.
13004	Information	Software Distribution server was terminated.
14004#	Error	System error occurred during start.
14010	Error	Connection request to the Software Distribution Manager is improper.

Event ID	Message type	Message text
14018	Error	The hostname of connection destination is not set.
14033	Information	Request of connection is denied, because server is refuse condition.
14035	Information	Server will be made to be connectable condition.
14036	Information	Symbol of OpenView NNM Add Failed (Node=*xx*, Label=*yy*).
14037#	Error	Process of Software Distribution Manager was down.
14039	Error	JP1/IM Server or Agent is not installed.
14040	Error	A notice of event to the JP1/IM Event Server failed.
14042	Warning	JP1 event notification of the results of operation monitoring failed. -- Information about JP1 event notification of the results of operation monitoring -- *zz*
14051	Error	User permissions could not be acquired from JP1/Base.
14052	Error	The user specified in the environment variable NETM_USERID does not have permission to execute this
14053	Error	The user specified in the environment variable NETM_USERID is not registered in JP1/Base.
14081	Error	An error occurred during output of the audit logs.
14082	Information	A new audit log file was generated successfully.
16001	Warning	No inventory matches the specified condition.
16002	Error	Inventory search error.
16003	Error	Inventory data is incorrect(*xx*).
16004	Information	Update of *xx* inventory data is suspended.
16005	Error	System error occurred in processing inventory.
16006	Error	System error occurred.
16007	Warning	New inventory data cannot be saved, because transfer of old inventory is not finished.
16008	Warning	You need to transfer the old inventory data using SETUP.
16009	Warning	Database for user inventory is not specified.
16010	Warning	Table for user inventory is not specified.
16012	Warning	The specified table(*xx*) for user inventory does not exist.
16013	Warning	Invalid user inventory from client(*xx*).
16014	Warning	Database access error in processing user inventory from client(*xx*).
16015	Warning	Alert information from the client (*xx*) could not be output to a CSV file.
16016#	Error	The operation history storage directory cannot be accessed.
16017#	Error	The operation history backup directory cannot be accessed.

Event ID	Message type	Message text
16018#	Error	The operation history cannot be saved because the space is insufficient in the history storage directory.
16019#	Error	The operation history cannot be backed up because the space is insufficient in the operation history backup directory.
16020#	Error	The space in the operation history backup directory has reached the threshold value.
16021	Information	The operation monitoring history will now be stored into the database.
16022	Information	Storage of the operation monitoring history into the database has finished.
16023	Error	A system error occurred during the processing to store the operation monitoring history into the database.
16024	Error	An RDB access error occurred during the processing to store the operation monitoring history into the database.
16025	Warning	Processing to store the operation monitoring history into the database was interrupted because the server received a stop request.
16026	Warning	Processing to store the operation monitoring history into the database was interrupted because a release request was received from a command.
16027	Warning	Processing to store the operation monitoring history into the database could not be performed because the processing is already being performed by a command.
16028	Warning	Storage processing could not be performed because the operation monitoring history has already been stored into the database by a command.
16029	Warning	The date(*YYYYMMDDhhmmss*) of an operation monitoring history of a client(*xx*) is out of the range to be stored.
16030#	Error	An attempt to connect to the network drive has failed during the access to the operation log.:*xx*
16031	Warning	Store the operation monitoring history that has not yet been stored to the database by executing the dcmmonrst command with the option "/x".
18000	Error	netmdmclt/udp service was not definition.
18001	Error	Local host name is not defined.
18002	Error	Socket error occurred.
18003	Error	xx was unknown client address.
18004	Error	Call to *xx* for distribution job failed.
18005	Error	Fail in start rtcp server.
18006	Error	Error rtcp before process (host:*xx*).
18007	Error	Fail in recvfrom.
18008	Information	Client request server started.
18010	Error	Message size error.
18011	Error	netmdmclt/tcp service was not definition.

Event ID	Message type	Message text
19001	Information	Job schedule server was started.
19002	Information	Job schedule server was terminated.
19003	Warning	The schedule information was deleted because the *xx* required for schedule execution does not exist. (job definition name: *yy*, job number: *nn*, schedule execution date: *mm*)

Legend:

xx, *yy*, *nn*, *mm*: Any character string

zz: Attribute of JP1 event whose notification was attempted

YYYYMMDDhhmmss: Date and time

#: We recommend that you monitor this message. For details about the causes of the messages and what action should be taken on them, see *7.1.4 Event log messages that should be monitored, their causes, and the actions to be taken*.

(3) Messages related to client alerts

Event ID	Message type	Message text
30000	Warning	The client(*xx*) is in critical condition(*yyyyyy*).
30001	Warning	The client(*xx*) reported a warning(*yyyyyy*).
30002	Information	The client(*xx*) has returned to normal(*yyyyyy*).

Legend:

xx: Any character string

yyyyyy: Alert message

(4) Messages related to importing and exporting user inventory items

Event ID	Message type	Message text
7	Error	Error in writing file. Error message from *path op*.
99	Error	Exception error - *xx*. Error message from *path op*.
132	Error	Package *xx* restoration failed. Error message from *path op*.
139	Error	Label of Item name (*xx*) which is specified in Parameter file is being used on entered another item.
140	Error	Existing Higher Server or Local and higher servers of item name (*xx*) which is specified in Parameter file will be updated. High Server or Local and higher servers cannot be updated.
141	Error	Though Insert parameter of Item name (*xx*) in Parameter file is specified, Select parameter is not specified. If Insert parameter is specified, Select parameter is required to be specified together.
142	Error	This Parameter is duplicated. Or parameter is specified out of brackets: *xx*.
143	Error	Unusable characters (\ / * " ' : ; , & tab) are specified in Parameter (item) of Item name. Or specifiable characters exceed 64 characters. Specified value: *xx*.
144	Error	Unusable characters (\ / * " ' : ; , & tab) are specified in Parameter(label) of Label. Or specifiable characters exceed 64 characters. Specified value: *xx*.

Event ID	Message type	Message text
145	Error	Unusable characters (\ / * " ' : ; , & tab) are specified in Parameter(comment) of Comment. Or specifiable characters exceed 255 characters. Specified value: *xx*.
146	Error	Unusable characters (except Y (y) or N (n)) are specified in Parameter (require) of required item. Or specification is incorrectly. Specified value: *xx*.
147	Error	Unusable characters (except Y (y) or N (n)) are specified in Parameter (insert) of List or List (Text is possible). Or specification is incorrectly. Specified value: *xx*.
148	Error	Parameter is specified incorrectly. : *xx*.
149	Error	Parameter (select) of List is specified out of brackets: *xx*.
150	Error	Unusable characters(\ / * " ' : ; , & tab) are specified to parameter(select) of List on Item name (*xx*) which is specified in parameter file. Or specification is incorrectly.
151	Error	Parameter (select) of List which exceeds 201 characters is specified to Item name (*xx*) in parameter file.
152	Error	A specified selection item exceeds the max size for the parameter specified for selection items that have the item name (*xx*), specified in the parameter file. (For "select", the max size is 51,254 bytes. For "selectable", the total value with "upper_select" is 102,509 bytes.)
153	Error	Duplicated parameter (select) of List is specified to Item name (*xx*) in parameter file.
154	Error	Format of Parameter file is invalid. Check whether the format is correctly on [L. *line-number*] or upon lines. : *xx*.
155	Error	Item name (*item*) is not specified in parameter file. Item name is required to specify. : *xx*.
156	Error	Item name (*item*) is not specified in parameter file. Check whether the input value is specified correctly on [L. *line-number*] or upon lines. Item name is required to specify. : *xx*.
157	Error	Number of items is achieved the upper limit 255. Check existing number of items. If items do not achieve 255, parameter in the item is incorrectly. Check the contents. Item name of failed to addition: *xx*.
158	Error	Duplicate USER_INVENTORY tags are specified. USER_INVENTORY tag can be specified in Parameter file only once. : *xx*.
159	Error	File cannot be opened. Check the file. : *xx*.
160	Error	File cannot be read. Check the file. : *xx*.
161	Error	File cannot be written. Check the file. : *xx*.
166	Error	Nothing has been specified for the parameter (upper_item). Item name: *xx*
168	Error	An item other than those enabled for text input has been specified as a hierarchical item. The selected item must be a hierarchical item specified for input. Item name: *xx*
169	Error	An incorrect value has been specified for the relation parameters (upper_select or selectable). Check the information specified on [L. *line-number*]: *xx*

Event ID	Message type	Message text
170	Error	Invalid characters (\ / * " ' : ; , & tab) have been specified in the relation parameters (upper_select or selectable). Specified value: *xx*
171	Error	The value specified for the relation parameters (upper_select or selectable) exceeds 200 characters. Item name: *xx*
172	Error	The number of items exceeds 255. Item name: *xx*
173	Error	Duplicate values have been specified for the relation parameters (upper_select or selectable). Item name: *xx*
176	Error	The valid selection items parameter (selectable) has been set in an invalid location. Check the information specified on [L. *line-number*]: *xx*
177	Error	Either invalid characters (\ / * " ' : ; , & tab) have been specified in the relation parameters (upper_select or selectable), or the value of these parameters exceeds 64 characters. Specified value: *xx*
178	Error	Either the parameter (select, upper_select, or selectable) has not been specified. Item name: *xx*
179	Error	A value not specified in the selection item parameter (select) has been specified in the valid selection items parameter (selectable). Item name: *xx*
180	Error	An attempt to add a lower item relationship to upper item *xx* failed because it already has a lower item.
181	Error	The maximum number of items (255) or hierarchy levels (10) has been exceeded. Check the existing number of items and hierarchy levels, and if the maximum limit has not been reached, a parameter in the item is most likely specified incorrectly. Item name: *xx*
183	Error	A value specified in requirement parameter (require) does not match the value of the higher item. Item name: *xx*
184	Error	An attempt to add or modify a selection values in a top-level or mid-level item has failed, since these actions are not allowed via import. Check the value of the parameter (select). Item name: *xx*
185	Error	An attempt to add a related lower item to a relationless upper item or a nonexistent selection item has failed. Check the value of the parameter (upper_select). Item name: *xx*
186	Error	An attempt to change a relationship on a top-level or mid-level item has failed. Relationships on these levels can not be changed. Item name: *xx*
187	Error	An attempt to change a relationship in a top-level or mid-level item has failed, since this is not allowed via import. Check the value of the parameter (select or upper_select). Item name: *xx*
1003	Error	API Parameter is invalid (Handle value specification). Error message from *path op*.
1006	Error	API parameter is invalid (Unspecified parameter error). Error message from *path op*.
1008	Error	Already exists. Error message from *path op*.
1010	Error	No search items or search ended specified information does not exist. Error message from *path op*.

Event ID	Message type	Message text
1014	Error	Fatal error occurred (internal error detection). Error message from *path op*.
1016	Error	System call error occurred due to API. Error message from *path op*.
1017	Error	API cannot continue transaction. Error message from *path op*.
1051	Error	Modification/deletion item does not exists. Error message from *path op*.
1053	Error	DM database is under renewal by other process. Error message from *path op*.
1054	Error	No. of connections to RDB server exceeded max simultaneous connections. Error message from *path op*.
1055	Error	Invalid password or manager ID. Error message from *path op*.
2001	Error	Memory allocation failure. Error message from *path op*.
2003	Error	Parameter file contains invalid value *xx*. Error message from *path op*.
2004	Error	Server connect error. Error message from *path op*.
2006	Error	Invalid command line argument. Error message from *path op*.

Legend:

path: Command execution path

op: Command execution option

xx: Any character string

(5) Messages related to commands

Event ID	Message type	Message text
1	Error	No input file. Error message from *path op*.
2	Error	An attempt to create the package or a file in the package failed. Check the JP1/SD log files. Check the specified path of the file or directory to be packaged, or reduce the number of files or directories to be packaged. Detailed information: *xx*
4	Error	Error in reading the file. Error message from *path op*.
5	Error	Error in server connection. Error message from *path op*.
7	Error	Error in writing file. Error message from *path op*.
12	Error	Invalid Environment. Error message from *path op*.
13	Error	System Error. Error message from *path op*.
98	Error	It over the registration limit or detected the internal contradiction. Error message from *path op*.
99	Error	Exception error - *xx*. Error message from *path op*.
100	Error	Failed to update input file for new version/generation: *path op*.
101	Error	Failed to melt *path op*.

Event ID	Message type	Message text
102	Error	Valid *path* to file(s) to be collected not found. Error message from *path op*.
103	Error	An environment is injustice. Error message from *path op*.
104	Error	Matching record not found in database. Error message from *path op*.
105	Error	Loading of DLL to extract package contents failed. Error message from *path op*.
106	Error	The package contents could not be output. Make sure that the administration file of the package is correct, and that there is enough memory and free space in the HD. Error message from *path op*.
107	Error	ODBC environment not initialized. Error message from *path op*.
108	Error	Local manager version not supported. Error message from *path op*.
109	Error	Failed to create query. Error message from *path op*.
112	Error	Too much data satisfies the constraint, output was not done. Error message from *path op*.
113	Error	The registry information could not be obtained. Error message from *path op*.
114	Error	The temporary file could not be opened. Error message from *path op*.
115	Error	Insufficient command argument. Check the command format. Error message from *path op*.
116	Error	Two /par arguments are specified. Check the command format. Error message from *path op*.
117	Error	Two /csv arguments are specified. Check the command format. Error message from *path op*.
118	Error	Two /o arguments are specified. Check the command format. Error message from *path op*.
119	Error	The file name of the output file is invalid. Check the command format. Error message from *path op*.
120	Error	Two /i arguments are specified. Check the command format. Error message from *path op*.
121	Error	The parameter file name is invalid. Check the command format. Error message from *path op*.
122	Error	Two template keys are specified or an invalid command argument is specified. Check the command format. Error message from *path op*.
123	Error	The template key is invalid or an invalid command argument is specified. Check the command format. Error message from *path op*.
124	Error	The file name of the output file is too long. Check the command format. Error message from *path op*.
125	Error	The parameter file name is too long. Check the command format. Error message from *path op*.
126	Error	The specified template key cannot be used when the /par argument is specified. Check the command format. Error message from *path op*.
127	Error	No Output file name is specified. Check the command format. Error message from *path op*.

Event ID	Message type	Message text
128	Error	No file name is specified for the output file. Check the command format. Error message from *path op*.
129	Error	No parameter file name is specified. Check the command format. Error message from *path op*.
130	Error	No parameter file name is specified. Check the command format. Error message from *path op*.
131	Error	Package *xx* restoration failed. Error message from *path op*.
133	Error	Package / Cabinet *xx* backup failed. Error message from *path op*.
134	Error	One of *xx*.pkg, *xx*.sci, *xx*.dpf file is not available for restoration. Error message from *path op*.
137	Error	*xx* is invalid input value. Error message from *path op*.
138	Error	Error in backing up package *xx*. Error Message From *path op*.
162	Error	*path op* The CSV file contains invalid data. Check the information specified on [L. *line-number*]: *xx*
163	Error	*path op* The CSV file format is invalid: *xx*
167	Error	*path op* The specified policy could not be found: *xx*
1000	Error	Control file not found on server. Error message from *path op*.
1003	Error	API Parameter is invalid (Handle value specification). Error message from *path op*.
1004	Error	Other process is using file. Error message from *path op*.
1006	Error	API parameter is invalid (Unspecified parameter error). Error message from *path op*.
1007	Error	API parameter is invalid (Name syntax check error). Error message from *path op*.
1008	Error	Already exists. Error message from *path op*.
1009	Error	Job creation continues. Error message from *path op*.
1010	Error	No search items or search ended specified information does not exist. Error message from *path op*.
1011	Error	Not enough space on disk. Error message from *path op*.
1014	Error	Fatal error occurred (internal error detection). Error message from *path op*.
1016	Error	System call error occurred due to API. Error message from *path op*.
1017	Error	API cannot continue transaction. Error message from *path op*.
1018	Error	Service name does not exist. Error message from *path op*.
1019	Error	Host name does not exist. Error message from *path op*.
1020	Error	Appears insufficient memory. Error message from *path op*.
1021	Error	Service is motive yet. Error message from *path op*.
1024	Error	Failed to connect. Error message from *path op*.
1025	Error	Discrepancy about protocol version of server & its API. Error message from *path op*.

Event ID	Message type	Message text
1026	Error	Not match in environment of server with environment of remote install manager. Error message from *path op*.
1032	Error	Destination not specified (job definition creation/edit error). Error message from *path op*.
1033	Error	Package specification does not exist (Job definition creation / edit error). Error message from *path op*.
1035	Error	Unusable node exists. Error message from *path op*.
1036	Error	Usable node not found. Error message from *path op*.
1037	Error	Unusable package exists. Error message from *path op*.
1038	Error	Usable package not found. Error message from *path op*.
1040	Error	Retry object not found. Error message from *path op*.
1045	Error	Unusable node and package exists. Error message from *path op*.
1048	Error	System definition does not exists. Error message from *path op*.
1051	Error	Modification/deletion item does not exists. Error message from *path op*.
1052	Error	Cabinet is full. Error message from *path op*.
1054	Error	No. of connections to RDB server exceeded max simultaneous connections. Error message from *path op*.
1055	Error	*path op* An error occurred during the accessing RDB server. Error message from *xx*.
1057	Error	RDB server name invalid or RDB server is under suspension. Error message from *path op*.
1058	Error	Database does not exists, database has not been created or may be corrupted. Error message from *path op*.
1060	Error	Connection with RDB server is removed. Error message from *path op*.
1061	Error	Specified manager ID does not have permission to get access to the database. Error message from *path op*.
1063	Error	Login name or password is incorrect. Error message from *path op*.
1064	Error	Specified version of ODBC driver is inapplicable. Error message from *path op*.
1067	Error	*path op* There are no settings for storing the software operation monitoring history into the database.
1068	Error	*path op* The specified storage directory does not exist or access is denied: *storage directory name*
1069	Error	*path op* The specified directory is not a storage directory or access is denied: *storage directory name*
1070	Information	*path op* Command processing completed normally.
1072	Warning	*path op* Command processing was interrupted because the release request was received.
1073	Error	*path op* Computer group was neither created nor inherited.

Event ID	Message type	Message text
1074	Error	*path op* The specified group does not exist, an invalid character is included in the specified character string, or the specified character string exceeds the maximum length.
1075	Error	*path op* Other processes are running for the WSUS server now.
1076	Error	*path op* An attempt to connect to the WSUS server (WSUS Linkage function) has failed.
1077	Error	*path op* An error occurred during communication with the WSUS server.(WSUS Linkage function)
1078	Error	*path op* An error occurred during the process in the WSUS server. (WSUS Linkage function)
1079	Error	*path op* The job could not be registered because the operation monitoring policy specified in the job definition does not exist. Correct the policy specification in the job definition, or create the specified operation monitoring policy.
1080	Error	*path op* The control job of software operation monitoring could not be registered because Remote Installation Manager is editing the software monitoring policy, or the server is executing a control job of software operation monitoring. Wait a while, and then retry the operation.
1081	Error	*path op* The setting to automatically store the software operation history was not specified, therefore the following cannot be performed: - Storing the software operation history by using the option /s - Releasing the hold status by using the option /r - Stopping storage of the software operation history
1082	Error	*path op* The setting to automatically store the software operation history is specified, therefore the following cannot be performed: - Storing the software operation history by using the option /x - Storing the software operation history again by using the option /z
1083	Error	*path op* An error occurred during an attempt to access the storage directory for the offline machine information file.
1084	Error	*path op* An error occurred during an attempt to access the offline machine information file (*xx*).
1085	Error	*path op* The offline machine information file *xx* is invalid.
1086	Error	*path op* Input processing for the offline machine information file (*xx*) was skipped because another process is in progress.
2001	Error	Memory allocation failure. Error message from *path op*.
2002	Error	Parameter file *xx* is invalid. Error message from *path op*.
2003	Error	Parameter file contains invalid value *xx*. Error message from *path op*.
2004	Error	Server connect error. Error message from *path op*.
2005	Error	Output file open error. Error message from *path op*.
2006	Error	Invalid command line argument. Error message from *path op*.
2007	Error	*xx* is invalid argument. Error message from *path op*.
2008	Error	*path op* An error occurred in analyzing the parameter file or the map file.:*xx*

Event ID	Message type	Message text
2009	Error	*path op* The processing will now stop because the command has been started twice.:*xx*
2010	Error	*path op* The process has stopped because Linkage to Active Directory is not set.
2011	Error	*path op* An attempt to obtain information from Active Directory has failed.:*xx*
2012	Error	*path op* An attempt to store the information obtained from Active Directory has failed.:*xx*
2013	Error	*path op* An attempt to link to Active Directory has failed.
2014	Error	*path op* System Error: *xx*
2015	Error	*path op* The process has stopped because a restoration of Active Directory was detected.
2016	Error	*path op* The process has stopped because a change of the assignment key was detected.
2017	Information	*path op* The part of the data obtained from Active Directory that exceeded the upper limit has been discarded.
2018	Information	*path op* Active Directory has been successfully linked to.
2021	Error	*path op* Processing ended because the user logged off.

Legend:
path: Command execution path
op: Command execution option
xx: Any character string

7.1.2 Event log messages for JP1/Software Distribution Client (relay system)

The following shows the event log messages that JP1/Software Distribution Client (relay system) can output:

(1) Messages related to Windows NT interface

Event ID	Message type	Message text
0	Error	Windows NT API error occurred. Request: *xx*, Error: *yy*

Legend: *xx*, *yy*: Any character string

(2) TCP/IP-related messages

Event ID	Message type	Message text
1002	Error	TCP/IP Windows Sockets Interface error. *xx*/*yy*

Legend: *xx*: Any character string

(3) Messages related to the processing of a relay system

Event ID	Message type	Message text
7008	Information	Remote installer started up, because Client received request from server.
7009	Error	Client received request from server, but remote installer start up failed.
8001#	Error	Memory shortage occurred in the relay system.
8002	Error	System error occurred in the relay system.
8003	Information	Software Distribution SubManager started.
8004	Information	Software Distribution SubManager stopped.
8005	Error	An error occurred while receiving job instruction file (hostname : *xx*).
8006	Error	System error occurred in the Software Distribution SubManager.
8007	Error	The resource file to distribute does not exist.
8008	Error	The script file for the job to execute does not exist.
8009	Error	Destination host specified in job instruction is invalid.
8010	Error	Connect to the target host failed. (*xx*/*yy*)
8012	Error	Error occurred creating a NamedPipe
8013	Error	Error occurred connecting a NamedPipe
8014	Error	Read message error
8015	Error	Write message error
8016	Error	Message operand contains invalid value.
8017	Error	There is sequence error in the message.
8018	Information	There is no message from server.
8019	Error	*xx*: deletion failed.
8020	Success	*xx*: deletion complete.
8021	Information	Package [*xx*] is stored.
8022	Information	Updated the script file of package [*xx*].
8023#	Error	The higher system cannot be connected because that is old version. (hostname:*xx*)
8024#	Error	No Free Space to download the package.
8025#	Error	No Free Space to download the script file.
8026#	Error	No free space in package directory to store the package.
8027	Error	Destination host not defined (hostname:*xx*).
8028	Error	An error occurred clearing package keeping directory.
8029	Information	Package keeping directory is cleared.
8030	Error	An error occurred wile resource file downloading.
8031	Error	An error occurred wile script file downloading.

Event ID	Message type	Message text
8032	Error	Communication error occurred while relaying a job (hostname : *xx*).
8034	Information	Receive a request of suspend.
8035	Information	Receive a request of restart.
8036	Information	Collect file keeping directory was initialized.
8037	Error	Initialize of collected file directory failed.
8038	Information	Target files under the directory used to store the collected files were sent.
8039	Error	Target files under the directory used to store the collected files could not be sent.
8040	Error	Cannot add *xx*.
8041	Information	*xx* was added.
8042	Error	Delete of *xx* from the ID failed.
8043	Error	Delete of *xx* failed.
8044	Information	*xx* was deleted.
8045	Error	Change of ID group password failed(ID name:*xx*).
8046	Information	Change of password for *xx* complete.
8047	Information	*xx* was deleted from the ID group.
8048	Error	Invalid ID change(request:*xx*).
8049	Error	Transmission of ID file failed.
8050#	Error	ID-Job received from *xx* but *yy* is valid server.
8051	Information	System configuration file was transmitted.
8052	Error	Transmission of System configuration file failed.

Legend: *xx*, *yy*: Any character string

#: We recommend that you monitor this message. For details about the causes of the messages and what action should be taken on them, see *7.1.4 Event log messages that should be monitored, their causes, and the actions to be taken*.

(4) Messages related to the managing server

Event ID	Message type	Message text
10101	Error	System error occurred.
10106	Error	File close error.
11002	Error	System error occurred in the file transfer server.
11003	Error	Processing contradiction occurred in the file transfer server.
11004	Error	The processing sequence to the file transfer server is improper.
11005	Error	Processing request to a file transfer server is improper.
11006#	Error	While starting the Software Distribution server, a memory shortage had occurred.

Event ID	Message type	Message text
11010	Error	Interruption occurred.
11011	Error	The specified file does not exist.
11017	Error	File error occurred in the management file.
11020#	Error	Setting of an operation environment is improper.
11022#	Error	Resource hangar is destroyed.
11023	Error	An illegal difference instruction file received from *xx*.
11024	Error	An illegal status notification file received from *xx*.
11025	Error	An illegal inventory file received from *xx*.
12013#	Error	Environment for the resource management file access server is destroyed.
12014#	Error	Environment for the resource attribute file access server is destroyed.
12015#	Error	Environment for the execution management file access server is destroyed.
12016#	Error	Environment for the resource state file access server is destroyed.
12017#	Error	It failed in generation of an environment that a resource management file access server operates.
12018#	Error	Generation of an environment for the resource attribute file access server failed.
12019#	Error	Generation of an environment for the execution management file access server failed.
12020#	Error	Generation of an environment for the resource state file access server failed.
12032	Error	No space left on management file, no more space for writing is available.
12033	Error	It failed in creating an index of the management file.
12034	Error	It failed in creating an alternation index of the management file.
12035	Error	It failed in putting on the record key into index of a management file.
12036	Error	It failed in putting on the letter into index of a management file.
12037	Error	It failed in dividing index of a management file.
12038	Information	System is suspended. Download request is denied.
13003	Information	Software Distribution server was started.
13004	Information	Software Distribution server was terminated.
14004#	Error	System error occurred during start.
14010	Error	Connection request to the Software Distribution Manager is improper.
14018	Error	The hostname of connection destination is not set.

Event ID	Message type	Message text
14033	Information	Request of connection is denied, because server is refuse condition.
14035	Information	Server will be made to be connectable condition.
14036	Information	Symbol of OpenView NNM Add Failed (Node=*xx*, Label=*yy*).
14038#	Error	Process of Software Distribution SubManager was down.
14039	Error	JP1/IM Server or Agent is not installed.
14040	Error	A notice of event to the JP1/IM Event Server failed.
16003	Error	Inventory data is incorrect(*xx*).
16004	Information	Update of *xx* inventory data is suspended.
16005	Error	System error occurred in processing inventory.
16006	Error	System error occurred.
16007	Warning	New inventory data cannot be saved, because transfer of old inventory is not finished.
16008	Warning	You need to transfer the old inventory data using SETUP.
16015	Warning	Alert information from the client (*xx*) could not be output to a CSV file.
18000	Error	netmdmclt/udp service was not definition.
18001	Error	Local host name is not defined.
18002	Error	Socket error occurred.
18003	Error	*xx* was unknown client address.
18004	Error	Call to *xx* for distribution job failed.
18005	Error	Fail in start rtcp server.
18006	Error	Error rtcp before process (host:*xx*).
18007	Error	Fail in recvfrom.
18008	Information	Client request server started.
18010	Error	Message size error.
18011	Error	netmdmclt/tcp service was not definition.
19001	Information	Job schedule server was started.
19002	Information	Job schedule server was terminated.
19003	Warning	The schedule information was deleted because the *xx* required for schedule execution does not exist. (job definition name: *yy*, job number: *nn*, schedule execution date: *mm*)

Legend: *xx*, *yy*, *nn*, *mm*: Any character string.

#: We recommend that you monitor this message. For details about the causes of the messages and what action should be taken on them, see *7.1.4 Event log messages that should be monitored, their causes, and the actions to be taken*.

(5) Messages related to client alerts

Event ID	Message type	Message text
30000	Warning	The client(*xx*) is in critical condition(*yyyyyy*).
30001	Warning	The client(*xx*) reported a warning(*yyyyyy*).
30002	Information	The client(*xx*) has returned to normal(*yyyyyy*).

Legend:
xx: Any character string
yyyyyy: Alert message

(6) Messages related to commands

Event ID	Message type	Message text
1	Error	No input file. Error message from *path op*.
2	Error	*path op* An attempt to create the package or a file in the package failed. Check the JP1/SD log files. Check the specified path of the file or directory to be packaged, or reduce the number of files or directories to be packaged. Detailed information:*xx*.
4	Error	Error in reading the file. Error message from *path op*.
5	Error	Error in server connection. Error message from *path op*.
7	Error	Error in writing file. Error message from *path op*.
12	Error	Invalid Environment. Error message from *path op*.
13	Error	System Error. Error message from *path op*.
99	Error	Exception error - *xx*. Error message from *path op*.
100	Error	Failed to update input file for new version/generation: *path op*.
101	Error	Failed to melt *path op*.
102	Error	Valid path to file(s) to be collected not found. Error message from *path op*.
131	Error	Package *xx* restoration failed. Error message from *path op*.
133	Error	Package / Cabinet *xx* backup failed. Error message from *path op*.
134	Error	One of *xx*.pkg, *xx*.sci, *xx*.dpf file is not available for restoration. Error message from *path op*.
135	Error	Unable to execute external program *xx*. Error message from *path op*.
136	Error	Maximum execution period for the command expired. *xx* Job not ended. Error message from *path op*.
137	Error	*xx* is invalid input value. Error message from *path op*.
138	Error	Error in backing up package *xx*. Error Message From *path op*.
188	Error	Unable to monitor ID job and all node job. Error message from *path op*.
190	Error	Specified job [*xx*] does not exist. Error message from *path op*.

Event ID	Message type	Message text
192	Error	Monitor Interval Time is greater than the time out period. Error message from *path op*.
193	Error	Error type specification is invalid for SubManager. Error message from *path op*.
1003	Error	API Parameter is invalid (Handle value specification). Error message from *path op*.
1004	Error	Other process is using file. Error message from *path op*.
1006	Error	API parameter is invalid (Unspecified parameter error). Error message from *path op*.
1007	Error	API parameter is invalid (Name syntax check error). Error message from *path op*.
1008	Error	Already exists. Error message from *path op*.
1009	Error	Job creation continues. Error message from *path op*.
1010	Error	No search items or search ended specified information does not exist. Error message from *path op*.
1011	Error	Not enough space on disk. Error message from *path op*.
1014	Error	Fatal error occurred (internal error detection). Error message from *path op*.
1016	Error	System call error occurred due to API. Error message from *path op*.
1017	Error	API cannot continue transaction. Error message from *path op*.
1032	Error	Destination not specified (job definition creation/edit error). Error message from *path op*.
1033	Error	Package specification does not exist (Job definition creation / edit error). Error message from *path op*.
1035	Error	Unusable node exists. Error message from *path op*.
1036	Error	Usable node not found. Error message from *path op*.
1037	Error	Unusable package exists. Error message from *path op*.
1038	Error	Usable package not found. Error message from *path op*.
1040	Error	Retry object not found. Error message from *path op*.
1045	Error	Unusable node and package exists. Error message from *path op*.
1051	Error	Modification/deletion item does not exists. Error message from *path op*.
1052	Error	Cabinet is full. Error message from *path op*.
2001	Error	Memory allocation failure. Error message from *path op*.
2002	Error	Parameter file *xx* is invalid. Error message from *path op*.
2003	Error	Parameter file contains invalid value *xx*. Error message from *path op*.
2004	Error	Server connect error. Error message from *path op*.
2005	Error	Output file open error. Error message from *path op*.
2006	Error	Invalid command line argument. Error message from *path op*.

Event ID	Message type	Message text
2007	Error	*xx* is invalid argument. Error message from *path op*.
2021	Error	*path op* Processing ended because the user logged off.

Legend:
path: Command execution path
op: Command execution option
xx: Any character string

7.1.3 Event log messages for JP1/Software Distribution Client (client)

The following shows the event log messages that JP1/Software Distribution Client (client) can output.

Event ID	Message type	Applicable function	Message text
0	Error	Common processing	Windows NT API error occurred. Request: *xx*, Error *yy*
5	Error	Command related	Error in server connection. Error message from *path op*.
7	Error	Command related	Error in writing file. Error message from *path op*.
99	Error	Command related	Exception error - *xx*. Error message from *path op*.
100	Error	Command related	Failed to update input file for new version/generation: *path op*.
1001[#1]	Error	TCP/IP related	An error occurred while the execution request was received from Server.
1002[#1]	Error	TCP/IP related	TCP/IP (Windows Sockets Interface) error occurred. *xx*/*yy*
1003[#]	Error	TCP/IP related	An error occurred on WinSockAPI. Cause of error: *xx* Additional information: *yy*
2001	Error	Command related	Memory allocation failure. Error message from *path op*.
2002	Error	Command related	Parameter file *xx* is invalid. Error message from *path op*.
2003	Error	Command related	Parameter file contains invalid value *xx*. Error message from *path op*.
2005	Error	Command related	Output file open error. Error message from *path op*.
2006	Error	Command related	Invalid command line argument. Error message from *path op*.
2021	Error	Command related	*path op* Processing ended because the user logged off: *xx*
5012[#1]	Error	Installation related	An error occurred in the following process. Cause of error: *xx* Additional information: *yy*
6001[#1]	Error	Packager related	An error occurred in the following process. Cause of error: *xx* Additional information: *yy*

Event ID	Message type	Applicable function	Message text
7002	Information	Service related	Software Distribution Client Service was stopped. (*xx*/*xx*)
7003	Information	Service related	Software Distribution Client Service was started. Ver=*yy*
7004[#1]	Error	Installation related	An error occurred while instructions information was referred from Server. (File system of Windows NT may be invalid.)
7008	Information	Execution request related	Remote Installer was started because the processing request was received from Server.
7009[#1#2]	Error	Execution request related	Though the processing request was received from Server, Remote Installer could not start.
7010	Information	Execution request related	*xx* was started because the processing request was received from Server.
7011	Error	Execution request related	Though the processing request was received from Server, *xx* could not be started.
7012	Information	Execution request related	Receiving the request for execution service was stopped. The request for processing cannot be received from Server under termination.
7013	Error	Clients in general	An error occurred in the following process. Additional information: *xx*
7014[#1]	Error	Other functions	An error occurred in program. Cause of error: *xx*, Additional information: *yy*
7015	Information	Job information related	*xx*
7016	Information	Related to ID group registration	*xx*
7017	Information	Related to system configuration registration	*xx*
7018[#1]	Error	Other functions	Own host name cannot be acquired. The range of own host name is outside the valid range
20000[#1]	Error	Common processing	An error occurred in the following process. Cause of error: *xx* Additional information: *yy*

Legend:

path: Command execution path

op: Command execution option

xx, *yy*: Any character string

#1: We recommend that you monitor this message. For details about the causes of the messages and what action should be taken on them, see *7.1.4 Event log messages that should be monitored, their causes, and the actions to be taken*.

#2: This message is not output when the JP1/Software Distribution Client (client) version is 09-50 or later.

7.1.4 Event log messages that should be monitored, their causes, and the actions to be taken

Of the event log messages that are output by JP1/Software Distribution, this section explains the messages that should be monitored, their causes, and the actions to be taken.

(1) Format of message descriptions

In this section, messages are explained in the following format:

XXXXX (event ID) <*YYYYY* (message type)> <*Z* (system type)>

Message text

Cause

This describes the cause of the message and explains the variables that occur in the message text.

Action

This explains the action to be taken.

<*YYYYY*>

This indicates the message type.

<*Z*>

This indicates the type of system about which the event log message is output. Systems types are indicated in abbreviated codes, as listed in the following table:

Program	System type	Abbreviation code
JP1/Software Distribution Manager	Central manager	M
	Relay manager	R
JP1/Software Distribution Client	Relay system	S
	Client	C

(2) Event log messages that should be monitored, their causes, and the actions to be taken

The following section shows the event log messages that should be monitored, their causes, and the action to be taken.

1001 <Error> <R, S, C>

`An error occurred while the execution request was received from Server.`

Cause

It is possible that the system is unstable due to a memory shortage.

Action

Relay manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system or client

After resolving the memory shortage problem, use the client manager to restart the client.

1002 <Error> <R, S, C>

`TCP/IP (Windows Sockets Interface) error occurred.` *xx*/*yy*

Cause

Either the network environment is invalid or it is possible that a communication failure occurred.

xx: Name of the function in which the error occurred

yy: Socket error code

Action

Relay manager

After resolving the network environment or communication setting problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system or client

After resolving the network environment or communication settings problem, use the client manager to restart the client.

1003 <Error> <R, S, C>

`An error occurred on WinSockAPI. Cause of error: xx Additional information: yy`

Cause

Either the network environment is invalid or it is possible that a communication failure occurred.

xx: Socket error code

yy: Name of the function in which the error occurred

Action

Relay manager

After resolving the network environment or communication setting problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system or client

After resolving the network environment or communication settings problem, use the client manager to restart the client.

5012 <Error> <R, S, C>

`An error occurred in the following process. Cause of error: xx Additional information: yy`

Cause

An error occurred during installation of a package.

xx: C language runtime error or Win32 API error code

yy: Name of the function in which the error occurred

Action

Based on the error code and the name of the function in which the error occurred, resolve the error, and then rerun the job.

6001 <Error> <R, S, C>

`An error occurred in the following process. Cause of error: xx Additional information: yy`

Cause

An error occurred during packaging.

xx: C language runtime error or Win32 API error code

yy: Name of the function in which the error occurred

Action

Based on the error code and the name of the function in which the error occurred, resolve the error, and then rerun the job.

7004 <Error> <R, S, C>

`An error occurred while instructions information was referred from Server.`

`(File system of Windows NT may be invalid.)`

Cause

Either the file is corrupt or a disk failure has occurred.

Action

Relay manager

Run Scan Disk. After resolving the file or disk problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system or client

Run Scan Disk. After resolving the file or disk problem, use the client manager to restart the client.

7009 <Error> <R, S, C>

```
Though the processing request was received from Server, Remote Installer could not
start.
```

Cause

It is possible that the system is unstable due to a memory shortage.

Action

Relay manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system or client

After resolving the memory shortage problem, use the client manager to restart the client.

7014 <Error> <R, S, C>

```
An error occurred in program. Cause of error: xx, Additional information: yy
```

Cause

An error occurred during the registration of packaging.

xx: C language runtime error or Win32 API error code

yy: Name of the function in which the error occurred

Action

Based on the error code and the name of the function in which the error occurred, resolve the error, and then rerun the packaging.

7018 <Error> <R, S, C>

```
Own host name cannot be acquired. The range of own host name is outside the valid
range
```

Cause

The local host name is coded in 65 or more characters.

Action

Code the local host name in 64 or fewer characters.

8001 <Error> <R, S>

```
Memory shortage occurred in the relay system.
```

Cause

It is possible that the system is unstable due to a memory shortage.

Action

Relay manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

8023 <Error> <R, S>

```
The higher system cannot be connected because that is old version. (hostname:xx)
```

Cause

The version of the higher system is potentially too old.

xx: Host name or IP address of the source or connection destination, specified in setup, of the job execution request.

Action

Check the version of the higher system. If the version is too old, upgrade the higher system.

8024 <Error> <R, S>

```
No Free Space to download the package.
```

Cause

Insufficient free space on the hard disk.

Action

Allocate enough free space on the hard disk, and then rerun the job. For details about hard disk space requirements, see *5.3.3 Disk space requirements* in the manual *Description and Planning Guide*.

8025 <Error> <R, S>

```
No Free Space to download the script file.
```

Cause

Insufficient free space on the hard disk.

Action

Allocate enough free space on the hard disk, and then rerun the job. For details about hard disk space requirements, see *5.3.3 Disk space requirements* in the manual *Description and Planning Guide*.

8026 <Error> <R, S>

```
No free space in package directory to store the package.
```

Cause

Insufficient free space on the hard disk

Action

Allocate enough free space on the hard disk, and then rerun the job. For details about hard disk space requirements, see *5.3.3 Disk space requirements* in the manual *Description and Planning Guide*.

8050 <Error> <S>

```
ID-Job received from xx but yy is valid server.
```

Cause

The connection destination is specified incorrectly.

xx: Host name or IP address of the connection destination specified in the setup

yy: Host name or IP address of the higher system that executed the editing of the ID.

Action

On the **Connection Destination** page of the Relay System Setup dialog box, check the settings for the higher system. For details about the **Connection Destination** page, see *5.2.1 Connection Destination page* in the manual *Setup Guide*.

10000 <Error> <M, R>

```
RDBMS is connected up to the maximum connection.
```

Cause

There are not enough user connections that can simultaneously connect to the relational database.

Action

Check *user connections* settings if Microsoft SQL Server is used as a relational database server, or *process* settings for Oracle, and increase the number of user connections that can connect simultaneously to the relational database.

10008 <Error> <M, R>

```
Database format unmatched.
```

Cause

The version of the relational database does not match that of JP1/Software Distribution.

Action

Use Database Manager to upgrade the relational database.

10009 <Error> <M, R>

```
Login to RDBMS failed.
```

Cause

The settings for using the relational database are incorrect.

xx: Type of relational database being used

- `NETM_MSSQL`: Microsoft SQL Server
- `NETM_ORACLE`: Oracle

Action

Check the settings in the **Database Environment** page settings of the Server Setup dialog box. For details about the **Database Environment** page, see *4.2.1(2) Database Environment page (for Microsoft SQL Server or Oracle)* in the manual *Setup Guide*.

10010 <Error> <M, R>

```
DataSourceName is invalid.
```

Cause

The name of the relational database is invalid.

xx: Type of relational database being used

- `NETM_MSSQL`: Microsoft SQL Server
- `NETM_ORACLE`: Oracle

Action

Check the settings in the **Database Environment** page settings of the Server Setup dialog box. For details about the **Database Environment** page, see *4.2.1(2) Database Environment page (for Microsoft SQL Server or Oracle)* in the manual *Setup Guide*.

10011 <Error> <M, R>

```
An access error to RDBMS, because transaction log full.
```

Cause

Not enough free space in the transaction log for the relational database.

Action

Allocate enough free transaction log area for the relational database.

10012 <Error> <M, R>

```
An access error to RDBMS, because capacity of database over.
```

Cause

Not enough free area for the relational database.

Action

Allocate enough free area for the relational database.

11006 <Error> <M, R, S>

```
While starting the Software Distribution server, a memory shortage had occurred.
```

Cause

It is possible that the system is unstable due to a memory shortage.

Action

Manager or relay manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

11020 <Error> <M, R, S>

```
Setting of an operation environment is improper.
```

Cause

It is possible that JP1/Software Distribution settings are incorrect.

Action

Manager or relay manager

Check the settings in the **Server Customization** page settings of the Server Setup dialog box. For details about the **Server Customization** page, see *4.2.4 Server Customization page* in the manual *Setup Guide*.

Relay system

Check the settings for the **Relay system customization** page in the Relay System Setup dialog box. For details about the **Relay system customization** page, see *5.2.4 Relay System Customization page* in the manual *Setup Guide*.

11022 <Error> <M, R, S>

```
Resource hangar is destroyed.
```

Cause

It is possible that the package storage directory for JP1/Software Distribution is corrupt.

Action

In the Maintenance Wizard, select **Revise** to re-install JP1/Software Distribution Service, which will repair and initialize the package storage directory. For details about the Maintenance Wizard, see *1.3 Changing installation settings* in the manual *Setup Guide*.

12013 <Error> <M, S>

```
Environment for the resource management file access server is destroyed.
```

Cause

It is possible that the cabinet information storage directory for JP1/Software Distribution is corrupt.

Action

In the Maintenance Wizard, select **Revise** to re-install JP1/Software Distribution Service, which will repair and initialize the cabinet information storage directory. For details about the Maintenance Wizard, see *1.3 Changing installation settings* in the manual *Setup Guide*.

12014 <Error> <M, S>

```
Environment for the resource attribute file access server is destroyed.
```

Cause

It is possible that the package information storage directory for JP1/Software Distribution Manager is corrupt.

Action

In the Maintenance Wizard, select **Revise** to re-install JP1/Software Distribution Service, which will repair and initialize the package information storage directory. For details about the Maintenance Wizard, see *1.3 Changing installation settings* in the manual *Setup Guide*.

12015 <Error> <M, S>

```
Environment for the execution management file access server is destroyed.
```

Cause

It is possible that the job detail information storage directory for JP1/Software Distribution is corrupt.

Action

In the Maintenance Wizard, select **Revise** to re-install JP1/Software Distribution Service, which will repair and initialize the job detail information storage directory. For details about the Maintenance Wizard, see *1.3 Changing installation settings* in the manual *Setup Guide*.

12016 <Error> <M, S>

```
Environment for the resource state file access server is destroyed.
```

Cause

It is possible that the installation package information storage directory for JP1/Software Distribution is corrupt.

Action

In the Maintenance Wizard, select **Revise** to re-install JP1/Software Distribution Service, which will repair and initialize the installation package information storage directory. For details about the Maintenance Wizard, see *1.3 Changing installation settings* in the manual *Setup Guide*.

12017 <Error> <M, S>

```
It failed in generation of an environment that a resource management file access
server operates.
```

Cause

It is possible that the system is unstable due to memory shortage.

Action

Manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

12018 <Error> <M, S>

```
Generation of an environment for the resource attribute file access server failed.
```

Cause

It is possible that the system is unstable due to memory shortage.

Action

Manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

12019 <Error> <M, S>

```
Generation of an environment for the execution management file access server failed.
```

Cause

It is possible that the system is unstable due to memory shortage.

Action

Manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

12020 <Error> <M, S>

```
Generation of an environment for the resource state file access server failed.
```

Cause

It is possible that the system is unstable due to memory shortage.

Action

Manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

14004 <Error> <M, R, S>

```
System error occurred during start.
```

Cause

It is possible that the system is unstable due to memory shortage.

Action

Manager or relay manager

After resolving the memory shortage problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system

After resolving the memory shortage problem, use the client manager to restart the client.

14037 <Error> <M, R>

```
Process of Software Distribution Manager was down.
```

Cause

JP1/Software Distribution detected an error. It is possible that a service (Remote Installer Server) for JP1/Software Distribution Manager is stopped.

Action

From **Control Panel**, choose **Administrative Tools**, and then **Services** to check the status of Remote Install Server. If it is *Start* or *Pause*, restart Remote Install Server. If no status is shown (not running), start Remote Install Server.

14038 <Error> <S>

```
Process of Software Distribution SubManager was down.
```

Cause

JP1/Software Distribution detected an error. It is possible that a service (Client Install Service) for JP1/Software Distribution Client (relay system) is down.

Action

Use the client manager to check the client's status. If the status is *Running*, restart the client. If it is *Terminated*, or *Starting or terminating*, or *Non-resident*, start the client. For details about how to start a non-resident client, see *11.1.2(2) Making a client non-resident* in the manual *Administrator's Guide Volume 1*.

16016 <Error> <M, R>

```
The operation history storage directory cannot be accessed.
```

Cause

It is possible that the file is corrupt or there is a disk failure.

Action

Run Scan Disk. After resolving the file or disk problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

16017 <Error> <M, R>

```
The operation history backup directory cannot be accessed.
```

Cause

It is possible that the file is corrupt or there is a disk failure.

Action

Run Scan Disk. After resolving the file or disk problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

16018 <Error> <M, R>

```
The operation history cannot be saved because the space is insufficient in the
history storage directory.
```

Cause

Insufficient free space on the hard disk.

Action

Allocate enough free space on the hard disk, and then rerun the job. For details about hard disk space requirements, see *5.3.3 Disk space requirements* in the manual *Description and Planning Guide*.

16019 <Error> <M, R>

```
The operation history cannot be backed up because the space is insufficient in the
operation history backup directory.
```

Cause

Insufficient free space on the hard disk.

Action

Allocate enough free space on the hard disk. For details about hard disk space requirements, see *5.3.3 Disk space requirements* in the manual *Description and Planning Guide*.

16020 <Error> <M, R>

```
The space in the operation history backup directory has reached the threshold value.
```

Cause

The available space in the operation history backup directory has reached the threshold value that was specified in the setup.

Action

From **Control Panel**, choose **Administrative Tools**, and then **Services** to terminate the JP1/Software Distribution Manager service (Remote Install Server), and back up everything under the operation history backup directory specified in the setup. After making a backup, delete everything under the backup directory to allocate enough space, and then start the service (Remote Install Server) for JP1/Software Distribution Manager.

16023 <Error> <M, R>

```
Processing for storing operation monitoring history in the database resulted in a
system error.
```

Cause

JP1/Software Distribution detected an error when operation monitoring history was to be stored in the database.

Action

See *6.7 Collecting maintenance data*, collect the data required for determining the cause of the error, then contact the support service or distributor.

16024 <Error> <M, R>

```
Processing for storing operation monitoring history in the database resulted in an
RDB access error.
```

Cause

JP1/Software Distribution detected an error when operation monitoring history was to be stored in the database.

Action

See *6.7 Collecting maintenance data*, collect the data required for determining the cause of the error, then contact the support service or distributor.

16030 <Error> <M, R>

```
An attempt to connect to the network drive has failed during the access to the
operation log.:xx
```

Cause

There may be an error in the authentication information settings or in the connection path to the network drive.

Action

Specify a valid login ID, password, and domain name in the **Network Connection** panel of Manager Setup.

Also check the connection path to the network drive. If the connection path to the operation history storage directory is incorrect, perform an overwrite installation, and specify the correct path in the Software Operation History Storage Directory Settings dialog box. If the operation history backup directory is incorrect, specify the correct path on the **Operation Monitoring** page.

16031 <Warning> <M, R>

```
Store the operation monitoring history that has not yet been stored to the database
by executing the dcmmonrst command with the option "/x".
```

Cause

The operation history storage directory contains an operation history file, whose file is 20 MB or greater that has not yet been stored in the database.

Action

Execute the `dcmmonrst` command with `/x` specified in the argument to store the operation history in the database.

20000 <Error> <R, S, C>

```
An error occurred in the following process. Cause of error: xx Additional
information: yy
```

Cause

Either the network environment is invalid or it is possible that a communication failure occurred.

xx: Socket error code

yy: Name of the function in which the error occurred

Action

Relay manager

After resolving the network environment or communication setting problem, use **Services** to restart the server (Remote Install Server) for JP1/Software Distribution Manager (from **Control Panel**, choose **Administrative Tools**, and then **Services**).

Relay system or client

After resolving the network environment or communication settings problem, use the client manager to restart the client.

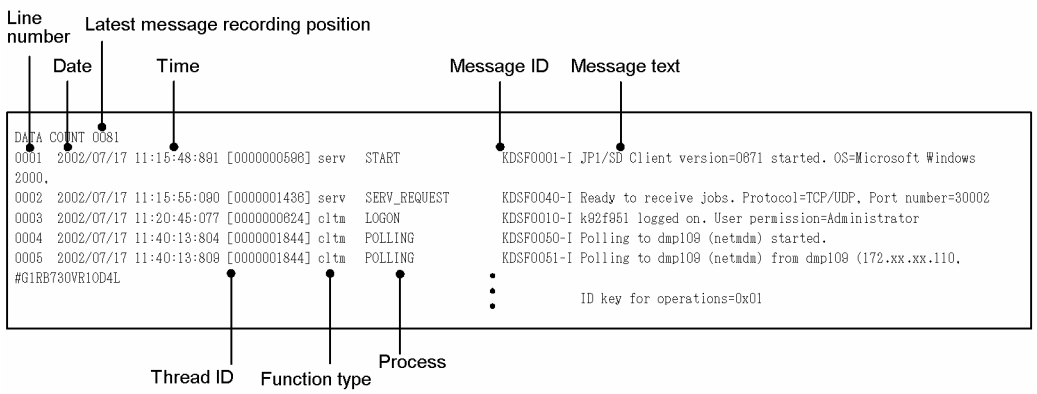
7.2 Lists of basic client log messages

You can check basic client messages in the USER_CLT.LOG file. The following explains the format of the USER_CLT.LOG file and the contents of the messages.

7.2.1 USER_CLT.LOG file format

The USER_CLT.LOG file is output in the following format:

Figure 7–1: Format of the USER_CLT.LOG file



Line 1 of the USER_CLT.LOG file indicates the line number of the line containing the latest message, and messages are displayed in line 2 and subsequent lines. You should reference the date, time, message ID, and message text to check the operation of the client. In line 2 and beyond, for some items the output position (column) is fixed. The following output positions apply:

- Line number: columns 0-3
- Date: columns 6-15
- Time (hour, minute, second, millisecond): columns 17-28
- Thread ID: columns 30-41
- Function type: columns 43-50
- Processing: columns 52-67
- Message ID: columns 69-78
- Message text: columns 80-189

When the client's OS is Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, or Windows Vista, the output positions for the items are as follows:

- Line number: columns 0-3
- Date: columns 5-14
- Time (hour, minute, second, millisecond): columns 16-27
- Thread ID: columns 29-52
- Function type: columns 54-61
- Processing: columns 63-78
- Message ID: columns 80-89
- Message text: columns 91-189

7.2.2 Format of message descriptions

In this section, messages are explained in the following format:

KDSF*XXXX-M* (*message-ID*)

This is a message text.

In the area enclosed in curly brackets ({}), one of the items delimited by a stroke (|) is output. In the area enclosed in square brackets ([]), items are either output or not output, depending on the situation.

Cause

This describes the cause of the message and explains the variables that occur in the message text.

The *instruction number* in a message is a unique number that represents a detailed processing unit for the job. Messages with a matching instruction number indicate a log concerning the same processing. For example, if two packages are distributed by a job, for each package a message is output, indicating the receipt or success of the job. In this case, although the messages indicate the same job number, the instruction numbers are unique for each package. To look up the reception or success of a package, you can reference all the messages having the same instruction number.

The *maintenance information* in a message is an item that you may need when you ask maintenance personnel about the message. Users need not investigate the contents of maintenance information.

Action

This describes the action to be taken. This item is left blank for messages that do not require any action.

The letter *M* at the end of a message ID indicates one of the following message type codes:

- `I`: Information message
- `W`: Warning message
- `E`: Error message

7.2.3 List of messages

This section shows message contents and any actions to be taken.

KDSF0001-I

xxxxxxxx version=*vvrrss* started. OS=*oooooooo*, Resident client={YES|NO}, Run without Administrator permissions={YES|NO}

Cause

Product *xxxxxxxx* started under the following conditions:

xxxxxxxx: JP1/Software Distribution product name

vvrrss: JP1/Software Distribution version/revision

oooooooo: OS name and version

`Resident client={YES|NO}`: Client resident yes/no

`YES`: Resident

`NO`: Non-resident

`Run without Administrator permissions={YES|NO}`: Use the *Facility for installation with non-Administrator user permissions*

`YES`: Use the *Facility for installation with non-Administrator user permissions*.

`NO`: Do not use the *Facility for installation with non-Administrator user permissions*.

This setting is for Windows NT clients. For Windows Me and Windows 98 clients, the option `NO` is always output.

KDSF0002-W

xxxxxxxx version=*vvrrss* cannot start because * is specified for the connection destination. OS=*oooooooo*

Cause

Product *xxxxxxxx* cannot be started because an asterisk (`*`) is specified for the connection destination. It is possible that JP1/Software Distribution Client is pre-installed, but the connection destination is not yet set.

xxxxxxxx: JP1/Software Distribution product name (`JP1/Software Distribution Client` is displayed)

vvrrss: JP1/Software Distribution version/revision

oooooooo: OS name and version

Action

In the setup, set the connection destination, and restart JP1/Software Distribution.

KDSF0003-E

A process *pppppppp* failed to start in *xxxxxxxx* version=*vvrrss*. OS=*oooooooo*, {Win32|Socket|Runtime} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

The process failed to start.

pppppppp: Name of the failed process

xxxxxxxx: JP1/Software Distribution product name

vvrrss: JP1/Software Distribution version/revision

oooooooo: OS name and version

`{Win32|Socket|Runtime}`: Error type

`Win32`: A Win32 API error

`Socket`: A socket error

`Runtime`: A C language runtime error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Restart the service or OS.

KDSF0004-W

A question mark (?) is specified for the connection destination, so the product *xxxxxxxx* version=*vvrrss* will start but only Local System Viewer and the system monitoring facility will be available. OS=*oooooooo*

Cause

Because a question mark (`?`) is specified for the connection destination, although product *xxxxxxxx* starts, no facilities other than Local System Viewer and the system monitoring facility operate.

xxxxxxxx: JP1/Software Distribution product name (`JP1/Software Distribution Client` is displayed)

vvrrss: JP1/Software Distribution version/revision

oooooooo: OS name and version

Action

In the setup, set the connection destination, and restart JP1/Software Distribution.

KDSF0010-I

uuuuuuuu(SessionID=*sss*) logged on. User permission={Administrator|Ordinary user}

Cause

The user logged on.

uuuuuuuu: Logon user name

sss: Session ID (applicable when the OS is Windows Vista)

`{Administrator|Ordinary user}`: Logon user permissions

`Administrator`: Administrator permissions

`Ordinary user`: Non-Administrator user permissions

KDSF0020-I

A {logoff|shutdown} request was issued from OS[,SessionID=*sss*].

Cause

The OS requested a logoff or shutdown (only when a resident client is specified).

`{logoff|shutdown}`: Request from the OS

`logoff`: Logoff

`shutdown`: Shutdown

sss: Session ID (applicable when the OS is Windows Vista)

KDSF0030-I

xxxxxxxx terminated normally.

Cause

Product *xxxxxxxx* terminated normally.

xxxxxxxx: JP1/Software Distribution product name

KDSF0031-W

A process down was detected in *xxxxxxxx*. Process name=*pppppppp*

Cause

A process down condition was detected.

xxxxxxxx: JP1/Software Distribution product name

pppppppp: Target process name

Action

Use the client manager to check to see whether the client is starting. If it is not starting, either start the client or restart the OS. If the client is starting, no action is required.

If this problem occurs frequently, notify the system administrator.

KDSF0032-W

The process *pppppppp* was forcibly terminated by a timeout.

Cause

A process that does not terminate within a fixed time was found during the termination processing of the product. The process was terminated.

pppppppp: Target process name

KDSF0040-I

Ready to receive jobs. Protocol={TCP|UDP|TCP/UDP}, Port number=*yyyyyyyy*

Cause

The job is ready to be received.

`{TCP|UDP|TCP/UDP}`: Available protocol

`TCP`: TCP protocol

`UDP`: UDP protocol

`TCP/UDP`: TCP and UDP protocols

yyyyyyyy: Available port number (decimal)

KDSF0041-E

Preparation for receiving jobs failed. {Win32|Socket|Runtime} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

Preparation for receiving jobs failed.

{Win32|Socket|Runtime}: Error type

Win32: Win32 API error

Socket: Socket error

Runtime: C language runtime error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Restart JP1/Software Distribution. If the problem persists after the restart, review the operating environment in reference to the description of the error code.

KDSF0042-I

A job execution request was received from *xxxxxxxx* (*yyy.yyy.yyy.yyy, zzzzzz*). Protocol={TCP|UDP}, ID key for operations =0x*nn*

Cause

A job execution request was received under the following conditions from a higher system:

xxxxxxxx: Higher system host name

yyy.yyy.yyy.yyy: Higher system IP address

zzzzzz: Higher system product type

netmdm: JP1/Software Distribution Manager

netmdmw: JP1/Software Distribution Client (relay system)

{TCP|UDP}: Protocol receiving the execution request

TCP: TCP protocol

UDP: UDP protocol

0x*nn*: Higher system operation key

0x01: Host name

0x02: IP address

KDSF0050-I

Polling to *xxxxxxxx* (*yyyyyyyy*) started.

Cause

Polling started.

xxxxxxxx: Polling-to host name or IP address

yyyyyyyy: Polling-to product name

netmdm: JP1/Software Distribution Manager

netmdmw: JP1/Software Distribution Client (relay system)

KDSF0051-I

Polling to *xxxxxxxx* (*yyyyyyyy*) from *hhhhhhhh* (*iii.iii.iii.iii*, *ddddddd*) is completed. ID key for operations=0x*nn*

Cause

Polling completed.

xxxxxxxx: Polling-to host name or IP address

yyyyyyyy: Polling-to product name

netmdm: JP1/Software Distribution Manager

netmdmw: JP1/Software Distribution Client (relay system)

hhhhhhhh: Local host name

iii.iii.iii.iii: Local host IP address

ddddddd: Local host host ID

0x*nn*: Higher system operation key

0x01: Host name

0x02: IP address

0x03: Host name (host ID used)

0x04: IP address (host ID used)

0xff: Invalid operation key information

KDSF0052-W

Polling to *xxxxxxxx* (*yyyyyyyy*) from *hhhhhhhh* (*iii*.*iii*.*iii*.*iii*, *ddddddd*) failed. ID key for operations=0x*nn*, {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

Polling failed due to an error (including temporary errors).

xxxxxxxx: Polling-to host name or IP address

yyyyyyyy: Polling-to product type

netmdm: JP1/Software Distribution Manager

netmdmw: JP1/Software Distribution Client (relay system)

hhhhhhhh: Local host name

iii.*iii*.*iii*.*iii*: Local host IP address

ddddddd: Local host host ID

0x*nn*: Higher system operation key

0x01: Host name

0x02: IP address

0x03: Host name (host ID used)

0x04: IP address (host ID used)

0xff: Invalid operation key information

{Win32|Socket|Runtime|Protocol}: Error type

Win32: Win32 API error

Socket: Socket error

Runtime: C language runtime error

Protocol: JP1/Software Distribution protocol error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Make sure that the polling-to host name, IP address, and product name are specified correctly. If they are correctly specified, check to see if the higher system at the polling destination is started.

KDSF0053-I

Searching the local host for a package to be installed started. Cause={BOOT|SCHEDULE}

Cause

A search for packages to be installed, downloaded in the local host, was started.

Cause={BOOT|SCHEDULE}: Search timing and description

BOOT: When the system is booted, search for packages that are to be installed at system startup time.

SCHEDULE: If a package with an installation date and time was received, search for the package on the specified installation date and time.

KDSF0054-I

Searching the local host for a package to be installed was completed.

Cause

Searching for the package to be installed, which was downloaded in the local host, was completed.

KDSF0055-W

A fatal error occurred during job processing.

Cause

A fatal error occurred during job processing.

Action

Restart the OS.

KDSF0060-I

A job was received. Job type=*yyyyyyyy*, Job number=*jjjjjjjj*, Instruction number=*ccccccc*, Installation timing=*zzzzzzzz* (0x*aa* +0x*bb*), Replace existing package={YES|NO}, Installation date/time=*ttttttttttt* {, Installation mode={BG|GUI}, Package information=*d.cc.pppppp.vvvv.ssss*, Package name=*nnnnnnnn*, *fffffffff* | Software to be Searched=*ssssssss*[, Drive to be Searched=*xxxxxxxx* [:*vvvvvvvv*]]}

Cause

A job was received. This message is also output when the client receives a job deletion instruction because the job was deleted by the managing server during the execution of the job.

yyyyyyyy: job type

`Install package`: *Install package* job

`Get system information from client`: *Get system information from client* job

`Get software information from client`: *Get software information from client* job

`Collect files from client`: *Collect files from client* job

`Send package, allow client to choose`: *Send package, allow client to choose* job

`Transfer user inventory schema to client`: *Transfer user inventory schema to client* job

`Transfer registry collection definition`: *Transfer registry collection definition* job

`Report message`: *Report message* job

`Set the software monitoring` policy: *Set the software monitoring policy* job

`Get software monitoring information from the client`: *Get software monitoring information from the client* job

`Delete job`: Job deletion instruction (a job deletion instruction that is transmitted to the client when the managing server deletes a job; this is not a job)

jjjjjjjj: Job number

ccccccc: Instruction number

zzzzzzzz: Execution timing

`Normal installation`: Normal installation

`Install when system starts`: Install when system starts

`Install when system stops`: Install when system stops

`0x`*aa*`+0x`*bb*: Maintenance information about execution timing

`Replace existing package={YES|NO}`: Replace existing package yes/no

`YES`: Replace existing package.

`NO`: Do not replace.

ttttttttttt: Installation date and time (year, month, day, hour, minute)

The following information is output by an *Install package* job or a *Send package, allow client to choose* job.

`{BG|GUI}`: Installation mode

`BG`: Background installation mode

`GUI`: GUI installation mode

d.*cc*.*pppppp*.*vvvv*.*ssss*: Package information

- *d*: Packager type
  C: Package registered from a UNIX packager (Packager)
  D: Package registered from a Windows packager
- *cc*: Cabinet ID
- *pppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

nnnnnnnn: Package name

ffffffff: Package maintenance information

The following information is output for the *Get software information from client* job:

ssssssss: Software to be searched

- `Search software installed by Software Distribution`: Search for software installed by JP1/Software Distribution.
- `Search all software`: Search for all software.
- `Search for software in "Add/Remove Programs"`: Search for software in **Add/Remove Programs**.
- `Search for a file`: Search for a file.
- `Search for Microsoft Office products`: Search for Microsoft Office products.
- `Search for anti-virus products`: Search for anti-virus products.

When `Software to be searched` is `Search all software` or `Search for a file`, the following information is output:

xxxxxxxx: Type of drive to be searched

- `All Fixed drives`: All fixed drives
- `All Fixed drives and Network drives`: All fixed drives and network drives
- `Specified drives`: Specify drives to be searched.

When `Type of drive to be searched` is `Specified drives`, the following information is output:

vvvvvvvv: Drive to be searched

The drive to be searched is displayed with a letter from `A` to `Z` or a number from `1` to `9`. If multiple drives are specified, drive names are separated with a semicolon (`;`) and displayed. For example, if `A`, `C`, `1`, and `2` are specified, they are displayed as follows:

```
A;C;1;2
```

KDSF0061-I

The local host reported to the managing server that the status of a job on the local host has changed. Instruction number=*cccccccc*, Maintenance code=*kkkkkkkkkkkkk*[: *ssssssss*]

Cause

The managing server was notified that the job status changed on the local host side.

cccccccc: Instruction number

kkkkkkkkkkkkk: Maintenance code (same as Remote Installation Manager)

ssssssss: Description of maintenance code

KDSF0070-I

Downloading a file by unicasting was started. *ffffffff*, Unicasting from *hhhhhhhh*

Cause

File downloading by unicasting started.

ffffffff: Maintenance information

hhhhhhhh: Host name or IP address of the higher system (source of unicasting distribution)

KDSF0071-I

Downloading a file by multicasting was started. *ffffffff*, Multicasting from *hhhhhhhh* (multicast address=*iii*.*iii*.*iii*.*iii*)

Cause

File downloading by multicasting started.

ffffffff: Maintenance information

hhhhhhhh: Host name or IP address of the higher system (source of multicasting distribution)

iii.*iii*.*iii*.*iii*: Multicasting address that is set in the higher system (source of multicasting distribution)

KDSF0072-I

The file was normally downloaded by unicasting. *ffffffff*, Size=*yyyyyyyy* bytes, Unicasting from *hhhhhhhh*

Cause

File downloading by unicasting was successful.

ffffffff: Maintenance information

yyyyyyyy: Size of the downloaded file (in bytes)

hhhhhhhh: Host name or IP address of the higher system (source of unicasting distribution)

KDSF0073-I

The file was normally downloaded by multicasting. *ffffffff*, Size=*yyyyyyyy* bytes, Multicasting from *hhhhhhhh* (multicast address=*iii*.*iii*.*iii*.*iii*)

Cause

File downloading by multicasting was successful.

ffffffff: Maintenance information

yyyyyyyy: Size of the downloaded file (in bytes)

hhhhhhhh: Host name or IP address of the higher system (source of multicasting distribution)

iii.*iii*.*iii*.*iii*: Multicasting address that is set in the higher system (source of multicasting distribution)

KDSF0074-W

An error occurred in downloading a file by unicasting. *ffffffff*, Unicasting from *hhhhhhhh*, {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

File downloading by unicasting failed.

ffffffff: Maintenance information

hhhhhhhh: Host name or IP address of the higher system (source of unicasting distribution)

`{Win32|Socket|Runtime|Protocol}`: Error type

`Win32`: Win32 API error

`Socket`: Socket error

`Runtime`: C language runtime error

`Protocol`: JP1/Software Distribution protocol error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Normally, no action is required on the user's part. JP1/Software Distribution automatically retries according to the settings that are provided in **When communications fail** in the **Retry Communications** page of the Setup dialog box. If the retry times out, another attempt is made after the next polling.

However, if this error occurs frequently when JP1/Software Distribution is newly installed, there may be a problem with the network environment. In that case, you should review the network environment settings.

KDSF0075-W

An error occurred in downloading a file by multicasting. {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

File downloading by multicasting failed.

`{Win32|Socket|Runtime|Protocol}`: Error type

`Win32`: Win32 API error

`Socket`: Socket error

`Runtime`: C language runtime error

`Protocol`: JP1/Software Distribution protocol error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Normally, no action is required on the user's part. JP1/Software Distribution automatically retries. If the retry times out, another attempt is made at unicasting.

However, if this error occurs frequently when JP1/Software Distribution is newly installed, there may be a problem with the network environment. In that case, you should review the network environment settings

KDSF0076-W

Downloading by multicasting terminated abnormally. This package will be downloaded by unicasting. *ffffffff*, Multicasting from *hhhhhhhh* (multicast address=*iii*.*iii*.*iii*.*iii*)

Cause

The downloading of a package by multicasting terminated abnormally. This package will be downloaded by unicasting.

ffffffff: Maintenance information

hhhhhhhh: Host name or IP address of the higher system (source of multicasting distribution)

iii.*iii*.*iii*.*iii*: Multicasting address that is set in the higher system (source of multicasting distribution)

Action

If this message occurs frequently in multiple clients, specify a smaller job package size on the **Multicasting** page for the setup for the source of multicasting.

KDSF0077-W

The multicast address does not match between the higher system and client. This package will be downloaded by unicasting. Multicasting from *hhhhhhhh*, Local multicast address=*lll*.*lll*.*lll*.*lll*

Cause

The multicasting address that is set on the local host does not match the address for the higher system (source of multicasting distribution). This package will be downloaded by unicasting.

hhhhhhhh: Host name or IP address of the higher system (source of multicasting distribution)

lll.*lll*.*lll*.*lll*: Multicasting address that is set in the local host

Action

In a multi-polling environment, if the source of multicasting is not the higher system that is set as a normal connection destination, this message can be ignored. If the higher system is set as a normal connection destination, make sure that the multicasting address used by the higher system matches that used by the client.

KDSF0080-I

Uploading to *hhhhhhhh* was started. *ffffffff*, Size=*yyyyyyyy* bytes

Cause

File uploading started.

hhhhhhhh: Host name or IP address of the upload destination host
ffffffff: Maintenance information
yyyyyyyy: Size of the file to be uploaded (in bytes)

KDSF0081-I

The file was normally uploaded to *hhhhhhhh*. *ffffffff*, Size=*yyyyyyyy* bytes

Cause

File uploading was successful.
hhhhhhhh: Host name or IP address of the upload destination host
ffffffff: Maintenance information
yyyyyyyy: Size of the uploaded file (in bytes)

KDSF0082-W

An error occurred in uploading to *hhhhhhhh*. *ffffffff*, {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

File uploading failed.
hhhhhhhh: Host name or IP address of the upload destination host
ffffffff: Maintenance information
`{Win32|Socket|Runtime|Protocol}`: Error type
`Win32`: Win32 API error
`Socket`: Socket error
`Runtime`: C language runtime error
`Protocol`: JP1/Software Distribution protocol error
mm: Error code
nnnnnn: Description of error code *mm*
zzzzzzzz: Maintenance information

Action

Normally, no action is required on the user's part. JP1/Software Distribution automatically retries according to the settings that are provided in **Installation result files failed to transmit to the higher serve**r file in the **Retry Communications** page of the Setup dialog box. If the retry times out, another attempt is made after the next polling.
However, if this error occurs frequently when JP1/Software Distribution is newly installed, there may be a problem with the network environment. In that case, you should review the network environment settings.

KDSF0090-I

A job started. Job type=*jjjjjjjj*, Job number=*xxxxxxxx*, Instruction number=*yyyyyyyy* {, Package information=*d.cc.ppppp.vvvv.ssss*, Package name=*nnnnnnnn*, *ffffffff* | Software to be Searched=*ssssssss* [, Drive to be Searched= *kkkkkkkk* [:*vvvvvvvv*] , Retrieve list=*rrrrrrrr*:*lllllll* Bytes(*eeeeeeee* Entries)]}

Cause

The execution of a job started.
jjjjjjjj: Maintenance information
`Install package`: *Install package* job
`Get system information from client`: *Get system information from client* job
`Get software information from client`: *Get software information from client* job
`Collect files from client`: *Collect files from client* job
`Send package, allow client to choose`: *Send package, allow client to choose* job
xxxxxxxx: Job number
yyyyyyyy: Instruction number
The following information is output for an *Install package* job or a *Send package, allow client to choose* job:

d.*cc*.*pppppp*.*vvvv*.*ssss*: Package information

- *d*: Packager type
  C: Package registered from a UNIX packager (Packager)
  D: Package registered from a Windows packager
- *cc*: Cabinet ID
- *pppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

nnnnnnnn: Package name
ffffffff: Package maintenance information
The following information is output for the *Get software information from client* job:

ssssssss: Software to be searched

- `Search software installed by Software Distribution`: Search for software installed by JP1/Software Distribution.
- `Search all software`: Search for all software.
- `Search for software in "Add/Remove Programs"`: Search for software in **Add/Remove Programs**.
- `Search for a file`: Search for a file.
- `Search for Microsoft Office products`: Search for Microsoft Office products.
- `Search for anti-virus products`: Search for anti-virus products.

When `Software to be searched` is `Search all software` or `Search for a file`, the following information is output:

kkkkkkkk: Type of drive to be searched

- `All Fixed drives`: All fixed drives
- `All Fixed drives and Network drives`: All fixed drives and network drives
- `Specified drives`: Specify drives to be searched.

When `Type of drive to be searched` is `Specified drives`, the following information is output:

vvvvvvvv: Drive to be searched
The drive to be searched is displayed with a letter from `A` to `Z` or a number from `1` to `9`. If multiple drives are specified, drive names are separated with a semicolon (`;`) and displayed. For example, if `A`, `C`, `1`, and `2` are specified, they are displayed as follows:
`A;C;1;2`

rrrrrr: Search list type

- `SERVER`: Search list sent from the higher system
- `CLIENT`: Search list found in the client

lllllll: Size of search list to be used in the search (unit: bytes)
eeeeeeee: Number of entries in search list to be used in the search

KDSF0091-I

The job is completed. Job type=*jjjjjjjj*, Job Number=*xxxxxxxx*, Instruction number=*yyyyyyyy*[, Package information=*d.cc.pppppp.vvvv.ssss*, Package name=*nnnnnnnn*, *ffffffff*, Installation path=*zzzzzzzz*]

Cause

The job execution was successful.

jjjjjjjj: Job type
`Install package`: *Install package* job
`Get system information from client`: *Get system information from client* job

`Get software information from client`: *Get software information from client* job

`Collect files from client`: *Collect files from client* job

`Send package, allow client to choose`: *Send package, allow client to choose* job

xxxxxxxx: Job number

yyyyyyyy: Instruction number

The following information is output for an *Install package* job or a *Send package, allow client to choose* job:

d`.`*cc*`.`*pppppp*`.`*vvvv*`.`*ssss*: Package information

- *d*: Packager type
  `C`: Package registered from a UNIX packager (Packager)
  `D`: Package registered from a Windows packager
- *cc*: Cabinet ID
- *pppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

nnnnnnnn: Package name

ffffffff: Package maintenance information

zzzzzzzz: Installation destination path name (an accurate value is not displayed if installation is performed by specifying a default installation directory for a Hitachi program product)

KDSF0092-E

An error occurred in a job. Job type=*jjjjjjjj*, Job number=*xxxxxxxx*, Instruction number=*yyyyyyyy*, [Package information=*d.cc.pppppp.vvvv.ssss*, Package name=*nnnnnnnn*, *ffffffff*, Installation path=*iiiiiiii*,]Cause={The installer *ccccccc*, Code=0x*dd*, *zzzzzzzz*|An external program *aaaaaaaa*, Code=0x*dd*, *zzzzzzzz*|An error occurred in unarchiving or archiving a file, *eeeeeeee* error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]|An installation conditions error occurred: *pppppppp*, *zzzzzzzz*}. Maintenance code=*kkkkkkkkkkkkkk*[: *ssssssss*]

Cause

The job execution failed.

jjjjjjjj: Job type

`Install package`: *Install package* job

`Get system information from client`: *Get system information from client* job

`Get software information from client`: *Get software information from client* job

`Collect files from client`: *Collect files from client* job

`Send package, allow client to choose`: *Send package, allow client to choose* job

xxxxxxxx: Job number

yyyyyyyy: Instruction number

`[Package information=`*d*`.`*cc*`.`*pppppp*`.`*vvvv*`.`*ssss*`, Package name=`*nnnnnnnn*`, `*ffffffff*`, Installation path=`*iiiiiiii*`, ]`

This part is output for an *Install package* job or a *Send package, allow client to choose* job.

d`.`*cc*`.`*pppppp*`.`*vvvv*`.`*ssss*: Package information

- *d*: Packager type
  `C`: Package registered from a UNIX packager (Packager)
  `D`: Package registered from a Windows packager
- *cc*: Cabinet ID
- *pppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

nnnnnnnn: Package name

ffffffff: Package maintenance information

iiiiiii: Installation destination path name (an accurate value is not displayed if installation is performed by specifying a default installation directory for a Hitachi program product)

`Cause`: Cause of the execution failure. One of the following five cause types is output:

- `The installer` *ccccccc*`, Code=0x`*dd*, *zzzzzzzz*

  Execution failed due to the installer for a Hitachi program product or other companies' software.

  ccccccc: Problem that occurred in the installer

  - `was not started because of an error`: Installer startup failure
  - `resulted in an error`: Installer error termination
  - `terminated by a timeout`: Installer timeout termination

  `0x`*dd*: Error code

  zzzzzzzz: Maintenance information

- `An external program` *aaaaaaaa*`, Code=0x`*dd*, *zzzzzzzz*

  Execution failed due to an external program

  aaaaaaaa: Problem that occurred in the external program.

  - `was not started because of an error`: External program startup failure
  - `resulted in an error`: External program error termination
  - `terminated by a timeout`: External program timeout termination

  `0x`*dd*: Error code

  zzzzzzzz: Maintenance information

- `An error occurred in unarchiving or archiving a file,` *eeeeeeee* `error, Code=`*mm*`[: `*nnnnnn*`][, `*zzzzzzzz*`]`

  Execution failed due to a file unarchiving or archiving error.

  eeeeeeee: Error type

  `Win32`: Win32 API error

  `Socket`: Socket error

  `Runtime`: C language runtime error

  mm: Error code

  nnnnnn: Description of error code *mm*

  zzzzzzzz: Maintenance information

- `An installation conditions error occurred:` *pppppppp*`,` *zzzzzzzz*

  Execution failed due to an installation condition error.

  pppppppp: Error-causing installation condition (system or software condition)

  zzzzzzzz: Maintenance information

- `An information acquisition conditions error occurred`

  During the acquisition of system or software information, the distribution destination system did not meet required conditions; the execution of the job failed.

kkkkkkkkkkkkk: Maintenance code (same as Remote Installation Manager)

ssssssss: Description of the maintenance code

Action

Take an action in reference to the description of the maintenance code that is output to *ssssssss*. Also, take the following action according to the cause of error that is output to `Cause=`:

- `Cause=The installer` *ccccccc*`, Code=0x`*dd*`,` *zzzzzzzz*

  Unless an explanation is output to *ssssssss*, check the cause of `Code=0x`*dd* being returned by referencing documentation for the Hitachi program product or other companies' software.

- `Cause=An external program` *aaaaaaaa*`, Code=0x`*dd*`,` *zzzzzzzz*

  Unless an explanation is output to *ssssssss*, check the cause of `Code=0x`*dd* being returned by referencing documentation for the external program or ask the source of the external program.

- `Cause=An error occurred in unarchiving or archiving a file, `*eeeeeeee*`error, Code=`*mm*`[: `*nnnnnn*`][, `*zzzzzzzz*`]`

  Take an action by checking the error code explanation that is output to *nnnnnn*.

- `Cause=An installation conditions error occurred: `*pppppppp*`, `*zzzzzzzz*

  Check to see if the installation condition that is output to *pppppppp* is appropriate.

- `Cause=An information acquisition conditions error occurred`:

  In the distribution destination system, check the prerequisites for the *Get system information* or *Get software information* job.

KDSF0093-I

Job number=*xxxxxxxx*, Instruction number=*yyyyyyyy*, Program path=*zzzzzzzz*. The installer started. Package information=*d*.*cc*.*pppppp*.*vvvv*.*ssss*, Package name=*nnnnnnnn*, Timeout=*mm*

Cause

The installer started.

xxxxxxxx: Job number

yyyyyyyy: Instruction number

zzzzzzzz: Path name for the program that started

d`.`*cc*`.`*pppppp*`.`*vvvv*`.`*ssss*: Packager information

- *d*: Packager type

  `C`: Package registered from a UNIX packager (Packager)

  `D`: Package registered from a Windows packager

- *cc*: Cabinet ID
- *pppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

nnnnnnnn: Package name

mm: Monitoring time (in seconds). A monitoring time of `0` means indefinite monitoring.

KDSF0094-I

Job number=*xxxxxxxx*, Instruction number=*yyyyyyyy*, Program path=*zzzzzzzz*. The external program started. Timing=*tttttttt*, Monitor=*wwwwwwww*, Result notification=*eeeeeeee*, Error action={Abort|Continue}, Timeout=*mm*

Cause

An external program started.

xxxxxxxx: Job number

yyyyyyyy: Instruction number

zzzzzzzz: Path name for the external program that started

tttttttt: External program startup timing

`Before installation`: Before installation

`After installation`: After installation

`Installation error`: Upon an installation error

wwwwwwww: Whether an external program timeout is set and the disposition of the external program after it has timed out

`No timeout`: No timeout value set; the system waits for a response from the external program indefinitely.

`Error after timeout`: An error is generated if the specified timeout limit is exceeded.

`Continue after timeout`: No error is generated when the timeout limit is reached.

eeeeeeee: Method for acquiring external program processing results

`Windows`: Notify by using a Windows message from the external program

`Return code`: Notify by using a termination code from the external program

`{Abort|Continue}`: Disposition upon a processing result error

`Abort`: Abort as an error

`Continue`: Continue the processing without treating the event as an error

mm: External program monitoring time (in seconds). A monitoring time of `0` means indefinite monitoring.

KDSF0095-I

Job number=*xxxxxxxx*, Instruction number=*yyyyyyyy*, Program path=*zzzzzzzz*. The {installer|external program} terminated normally.

Cause

The installer or the external program terminated normally.

xxxxxxxx: Job number

yyyyyyyy: Instruction number

zzzzzzzz: Path name for the normally terminated program

`{installer|external program}`: Type of the normally terminated program

`installer`: Installer

`external program`: External program

KDSF0096-W

Job number=*xxxxxxxx*, Instruction number=*yyyyyyyy*, Program path=*pppppppp*. The {installer|external program} {was not started because of an error. *eeeeeeee* error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]|resulted in an error. Return code=0x*zz*, Extend return code=0*xccccccccc*|terminated by a timeout}.

Cause

The installer or the external program either terminated abnormally or timed out.

xxxxxxxx: Job number

yyyyyyyy: Instruction number

pppppppp: Path name for the external program

`{installer|external program}`: Type of the terminated program

`installer`: Installer

`external program`: External program

`{was not started because of an error. `*eeeeeeee*` error, Code=`*mm*`[: `*nnnnnn*`][, `*zzzzzzzz*`]|resulted in an error. Return code=0x`*zz*`|`, Extend return code=0*xccccccccc*|terminated by a timeout}: Cause of termination; one of the following three causes is output:

- `was not started because of an error. `*eeeeeeee*` error, Code=`*mm*`[: `*nnnnnn*`][, `*zzzzzzzz*`]`

  Startup failure

  eeeeeeee: Error type

  `Win32`: Win32 API error

  `Socket`: Socket error

  `Runtime`: C language runtime error

  `Protocol`: JP1/Software Distribution protocol error

  mm: Error code

  nnnnnn: Description of error code *mm*

  zzzzzzzz: Maintenance information

- `resulted in an error. Return code=0x`*zz*, Extend return code=0*xccccccccc*

  Terminated due to an error.

  `0x`*zz*: Return code returned by an external program (1 byte)

  `0x`*ccccccccc*: Return code returned by an external program (4 bytes)

- `terminated by a timeout`

  Terminated due to timeout.

Action

Take the following action, depending on the cause of the termination:

- Startup failure
  Make sure that the path name for the external program is correct.
- Error termination
  Check the condition under which the output return code is returned.
- Timeout termination
  Make sure that the monitoring time is set correctly. Also, determine the cause of the external program not terminating within the timeout limit.

KDSF0097-I

An attempt to detect information about patches by using the Windows Update Agent was successful.

Cause

Detection of unapplied patch information by using WUA was successful.

KDSF0098-W

An attempt to detect information about patches by using the Windows Update Agent could not be executed because {the OS does not support the Windows Update Agent | the Windows Update Agent was unavailable | the database file for the Windows Update Agent was not found}.

Cause

Detection of unapplied patch information by using WUA could not be executed.

`{the OS does not support the Windows Update Agent | the Windows Update Agent was unavailable | the database file for the Windows Update Agent was not found}`: Cause type. One of the following three types is output:

- `the OS does not support the Windows Update Agent`: The OS does not support WUA.
- `the Windows Update Agent was unavailable`: WUA cannot be used.
- `the database file for the Windows Update Agent was not found`: The database file for WUA was not found.

Action

- If WUA cannot be used
  Install WUA.
- If the database file for WUA cannot be found
  Store the database file for WUA in *client-installation-directory*`\CLIENT\WUA`.

KDSF0099-E

An attempt to detect information about patches by using the Windows Update Agent failed due to {a timeout | an unexpected error}.

Cause

Patch information detection by using WUA failed.

`{a timeout | an unexpected error}`: Failure cause

`a timeout`: The process timed out.

`an unexpected error`: An unexpected error occurred.

Action

If the process timed out, wait awhile and then re-execute the job.

KDSF0100-I

The automatic registration of *hhhhhhhh* (*iii*.*iii*.*iii*.*iii*, *ddddddd*) to the managing server started. Old managing server: *vvvvvvv* -> New managing server: *xxxxxxx*

Cause

The automatic registration of the local host started in the system configuration information that is managed by the managing server.

hhhhhhhh: Local host name

iii.*iii*.*iii*.*iii*: IP address of the local host

dddddddd: Host ID for the local host. If this ID is not specified in the system configuration information, an asterisk (*) is output.

vvvvvvvv: Host name or IP address of the old registration[#]. When a new local host is registered in the system configuration information, an asterisk (*) is output.

xxxxxxxx: New registration host name or IP address[#]

#

This message is also output when the managing server is not changed, such as when the IP address or the host name of the local host is changed. In this case, the same value is output to both the old managing server and the new managing server.

KDSF0101-I

The automatic registration of *hhhhhhhh* (*iii*.*iii*.*iii*.*iii*, *dddddddd*) to the managing server was completed. Old managing server: *vvvvvvvv* -> New managing server: *xxxxxxxx*

Cause

The automatic registration of the local host terminated in the system configuration information that is managed by the managing server.

hhhhhhhh: Local host name

iii.*iii*.*iii*.*iii*: IP address of the local host

dddddddd: Host ID for the local host. If this ID is not specified in the system configuration information, an asterisk (*) is output.

vvvvvvvv: Host name or IP address of the old registration.[#] When a new local host is registered in the system configuration information, an asterisk (*) is output.

xxxxxxxx: New registration host name or IP address[#]

#

This message is also output when the managing server is not changed, such as when the IP address or the host name of the local host is changed. In this case, the same value is output to both the old managing server and the new managing server.

KDSF0102-W

The automatic registration of *hhhhhhhh* (*iii*.*iii*.*iii*.*iii*, *dddddddd*) to the managing server failed. Old managing server: *vvvvvvvv* -> New managing server: *xxxxxxxx*, {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

The automatic registration of the local host failed in the system configuration information that is managed by the managing server.

hhhhhhhh: Local host name

iii.*iii*.*iii*.*iii*: IP address of the local host

dddddddd: Host ID for the local host. If this ID is not specified in the system configuration information, an asterisk (*) is output.

vvvvvvvv: Host name or IP address of the old registration.[#] When a new local host is registered in the system configuration information, an asterisk (*) is output.

xxxxxxxx: New registration host name or IP address[#]

`{Win32|Socket|Runtime|Protocol}`: Error type

`Win32`: Win32 API error

`Socket`: Socket error

`Runtime`: C language runtime error

`Protocol`: JP1/Software Distribution protocol error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

#

This message is also output when the managing server is not changed, such as when the IP address or the host name of the local host is changed. In this case, the same value is output to both the old managing server and new managing server.

Action

JP1/Software Distribution retries in the next polling. If polling is specified for system startup time, reboot the OS.

If the automatic registration fails even after a retry, check the explanation in the error code.

KDSF0103-I

Inventory information was reported because a system modification was detected.

Cause

A change in the system was detected; inventory information was reported.

KDSF0110-I

ID group processing started. ID group=*xxxxxxxx*, Operation={ADD|EXECUTE|DELETE}, Relay managing the ID=*hhhhhhhh* (*iiiiiiii*)

Cause

ID group processing started.

xxxxxxxx: Target ID name

{ADD|EXECUTE|DELETE}: Processing type

ADD: Adding the local host to the target ID

EXECUTE: Execution request for the job that was executed on the target ID (this operation is started automatically when a local host is added to the ID, requesting the execution of the ID job that is already stored in the relay managing the ID)

DELETE: Deleting the local host from the target ID

hhhhhhhh: Relay managing the ID

iiiiiiii: Relay managing the ID product type

netmdm: JP1/Software Distribution Manager

netmdmw: JP1/Software Distribution Client (relay system)

KDSF0111-I

ID group processing was completed. ID group=*xxxxxxxx*, Operation={ADD|EXECUTE|DELETE}, Relay managing the ID=*hhhhhhhh* (*iiiiiiii*)

Cause

The ID group processing was completed.

xxxxxxxx: Target ID name

{ADD|EXECUTE|DELETE}: Processing type

ADD: Adding the local host to the target ID

EXECUTE: Execution request for the job that was executed on the target ID (this operation is started automatically when a local host is added to the ID, requesting the execution of the ID job that is already stored in the relay managing the ID)

DELETE: Deleting the local host from the target ID

hhhhhhhh: Relay managing the ID

iiiiiiii: Relay managing the ID product type

netmdm: JP1/Software Distribution Manager

netmdmw: JP1/Software Distribution Client (relay system)

KDSF0112-E

An error occurred in IP group processing. ID group=*xxxxxxxx*, Operation={ADD|EXECUTE|DELETE}, Relay managing the ID=*hhhhhhhh* (*iiiiiiii*), {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

An error occurred in the ID group processing.

xxxxxxxx: Target ID name

`{ADD|EXECUTE|DELETE}`: Processing type

`ADD`: Adding the local host to the target ID

`EXECUTE`: Execution request for the job that was executed on the target ID (this operation is started automatically when a local host is added to the ID, requesting the execution of the ID job that is already stored in the relay managing the ID)

`DELETE`: Deleting the local host from the target ID

hhhhhhhh: Relay managing the ID

iiiiiiii: Relay managing the ID product type

`netmdm`: JP1/Software Distribution Manager

`netmdmw`: JP1/Software Distribution Client (relay system)

`{Win32|Socket|Runtime|Protocol}`: Error type

`Win32`: Win32 API error

`Socket`: Socket error

`Runtime`: C language runtime error

`Protocol`: JP1/Software Distribution protocol error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Reference the explanation on the error code; make sure that the relay managing the ID is specified correctly, and that no communication errors have occurred.

KDSF0120-I

Packaging started. Package information=`D.`*cc*`.`*ppppppp*`.`*vvvv*`.`*ssss*, Save to=*hhhhhhhh* (*iiiiiiii*)

Cause

Packaging started.

`D.`*cc*`.`*pppppp*`.`*vvvv*`.`*ssss*: Package information

- `D`: In this packager type, the letter `D`, which denotes a package added from a Windows packager, is always output.
- *cc*: Cabinet ID
- *pppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

hhhhhhhh: Host name or IP address of the managing server to which a package is to be added

iiiiiiii: Product type of the managing server to which a package is to be added

`netmdm`: JP1/Software Distribution Manager

`netmdmw`: JP1/Software Distribution Client (relay system)

KDSF0121-I

Packaging terminated normally. Package information=D.*cc*.*ppppppp*.*vvvv*.*ssss*, Save to=*hhhhhhhh* (*iiiiiiii*)

Cause

Packaging terminated normally.

`D.cc.ppppp.vvvv.ssss`: Package information

- `D`: In this packager type, the letter `D`, which denotes a package added from a Windows packager, is always output.
- *cc*: Cabinet ID
- *ppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

hhhhhhhh: Host name or IP address of the managing server to which a package is to be added

iiiiiiii: Product type of the managing server to which a package is to be added

`netmdm`: JP1/Software Distribution Manager

`netmdmw`: JP1/Software Distribution Client (relay system)

KDSF0122-E

Packaging failed. Package information=`d`.*cc*.*pppppppp*.*vvvv*.*ssss*, Save to=*hhhhhhhh* (*iiiiiiii*), {Win32|Socket|Runtime|Protocol} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

Packaging failed.

`D.cc.ppppp.vvvv.ssss`: Package information

- `D`: In this packager type, the letter `D`, which denotes a package that was to be added from a Windows packager, is always output.
- *cc*: Cabinet ID
- *ppppp*: Package ID
- *vvvv*: Version/revision
- *ssss*: Generation

hhhhhhhh: Host name or IP address of the managing server to which a package is to be added

iiiiiiii: Product type of the managing server to which a package is to be added

`netmdm`: JP1/Software Distribution Manager

`netmdmw`: JP1/Software Distribution Client (relay system)

`{Win32|Socket|Runtime|Protocol}`: Error type

`Win32`: Win32 API error

`Socket`: Socket error

`Runtime`: C language runtime error

`Protocol`: JP1/Software Distribution protocol error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Make sure that the host name or IP address of the managing server is specified correctly, and that no communication errors have occurred.

KDSF0123-E

Creation of the package failed. (information = TablNum[*xxxxxxxx*], limit = [65535])

Cause

Creation of the package failed because the total size# of the target information exceeded the maximum value `65535`.

xxxxxxxx: Number of target information items

#

The target information means the information specific to the package target. The total value of the target information is the sum of the following information plus 4:

- Total number of folders or files to be packaged
- Total number of short files for the folders or files to be packaged

Action

Reduce the number of folders or files to be packaged so that the total value of the target information does not exceed the maximum value (`65535`) and then re-execute the command.

KDSF0130-E

An error occurred in a process *pppppppp*. {Win32|Socket|Runtime} error, Code=*mm*[: *nnnnnn*][, *zzzzzzzz*]

Cause

An error occurred in process *pppppppp*.

pppppppp: Process name

`{Win32|Socket|Runtime}`: Error type

`Win32`: Win32 API error

`Socket`: Socket error

`Runtime`: C language runtime error

mm: Error code

nnnnnn: Description of error code *mm*

zzzzzzzz: Maintenance information

Action

Check the explanation of the error code and take appropriate action.

KDSF0140-E

An application exception occurred in process *pppppppp*.

Cause

An application exception occurred in process *pppppppp*.

pppppppp: Process name

Action

Please ask Hitachi to investigate the problem as necessary. When requesting assistance, you should collect a `DUMP.LOG`.

Appendixes

A. Functions Provided in the Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition of JP1/Software Distribution Client

The Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition of JP1/Software Distribution Client program is required in order to provide management of a JP1/Software Distribution system client that uses the Windows 8, Windows Server 2012, Windows 7, Windows Server 2008,or Windows Vista operating system. In this manual, *Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista Edition* is referred to as *Windows 8/2012/7/2008/Vista Edition* unless otherwise specified.

Installing Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client makes the functions provided in JP1/Software Distribution available to users of Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista.

The following explains the differences between the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client and the standard JP1/Software Distribution Client:

- Hardware estimation

  There are differences in the requirements for CPU performance, memory, and disk space. For details about the hardware estimates, see *A.2 Estimating hardware requirements*.

- Available components and functions

  There are differences in the available components and functions. For details about the available components and functions, see *A.3 Available components and differences in available functions*.

- Installation procedures

  The installation procedures differ in some respects. For details about the installation procedure, see *A.4 Installing the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client*.

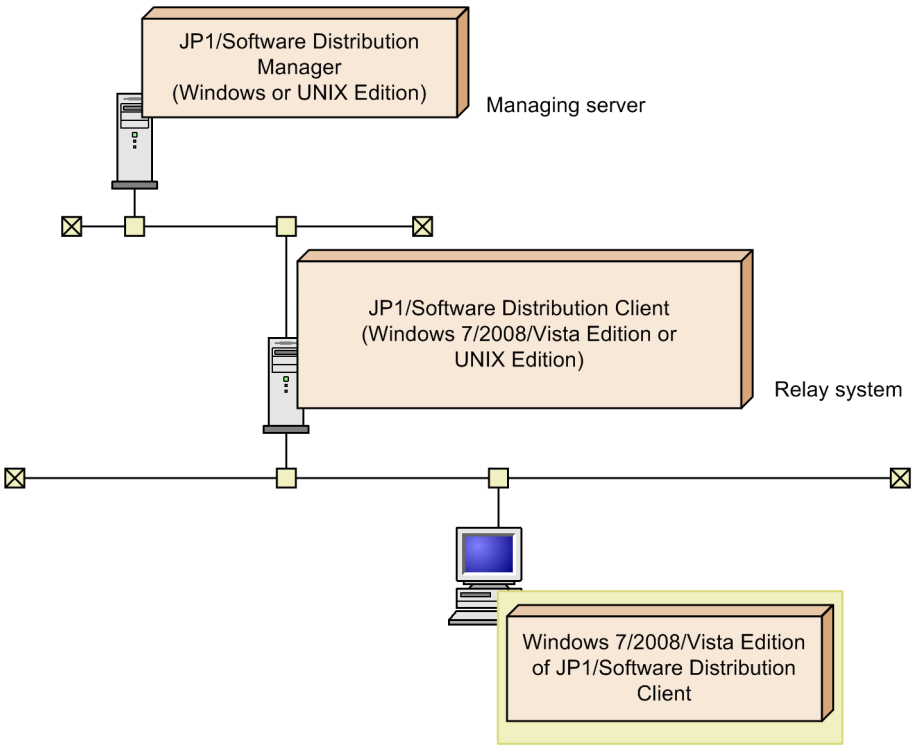
- Setup procedure

  The setup procedures differ in some respects. For details about the setup procedure, see *A.5 Setting up the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client*.

A.1 System configuration

The following figure shows an example of a system configuration for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

Figure A–1: Example of a system configuration for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client



A.2 Estimating hardware requirements

This section explains the CPU performance and memory requirements for operating each component of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client. The section also explains the required disk space for each component.

(1) CPU performance

The following table shows the CPU performance that is required to operate each component of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

Table A–1: CPU performance required by each component

Component	CPU performance
Client	300 MHz or faster (1 GHz or faster is recommended)
Packager	
Remote Control Agent	

(2) Memory requirements

The following table shows the memory requirement for each component of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

Table A–2: Required memory for each component

Component	Memory requirement (MB)
Client	13 or greater

Component	Memory requirement (MB)
Packager	10 or greater
Remote Control Agent	8 + *a* + *b* + *c* + *d* + *e* or greater[#]

#

a: Temporary buffer for drawing (5 MB for the standard application)

b: Temporary buffer during file transfer (2 MB)

c: Connection buffer (1 MB × *number of connection controllers*)

d: Buffer for chat server (2 + (0.1 × *number of connections*) MB)

e: Buffer for chat client (2 + (0.2 × *number of connections*) MB)

(3) Disk space requirement

The following table shows the disk space requirement for each component of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

Table A–3: Disk space requirement for each component

Component		Disk space (megabytes)
Client	Client	16
	Added functionality	3
	Package Setup Manager	2
Packager		6
Remote Control Agent		10
Online Help		6
Common area used by JP1/Software Distribution Client		8

A.3 Available components and differences in available functions

This section lists the components available in the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client and explains the differences in the available functions.

(1) Available components

The following table shows the components available in the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

Table A–4: Available components

Component		Availability
Client	Client	Yes
	Added functionality	Yes
	Package Setup Manager	Yes
	Distribution functionality by Visual Test 6.0	No
Packager		Yes
Remote Control Agent	Remote Control Agent	Yes
	Chat	Yes
Automatic Installation Tool		Yes

Component	Availability
Startup Kit Support Tool	Yes
Online Help	Yes

Legend:

Yes: Can be used.

No: Cannot be used.

(2) Differences in available functions

The following functions cannot be used in the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client:

- Remote installation of a recorder file created using Visual Test
- **Start System Monitoring** and **Stop System Monitoring** in Local System Viewer

Even if multiple users are logged in, they all cannot execute the following functions at the same time:

- Registration to ID group
- Client Manager
- Notification to server
- Execution of a job
- Notification from Software Distribution - Update User Information dialog box
- Local System Viewer
- Package Setup Manager
- Packager

For details about the software information and registry information that can be acquired, see *2.2.1 Acquiring system information* in the manual *Description and Planning Guide*.

A.4 Installing the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client

This section explains how to perform a new installation of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client, as well as how to install the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client after upgrading the OS.

For details about changing the installation contents, see *1.3 Changing installation settings* in the manual *Setup Guide*.

(1) Performing a new installation of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client

The procedure for performing a new installation of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client is almost the same as for installing the standard JP1/Software Distribution Client.

The following differences when you install the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client should be noted:

- Because the corresponding information has not been sent, the Register User dialog box is hidden.
- Because the GUI mode installer is always created, the **Enable installation in GUI mode** check box in the Specify Program Folder dialog box is hidden.
- Because the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client is always used with non-administrator user permissions, the **Run the client with non-Administrator user permissions** check box in the Set Options dialog box is not displayed.

For details about how to install the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client, see *3. Installing JP1/Software Distribution Client* in the manual *Setup Guide*.

(2) Installing the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client after upgrading the OS

When you initialize the OS of the computer on which JP1/Software Distribution is installed and you then upgrade the version, you must make a backup and uninstall the JP1/Software Distribution Client.

When you make a backup or restore from a backup, you must use Client Manager to first stop the client and then stop JP1/Software Distribution service.

You can perform overwrite installation of the OS only if the OS to be upgraded is Windows XP.

When you upgrade the version by overwriting the OS, Step 2 in the procedure is not required. This is the step in which you initialize the OS and then upgrade the version. Also, when you uninstall the JP1/Software Distribution Client, you must not delete information about hosts managed by higher systems.

To install the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client after initializing and upgrading the OS version:

1. Make a backup of the data under the installation directory of JP1/Software Distribution Client.
   Make a backup of the following directories:
   - `CLIENT`
   - `DMAMT`
   - `MASTER\DB`
   - `USERINV`
2. Make a backup of the data under the Windows folder.
   Make a backup of the following directories:
   - `NETMDMP.HID`
3. Uninstall JP1/Software Distribution Client.
   For details about how to uninstall JP1/Software Distribution Client, see *1.4 Uninstalling JP1/Software Distribution* in the manual *Setup Guide*.
4. Upgrade the OS version.
5. Install the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.
   For details about the installation procedure, see *3. Installing JP1/Software Distribution Client* in the manual *Setup Guide*.
6. Use Client Manager to stop the client.
7. Restore from the backup.

A.5 Setting up the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client

The procedure for setting up the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client is almost the same as for setting up the standard JP1/Software Distribution Client. The following differences when you set up the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client should be noted:

- Because Windows Vista Edition of JP1/Software Distribution Client is always used with non-administrator user permissions, the **Security** page is hidden.
- Because the client is resident, the **Client starts automatically at system boot** check box on the **Default Running Status/Polling** page is already selected (its selection is deactivated).

For details about how to set up the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client, see *5. Setting Up JP1/Software Distribution Client (relay system)* and *6. Setting Up JP1/Software Distribution Client (client)* in the manual *Setup Guide*.

If the Program Compatibility Assistant dialog box appears after setup, select **This program installed correctly**.

A.6 Notes on using the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client

This section provides notes on using the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

(1) Manager notes

The following notes apply to the manager when the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client is used:

- When the OS is Windows Vista, do one of the following for the OS type when you acquire registry information for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client:
  - If the manager's version is 08-00 or earlier, select **Any** for **Operating system** in the Edit dialog box.
  - If the manager's version is 08-10 or later, select **Windows Vista** or **Any** for **Operating system** in the Edit dialog box.
- When the OS is Windows Server 2008, do one of the following for the OS type when you acquire registry information for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client:
  - If the manager's version is 08-10 or earlier, select **Any** for **Operating system** in the Edit dialog box.
  - If the manager's version is 08-51 or later, select **Windows Server 2008** or **Any** for **Operating system** in the Edit dialog box.
- When the OS is Windows Server 2008 R2, do one of the following for the OS type when you acquire registry information for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client:
  - If the manager's version is 09-00 or earlier, select **Any** for **Operating system** in the Edit dialog box.
  - If the manager's version is 09-50 or later, select **Windows Server 2008 R2** or **Any** for **Operating system** in the Edit dialog box.
- When the OS is Windows 7, do one of the following for the OS type when you acquire registry information for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client:
  - If the manager's version is 09-00 or earlier, select **Any** for **Operating system** in the Edit dialog box.
  - If the manager's version is 09-50 or later, select **Windows 7** or **Any** for **Operating system** in the Edit dialog box.
- When the OS is Windows 8, do one of the following for the OS type when you acquire registry information for the Windows 8//2012/7/2008/Vista Edition of JP1/Software Distribution Client:
  - If the manager's version is 09-50 or earlier, select **Any** for **Operating system** in the Edit dialog box.
  - If the manager's version is 09-51 or later, select **Windows 8** or **Any** for **Operating system** in the Edit dialog box.
- When the OS is Windows Server 2012, do one of the following for the OS type when you acquire registry information for the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client:
  - If the manager's version is 09-50 or earlier, select **Any** for **Operating system** in the Edit dialog box.
  - If the manager's version is 09-51 or later, select **Windows Server 2012** or **Any** for **Operating system** in the Edit dialog box.
- A job that changes a file or registry protected as a Windows resource results in an error.
- Do not set a symbolic link, hard link, or junction to any of the following directories and files:
  - The installation directory specified during packaging or remote installation
  - Directories and files that are the target of remote collection

  If a symbolic link, hard link, or junction is set to any of these directories, such directories will not be subject to packaging, remote installation, or remote collection.
- When the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client is an offline machine, use JP1/Software Distribution Manager version 08-10 or later to create a medium for installation and inventory acquisition. An error results if a medium created by JP1/Software Distribution version 08-00 or earlier is used by the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client.

(2) Client notes

The following notes apply to the client when the OS is Windows 8, Windows 7 or Windows Vista and also the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client is used:

For general notes about using the client, see *2.13.7 Notes on using a client* in the manual *Description and Planning Guide*.

- If the OS is Windows 8, you can use Windows Task Manager to disable startup programs. However, you must not disable any programs registered by JP1/Software Distribution Client (relay system).
- When execution of any of the following operations is requested, the User Account Control dialog box appears. To execute the operation, enable program execution; to prevent execution, cancel execution.
  - Install Client
  - Start client setup#
  - Start Packager#
  - Start Client Manager#
  - Acquire inventory information offline
  - Execute offline installation#

  #

  If the executing user does not have administrator permissions for the OS, grant administrator permissions to the user beforehand.
- Characters that cannot be displayed in the OS's language environment are replaced by a question mark (?).
- The Fast User Switching feature cannot be used as a means for users to run multiple instances of the Windows 8/2012/7/2008/Vista Edition of JP1/Software Distribution Client application at the same time.

B. Remote Installation of Update Data to Security PCs

A security PC is a PC equipped with minimum functionality that has no hard disk, floppy disk, or other external storage devices. To update programs that operate on security PCs, use the update data for security PCs that is distributed by Hitachi. You can remotely install the update data to security PCs by using JP1/Software Distribution.

This appendix explains how to remotely install update data to security PCs.

B.1 Requirements for remote installation to security PCs

For update data to be remotely installed to security PCs, the conditions described below must be satisfied.

(1) Manager

- The manager is JP1/Software Distribution Manager version 07-00 or later for Windows (uses a relational database) or JP1/Software Distribution Manager Embedded RDB Edition version 07-50 or later.
- The manager uses a host ID to operate the JP1/Software Distribution system.
- The manager is connected to the security PCs through a network, and the security PCs are registered in the system configuration information.

(2) Packager

Packager is the Packager of JP1/Software Distribution version 08-00 or later for Windows.

(3) Relay manager/system

- When remotely installing update data to security PCs via a relay manager, the relay manager must be JP1/Software Distribution Manager version 07-00 or later for Windows (uses a relational database) or JP1/Software Distribution Manager Embedded RDB Edition version 07-50 or later.
- When remotely installing update data to security PCs via a relay system, the relay system must be JP1/Software Distribution SubManager version 06-72 or later for Windows.

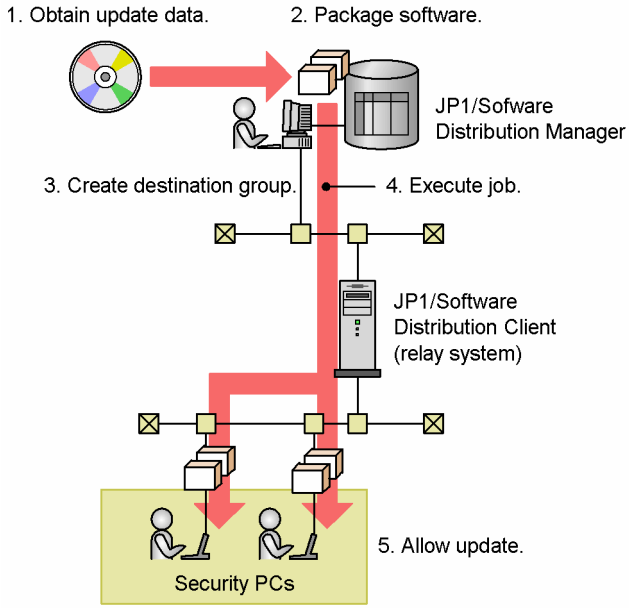
(4) Security PC

- Use the system launcher to specify the manager or relay manager/system in the higher connection destination system to be used for remote installation.

B.2 Flow of remote installation to security PCs

The following figure shows the flow of remote installation to security PCs.

Figure B–1: Flow of remote installation to security PCs



To remotely install update data to security PCs:

1. Obtain the update data that Hitachi distributes for security PCs.
2. Package the update data by using Packager.
   For details about how to package update data, see *B.3 Packaging update data*.
3. Using JP1/Software Distribution Manager, create a destination group that contains only the security PCs.
   For details about how to create a destination group that contains only security PCs, see *B.4 Creating a destination group that contains only security PCs*.
4. Using JP1/Software Distribution Manager, execute the job to remotely install the package created in step 2 to the destination group that was created in step 3.
   For details about how to create and execute a job, see *B.5 Executing a job that remotely installs update data*.
5. Allow update at startup in security PCs.
   The update data is installed on the security PCs. When update data is installed on a security PC, the PC is restarted at least twice.

B.3 Packaging update data

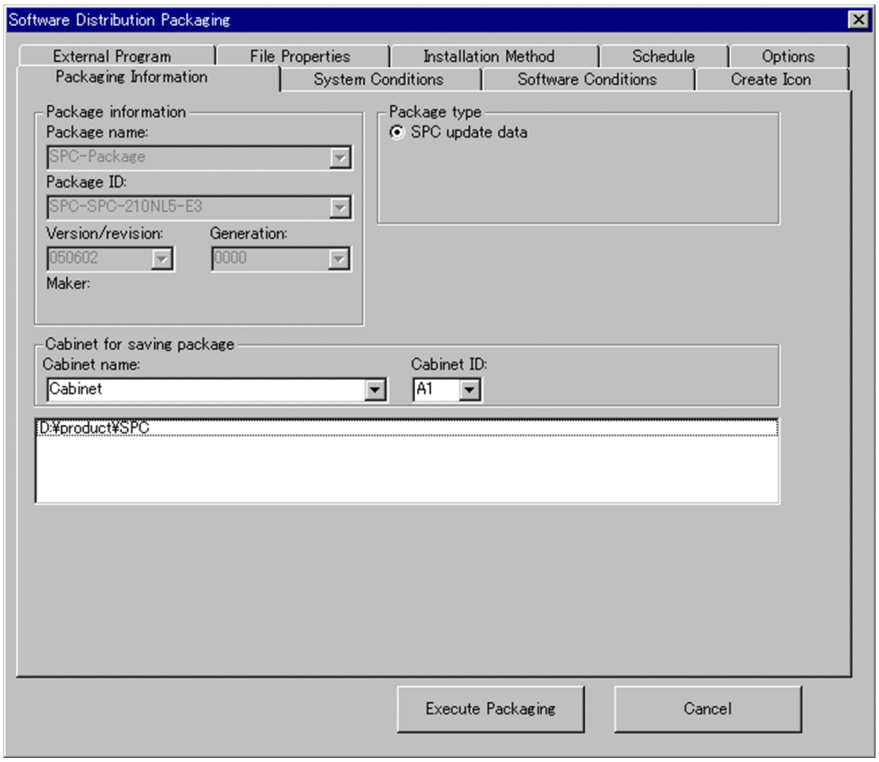
When packaging update data, you can specify only the following items in the Software Distribution Packaging dialog box:

- **Cabinet name** and **Cabinet ID** on the **Packaging Information** page
- **Package expiration at the relay system** on the **Schedule** page
- **Compress package data** and **Compression** on the **Options** page

For details about how to package update data, including how to specify these items, see *2.1 Packaging procedure* in the manual *Administrator's Guide Volume 1*.

When you package update data, the package type is set to **SPC update data**.

Figure B–2: Software Distribution Packaging dialog box



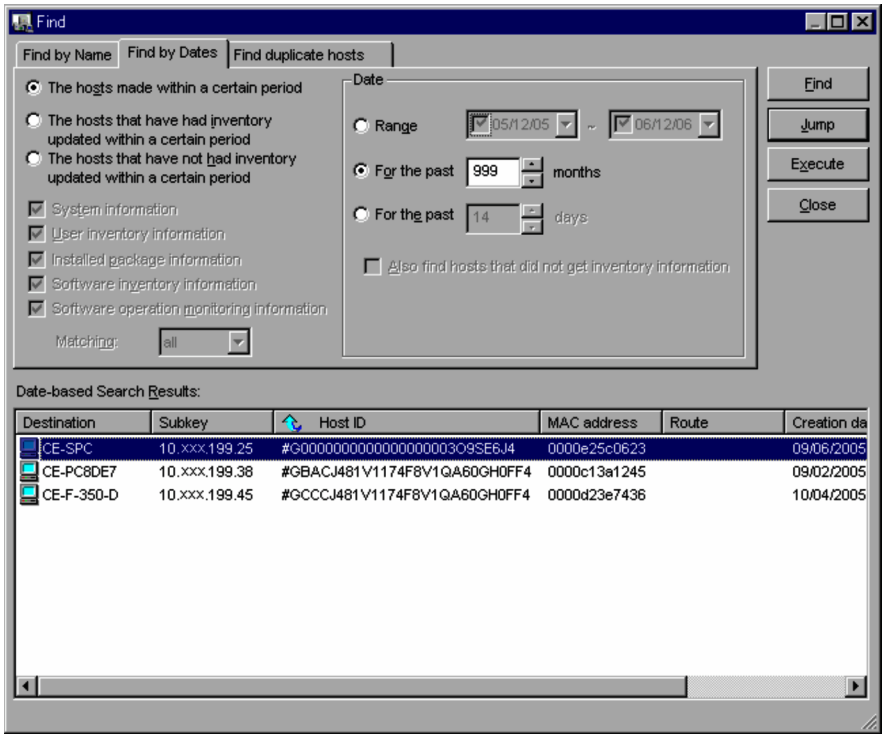
B.4 Creating a destination group that contains only security PCs

You can remotely install update data only to the security PCs. You must therefore create a destination group that allows you to specify only the security PCs as the job destination.

To create the destination group:

1. Display the Destination window of Remote Installation Manager, choose **File** and then **Create Host Group**.
   The Create Host Group dialog box is displayed.
2. Select **Create a host group**, specify the name of the destination group to be created, and then click the **Execute** button.
   A destination group having the specified name is created. Click the **Exit** button to close the Create Host Group dialog box.
3. Display the System Configuration window of Remote Installation Manager, choose **Options** and then **Find**.
   The Find dialog box is displayed.
4. On the **Find by Dates** page, specify the following:
   - Select **The hosts made within a certain period**.
   - Select **Range**, and specify the range from the date when security PCs were first registered to the system configuration information to the current date.
     If you do not know the date when security PCs were first registered, select **For the past** and then specify `999` **months**.
5. Click the **Find** button.
   The search is started, and the search results are displayed in the **Date-based Search Result** list.
6. Click the **Host ID** column heading in the **Date-based Search Result** list.
   The hosts in the search results are sorted in ascending order of host ID. Hosts with a host ID that starts with `#C00000000000000` are security PCs.

Figure B–3: Find by Dates page



7. Select all hosts with a host ID that starts with `#C0000000000000000`, right-click, and choose **Copy**.
8. Return to the Destination window of Remote Installation Manager, select the destination group that you created in step 2, right-click, and choose **Paste**.

   The hosts that you selected in step 7 are pasted to the selected destination group. You have now created a destination group that contains only the security PCs.

Each time you remotely install update data to the security PCs, Hitachi recommends that you re-create the destination group according to this procedure. If you use the previous destination group, any security PCs that are added after the previous destination group was created are not included in the destinations.

B.5 Executing a job that remotely installs update data

Execute the *Install package* job, and remotely install the update data package to the destination group that contains only the security PCs.

(1) Creating and executing the job

To create and execute a job:

1. From Remote Installation Manager, display the Package window and the Destination window.
2. Drag the package data package icon displayed in the Package window and drop it on the icon of the security PC-only destination group displayed in the Destination window.

   The Define New Job dialog box is displayed.
3. Select the **Install package** job, and click the **OK** button.

   The Create Job dialog box is displayed.

   Do not select a job other than **Install package**. The other jobs cannot be executed on security PCs.
4. In the Create Job dialog box, set the items on each page.

   The setup for each page is described below.

Page	Setup description
Job page	Specify a job name.
Destination page	Confirm that the destination group that contains only the security PCs has been set. Update data cannot be remotely installed to clients except security PCs.
Package page	Confirm that the update data package has been set. Packages other than update data packages cannot be remotely installed to security PCs. Clicking the **Change** button displays the Change Installation Conditions dialog box, which allows you to change the following settings: • **Replace existing package** on the **System Conditions** page • **Package expiration at the relay system** on the **Schedule** page
Job Distribution Attributes page	This setup is unnecessary. When update data is remotely installed to security PCs, the job is always executed with the settings **Do not distribute** (to suspected destination), **Unicast distribution**, and **Do not split package for distribution**.
Schedule page	You can set a job execution date in the server. Even if you set a job execution date in a client, the setting is ignored.
Client Control page	This setup is unnecessary. Client control cannot be used during remote installation to security PCs.

5. Click the **Execute** or **Save and Execute** button to execute the job.

   When the job is executed, a dialog box for checking the executed update is displayed when the security PC is started. Click the **Yes** button in this dialog box to restart the security PC and then start package downloading and installation.

(2) Maintenance codes for job errors

If a job to a security PC results in an error, the error cause is displayed as a maintenance code. To check the maintenance code, open the Job Execution Status window and display the Detailed Information dialog box.

The table below shows maintenance codes that may be displayed if a job results in an error because authentication could not be performed in a security PC. These maintenance codes are displayed in JP1/Software Distribution Manager versions 08-00 or later for Windows. For details about other maintenance codes, see *6.2.3 List of maintenance codes*.

Maintenance code	Cause	Action
300097078100	Authentication could not be performed. The authentication data has been altered.	Contact the system administrator.
300097078200	A memory shortage occurred.	Stop unnecessary applications.
300097078300	The authentication device does not have a certification.	Issue a new certification.
300097078400	The authentication device does not have a valid certification.	Issue a new certification.
300097078500	The certification of the authentication device has expired.	Issue a new certification.
300097078600	There is no certification from the certification office.	Contact the system administrator.
300097078700	An internal error occurred.	Contact the system administrator.
300097079100	The environment for executing PKI authentication is unauthorized.	Contact the system administrator.
30009707FF00	Other error occurred.	Contact the system administrator.

C. Output of Audit Logs

This appendix explains the information that is output in audit logs.

C.1 Types of events output in audit logs

The following table shows the types of events that are output in audit logs and the times at which audit logs are output by JP1/Software Distribution. The event type is the identifier used to classify events output in audit logs.

Table C–1: Types of events output in audit logs

Event type	Description	Time at which audit log is output by JP1/Software Distribution
StartStop	Event that indicates software startup or termination.	• During start/stop of a JP1/Software Distribution Manager service (Remote Install Server) • During start/stop of a GUI-based program • During start/stop of a batch command
Authentication	Event that indicates success or failure of authentication by an administrator.	During execution of authentication by a GUI-based program
Failure	Event that indicates a software error.	During abnormal termination of the JP1/Software Distribution Manager service (Remote Install Server)
ContentAccess	Event that indicates success or failure of access to a file, registry, or data in the database managed by JP1/Software Distribution.	• During job execution or issuance of execution results • During command execution or issuance of execution results • During abnormal termination of a Database Manager operation

C.2 Audit log save format

This section explains the format used to save audit logs. Audit logs are output to `NETMAuditManagern.LOG`. When the amount of log file output reaches a specified level, the file name is changed, the log file is saved, and a new log is written in a newly created file that has the original name. When this log file switching occurs, `NETMAuditManager1.LOG` is changed to `NETMAuditManager2.LOG` and then `NETMAuditManager1.LOG` is newly created to write logs. When `NETMAuditManager1.LOG` reaches the requisite level, the previously saved `NETMAuditManager2.LOG` is changed to `NETMAuditManager3.LOG`, and `NETMAuditManager1.LOG` is changed to `NETMAuditManager2.LOG` and saved.

In this way, the names of the saved log files are changed to names whose final element is incremented by 1. The larger the value associated with a log file name, the older the file is. When the number of log files reaches a specified value, log files are deleted beginning with the oldest.

You specify during setup the amount of data to be output to each log and the log file output destination. For details about how to specify audit log output, see *4.2.21 Audit Log page* in the manual *Setup Guide*.

C.3 Audit log output format

This section explains the audit log output format, output destination, and output items. It also provides an example of an audit log.

(1) Output format of audit logs

Audit logs are output in the `CALFHM` format, which indicates the audit log format, audit log revision number, and applicable output items, in that order.

The following figure shows the audit log output format.

Figure C–1: Audit log output format

```
CALFHM X.X,output-item-1=value-1,output-item-2 =value-2,...,output-item-n =value-n
```

(2) Audit log output destination

Audit logs are output to the directory specified on the **Audit Log** page during setup of JP1/ Software Distribution Manager.

For details about how to use the **Audit Log** page to specify the audit log output destination, see *4.2.21 Audit Log page* in the manual *Setup Guide*.

(3) Output items

There are two types of output items, common and specific, as explained below:

- Common output items
  Items output in common by all JP1 products that output audit logs.
- Specific output items
  Items output by a particular JP1 product that outputs audit logs.

(a) Common output items

The following table shows the values and contents of the common output items.

Table C–2: Common output items for audit logs

No.	Output item		Value	Contents
	Item name	Output attribute		
1	Common specification identifiers	--	CALFHM	Identifier that indicates the format of the audit log
2	Common specification revision number	--	*X.X*	Revision number used to manage the audit log
3	Sequence number	Seqnum	Sequence number	Sequence number of the audit log
4	Message ID	msgid	KDSD*xxx-x*	Message ID for each product
5	Date/time	date	*YYYY-MM-DD*T*hh:mm:ss.sss*TZD[#1]	Date/time at which the audit log was acquired and the time zone
6	Generated program name	progid	JP1/NETM/DM	Event program name
7	Generated component name	compid	Menu name of Software Distribution Manager folder: • JP1_DM_SERVICE Remote Install Server • JP1_DM_SETUP Setup • JP1_DM_DBMANAGER Database Manager	Menu name, window name, and command name of the Software Distribution Manager folder where the event was detected

No.	Output item		Value	Contents
	Item name	Output attribute		
7	Generated component name	compid	• JP1_DM_NETMDM Remote Installation Manager • JP1_DM_DMIVVW Inventory Viewer • JP1_DM_DMCSVUTY CSV output utility • JP1_DM_DMUNARC Unarchiver • JP1_DM_DMPACK Packager Window name: • JP1_DM_DMDRYSTP Host search • JP1_DM_DMSMID Software operation information • JP1_TEMPLATEVIEW Template management • JP1_DM_DPTVIEW Update management[#2] Command name: • JP1_DM_DCMCOLL Collect files • JP1_DM_DCMCSVU Export to a CSV-formatted file • JP1_DM_DCMDICE Export a software inventory dictionary • JP1_DM_DCMDICI Import a software inventory dictionary • JP1_DM_DCMGPMNT Apply policies to all hosts • JP1_DM_DCMHSTWO Detect a host on which JP1/Software Distribution is not installed • JP1_DM_DCMINST Create and execute a job • JP1_DM_DCMJBRM Delete a job • JP1_DM_DCMJEXE Execute a job • JP1_DM_DCMMONRST Store operating information in a database • JP1_DM_DCMPACK Execute a package • JP1_DM_DCMPKGET Acquire a backup of a package • JP1_DM_DCMPKPUT Restore a package from its backup	Menu name, window name, and command name of the Software Distribution Manager folder where the event was detected

No.	Output item		Value	Contents
	Item name	Output attribute		
7	Generated component name	compid	• JP1_DM_DCMPKRM Delete a package • JP1_DM_DCMRMGEN Delete a job definition • JP1_DM_DCMRTRY Re-execute a job • JP1_DM_DCMSTAT Acquire the job execution status • JP1_DM_DCMSTDIV Load offline machine information • JP1_DM_DCMSTSW Monitor the job execution status • JP1_DM_DCMSUSP Stop and restart a file transfer • JP1_DM_DCMUIDI Batch-enter the user inventory • JP1_DM_DCMWSUS Register and synchronize computer groups • JP1_DM_DCMADSYNC Establish directory linkage Batch command name: • JP1_DM_NETMDB_UNLOAD Making a database transfer backup • JP1_DM_NETMDB_RELOAD Restoration from database transfer backup • JP1_DM_NETMDB_START Database startup • JP1_DM_NETMDB_STOP Database stop • JP1_DM_NETMDB_BACKUP Making a database backup • JP1_DM_NETMDB_REORGANIZATION Database re-organization • JP1_DM_NETMDB_RECLAIM Release used free pages in database • JP1_DM_NETMFILE_BACKUP Acquire a backup of operation history and package files • JP1_DM_NETMFILE_RESTORE Restore operation history and package files from their backup files	Menu name, window name, and command name of the Software Distribution Manager folder where the event was detected
8	Generated process ID	pid	Process ID	Process ID from which event occurrence was detected
9	Generated location	ocp:host	Host name	Name of host on which event occurred.

No.	Output item		Value	Contents
	Item name	Output attribute		
9	Generated location	`ocp:host`	Host name	If the host name cannot be obtained, a hyphen (-) is output.
10	Event type	`ctgry`	• `StartStop` • `Authentication` • `Failure` • `ContentAccess`	Identifier used to classify events output to audit logs
11	Event result	`result`	• `Success` (successful) • `Failure` (failure) • `Occurrence` (occurrence of an event for which there is no success or failure classification)	Result of event that occurred
12	Subject identification information#3	`subj:uid`	JP1 user ID	Information about user associated with event that occurred
		`subj:pid`	Process ID	Information about process associated with event that occurred

Legend:

--: No attribute is output

#1

YYYY: year, *MM*: month, *DD*: day, *hh*: hour, *mm*: minute, *ss*: second, *sss*: millisecond

`T` is the delimiter between the date and the time.

TZD indicates the time zone's time differential. One of the following is output:

+*hh:mm*: Indicates that the time is ahead of Coordinated Universal Time (UTC) by the indicated number of hours and minutes.

-*hh:mm*: Indicates that the time is behind Coordinated Universal Time (UTC) by the indicated number of hours and minutes.

`Z`: Indicates that the time is the same as Coordinated Universal Time (UTC).

#2

No audit logs are output for operations performed from Task Scheduler.

#3

If the event is not related to the user or if user management is not used, the process ID is output.

(b) Specific output items

The following tables show the values and contents of the specific output items.

Table C–3: Specific output items for audit logs

No.	Output item		Value	Contents
	Item name	Output attribute		
1	Action information	`op`	• `DMPK_REG` Package registration • `DMPKJOB_ACT` Execution of *Install package* job or *Send package, allow client to choose* job.	Information about the user operation that caused the event to occur. Operation information that does not correspond to the value is not output.
2	Permissions information	`auth`	• `JP1_DM_Admin` System administrator • `JP1_DM_Deploy`	User permission used to execute user authentication for JP1/Base.

No.	Output item		Value	Contents
	Item name	Output attribute		
2	Permissions information	auth	Distribution management user • JP1_DM_Inventory Asset management user • JP1_DM_Observe System-monitoring user • JP1_DM_Collect Collection management user • JP1_DM_Guest User who browses information	Operation information that does not correspond to the value is not output.
3	Free description	msg	Any message	Message indicating the nature of the event

(4) Example of an output audit log

The following is an output example in which you start Remote Installation Manager from JP1/Software Distribution Manager to create a host.

To create the host:

1. Start Remote Installation Manager.
2. Execute user authentication.
3. Create a new host.
4. Quit Remote Installation Manager.

The contents of the audit log are shown in the following figure.

Figure C–2: Contents of audit log

Step 1
```
CALFHM 1.0, seqnum=1, msgid=KDSD10001-I, date=2007-01-
24T15:50:28.538+09:00, progid=JP1/NETM/DM, compid=JP1_DM_NETMDM, pid=316,
ocp:host=JP1_HOSTNAME, ctgry=StartStop, result=Success, subj:pid=316,
msg="The process started successfully."
```
Step 2
```
CALFHM 1.0, seqnum=2, msgid=KDSD10003-I, date=2007-01-
24T15:50:36.710+09:00, progid=JP1/NETM/DM, compid=JP1_DM_NETMDM, pid=316,
ocp:host=JP1_HOSTNAME, ctgry=Authentication, result=Success,
subj:uid=admin1, auth=JP1_DM_Admin, msg="Authentication succeeded."
```
Step 3
```
CALFHM 1.0, seqnum=3, msgid=KDSD4001-I, date=2007-01-
24T15:50:50.428+09:00, progid=JP1/NETM/DM, compid=JP1_DM_NETMDM, pid=316,
ocp:host=JP1_HOSTNAME, ctgry=ContentAccess, result=Success,
subj:uid=admin1, auth=JP1_DM_Admin,
msg="The host was created successfully."
```
Step 4
```
CALFHM 1.0, seqnum=4, msgid=KDSD10002-I, date=2007-01-
24T15:50:56.600+09:00, progid=JP1/NETM/DM, compid=JP1_DM_NETMDM, pid=316,
ocp:host=JP1_HOSTNAME, ctgry=StartStop, result=Success, subj:uid=admin1,
auth=JP1_DM_Admin,
msg="The process will now end."
```

C.4 Setup for audit log output

During setup, you can specify a setting that enables audit log output. If you are using the Server core facility and Packager on different PCs, you must also specify a setting for audit log output in Packager.

The following explains how to set audit log output.

Setting during setup

During setup, on the **Audit Log** page, select the **Output audit logs** check box.

For details about how to use the **Audit Log** page, see *4.2.21 Audit Log page* in the manual *Setup Guide*.

Setting in Packager

In the Software Distribution Packager window, choose **Options** and then **Customize default settings** to display the Customize Default Settings dialog box. Then, on the **Audit Log** page, select the **Output audit logs** check box.

For details about how to use the **Audit Log** page, see *2.2.16(4) Audit Log page* in the manual *Administrator's Guide Volume 1*.

D. Version Changes

(1) Changes in version 09-50

- Windows 7 and Windows Server 2008 R2 are now supported.
- If remote installation of JP1/Software Distribution Client (relay system) is performed on a JP1/Software Distribution (relay system) in which Automatic Installation Tool is installed, all components other than Automatic Installation Tool are now updated.
- The user can now set as system information that password protection for screen saver information is to be acquired even if the screen saver is disabled.
- The following inventory information (system information) can now be collected:
  - Encryption information set by BitLocker
  - Drive (hard drive) encryption information set by HIBUN FDE
  - Linux distribution
- Software information can now be collected for additional Microsoft Office products. In addition, greater detail about Microsoft Office products is now provided.
- Software information can now be collected for additional anti-virus products.
- Directory information about groups can now be acquired from Active Directory. In addition, the argument `/d` has been added to the command for acquiring directory information (`dcmadsync.exe`), which enables the user to delete directory information that has already been acquired.
- The operation status of virtual environments can now be monitored.
- Use of the devices listed below can now be suppressed. In addition, their connection history, disconnection history, connection permission logs, and connection suppression logs can now be acquired.
  - Bluetooth devices
  - Imaging devices
- If suppression exclusion conditions are set when access to USB media is suppressed, the following logs can now be acquired:
  - Connection permission log
  - Connection suppression log
- Writing can now be suppressed individually for the following devices, and their connection suppression logs can now be acquired:
  - Internal CD/DVD drives
  - Internal floppy disk drives
  - IEEE 1394 connection devices
  - Internal SD card readers
- Operation of JP1/Software Distribution Client (client) is now supported in Windows XP Mode environments.
- The facilities for acquiring print logs and for suppressing printing can now be used when a shared network printer is being used in Windows Vista or Windows Server 2008.
- In the event that a USB media device for which operations have been suppressed is connected to a client PC, the corresponding JP1 event can now be reported as an alert.
- If one of the devices listed below is connected to a client PC when its use is suppressed, a message indicating that use of that device is suppressed can be displayed on the client PC. In addition, the corresponding JP1 event can be reported to JP1/IM as an alert.
  - Internal CD/DVD drives
  - Internal floppy disk drives
  - IEEE 1394 connection devices
  - Internal SD card readers

  - Bluetooth devices
  - Imaging devices
- If startup of a software program is suppressed, the corresponding JP1 event can be reported as an alert.
- If printing is suppressed, the corresponding JP1 event can be reported as an alert.
- Content on the following pages in the server setup process has been modified:
  - **Operation Monitoring** page
  - **AIM** page
- Operation monitoring history can now be stored using the data partitioning facility provided in Microsoft SQL Server 2008 and Microsoft SQL Server 2005.
- An explanation has been added about the relationship between directory information and system configuration information.
- By assigning divisions to users when inventory information is being managed with Asset Information Manager Subset, a single user can manage information about multiple groups.
- The minimum and recommended CPU performance specifications needed to run products and components of JP1/Software Distribution have been changed.
- An explanation has been added about the memory requirements on a managing server when Embedded RDB is used as the relational database.
- The formulas used to estimate the disk capacity needed for Microsoft SQL Server and Oracle databases have been revised.
- If operation monitoring logs are set on the **Report To Higher System** page to be relayed to a higher system, the user can now select which information is sent to the higher system.
- The firewall data pass-through direction can now be changed when the port number and protocol are set to 30002/udp.
- The CPU type can now be acquired as system information.
- The sizes of the following columns in the netmdm_ospatch_patchinf relational database table have been changed:
  - `dm_title`
  - `dm_kbarticle`
- When Embedded RDB is used as the database, a maximum of 1,840 megabytes of patch data can now be stored in the netmdm_ospatch_patchinf relational database table.
- The maximum number of characters that can be used in a collection path name has been increased from 63 half-width characters to 256 half-width characters.
- Explanations have been added about the correspondences between the settings in the Windows and UNIX editions of JP1/Software Distribution.
- A checkbox labeled **Do not repeat package IDs when collecting software information** has been added to the client setup **Job Options** page to allow suppression of duplicate package IDs.
- The following explanation has been moved to the chapter on setting up JP1/Software Distribution Manager:
  - Registry setting for displaying the OS name
- By specification of a registry setting, command processing can now be set to continue even after the user has logged off of Windows.
- By specification of the argument /LC in a command, command processing can now be set to continue even after the user has logged off of Windows.
- Unicode CSV files can now be output using the CSV output utility or the CSV output command (`dcmcsvu.exe`).
- During the client setup process, the user can now select on the **Error Handling** page whether to output messages to the event viewer.
- The following log files can now be output:
  - `DPTExpt.log`
  - `DPTInpt.log`

- The number of log entries has been changed by moving INVENTRY.LOG to the FUNC log.
- The argument `/n` has been added to the command (`dcmmonrst.exe`) that stores operating information in a database; this argument enables the user to check the status of a store process. A log file for checking the store process status has also been added (`MONRST.LOG`).
- The minimum size of the security update management file has been changed to 130 megabytes.
- When upgrading Embedded RDB, the user can now select whether to migrate patches acquired by the security update management facility.
- The command DPTInpt.exe (store patches in database) has been added, which enables the user to migrate patches acquired by the security update management facility.
- An explanation of possible corrective actions to take in order to handle delays in automatic notifications from the relay managing the ID has been added.
- The setting **Manage device change log information** has been added under **Basic Information** in the Server Setup dialog box of Asset Information Manager Subset. This setting allows the user to select whether to manage the initial change history of a device to be managed when the *Delete change log* task is performed.
- Login authentication can now be performed by linking Asset Information Manager Subset to Active Directory. In addition, Active Directory user information can now be acquired.
- The setting **Targets for inventory** has been added under **Link with JP1/SD** in the Server Setup dialog box of Asset Information Manager Subset. This setting allows the user to acquire inventory information from all devices, or only from devices with host IDs, or only from devices with system information.
- The setting **CSC notification count** has been added under **Link with JP1/SD** in the Server Setup dialog box of Asset Information Manager Subset. This setting allows the user to set the timing for reporting acquisition of JP1/Software Distribution inventory information to JP1/Client Security Control.
- The setting **Inventory acquisition method** has been added under **Link with JP1/SD** in the Server Setup dialog box of Asset Information Manager Subset. This setting allows the user to select **Multithreading method** as the method for acquiring inventory information.
- The setting **Multiplex level for inventory** has been added under **Link with JP1/SD** in the Server Setup dialog box of Asset Information Manager Subset. This setting allows the user to specify the multiplex level when inventory information is collected using the multithread method.
- Modification date of system configuration information and modification date of registry information can now be managed as asset information.
- Explanations have been added about upgrading the program version and migrating data in a cluster system environment.
- JP1/Software Distribution Client (client) is now supported for Citrix XenApp (public desktop) running on a terminal server.
- Explanations about starting and stopping the managing server have been added.

  The following explanation has also been included:

  System shutdown procedure when using Embedded RDB as the relational database.
- A facility has been added for backing up operation monitoring results. With this addition, the dmTRUtil.exe command can now be used to output a backup of the operation monitoring results to a CSV file.
- The following capabilities have been added for using device instance IDs to set exclusion conditions for suppressing connection of USB media:
  - The device instance ID of a USB controller can be set as an exclusion condition.
  - A comparison method can be selected for comparing device instance IDs against a specified condition character string.
- A note has been added in the Software Operation Information window stating that software operation history is not displayed for clients if more than 560,000 operation history entries have been stored.
- Explanations have been added about environment variables that cannot be set and other items that are not available when offline installation is performed.
- The dcmstdiv.exe command has been added to enable command-initiated entry of information about offline machines.
- The following items have been added as information that can be output to a CSV file by the CSV output utility or the dcmscvu command:

  - Registry path (registry collection items template)
  - Software indicator ID (Microsoft Office products template)
  - Software indicator ID (anti-virus products template)
- Client configuration settings can now be changed when remote installation of JP1/Software Distribution Client (client) is used.
- The following settings have been added for remote setup of clients:
  - **Host name or IP address**
  - **Product type**
  - **When the system is changed, inventory information is notified to Higher System**
- If operation history on a client is lost, the corresponding JP1 event can now be reported as an alert.
- Descriptions have been added about system maintenance operations that need to be performed. In addition, explanations about the following items have been included:
  - How to change the JP1/Software Distribution Manager settings in a cluster system environment
  - Recommended intervals for performing various database maintenance operations
  - Procedures for backing up and restoring the system
- WMI information can now be collected.
- Messages have been added for the following event IDs:
  - 1081
  - 1082
  - 1083
  - 1084
  - 1085
  - 1086
  - 2021
  - 11029
  - 16031
- A JP1/Software Distribution Client (client) event log message is no longer output for event ID 7009.
- Messages with the following IDs have been added to the section about event log messages for which monitoring is recommended (including the causes and the corrective actions to be taken):
  - 16023
  - 16024
  - 16031
- The basic client log messages KDSF0055-W and KDSF0123-E have been added.
- The contents of the basic client log messages KDSF0010-I and KDSF0020-I have been changed.

(2) Changes in version 09-00

- The following information, which is displayed on the **Attributes** page in the System Configuration, Destination, and Directory information windows for Remote Installation Manager, is updated when a *Set the software monitoring policy* job is executed:
  - **Applied software operation monitoring policy**
  - **Applied software operation monitoring policy version**
- Microsoft SQL Server 2008 can now be used as a relational database program.
- Additional anti-virus products can now be acquired as software information.
- Specific USB media can now be excluded from being suppressed. In addition, if USB media connected to a client PC is being suppressed, a message indicating that fact can now be displayed.

- When automatic storage of operation information is not being performed, the information can now be manually stored in a database by executing the `dcmmonrst` command with the `/x` argument specified.
- Hitachi bundle-named (name created from multiple products) products stored on Hitachi bundled-product CD-ROMs can now be packaged.
- Output of messages to the event log by Embedded RDB that are not required for operations can now be suppressed.
- Hosts can now be deleted from system configuration information by removing the host from the ID group.
- Remote Installation Manager of JP1/Software Distribution Manager can now be used to add a host group or a host from a file.
- The following items have been changed in the Server Setup dialog box of Asset Information Manager Subset.
  - The minimum value that can be specified for the **Communication-less monitoring time** setting under **Session Information** has been changed to 5 minutes.
  - The **Status to display in device search windows** setting has been added under **Basic Information**, allowing the user to choose the device statuses to display as **Status** search conditions in the Device Totals and Device List windows.
- If **Scheduled Tasks** is used to automatically obtain patches, the following functions can now be used:
  - Deletion of security updates after packaging
  - Non-downloading of packaged security updates
- The user name, host name, and IP address can now be specified as search conditions in the Batch Update window of Asset Information Manager Subset.
- The `Text_Title` (text for dialog box titles) item has been added to the Asset Information Manager Subset `VariousInfo` management class, allowing the user to change the title of operation windows.
- Information about the cause and handling of the `3000AF008300` maintenance code has been added to the event log message.
- Commands for backing up and restoring package files and operation history files have been added when Microsoft SQL Server or Oracle is being used as the relational database:
  - `netmfile_backup.bat`
  - `netmfile_restore.bat`
- The following inventory information items can now be acquired:
  - Turn off hard disks (AC)
  - Turn off hard disks (DC)
  - System standby/Sleep (AC)
  - System standby/Sleep (DC)
  - System hibernates (AC)
  - System hibernates (DC)

  Additionally, operation examples of dealing with clients whose power-save setting is not configured and of shutting down clients have been added.
- The operation monitoring function can now be applied to offline machines through the use of media.
- The maximum size of the management file cache can now be specified during setup of relay systems, so that decreases in job processing throughput can be avoided, even if the number of jobs managed by the relay system increases.
- Re-installation is now performed automatically if the initial installation of JP1/Software Distribution Client fails. In addition, the location of the InstallShield environment deletion tool, which is executed if re-installation of JP1/Software Distribution Client fails, is now noted.
- Procedures have been added describing how to perform an overwrite installation or a re-installation of JP1/Software Distribution Manager in a cluster system.
- Job execution results are now recorded, regardless of the setting specified for the **Record the results of ID group jobs** during setup of the relay system, so that relay system ID group jobs can be re-executed by default.

- If Embedded RDB is used for the JP1/Software Distribution Manager database, the size of the operation table area can now be increased automatically.
- If Embedded RDB is used to create an Asset Information Manager Subset database, the size of the database can be expanded automatically.
- A CSV-format backup of Asset Information Manager Subset databases can now be obtained by executing `jamdbexport.bat`.
- An explanation has been added about `jamemb_backup.bat`, which is used to obtain backup files of Asset Information Manager Subset databases in an Embedded RDB environment.
- An explanation has been added about `jamemb_reorganization.bat`, which is used to re-organize Asset Information Manager Subset databases in an Embedded RDB environment.
- As an option for `jamTakeOperationLog.bat`, the group, user name, and location information can now be output to a CSV file when a search pattern is used to output all items in an operation log.
- Event log messages have been added for the following event IDs:
  - `8060`
  - `8061`
  - `8064`
  - `8065`
  - `8066`
  - `8067`
  - `8068`
  - `8069`

(3) Changes in version 08-51

- WUA 3.0 can now be used to acquire client patch information.
- Active Directory information can now be collected on managing servers, specified for job destinations, and viewed in Inventory Viewer.
- Asset Information Manager Subset can now be used to count inventory information items based on job purpose.
- Web access logs, and the logs of print operations and operations to and from external media, can now be acquired as software operation information. Also, printing and operations to and from external media can now be suppressed.
- When a computer that supports AMT is used as a client, the client's BIOS can now be controlled remotely. Also, a diagnostic program on a floppy disk in the managing server can now be used to perform checks on clients.
- Through the use of Microsoft .NET Framework 3.0, AMT Linkage can now be used for clients in a wireless LAN environment.
- Some JP1/Software Distribution Manager components can now be used on Windows Vista.
- Windows Server 2008 is now supported.
- Security-related items can now be acquired as system information.
- The following power management information can now be acquired as system information:
  - Turn off monitor (AC)
  - Turn off monitor (DC)
  - Processor throttle (AC)
  - Processor throttle (DC)
- Software information can now be acquired for additional anti-virus products. A description has also been added about the ability to determine the resident/nonresident status of various anti-virus products.
- Software information on Hitachi program products can now be acquired by using **Search software listed in "Add/Remove Programs"**.

- Whether to save operation information reported to a central manager or relay manager from lower-level systems is now selectable. Whether or not to report operation information received by a relay manager from a lower-level system to a higher-level system can now be selected as well.
- Operation monitoring policies can now be output to a file. Operation monitoring policies can also now be added by importing these output files.
- Operation monitoring functions can now be used for clients running the 64-bit version of Windows Vista.
- File operation history can now be acquired from clients running Windows Server 2008 or Windows Vista.
- Network drives can now be used as directories for storing operation history and backups.
- Database Manager can now be used to create a database area for acquired patches. Windows Mail has also been added as a program type for which patches can be acquired.
- JP1/Software Distribution can now link to WSUS 3.0. When linked to a hierarchically-configured WSUS system, downstream WSUS servers can now be synchronized with the top-level WSUS server, and clients can now be registered to computer groups of downstream WSUS servers.
- Windows Remote Desktop operations are now supported.
- Software inventory information can now be managed under Coordinated Universal Time (UTC).
- The default, minimum, and maximum sizes of the Embedded RDB database area have been changed. The size of the Embedded RDB work table area can also now be specified with Database Manager.
- A formula for calculating the size of the operation monitoring logs has been added to the formulas for estimating the area required for the Embedded RDB database.
- A formula for calculating the size of the registry acquisition items has been added to the formulas for estimating the area required for the Microsoft SQL Server database.
- The Windows Server 2008 and Windows Vista versions of JP1/Software Distribution Client can now be used for relay systems.
- The check box for displaying the Readme file when installation finishes has been removed.
- A description has been added about the log files in which the number of managed log generations and entries cannot be set.
- The following Embedded RDB commands now output return codes:
  - netmdb_backup.bat
  - netmdb_reload.bat
  - netmdb_reorganization.bat
  - netmdb_unload.bat
- A description of the backup procedure for Asset Information Manager Subset has been added.
- The date and time that software registered in **Add/Remove Programs** is installed can now be acquired along with other software information.
- When automatic host group maintenance is used to create a host group based on user inventory information, the maximum number of characters that can be used in the host group name has been changed to 32.
- The `JOB_DESTINATION_ID` tag used by the command parameter file can now be used to specify a relay managing the ID on which to execute the job.
- A command can now be used to acquire information about problems that occur in JP1/Software Distribution.
- Event log messages assigned the following event IDs have been added:
  - `11026`
  - `11027`
  - `11028`
  - `16029`
  - `16030`

  Also, it is now recommended to monitor for event ID `16030` event log messages.

(4) Changes in version 08-10

- Functionality has been added to enable management of users of JP1/Software Distribution when linked to JP1/Base.
- The following functionalities can now be used when computers that support AMT are used as clients:
  - Control of clients that use the AMT power control feature
  - Storing of host IDs in nonvolatile memory provided by AMT
- Software operation time at clients can now be acquired by the function for monitoring software operation status. In addition, a function has been added that totals the acquired operation times in the Software Operation Status window.
- Operation logs can now be traced by using the File Operation Trace window.
- A function has been added that obtains security updates, service packs, and other patches provided by Microsoft.
- A function has been added that provides HTML message notifications to clients.
- Operation logs can now be totaled by group using the Operation Log Total window.
- Support for Windows Vista has been added in the following program product:
  - JP1/Software Distribution Client
- Anti-virus products for which software information can be acquired have been added.
- Version and generation numbers have been added to operation monitoring policies, to make it easier to understand which operation monitoring policy is being applied.
- Text-format files that contain policy information for automatic maintenance of host groups and ID groups can now be imported and exported.
- A user inventory item has been added as a policy type for automatic maintenance of ID groups.
- The description of the number of clients that can be connected directly to a relay system has been modified.
- The data types of some database items in Embedded RDB have been changed, and the size of the database that is created has been reduced.
- The descriptions of the formulas for estimating database size have been improved by clarifying the items targeted by the calculations.
- Functionality has been added so that clients using the host name as the ID key for operations and which are unable to resolve the name of the connection-target higher system through normal means can perform name resolution and connect to the higher system based on the IP address received in the execution request information.
- A function has been added for output of JP1/Software Distribution's operation as audit logs.
- The method of setting up Asset Information Manager Subset and creating a database has been changed.
- A setting has been added to disable display of dialogs while JP1/Software Distribution Client is being installed remotely.
- An additional facility has been added as a JP1/Software Distribution Client component.
- The function that detects hosts on which JP1/Software Distribution is not installed can now detect hosts in a VPN environment with routers that do not support SNMP in the search path.
- The apostrophe (') can now be entered in text-entry user inventory items.
- The basic log message at the client (KDSF0096-W) has been changed.
- A program product ID file can now be created from the Package Information tool when an AIT file is created.
- The following messages about editing AIT files have been added: AITG123-E, AITG124-E, AITG125-E

(5) Changes in version 08-00

- Microsoft SQL Server 2005 is now supported as a relational database program.
- Embedded RDB is supported as the standard relational database provided by JP1/Software Distribution Manager. Basic databases are no longer supported.
- In the Find dialog box, hosts can now be searched by using the host name or IP address as the key value.
- The automatic host group maintenance facility enables hosts to be grouped by the client's OS sub-version.

- The software operation monitoring facility enables the user to select whether or not startup of specified software and path is to be permitted. It also enables the user to select whether or not startup of all software other than specified items is to be permitted.
- The software operation monitoring facility can acquire a file manipulation log.
- Client operation information can now be viewed in the Operation Log List window.
- WUA can be used to acquire information on installed patches.
- Anti-virus products that can be acquired as software information have been added.
- The Add Destination, Add Package, and Save Job dialog boxes can now be resized.
- The maximum number of user inventory items that can be selected has been changed from 255 items to a total size of 51,254 bytes. For hierarchized user inventory items, a maximum size of 102,509 bytes, including the higher items, has been added.
- In split package distribution, the status of execution from relay system to lower system can now be checked at the higher system.
- Polling has been added as a timing for automatically changing a client's connection destination.
- A function for setting client security management has been added for use when JP1/Client Security Control is linked.
- The JP1/Software Distribution management facility and the client installation facility are no longer supported for Web browsers.
- The differing-components distribution facility is no longer supported.
- WUA can be used to acquire information on uninstalled patches.
- WSUS can be linked to manage security updates.
- Windows Server 2003 (x64) is now supported.
- Parentheses ((and)) are now permitted in installation and work directory names.
- The system configuration information can be searched for duplicate hosts and the hosts with the older update dates/times can be deleted.
- An option for delaying a client's polling start time has been added.
- A description of Embedded RDB settings in a firewall environment has been added.
- CPU types have been added to the system information that can be acquired.
- The user can now select whether or not to use the standard retrieve list when software information is acquired.
- When a package is distributed to a UNIX client and an external program is started, the external program's termination code can now be referenced by the server.
- JP1/Software Distribution can now install security update data on the security PC.
- Additional anti-virus products for which information can be acquired have been added.
- Descriptions of environment variables that can be specified in **Skip directory** on the **Options** page and in **File name by full path** on the **Collect File** page of the Create Job dialog box have been added.
- Name of a hotfix whose format is changed when it is displayed as software information by Remote Installation Manager has been added.
- Contents of client's basic log messages `KDSF0060-I` and `KDSF0090-I` have been changed.
- `KDSF0097-I`, `KDSF0098-W`, and `KDSF0099-E` have been added to client's basic log messages.
- In Remote Installation Manager's Job Status window, a folder is now created to store the *Report message* job executed from JP1/Client Security Control.
- During host search, the user can now select whether or not host names are to be acquired. The user can also select the range of host information to be acquired.
- Inventory information for Microsoft Office products and anti-virus products can now be acquired from offline machines.
- A description of how to make a backup of suppress history and operation history has been added.
- Event log message with event ID `19003` has been added.
- System security measures can now be enhanced by linking to JP1/Client Security Control.

(6) Changes in version 07-50

- The *Get software information from client* job now provides capability to acquire information about patches that have not been installed on a computer. This also allows Remote Installation Manager to display information on patches that have not been installed on a computer.

  An event log message maintenance code (3000EF300000) has also been added.
- Capabilities to monitor the operating status of client software, suppress startup of software, and obtain the operation history of software are now provided. Remote Installation Manager can now also display suppression logs and operation logs.

  Event IDs 16016 and 16020 messages have also been added.
- An administrator can now send messages to clients.
- Notification of event information that has been updated on a client can now be reported automatically to the higher system.
- A facility for automatic maintenance of ID groups has been added, which provides capability to register automatically new clients added to an ID group by setting a policy for that ID group.
- JP1/Software Distribution Manager Embedded RDB Edition has been added.
- Capability to search hosts that exist on a network and to detect hosts on which JP1/Software Distribution is not installed is now provided.
- Information that enables JP1/Asset Information Manager to monitor updating of inventory information has been added to several tables in the database.
- Causes and actions to take for event log messages that recommend monitoring have been added.
- Client's basic log message KDSF0103-I has been added.
- Contents of client's basic log messages KDSF0060-I and KDSF0092-E have been changed.
- AIT files provided by JP1/Software Distribution have been added.
- Capability to install software on a PC on which JP1/Software Distribution Client is installed without using a network has been added.
- Because an installation set can now be used to overwrite a previous installation of JP1/Software Distribution Client, the overwrite installation item has been deleted from the table that indicates differences between using an installation set and installing from a Web browser.

  Descriptions of the use of an installation set when performing an overwrite installation have also been added to the procedure for configuring JP1/Software Distribution Client setup information.
- Hosts on which JP1/Software Distribution is not installed (hosts without JP1/Software Distribution installed) can now be detected by reading a CSV file containing information about the hosts in the network.
- CPU types have been added as system information that can be acquired.
- A description of operating JP1/Software Distribution in the terminal service environment has been added.
- Support has been added for running Microsoft Windows Server 2003, Enterprise Edition, as a cluster system OS for JP1/Software Distribution.
- The Get software information from client job now provides capability to acquire information about patches that have been installed on a computer. The acquired patch information can also be displayed by Remote Installation Manager and Package Setup Manager.
- Anti-virus products have been added as system information that can be acquired.
- When user inventory items are being created, the only characters that cannot be used in a comment field now are the semicolon (;) and percent sign (%).
- When a Transfer user inventory schema to client job is being created, whether or not to allow the user to cancel user inventory items in the dialog box and for the client to specify an action after the user inventory has been set has been added.
- Acquired Microsoft Office product and anti-virus product information can now be output to a CSV-format file.
- Notes about creating and using AIT files have been added.
- Capability to distribute software and check distribution status from operation windows of JP1/Asset Information Manager has been added.

- JP1/Software Distribution Client can no longer be installed on PCs on which Client Installation by Web and the Startup Kit Support Tool are installed.
- JP1/Software Distribution SubManager can now be used by a user logged on without administrator permissions to perform remote installation.
- If an error occurs while an overwrite installation is being performed, information on the previously installed package can now be retained.
- By setting a priority for use of network adapters, a client's IP address can now be reported to the higher system.
- Host inventory information not included in the system configuration can now be deleted.
- *Windows Installer* has been added to system information to maintain Windows Installer version information. *Windows Installer* can now be counted in Inventory Viewer as well.
- Registered tools can now be started from Remote Installation Manager.
- Silent installation of programs can now be performed using Windows Installer.
- For the UNIX version of JP1/Software Distribution Client 07-50 and later, whether or not to restart the client machine automatically after a package has been installed can now be specified.
- When in the Job Definition window a job selected with the **F5** key is executed, a confirmation dialog box is now displayed.
- The method for acquiring the CPU clock speed has been changed.
- Microsoft Office products have been added as software information that can be acquired.
- *OS language* can now be counted in Inventory Viewer.
- The following commands can now be executed from JP1/Software Distribution SubManager:
  `dcmcoll.exe`, `dcminst.exe`, `dcmjbrm.exe`, `dcmjexe.exe`, `dcmpkrm.exe`, `dcmrmgen.exe`, `dcmrtry.exe`, `dcmstat.exe`, `dcmstsw.exe`
- The causes and actions to take for event log messages of maintenance codes `300097140000` and `30009F070000` have been changed.
- A section has been added that describes the functional differences between JP1/Software Distribution Manager and JP1/Software Distribution SubManager.
- An AIT file for distributing Windows Installer modules has been provided.

(7) Changes in version 07-00

- Windows 95 is no longer supported by JP1/Software Distribution Client. However, because JP1/Software Distribution Client versions earlier than 07-00 can connect to a higher system of version 07-00, explanations for Windows 95 were added to the manual.
- For a *Get software information from client* job, **Search for Microsoft Office products** and **Search for anti-virus products** were added to the **Software to be searched** option. Also, the number of hosts can now be counted for each product name, virus-definition file version, and residency setting of anti-virus products.
- AIT files, which are script files used to send responses to a software installer automatically, are supported. If an AIT file is packaged and remote-installed together with software, the software can be installed automatically.
- Extraction and packaging of differing-components is no longer supported by JP1/Software Distribution versions 07-00 or later (differing-components packages created with JP1/Software Distribution versions earlier than 07-00 can still be used).
- Client information can now be checked using Local System Viewer.
- Client systems can be monitored and alerts can be sent to the local PC or higher system in the event of errors.
- Alerts reported from clients can be checked at the higher system using alert information files, Event Viewer, and JP1/IM.
- The default values for client setup were changed.
- The **Remote Installation Client** and **Remote Installation Logon Manager** icons are no longer created in the Windows **Startup** group.
- The user can now choose to create the Software Distribution Client Setup folder.
- When the connection destination is undetermined, JP1/Software Distribution Client can be run by specifying `?`.

- The following features were added regarding job suspension and restart:
  - A relay manager can be specified as the destination of *Suspend file transfer* and *Resume file transfer* jobs.
  - Remote Installation Manager of JP1/Software Distribution Manager can suspend and restart file transfer between the local system and its lower systems.
  - Jobs can be suspended and restarted between lower systems in UNIX versions.
  - The `dcmsusp` command was added to suspend and restart file transfer.
- On the **Job Distribution Attributes** page, the user can specify whether or not to distribute jobs even if file transfer is currently suspended.
- Even if the client is not resident, a client user who logs on with non-Administrator user permissions can now install packages that could not be installed previously.
- A procedure was added for upgrading a relational database at the same time that JP1/Software Distribution was upgraded to Version 7i.
- When a version is not set in the software search list and acquisition of version information from the version resource for a specified file fails, `0000` is set as the version.
- During a search using a software search list, a file whose size is 0 bytes can now be searched.
- The detailed information about a destination can be displayed by starting Event Viewer from the Job Status window.
- When the Count Clients facility is executed from the System Configuration or Destination window, the selection status of hosts and host groups is also applied to the host selection window of Inventory Viewer. Additionally, the Count Clients facility can now be executed by specifying a template from the System Configuration or Destination window.
- The user can now specify a desired font in the Software Distribution Manager Unarchiver window (or Software Distribution SubManager Unarchiver window), JP1/Software Distribution Packager window, and Package Setup Manager window.
- The *Suspend file transfer* and *Resume file transfer* job types were added to enable file transfer to be suspended and restarted between a relay system and its lower systems.
- Remote startup and shutdown by the Client Control facility were implemented without having to place one or more relay managers or relay systems per router.
- JP1/Software Distribution can now establish connection even when another application has already established dial-up connection with the same destination.
- The maneuverability of the installer was improved.
- System configuration information can be used to manage the history of host deletions. Because of this change, the formula for determining the database size was also changed.
- The **Error Handling** page was added to the Server Setup dialog box to specify the number of generations of log files to be saved, the maximum number of entries, and the type of Event Viewer messages.
- The cause of the *Client not started* job execution status can be broken down.
- In the relay manager setup, the **Relay System Customization** page was changed to the **Report To Higher System** page.
- In the relay system setup, the **Report To Higher System** page was added, and the description of the **Send the result file to the server** option was moved from the **Relay System Customization** page to the **Report To Higher System** page.
- The client computer can be restarted automatically after package installation. Also, the client setup includes an option to specify whether or not to allow restart of the client computer.
- Display of a processing message during package installation can be specified for a package.
- A file was added to output a basic log related to client actions (`USER_CLT.LOG`).
- A facility was added to enable software to be deleted from the software inventory and to use the deleted software management table to manage deleted software. Because of this change, the formula for determining the database size was also changed.
- Partial match search is supported when host names are searched from the System Configuration window.

- In the Find dialog box, the search item **The hosts that have not had inventory updated within a certain period** was added to the **Find by Dates** page.
- Even when a package with installation date/time specified is distributed in a UNIX client, an external program can now be started immediately after installation.
- An option was added to support customization of default values in the Software Distribution Packaging dialog box and the Create Job dialog box dialog box.
- Packager and Remote Installation Manager can be used to check the detailed attributes of stored packages.
- For the following items among the system information that can be obtained, a supplementary explanation was provided:

  Name of OS family, drive capacity, free space, partition size, file system, logon user name, full name of user, user description
- **IE Patch and BIOS version** (SMBIOS) were added to the system information that can be acquired. Because of this change, the items that can be output to a CSV file were supplemented.
- A description was added regarding the handling when multiple Remote Installation Managers attempt to edit registry collection items and user inventory items at the same time.
- **Hold** was added as a software inventory management status. Also, detailed condition settings were supported to display only specific software in the Filter Software Inventory dialog box.
- For counting by Inventory Viewer, ranges that support combined conditions were increased.
- Hosts can be counted for each IE patch, BIOS manufacturer, and BIOS version (SMBIOS).
- **Restart specification** and **Display processing message** were added to the items that can be output to CSV files using the Package attributes template.
- **Restart specification** and **Display processing message** were added in the Package window to the items that can be printed.
- Previously, the client was unable to install some packages when the user was logged on to Windows NT with the non-Administrator user permissions, but the client can now install the packages if the client is in the running status.
- The `dcmstsw.exe` command was added to monitor job execution status.
- The `dcmdice.exe` command was added to save software inventory information to a CSV file. The `dcmdici.exe` command was also added to import software information from CSV file to the software inventory.
- `reboot` and `processing_dialog` of the `OPTION` tag were added as parameters that can be specified in the parameter file for the `dcmpack.exe` command. Because of this change, specifiable arguments were added.
- `JOB_SCHEDULE` and `JOB_DESTINATION_ID` were added as tabs that can be specified in the parameter file for the `dcmcoll.exe` command. Because of this change, specifiable arguments were added.
- Event log messages related to import and export of user inventory items and commands were added.

E. Glossary

agent

A host in which the Remote Control Agent operates.

AIT file

A file that contains a procedure for installing software interactively using a tool such as a dedicated installer. Automatic Installation Tool is used to create an AIT file.

alert report

An alert is a single message that is displayed by a program. If user operation may result in a serious error, an alert is displayed to attract the user's attention or to provide a warning.

With JP1/Software Distribution, when an error such as a hardware error is detected while monitoring a client system, the error event is reported to the user by means of a method such as a pop-up message. This is called an *alert report*.

all lower clients

A destination type specified when the central manager executes a job for all hosts under a relay manager.

application gateway method

A method of building a firewall that prohibits packet relay and controls access using an application gateway. Users cannot gain direct access to the system from the outside; they must first log in to a gateway and enter a password.

archive

A collection of files.

asset information

Information used by Asset Information Manager Subset to manage hardware and software.

Asset Information Manager Subset

A component that provides a GUI for totaling and searching the inventory information and operation logs collected by JP1/Software Distribution, according to the desired purpose.

By installing Asset Information Manager Subset, you can also open a window for managing software operation information from Remote Installation Manager.

It also provides GUI for client security management when JP1/Client Security Control is linked.

audit log

A log that is output in common by JP1 products. It provides a record of who performed each operation, when it was performed, and the type of operation that was performed.

authentication server

A server that uses JP1/Base to manage access permissions for JP1 users. One authentication server must be installed for each user authentication block. With this server, all JP1 users can be managed in a single batch. To manage JP1/Software Distribution users in linkage with JP1/Base, the JP1 users must be registered in this server.

automatic maintenance policy file

A text-format file that contains a policy for automatic maintenance of host groups and ID groups.

business filter

A function used by Asset Information Manager Subset to restrict the processes that can be executed from operation windows according to user permissions.

The constituent elements (buttons, search conditions, edit items, etc.) of each operation window are changed according to the user's permissions.

cabinet

An area in a managing server for storing packages.

central manager

JP1/Software Distribution Manager that is positioned at the top of the system in the case where managing servers are configured hierarchically.

change history

Information used by Asset Information Manager Subset to manage changes in the memory size and disk capacity of devices. You can use the change history to determine whether the CPU, memory, or disk has been physically modified without authorization.

The change history includes the change date, disk capacity, memory size, CPU, and so forth.

client

A computer on which the JP1/Software Distribution Client (client) software or the client facility of JP1/Software Distribution Manager or JP1/Software Distribution Client (relay system) is installed. A client receives software programs directly or through a relay manager/ system from the managing server and notifies the managing server of the results of installing the software.

client control facility

Facility for starting and shutting down remote PCs connected via a network from the local PC. Using this facility, JP1/Software Distribution can install software on a remote PC when its power is off, such as at night and on weekends/holidays. Note that in order to use this facility, the remote PCs (the motherboard, BIOS, power supply, LAN card, etc.) must support Wake on LAN and automatic shutdown.

collected file

A file collected from clients by remote collection.

collection script

A script that specifies the procedure for remote collection executed by a client. A collection script is created automatically when remote collection is executed from a Windows higher system. When remote collection is executed from a UNIX higher system, the client users can create user-specific collection scripts to achieve desired processing.

controller

A host in which the Remote Control Manager operates.

count clients

A facility that counts the number of hosts by types of information managed by JP1/Software Distribution Manager. This facility is used in a relational database system.

Database Manager

A JP1 software component used to create and maintain relational databases. Database Manager is provided in two component types, one for JP1/Software Distribution Manager and the other for the Asset Information Manager Subset component.

Database Manager for JP1/Software Distribution Manager is a component of JP1/Software Distribution Manager that is used to create and maintain relational databases used by JP1/Software Distribution.

Database Manager for Asset Information Manager Subset component is a subcomponent of Asset Information Manager Subset that is used to create and maintain relational databases for Asset Information Manager Subset.

deleted software management table

An internal table in which software deleted from the software inventory is registered. If a *Get software information from client* job with **Search for a file** specified is executed and software information reported from a host is registered in the deleted software management table, the obtained software information is not added to the software inventory nor to the software inventory of the host.

device operation

A target to which operation monitoring is applied. Reading from or writing to media via a USB storage device, internal CD/DVD drive, internal floppy disk drive, IEEE 1394-connected device, internal SD card slot, Bluetooth device, or imaging device can be suppressed as a *device operation*. This can only be used with clients running version 09-50 or later.

Connection and disconnection (removal) information for these devices is also collected in device operation logs.

directory information

User information and computer information acquired from Active Directory. The acquired directory information can be used as a job destination or for viewing the client information from Inventory Viewer.

division

In Asset Information Manager Subset, this is information that allows a user to manage other groups as a group job. Multiple divisions can be set for each group. By assigning a division to a user, that user can also manage the information of the groups (division groups) set to that division.

division information

In Asset Information Manager Subset, this is information about the groups set to a division.

domain

A unit for managing hosts and users in a network.

Embedded RDB

An embedded relational database provided by JP1/Software Distribution Manager. The user can select whether or not to install Embedded RDB when JP1/Software Distribution Manager is installed.

external media operations

See *operations to or from external media*.

firewall

A component installed at the boundary between the Internet and an internal system, which prevents unauthorized access to the internal system from the outside.

group information

Information used by Asset Information Manager Subset to manage organizations, such as departments that use the asset management system. Group information includes items such as group name, group code, cost group code, and so forth.

higher system addresses, file for

A settings file that contains the mappings of host names and IP addresses. It is used by a client to recognize the IP address of a higher system when a host name-keyed client cannot resolve the name of the higher system.

host

A networked personal computer or workstation that is a target for JP1/Software Distribution operations.

host group

A method of grouping multiple clients for remote installation of software at those clients. This method allows you to group hosts from a managing system in a way that matches the job, organization, or other distribution purpose.

host ID

A key that uniquely identifies a host in a system. Because host IDs are not affected by the network configuration, the system administrator can use host IDs to reduce the work of managing hosts. The system must use a relational database to use host IDs.

host on which JP1/Software Distribution is not installed

A host on which JP1/Software Distribution Manager has not been installed.

host search

Function for searching hosts in a specified range of the network; used to detect hosts on which JP1/Software Distribution is not installed.

HP NNM

A generic term for integrated network management programs that manage the configuration, performance, and problems in a network. If the OpenView Linkage facility is used, JP1/Software Distribution inventory information and job execution status can be managed from the monitoring windows of HP NNM version 7.5 or earlier.

ID group

A method of grouping multiple clients for remote installation of software at those clients. Clients are registered into an ID group at the clients or managing server.

ID group job

A job that specifies an ID group as the destination.

installation mode

The mode for installing a package in a client. The two options are **GUI installation mode**, which uses an installer, and **Background installation mode**, which does not use an installer and in which the files are simply copied.

installation script

A script executed by clients that specifies the procedure for an installation. An installation script is created automatically when a package is created. Users can create their own installation scripts to execute user-specific processes.

installation timing

The timing for installing a package in a client. You can select either **Install when system starts**, which installs the package when the client is started, or **Normal installation**, which installs the package when the package is transferred to the client.

installed software information

Information used by Asset Information Manager Subset to manage the software installed in various devices.

Installed software information, that is, the inventory information managed by the managing server, is imported into and used by the database of Asset Information Manager Subset.

Therefore, the software name and version being managed by the information-importing program, such as JP1/Software Distribution, are used.

installed software list

Information used by Asset Information Manager Subset to manage the names of software installed in various devices. This list is also used for managing the various settings of the installed software.

InstallShield environment deletion tool

A tool that re-initializes the installation environment. It is used before JP1/Software Distribution Client is re-installed after an installation has been stopped due to an installation error.

inventory

Information required for managing clients, such as hardware usage conditions and types of software installed in the client. A client's inventory is retrieved from the client by executing a job from the managing server.

Inventory Viewer

A window for displaying and counting inventory information retrieved from clients. This window provides a wide range of reporting functions. It can be used by JP1/Software Distribution Manager.

job

The execution unit of a JP1/Software Distribution facility. There are 21 job types:

- *Install package*
- *Transfer package to relay system*
- *Batch delete packages on relay system*
- *Collect files from client*
- *Collect files from client to relay system*
- *Acquire collected files from relay system*
- *Delete collected files from relay system*
- *Send package, allow client to choose*
- *Get system configuration information*
- *Get system information from client*
- *Get software information from client*
- *Transfer user inventory schema to client*
- *Get user inventory information*
- *Transfer registry collection definition*
- *Hold report*
- *Hold-report release*
- *Suspend file transfer*
- *Resume file transfer*
- *Report message*
- *Set the software monitoring policy*
- *Get software monitoring information from the client*

JP1 event

Information that is reported to JP1/Base about an event that has occurred in a system.

JP1 user

An account used by JP1/Software Distribution for user authentication when user management is performed in linkage with JP1/Base. Such an account is set up in the authentication server installed with JP1/Base. JP1/IM and JP1/AJS can also be used to perform user authentication of JP1 users.

JP1/AJS

A program for running jobs automatically. JP1/AJS enables you to routinely execute processes in a given order and to start a process when a specified event occurs.

JP1/Asset Information Manager

A program that supports streamlining of IT asset management applications and reduction of management cost required in tasks, such as installation of assets, software license management, and device maintenance, by using a database to achieve central management of information, such as hardware including network devices, software, and contracts.

JP1/Base

A program that provides the core functionality for JP1/IM.

JP1/Base sends and receives JP1 events, manages users, and controls client startup. It also functions as the JP1/IM system agent.

JP1/Base is a prerequisite program for JP1/IM - Manager.

JP1/IM

A program that centrally monitors a distributed system. Information about events such as job processing and failures in the distributed system is sent to JP1/IM as JP1 events. JP1/IM registers and manages JP1 events, and displays them on the system administrator's screen.

JP1/Software Distribution not installed, host on which

See *host on which JP1/Software Distribution is not installed*.

JP1/Software Distribution system

The entire network consisting of the hosts on which JP1/Software Distribution is installed.

Local System Viewer

A window that displays information about the hardware and software of clients, including the system monitoring status, alerts history, system information, and installed software. The client user can use this window for local system management purposes, because the information is available even when the client is not connected to a higher system.

managing server

A program that stores software to be remotely installed and gives the instructions for remote installation. This program can check the software installed in each host and the status and results of remote installation.

Microsoft SQL Server

Microsoft Corporation's relational database management system running on Windows NT. Microsoft SQL Server can be used as the relational database management system for JP1/Software Distribution information.

multicast address

The IP address of a multicast group. The address is specified when the sender and receivers for multicast distribution are set up.

multicast distribution

A method of job distribution that uses the IP multicast protocol to send packets to many specific clients from a higher system. Traffic is reduced because the higher system only needs to send the job packet to one multicast group location, regardless of the number of clients.

multicast group

A conceptual group to which jobs are distributed by multicast distribution. A multicast group has a specific IP address, known as the *multicast address*. When a higher system sends job packets to a multicast group, the packets are then distributed to each client within that group.

multiple LAN connections

A facility of JP1 for handling systems that consist of multiple local area networks (LANs).

Using this function, you can preset the LAN to be used for JP1 transmission on hosts that are connected to multiple LANs. Because JP1 communications can be set up independently of the system and other applications, this function supports a wide range of networks and modes of operation.

Hosts connected to multiple LANs may also be called multi-homed hosts or multiple Network Interface Card (NIC) hosts.

JP1/Software Distribution supports the following multi-LAN environments:

- Environments separated into multiple networks
- Environments with duplex networks

network configuration information file

A CSV file that contains information, such as the IP and MAC addresses, and subnet mask, of the hosts that are connected to the network.

network information

Information used by Asset Information Manager Subset to manage the location of each device on a network. Network information includes items such as IP address, MAC address, node name, computer name, and so forth.

offline folder

A folder for managing inventory information and operation information that is obtained from an offline machine. The offline folder is indicated as {OFFLINE} in the System Configuration and Destination windows.

offline installation

Facility for installing software using an installation medium instead of via a network.

offline machine

A Windows client that has not been registered in JP1/Software Distribution's system configuration information, such as the following PCs:

- PC on which a stand-alone JP1/Software Distribution Client (client) has been installed
- PC in a network on which JP1/Software Distribution Client (client) has been installed but not registered in JP1/Software Distribution's system configuration information

Inventory information and operation information can be obtained from offline machines. Software can be installed on offline machines.

offline machine information

Inventory information and operation information that is obtained from offline machines.

operation history

Information on the software and files manipulated at a client. The following types of operation logs can be collected:

- Start process
- Stop process
- Change caption
- Change active window
- Start/stop of machine
- Logons/logoffs
- File options
- Web access
- Print operations
- Operations to or from external media
- Device operations

Operation Log List window

When client operation information is collected by the managing server, this window is used to extract the software startup history, the print operations suppression history, and the software and file operation history under various conditions, and to view the extracted history.

operation logs

When the user operation logs stored in the database for the suppression history and operation history acquired by JP1/Software Distribution are checked in the Operation Log List window, the displayed information is referred to in general as *operation logs*.

operation monitoring policy

Conditions specified in order to monitor the software operation status. A policy sets software whose startup is to be suppressed and operations whose history is to be acquired.

operations to or from external media

A target to which operation monitoring is applied. Reading from or writing to media via a USB-connected storage device, internal CD/DVD drive, internal floppy disk drive, IEEE 1394-connection, or an internal SD card slot can be suppressed as an *operation to or from external media*. This can only be used with clients running versions between 08-51 and 09-00.

Connection and disconnection (removal) information for these external media is also collected in external media operation logs. Note that logs are not collected on operations to or from internal floppy disk drives.

package

The unit in which software programs are remotely installed. Packages are stored in the cabinet of a managing server.

Package Setup Manager

A facility that enables clients to select and install desired software programs received from the managing server or relay systems. It can reject installation or change the installation directory.

package type

There are three package types, user programs and data, Hitachi program products, and other companies' software.

Packager

A program that registers into the managing server software that is to be remote-installed. It corresponds to the Packager of Windows JP1/Software Distribution system. This is a JP1/Software Distribution term for UNIX.

packaging

The process of using Packager to create packages of software programs.

packet filtering method

A method of building a firewall that limits the packets that can pass through the firewall. This method allows access from within the system to the outside but prohibits access into the system from the outside. This method can limit the number of terminals that are permitted to access the Internet.

patch information file

File that contains information for obtaining patches from a Microsoft server. This file is needed by JP1/Software Distribution in order to obtain patches. JP1/Software Distribution obtains the path information file by connecting to a Hitachi Web server. It is updated based on the provisioning status of patches supplied by Microsoft.

patch information, unapplied

Information about patches that have not been applied to the client. Of the scanning results of the `mbsacli.exe` MBSA command, JP1/Software Distribution treats the information for which the most recent patch was not found (information indicated as `NOT Found` in the scanning results) as unapplied patch information.

policy

Conditions for automatic assignment to a host group or ID group of a new host being added to the system configuration by a facility for automatic registration into the system configuration.

RD area

A logical area used by Embedded RDB for storing tables and indexes.

recorder file

A file that defines the procedure for installing software interactively using a dedicated installer. JP1/Software Distribution provides recorder files for some software programs distributed by other companies. The user can also create recorder files.

relational database

Database used for managing JP1/Software Distribution Manager's information. The supported relational databases are Embedded RDB, Microsoft SQL Server, and Oracle.

relay manager

JP1/Software Distribution Manager positioned under the highest managing server (central manager) in a system where managing servers are configured hierarchically. A relay manager relays jobs such as remote installation and collection of inventory information between the managing server and clients.

relay manager/system

Collective name for programs that relay jobs such as remote installation and collection of inventory information between the managing server and clients.

relay managing the ID

A relay manager or relay system that manages ID group jobs and clients that belong to an ID group. When an ID group job is executed, the relay managing the ID saves the job in the local system and executes it for clients that are registered in the ID group.

relay system

JP1/Software Distribution Client that relays jobs such as remote installation and collection of inventory information between the managing server and clients.

remote collection

A facility for collecting files from clients to the managing server. Instructions are issued from the managing server.

remote control

A facility that executes client operations remotely from a managing server.

Remote Control Agent

A program executed on a remote PC that is controlled by remote operations from the Remote Control Manager.

Remote Control Manager

A program that issues remote control operations to the Remote Control Agent.

Remote Desktop

In this manual, the following functions are referred to as *Remote Desktop*:

- Remote Desktop for Administration or Remote Desktop in Windows Server 2012, Windows Server 2008, Windows Server 2003, Windows 8, Windows 7, Windows Vista, and Windows XP
- Terminal Services in Windows 2000 Server

remote installation

A facility that transfers packaged software from a managing server to a client system and installs it in the client.

Remote Installation Manager

A program that provides the interactive (GUI) capability at a managing server.

search pattern

The search conditions used to search for operation logs in the Operation Log List window are saved as search patterns. The search patterns used for the main searching purposes are registered as defaults. You can also edit the default search patterns or register new search patterns.

security PC

A PC that has only the minimally necessary functions, and that is not equipped with any external storage devices, such as a hard disk and floppy disk. A security PC can connect to an agent and remotely control application software and files. You can use JP1/Software Distribution to remotely install the update data for a security PC.

software information

Information about software installed on hosts comprising a JP1/Software Distribution system. It is acquired by executing jobs from a managing server.

software inventory dictionary

A dictionary for specifying the software to be managed by JP1/Software Distribution. From the software obtained through a file search, you can select the software to be managed. You can also specify the license information needed for managing software licenses using Inventory Viewer.

software search list

A list that is used to acquire software information. There are two types of software search lists, the *standard retrieve list*, which is provided by JP1/Software Distribution, and the *optional software list*, which can be edited by the user.

split distribution

A method of reducing the load on the network by dividing a package into units of a user-specified size and transferring them at a user-specified interval (distribution interval). The user can specify the file split size at setup or job creation, or even at relay locations along the package transfer route. Split distribution is useful for distributing large packages.

SQL

Structured Query Language, a language for relational databases.

suppress history

Shows the history of software startup and printing suppression executed on a client

system information

Information about the hardware of hosts comprising a JP1/Software Distribution system. It is acquired by executing jobs from a managing server.

system monitoring

A facility used by the client to monitor the status of specific hardware according to predefined conditions. During system monitoring, the status of a program being monitored is displayed on the **System Conditions** page of Local System Viewer. If an error occurs in the program being monitored, this event is reported to the user by displaying an alert message or changing the appearance of an icon. While the client is connected to its higher system, alerts can also be reported to the higher system.

System Monitoring icon

An icon displayed in the task bar notification area. The status of the system monitoring facility and the presence of alert messages can be identified by the icon's status (appearance). Double-clicking on the **System Monitoring** icon starts Local System Viewer.

To display the **System Monitoring** icon, in the Client Setup dialog box, on the **System Monitoring** page, choose the **Display the System Monitoring icon in the task bar notification area** option.

terminal server

In this manual, the following servers are referred to as a *terminal server*:

- For Windows Server 2012 or Windows Server 2008 R2, servers on which Remote Desktop Session Host Role Service of Remote Desktop Services is installed
- For Windows Server 2008 or Windows Server 2003, servers on which Terminal Server Role Service of Terminal Services is installed
- For Windows 2000 Server, servers on which Terminal Services has been installed in Application Server Mode

unarchiver

A program that restores archived and compressed files to their original formats during remote collection.

unicast distribution

A method of job distribution in which packets are sent from a higher system to each client individually. Because the higher system has to send each job packet separately to each target client, the number of times a packet is sent increases proportionally to the number of clients in the system.

user inventory information

Information unique to a client (such as name and PC serial number). The managing server executes a job to obtain this information.

user inventory item

An entry item for user inventory information. The user inventory items created in the managing server are distributed to clients by executing jobs.

Visual Test

A program that supports debugging of programs that run in a Windows environment.

Wake on LAN

A standard for turning on a computer in a local area network (LAN) from another computer in the network.

Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, and Windows Vista version of JP1/Software Distribution Client

A program needed in order to manage a computer running a Windows 8, Windows Server 2012, Windows 7, Windows Server 2008, or Windows Vista operating system as a client in a JP1/Software Distribution system. It can also be used as a relay system.

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