

JP1 Version 12

**JP1/IT Desktop Management 2 - Agent (For UNIX
Systems)**

3021-3-E22(E)

Notices

■ Relevant program products

JP1/IT Desktop Management 2 - Additional License for Linux

P-8142-7GCL JP1/IT Desktop Management 2 - Agent 12-00 (for Linux (x64))

JP1/IT Desktop Management 2 - Additional License for UNIX

P-1M42-7FCL JP1/IT Desktop Management 2 - Agent 12-00 (for AIX)

P-9D42-7FCL JP1/IT Desktop Management 2 - Agent 12-00 (for Solaris)

P-1J42-7FCL JP1/IT Desktop Management 2 - Agent 12-00 (for HP-UX (IPF))

JP1/IT Desktop Management 2 - Manager

P-9742-78CL JP1/IT Desktop Management 2 - Agent 12-00 (for Mac)

JP1/IT Desktop Management 2 - Operations Director

P-9742-7KCL JP1/IT Desktop Management 2 - Agent 12-00 (for Mac)

This manual can be used for the products other than the products shown above. For details, see the *Release Notes*.

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Summary of amendments

The following table lists changes in this manual (3021-3-E22(E)) and product changes related to this manual.

Changes	Location
Added how to install JP1/IT Desktop Management 2 - Agent.	5.3

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

Preface

This manual describes the functions and operations of the following program products:

- JP1/IT Desktop Management 2 - Additional License for Linux
- JP1/IT Desktop Management 2 - Additional License for UNIX

■ Intended readers

This manual is intended for system administrators who are familiar with UNIX operations, and who are responsible for managing and maintaining the software deployed across a network, using the JP1/IT Desktop Management 2 suite of program products.

■ Organization of this manual

This manual is organized into the following parts and appendixes. This manual is for all operating systems. Any differences between operating systems concerning the operation of this program are mentioned at the appropriate place in the manual.

PART 1. Description

This part outlines the specific roles of the program products configured in a JP1/IT Desktop Management 2 system, and describes the features of JP1/IT Desktop Management 2 - Agent.

PART 2. Introduction and Operation

This part describes the setup required at system installation, and the settings required for related program products.

PART 3. Operations

This part explains the syntax of commands.

PART 4. Troubleshooting and Messages

This part describes what to do if a problem occurs during program operation. The reason for message output and the recommended action are given for all messages output by JP1/IT Desktop Management 2 - Agent.

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1

Overview

When a networked system consists of a great many UNIX and Windows machines, managing the software resources across the whole system can be onerous and time-consuming. JP1/IT Desktop Management 2 - Agent and the other programs in JP1/IT Desktop Management 2 are designed to enable centralized management of all the software resources in a networked system.

This chapter describes the basic functions and configuration of a JP1/IT Desktop Management 2 system that uses the programs in the JP1/IT Desktop Management 2 series.

1.1 Overview of JP1/IT Desktop Management 2

JP1/IT Desktop Management 2 is a group of programs for distributing software over a network. The following describes the main programs and their functions.

- JP1/IT Desktop Management 2 - Manager (Windows only): Software distribution feature
- JP1/IT Desktop Management 2 - Agent (Windows only) (relay system): Software relay function
- JP1/IT Desktop Management 2 - Agent (distribution-destination system): Software distribution destination functions

Hereafter, unless it is necessary to differentiate JP1/IT Desktop Management 2 - Manager and JP1/IT Desktop Management 2 separately, they (the three programs listed above) will be generically referred to as *JP1/IT Desktop Management 2*.

To distribute software using JP1/IT Desktop Management 2, the applicable programs from those shown above must be installed and set up on all machines used for distribution.

The network in which the JP1/IT Desktop Management 2 programs are installed and which enables distribution management of software is called the *JP1/IT Desktop Management 2 system*.

1.1.1 Features of JP1/IT Desktop Management 2

A system that uses the JP1/IT Desktop Management 2 programs for managing software distribution has the following features:

- Less work involved in software distribution
Using command-driven operations at a central server, you can distribute software in a single operation to a large number of machines in a distributed environment. Distributed software is installed automatically, so there is no need to set up the destination machines individually. Also, you can centrally manage distribution and installation results on the central server.
- Hierarchical management of software distribution
In a large-scale system, relay machines can be used for software distribution, lessening the load on the network. By using the relay machines as departmental servers, you can distribute software across the whole networked system, or to selected departments only.
- Precise distribution operations
JP1/IT Desktop Management 2 provides a variety of distribution methods, which can be selected according to the system operation. For example, software can be distributed at a specified date and time, or to a specific group of machines.
- Applicable to a wide range of systems or platforms
JP1/IT Desktop Management 2 can be used whatever the size of your system, from a small system comprising a few dozen machines, up to a large-scale network with thousands of machines. The JP1/IT Desktop Management 2 programs also support cross-platform environments with both Windows and UNIX machines.
- Support for inventory control
The JP1/IT Desktop Management 2 system not only distributes software. The managing server in the system can retrieve and manage the inventory information of each machine in a network. The inventory information you can manage includes hardware information, software installation status, and user-specific inventory information.

1.1.2 Types of systems comprising the JP1/IT Desktop Management 2 system

In JP1/IT Desktop Management 2, the machines (UNIX and Windows) that make up the network can be divided by purpose into four types:

Managing server

Distributes software, and manages the distribution process and the installation status at the destination machines. The program JP1/IT Desktop Management 2 - Manager provides this functionality.

Relay system

Used as a relay point when distributing software. JP1/IT Desktop Management 2 - Agent (relay system) provides this functionality.

Distribution-destination system (client)

The target system to which software is distributed. JP1/IT Desktop Management 2 - Agent (distribution-destination system) provides this functionality.

A distribution-destination system that runs the UNIX version of JP1/IT Desktop Management 2 - Agent (distribution-destination system) is an *end workstation* if it is connected directly to the managing server. If packages are distributed via a relay system, the distribution-destination system is called a *client workstation*. Note that, in JP1/IT Desktop Management 2 - Agent documentation, the term *workstation* refers to UNIX workstations only.

Packager

Used for registering software to be distributed on the managing server. JP1/IT Desktop Management 2 - Agent provides this functionality.

A relay system or distribution-destination system can serve as a packager.

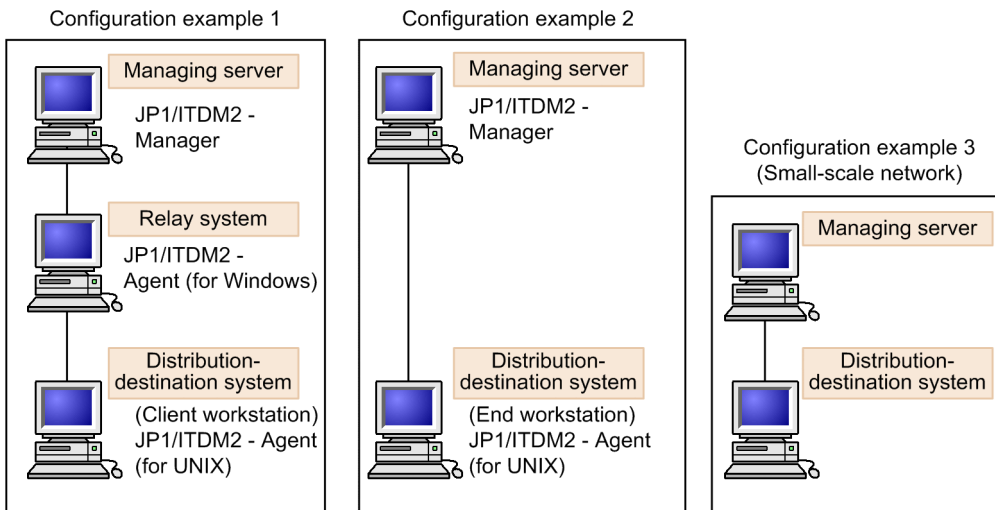
1.2 Configuration of a JP1/IT Desktop Management 2 system

This section describes the network configuration and software configuration of a JP1/IT Desktop Management 2 system.

1.2.1 Network configuration

Figure 1-1 shows a network configuration example of a JP1/IT Desktop Management 2 system.

Figure 1–1: Network configuration example



Note that in the UNIX version of JP1/IT Desktop Management 2 - Agent, the commands that can be used and the environmental settings details differ depending on whether the managing server is connected directly or via a relay system. Therefore, a system that is connected directly to the managing server (including a Windows relay system) is called an *end workstation*, and a system that is connected via a relay system is called a *client workstation*.

For details about network configurations where UNIX and Windows coexist, see (3) *Network configurations where Windows systems coexist*.

(1) Network configuration under JP1/IT Desktop Management 2 - Manager as a managing server

JP1/IT Desktop Management 2 series of programs operates in a WAN or LAN environment. TCP/IP is used over a LAN. JP1/IT Desktop Management 2 also supports firewalls.

One or more relay systems (JP1/IT Desktop Management 2 - Agent) can be configured between the managing server (JP1/IT Desktop Management 2 - Manager) and the distribution-destination systems (JP1/IT Desktop Management 2 - Agent). It is also possible to connect a managing server directly to a distribution-destination system (end workstation) without using any relay systems. The managing server includes a Windows relay system for management.

(2) Network configuration with multiple LAN connections

When the system consists of multiple local area network (LAN) connections, you can select the LAN used by each host in JP1. This function is called *multiple LAN connections*.

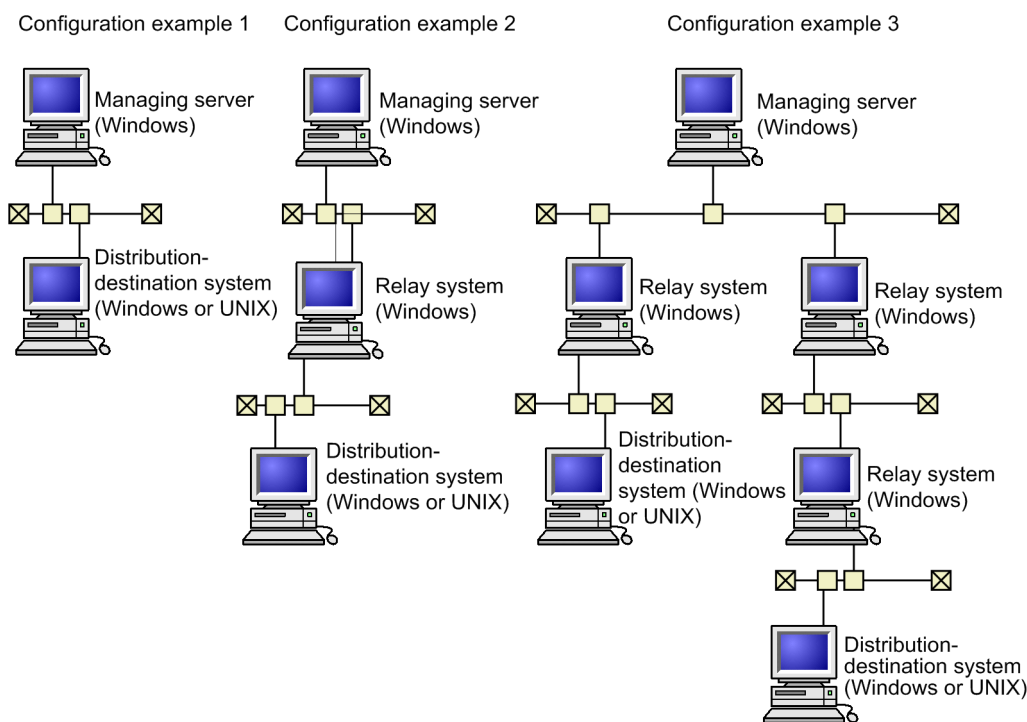
The JP1/IT Desktop Management 2 system uses multiple LAN connections in the following situations:

- When the network is separated into segments
You can set the managing server to use the right LAN for each distribution-destination system, without changing the LAN settings.
In the `/etc/hosts` file at the managing server, you must preset all the LAN settings to be used.
- When the managing server uses multiple networks
Using JP1/IT Desktop Management 2 on the distribution-destination systems, you can switch to the preset LAN connection without changing the LAN settings.
In the `/etc/hosts` file at the distribution-destination system, you must preset all the LAN settings to be used. In the network interface definition file, you must define the LAN settings for the JP1/IT Desktop Management 2 system.
For details on settings, see 5.3.3 *Defining the network interface for JP1/IT Desktop Management 2*.

(3) Network configurations where Windows systems coexist

Figure 1-2 shows system configurations in which Windows systems coexist.

Figure 1–2: Network configuration where Windows systems coexist



To perform packaging for JP1/IT Desktop Management 2 - Manager in an environment where a UNIX and Windows JP1/IT Desktop Management 2 - Agent coexist, note the following:

Cabinet ID is assigned to both the cabinet name and cabinet ID, for the cabinet created in the Windows systems.

To set a name for the UNIX cabinet displayed on the Windows screen, register the cabinet in the Windows JP1/IT Desktop Management 2 - Manager, and then set a name at that time.

1.2.2 Software configuration

The following describes the software that makes up a JP1/IT Desktop Management 2 system, and the prerequisite programs for JP1/IT Desktop Management 2 - Agent.

(1) Software used in a JP1/IT Desktop Management 2 system

The software used in a JP1/IT Desktop Management 2 system is described below.

(a) Software for the managing server

The following software runs on the managing server:

JP1/IT Desktop Management 2 - Manager

Provides managing server functions.

(b) Software for the relay systems

The following software runs on the relay systems:

JP1/IT Desktop Management 2 - Agent (Windows version)

This program provides the functions of relay systems, distribution-destination systems, and packagers.

(c) Software for the distribution-destination systems

The following software runs on the distribution-destination systems:

JP1/IT Desktop Management 2 - Agent (Windows version, UNIX version)

This program provides distribution-destination system functions and packager functions.

(2) Software relating to JP1/IT Desktop Management 2 - Agent functions

The following software is required to use JP1/IT Desktop Management 2 - Agent.

JP1/IM - Manager

This JP1 program enables events to be monitored across the network, and actions to be executed automatically in response to events. In JP1/IT Desktop Management 2 - Agent, events that occur can be automatically reported to JP1/IM - Manager such that actions are executed automatically in response to events.

For details on linking JP1/IT Desktop Management 2 - Agent with JP1/IM - Manager, see 7. *JP1 Event Processing Using JP1/IM - Manager* in PART 2.

1.3 Functions and operating environment of JP1/IT Desktop Management 2 - Agent

Along with the basic services that form the core processing, JP1/IT Desktop Management 2 - Manager and JP1/IT Desktop Management 2 - Agent provide additional services.

This section describes how functions and files are organized in JP1/IT Desktop Management 2 - Agent, and the conditions for using the program.

1.3.1 Organization of JP1/IT Desktop Management 2 - Agent functions

The functions provided by JP1/IT Desktop Management 2 - Agent can be broadly classified as *client services* and *generator tools*. These two types of functions differ in various ways, including their file structure and user interface. It is important to understand the differences in order to use the functions properly.

The features of the two types of functions are outlined below

Client services

Client services provide the functionality for operation as a destination system or packager (system at which packages are registered). These services normally launch automatically at machine startup and are available as resident services.

Generator tools

Generator tools are additional capabilities of JP1/IT Desktop Management 2 - Agent. The generator tools launch automatically when distributing packages for which the installation date and time are specified.

For details on the functionality of the generator tools, see *2.4 Package installation*.

The generator tools only cover the installation related services of the distribution-destination system of the client services. For details on the role of the generator tools, see *2.4 Package installation*.

1.3.2 Files used by JP1/IT Desktop Management 2 - Agent

This section describes the files that must be created or modified for using JP1/IT Desktop Management 2 - Agent. For other information see the following:

File (directory) structure

See Appendix A. *File Structures in JP1/IT Desktop Management 2 - Agent*.

Disk space requirement for files

See *5.2 Estimating of the disk space and memory requirements* in PART 2.

(1) Files used by the client services

Table 1-1 lists the files used by the client services of JP1/IT Desktop Management 2 - Agent.

Table 1–1: Files used by JP1/IT Desktop Management 2 - Agent (client services)

File type	Name	Purpose
Files used at packaging	Packaging-information file	Stores the information for the software to be packaged by using a command.

File type	Name	Purpose
Files used at packaging	User resource path file	Specifies the directory from which to package a user resource from the hard disk.
	Special file definition file	Specifies the device special files to be used for packaging.
Directories for storing packages	Temporary collection storehouse	An area on a relay system used to temporarily store resource files collected from lower-level systems if a line error occurs between the managing server and the relay system.
Files for reporting information to an upper-level system	User resource status file	Used to report user information, such as the status of packages installed locally (without using JP1/IT Desktop Management 2 - Manager), to the managing server.
Settings file		Defines the operating environment for the client services.
File for setting the environment		Sets an operating environment in detail for distribution-destination system.
ID group definition file [#]		Stores ID group information for organizing distribution-destination systems as groups.
Network interface definition file		Defines the network interfaces used by JP1/IT Desktop Management 2 in order of priority.
Log files	Log file	Contains the processing log for the client services.
	File for file system error information	Stores error information.

#

Used in client workstation

(2) Files used by the generator tools

Table 1-2 lists the files used by the generator tools of JP1/IT Desktop Management 2 - Agent.

Table 1–2: Files used by JP1/IT Desktop Management 2 - Agent (generator tools)

Name	Purpose
Directory for installation-scheduled packages	Directory for temporarily storing packages waiting to be installed at a scheduled date/time
Environment settings file	Sets the operating environment for the generator tools.
Log file	Contains the processing log for the generator tools.
Error log file	Contains the error log for the generator tools.

1.3.3 Conditions for using JP1/IT Desktop Management 2 - Agent

When using JP1/IT Desktop Management 2 - Agent, note the following:

- Language settings of the machine
 - In a system environment where machines that use different Japanese encodings coexist, you might not be able to use the Japanese language. You must use the same Japanese encoding system for all machines.
- Cautions when using on HP-UX
 - When using JP1/IT Desktop Management 2 - Agent under HP-UX, avoid using large user IDs and large files.
- Free space required for startup

- At least 5 megabytes of hard disk space is required to start JP1/IT Desktop Management 2 - Agent.
- Changing system time

You can change the system time when stopping the JP1/IT Desktop Management 2 - Agent system. Note that changing the system time might cause the following problems.

- A job with the date and time specified is executed at an unexpected time.
- When the system time is rolled back, a job with the date and time specified is executed twice.
- It becomes difficult to analyze the causes of failure because the log output times will deviate.

If a job is created after the system time is rolled back, a registered job might be overwritten. Wait for the time of the roll back to pass before creating a job.

2

Software Distribution

Software distribution is functionality of a JP1/IT Desktop Management 2 system, and performs batch distribution to the systems on a network. This chapter discusses the four stages of software distribution: software registration (packaging), package management, package distribution, and package installation.

The method of distributing OS patches is also discussed.

2.1 Software distribution overview

This section describes the functions of the entire JP1/IT Desktop Management 2 system and the functions which JP1/IT Desktop Management 2 - Agent is responsible for.

2.1.1 Distribution with UAP startup before and after package installation

You can start a program that performs user-specific processes before or after a package is installed, by specifying the startup when you register software or specify distribution. The program is started by a user with superuser permissions.

(1) UAP startup process created in using the client services

You can specify the following UAP startup processes when using the client services. For details on how to create UAPs, see 2.2.3(4) *Creating the UAPs to be started during installation (client services)*.

Type of process	Description	Example of UAPs registered
External program processing for installation	Starts a UAP before or after installation of another company's software, user programs and user data, or an OS patch. This type of processing is divided into the following two major categories: <ul style="list-style-type: none">External program processing before installation Processes executed before installation.External program processing after installation Processes executed after installation.	For another company's software or an OS patch: <ul style="list-style-type: none">Startup of installed softwareStartup of related softwareStop of the same software as that to be installed For user programs and user data: <ul style="list-style-type: none">Registration of distributed Gaiji charactersMessage output after installationCompiling the distributed source program and creating the object program
External program processing after market software installation	Starts the UAP after completion of Hitachi program product installation (setup).	<ul style="list-style-type: none">Startup of the installed Hitachi program productStartup of related Hitachi program productsStop of installing Hitachi program productsDeletion of the work file

2.1.2 Distribution specifying the installation timing

Unless otherwise specified, packages distributed to the distribution-destination system are immediately installed into the distribution-destination system. However, the installation fails if that software is in use or running in the distribution-destination system. To prevent such a problem, you can set an *installation timing*.

Specify the installation timing during the registration or distribution of software. The following installation timings can be specified.

- During system startup
- During system operation
- During system stop

When installation during system startup or during system stop is selected, the distributed package is stored in the hard disk of the distribution-destination system until installation.

For details about the precautions for the distribution-destination system when the installation timing is specified, see 2.4.1 *Installing packages with installation timing specified*.

2.1.3 Distribution specifying the installation date and time

When an installation date and time is specified for a package, the package that reaches the installation date and time will be automatically installed at the distribution-destination system.

You can specify an installation date and time for both Windows and UNIX distribution-destination systems. You can only specify the installation data and time for user data, user programs and OS patch.

2.1.4 Distributing through the selection of the package by the distribution-destination system user

Normally, when a package is distributed, the installation process is started regardless of the operating condition of the distribution-destination system. This can cause a problem in the system operation. To avoid this, you can allow the users at the distribution-destination systems to select whether or not to install the packages. This is called *client-user selected installation*. When this feature is used, even if the managing server distributes a combination of UNIX and Windows packages, the user can select and install the package applicable to the distribution-destination system.

You can specify this method only when distributing packages from JP1/IT Desktop Management 2 - Manager. For details on the procedure for client-user selected installation, see 2.4.2 *Selecting the package to install (Send package, allow client to choose job)*.

2.1.5 Distribution with recovery specified during installation failure

If installation of the distributed package fails, it is possible to perform recovery to the old version, by specifying the recovery in the packaging-information file during packaging.

When a distribution job which specifies recovery is executed, the distribution-destination system acquires a backup of the old version, and then begins installation of the package. If the package is not installed, the distribution-destination system uses the backup of the old version to perform recovery. The execution results of the recovery are reported to the managing server as a recovery status.

For details on specifying recovery during packaging, see 2.2.3(1) *Creating the packaging-information file*. For recovery operation during installation, see 2.4.3 *Recovery when installation fails*.

2.1.6 Package overwrite installation

Normally, if a package that has the same name as the package you want to distribute has already been installed in a destination system, the package is not distributed to the destination system. However, if *overwrite installation* is set during distribution, the new package will be forcibly distributed, overwriting the package that already exists in the distribution-destination system.

2.1.7 Distribution with OS restart in distribution-destination systems after installation

When you create a distribution job, you can specify whether to restart the operating system in the distribution-destination systems after the desired package is installed. If you do not specify the restart of the operating system in the distribution-destination systems at the creation of the job, the settings specified at packaging take effect.

2.1.8 Preventing package distribution by checking versions

Before distributing an update version of a program product, you can check whether the base version that of the update version has been installed in the distribution-destination. If it has not, a message is output. This prevents distribution of unnecessary packages.

(1) Specifying the base version of the update version

When distributing to a UNIX machine, specify the version as attribute information during packaging. This specification can be altered during creation of the distribution job.

(2) Timing for checking versions

The following shows when the version check is performed.

For UNIX distribution-destination systems

The check is performed immediately before installation of the resource file.

2.2 Software registration (packaging)

In order to distribute a software resource, it must be registered on the managing server. This is called *packaging*. Make sure that the software does not exceed 2 gigabytes before and after registration. The name of a file or directory registered as a resource must not contain spaces, character strings enclosed in (), [], or {}, or the following special 1-byte characters.

```
$, !, *, ?, ;, &, ", ', ` ^, \, |, <, >
```

You register software resources from JP1/IT Desktop Management 2 - Agent. The system at which the user registers a package is called a *packager*. At the managing server, the administrator can set a password to check whether any user attempting to register a package is authorized to do so.

Packages can be compressed at packaging time, which reduces the amount of the following data:

- Amount of data during packaging
- Disk space at the package storehouse on the distribution-destination system

In addition, compressed packages are not expanded until installation on a distribution-destination system, thereby reducing the amount of data at distribution.

2.2.1 Software classification

In a JP1/IT Desktop Management 2 - Agent system running under UNIX, software that can be registered is classified into four types, as follows. This classification is called the *package type*.

Hitachi program products

Hitachi software products. Some of these are not permitted to be distributed. For Hitachi program products that can be distributed, see the relevant documentation or Release Notes.

Program products that can be registered include JP1/IT Desktop Management 2 - Agent and other programs in the JP1/IT Desktop Management 2 series. That is, you can upgrade the JP1/IT Desktop Management 2 system itself, using the program functions.

Another company's software

Commercially available software from companies other than Hitachi. In principle, another company's software that can be distributed is a multi-license pack product. Distribution of such a product might not be permitted with a general license. Before distributing another company's software product, obtain approval from the vendor.

User data and user programs

Files can be packaged singly or in sets. You can also package files located in different directories as a single package. Packages containing user data or user programs that can be distributed to both UNIX machines and Windows machines are called *shared packages*.

OS patches

OS patches correct problems in operating systems. JP1/IT Desktop Management 2 can package the OS patches that have not yet been applied to the distribution-destination systems. You distribute the OS patches to the distribution-destination systems to centrally correct the problems in the operating systems. For details about the formats of OS patches that can be distributed and the procedure for distributing an OS patch, see *2.5 OS patch distribution*.

2.2.2 Packaging procedure

You can package a resource by a command.

How to register the software by using a command

Create and register a file (*packaging-information file*) which specifies attribute information (*package attribute*) such as the name of the software to be registered, and the installation method during distribution.

To register Hitachi program products or register user programs and user data to be distributed to machines whose OS is the same as the OS of the registration source, use the `rdsft` command. To register another company's software, register OS patches, or register user programs and user data to be distributed to machines whose OS differs from the OS of the registration source, use the `rdscom` command. The `rdscom` command can also register user programs and user data to be distributed to machines whose OS is the same as the OS of the registration source.

Hitachi program products and another company's software can only be distributed to machines whose OS is the same as the OS of the registration source.

This section explains procedures for registering software using commands.

(1) Registering Hitachi program products

This subsection describes how to register Hitachi program products.

(a) Registration method

Use the `rdsft` command to register Hitachi program products.

To specify detailed attributes, create the *packaging-information file* before you register resources and specify that file name in the command option. For the method of creating the packaging-information file, see 2.2.3(1) *Creating the packaging-information file*. For some items, you can set default values in the settings files of the client services.

Table 2-1 lists the `rdsft` command options to be specified and the items to be specified in the packaging-information file when you register program products. If the same item is specified using more than one method, the order precedence is the `rdsft` command, the packaging-information file, and then the settings file.

Table 2–1: Items to be specified when a Hitachi program product is registered

Item	Specification method			Default
	<code>rdsft</code> command	Packaging-information file	Settings file	
<code>-k password</code>	Y	--	--	__#1
<code>-C special-file-name #2</code>	Y	--	--	--
<code>-s</code> or <code>-S registered-program-product-model #2</code>	Y	--	--	--
<code>cabinet-ID-1 #2</code>	Y	Y	--	--
<code>-m managing-host-name</code>	Y	--	--	__#3
<code>-Q</code>	Y	--	--	__#4
<code>host-name-on-higher-system</code>	Y	Y	--	Value in the settings file
<code>packaging-information-file-name</code>	Y	--	--	--
<code>PPName #5</code>	--	Y	--	--

Item	Specification method			Default
	rdsft command	Packaging-information file	Settings file	
APaAfterGeneration	--	Y	--	--
APWatchTimer	--	Y	--	300 seconds
InstallTiming	--	Y	--	EXECUTE
Compress	--	Y	Y	NO
LifeofResource	--	Y	Y	1 day
Recover	--	Y	--	NO
BackupDataKeep	--	Y	--	0 days

Legend:

Y: Specifiable.

--: Not specifiable or inapplicable.

#1

Requires the password.

#2

Mandatory.

#3

For `-m managing-host-name`, specify the host name of the relay system that is directly connected to the managing server if program products are registered via at least two relay systems. This item does not need to be specified if program products are registered from the end workstation, the UNIX machine connected to the relay system that is directly connected to the managing server.

#4

Waits for the response from the user.

#5

Mandatory if `-s` is specified in the `rdsft` command.

If you want to register a Hitachi program product by using a special file that is not a system standard special file, you must define the special file in the *special file definition file*. For details on how to create the special file definition file, see 2.2.3(3) *Setting the special file definition file*.

(b) Note during registration

After execution of the register command (`rdsft` command), you cannot cancel the packaging. To make sure that the software is registered, execute the `rdslst` command after creation of the packaging-information file, and check the specified Hitachi program product.

The `rdslst` command, also allows you to confirm the Hitachi program products stored on a storage medium. For example, a CD-ROM might contain a Hitachi program product that is not licensed. Before registering a program product, use the `rdslst` command to check the stored Hitachi program products. Execute the `rdslst` command with the medium unmounted. Execute the packaging with the CD-ROM also unmounted.

(2) Registering another company's software

This subsection describes the formats of another company's software that can be distributed and the method for registering that software.

(a) Formats of another company's software that can be distributed

Table 2-2 describes the formats of another company's software that can be distributed by using JP1/IT Desktop Management 2.

Table 2–2: Formats of another company's software that can be distributed

OS	Software format	Software format example
HP-UX	File formats that can be specified in the <code>-s</code> option of the <code>swinstall</code> command	<code>depot</code>
Solaris	File formats that can be specified in the <code>-d</code> option of the <code>pkgadd</code> command	Solaris package format
AIX	File formats that can be specified in the <code>-d</code> option of the <code>geninstall</code> command	<code>bff</code>
Linux	File format that can be specified in the <code>rpm</code> command	<code>rpm</code>

If the OS command allows, you can specify a directory.

The following software of another company cannot be distributed:

- Software that must be installed in the single-user mode, which is one of the OS operation modes
- Software that requires the OS to be restarted during installation

(b) Registration method

To register another company's software, use the `rdscm` command with the `-ISVSOFT` option specified. Depending on the situation, you might need to perform the file creation tasks described below before registration:

Creating a packaging-information file

You can use command options to specify major attributes such as package ID and cabinet ID. However, if you want to specify more detailed attributes, you need to create a packaging-information file. For details on how to do this, see 2.2.3(1) *Creating the packaging-information file*.

Creating a response file

If you want to distribute another company's software that requires user responses during installation, you must specify the appropriate response file during packaging. A file that describes user responses is called a *response file*. You can specify a response file in HP-UX and Solaris only. The following shows the command for creating the response file:

HP-UX: `swask -c`

Solaris: `pkgask -r`

For details on the response file, see the documentation for the OS.

Creating an installation management file

To distribute the Solaris version of another company's software, you need to specify an installation management file during packaging. The installation management file describes information needed during installation. For example, you might be able to indicate forced distribution by using the file.

For details on how to create the installation management file, see the documentation for the OS.

Table 2-3 lists the items that you can specify by using command options or a packaging-information file when registering another company's software. For some of the items, the default values can be specified using the settings file for the client services. If the same item is specified using more than one method, the order of precedence is command, package-information file, and settings file.

Table 2–3: Items to be specified when another company's software is registered

Item	Specification method			Default
	rdscm command	Packaging-information file	Settings file	
-ISVSOFT#1	Y	--	--	--
-k <i>password</i>	Y	--	--	__#2
-d <i>user-resource-path</i> #1	Y	--	--	--
<i>cabinet-ID</i> #1	Y	Y	--	--
<i>package-ID</i>	Y	Y	--	Automatic generation
<i>program-name</i>	Y	Y	--	Space character#3
<i>version</i>	Y	Y	--	000000#3
<i>generation</i>	Y	Y	--	0000
<i>host-name-on-higher-system</i>	Y	Y	--	Value in the settings file
-m <i>managing-host-name</i>	Y	--	--	__#4
-Q	Y	--	--	__#5
<i>packaging-information-file-name</i>	Y	--	--	--
-N <i>service-name</i>	Y	--	--	--
-REBOOT	Y	--	--	--
-ISVRES <i>response-file-name</i> #6	Y	--	--	--
-ISVADM <i>installation-management-file-name</i> #7	Y	--	--	Path defined by the pkgadd command
UserName	--	Y	--	Space character
Compress	--	Y	Y	NO
APbeforeGeneration	--	Y	--	--
APafterGeneration	--	Y	--	--
APWatchTimer	--	Y	--	300 seconds
LifeofResource	--	Y	Y	1 day
InstallTiming	--	Y	--	EXECUTE
Recover#8	--	Y	--	NO

Legend:

Y: Specifiable.

--: Not specifiable or inapplicable.

#1

Mandatory.

#2

Requires a password.

#3

If a package ID is not specified, it is automatically generated.

#4

Specify the host name of the relay system that is directly connected to the managing server if program products are to be registered via at least two relay systems. This item does not need to be specified if program products are registered from the end workstation, the UNIX machine connected to the relay system that is directly connected to the managing server.

#5

Waits for a response from the user.

#6

This item can be specified for only the HP-UX or Solaris version of another company's software.

#7

This item can be specified for only the Solaris version of another company's software.

#8

This item can be specified for only the HP-UX version of another company's software.

(c) Automatic generation of package IDs

When you register another company's software without specifying the package ID, an OS command that acquires software information is executed to generate the package ID automatically. If you also omit specifying the program name and version, the command also automatically generates them.

The OS command used to acquire software information must be stored in a specific directory. Table 2-4 shows the command and the appropriate directory for each OS.

Table 2-4: OS command for acquiring software information and its directory

OS	Command	Directory for storing the command
HP-UX	swlist	/usr/sbin
Solaris	pkginfo	/bin
AIX	geninstall	/usr/sbin
Linux	rpm	/bin

The package ID, program name, and the version are automatically generated from the software short name, software long name, and version information acquired by the OS command. Automatic generation uses the following rules to convert the acquired information:

Package ID

- The string WUA- is prefixed.
- Periods (.) and underscores (_) are converted to hyphens (-).
- Lower-case letters are converted to the corresponding upper-case letters.
- If the package ID has more than 44 characters, it is truncated following the 42nd character and two hyphens (--) are appended.

Program name

- Periods (.) and underscores (_) are converted to hyphens (-).
- Lower-case letters are converted to the corresponding upper-case letters.
- If the program name has more than 50 characters, it is truncated following the 48th character and two hyphens (--) are appended.

Version

- Periods (.) are deleted.

- If the version has fewer than 7 characters, zeros (0) are appended to make the length 7 characters.
- If the version has more than 7 characters, it is truncated following the 7th character.

(3) Registering the user data and user programs

(a) Registration method

Use the `rdsft` command to register user data and user programs. Use the `rdscm` command to register shared packages. Before registration, create the following files as required.

Creating the packaging-information file

options. To specify detailed attributes, create a packaging-information file. For details on how to create this file, see 2.2.3(1) *Creating the packaging-information file*.

Creating the user resource path file

The directories and files for software where user data and user programs are to be registered are called the *user resource paths*. To register all software in different directories as a single unit of software, specify the user resource paths in a *user resource path file*. For details on how to create the user resource path file, see 2.2.3(2) *Creating the user resource path file*.

Table 2-5 lists the command options to be specified and the items to be specified in the packaging-information file when you register user data and user programs. For some items, you can set default values in the settings files of the client services. If the same item is specified using more than one method, the order precedence is the command, the packaging-information file, and then the settings file.

Table 2–5: Items to be specified when registering user data and user programs

Item	Specification method			Inheritance of specified items when packages are distributed to Windows clients	Default
	rdsft or rdscm command	Packaging-information file	Settings file		
<code>-k password</code>	S	--	--	--	A password is requested.
<code>-d user-resource-path</code> or <code>-D user-resource-path-file-name</code>	S	--	--	--	A directory under /NETMRDS/UPUPL/hd #1
<code>cabinet-ID</code> #2	S	S	--	I	--
<code>package-ID</code> #2	S	S	--	I	--
<code>program-name</code>	S	S	--	I	Space character
<code>-m managing-host-name</code>	S	--	--	--	__#3
<code>-L installation-mode</code> #4	S	--	--	I	B
<code>-Q</code>	S	--	--	--	A response from the user is waited.
<code>host-name-on-higher-system</code>	S	S	--	--	Value in the settings file
<code>packaging-information-file-name</code>	S	--	--	--	/NETMRDS/UPUPL/AC000000#5
<code>version</code>	S	S	--	I	000000
<code>prerequisite-version</code>	S	S	--	NI	Space character

Item	Specification method			Inheritance of specified items when packages are distributed to Windows clients	Default
	rdsft or rdscm command	Packaging-information file	Settings file		
<i>generation-number</i>	S	S	--	I	0000
<i>owner-name</i>	--	S	--	NI	Space character
Generator	--	S	--	NI	STANDARD
APbeforeGeneration	--	S	--	NI	--
APafterGeneration	--	S	--	NI	--
APWatchTimer	--	S	--	NI	300 seconds
Comments	--	S	--	NI	Space character
InstallDirectory	--	S	--	NI	/ (root directory)
OwnerofInstallDirectory	--	S	--	NI	User number 0
GroupofInstallDirectory	--	S	--	NI	Cabinet number 3
ModeofInstallDirectory	--	S	--	NI	755
InstallTiming	--	S	--	I#6	EXECUTE
Compress	--	S	S	NI	NO
LifeofResource	--	S	S	I	1 day
Recover	--	S	--	NI	NO
BackupDataKeep	--	S	--	NI	0 days
UAPBackupList	--	S	--	NI	File with the name of the distributed package ^{#7}

Legend:

S: Specifiable.

--: Not specifiable, inapplicable, or a value used only at registration.

I: Inherited by the Windows machine.

NI: Not inherited by the Windows machine.

#1

For HP-UX, a directory under /var/opt/NETMDMW/UPUPL/hd

#2

Mandatory.

#3

To register user data or user programs via two or more relay systems, specify the host name of the relay system that is directly connected to the managing server. This specification is unnecessary when registering user data or user programs from the end workstation, the UNIX machine connected to the relay system that is directly connected to the managing server.

#4

Use the rdscm command to specify.

#5

Assumed if you do not specify the packaging-information file name, user resource path, and user resource path file specifications are omitted. For HP-UX, it will be `/var/opt/NETMDMW/UPUPL/AC000000`.

#6

In the distribution-destination system of Windows, installation is not executed at system stop.

#7

The backups of the file and the directory to be overwritten are acquired.

(b) Shared package attributes that can be inherited by the distribution-destination system

When the distribution-destination system inherits shared packages, it can inherit the following file attributes.

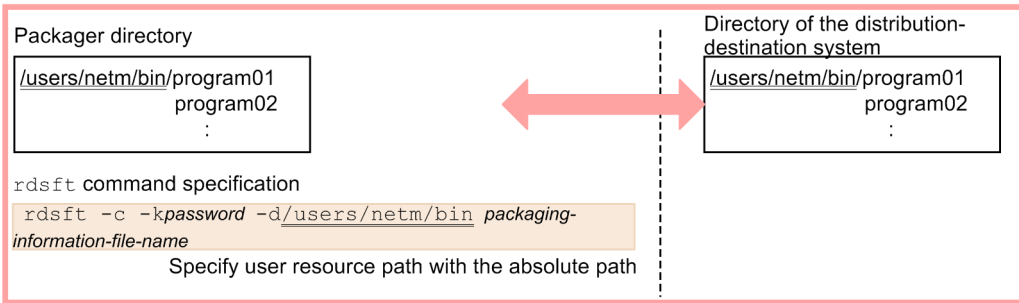
- File name
- File update time and date
- Name of the user who owns the file
- Cabinet ID which owns the file
- Access privilege of the user who owns the file (read, write, and execute)
- Access privilege of the cabinet who owns the file (read, write, and execute)
- Access privilege of the other users and cabinets (read, write, and execute)

(c) Directory configuration of the packager and the distribution-destination system

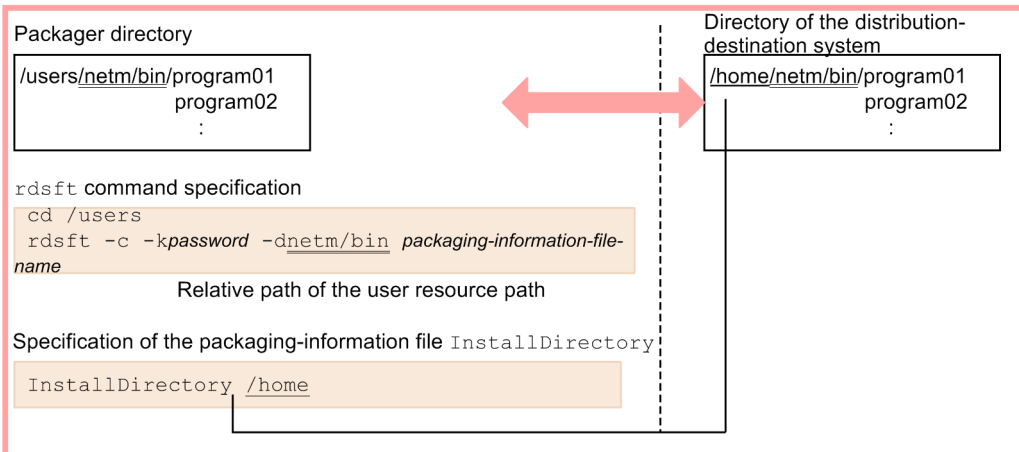
Figure 2-1 shows the directory configuration of the packager and the distribution-destination system.

Figure 2–1: Directory configuration of the packager and the distribution-destination system

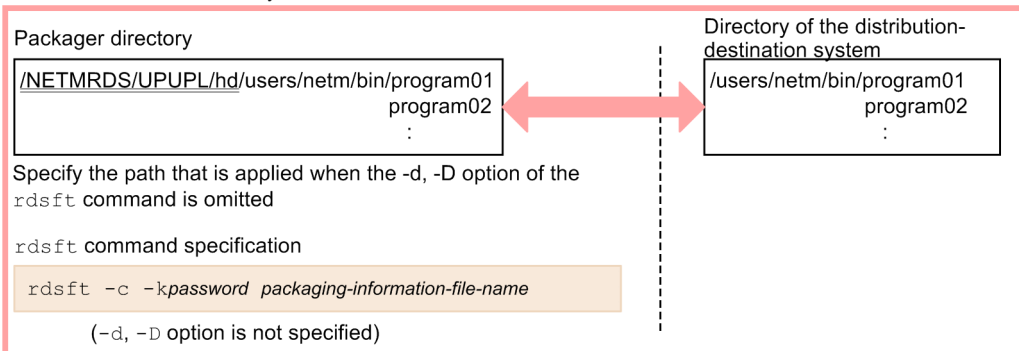
- When specifying the user resource path with the absolute path



- When specifying the user resource path with a relative path



- When the directory structure cannot be matched between the packager and distribution-destination system



2.2.3 Creating the files to be specified during packaging

(1) Creating the packaging-information file

Before you register resources, you need to create the file that describes the information about the resources to be registered (*packaging-information file*). This subsection describes how to create the packaging-information file.

(a) Rules for creating the packaging-information file

To create the packaging-information file, use a text editor in the following format:

```
attribute-nameTabvalueEnter
```

attribute-name

Specify the item to be specified in the packaging-information file.

value

Specify the value to be set for an item in the packaging-information file.

Create the packaging-information file according to the following rules.

- You can specify a space character instead of a tab character.
- To include a space character in a set value, enclose the set value between double quotation marks (").
- If you specify # in the first column, that line is treated as a comment.
- The maximum length of a line in the packaging-information file is 256 bytes including the code for the pressed **Enter** key.
- If you specify more than one attribute with the same name, the set value that is specified last is validated and the preceding set values are ignored.

(b) Syntax of the package-information file

Format

As shown below, attributes that can be specified in the package-information file differ depending on the package type.

For registering Hitachi program products

```
Group cabinet-ID
PPName program-product-model
[UserName owner-name]
[HostName host-name-on-higher-system]
[Compress {NO|COMPRESS|PACK}]
[APafterGeneration external-program-processing-after-market-software-
installation]
[APWatchTimer monitoring-time-for-external-program-processing-after-
market-software-installation]
[LifefofResource package-storage-period]
[InstallTiming BOOT]
[Recover {YES|NO}]
[BackupDataKeep backup-file-storage-period]
```

For registering another company's software and OS patches

```
Group cabinet-ID
[ResourceName package-ID]
[ProgramName program-name]
[Version version]
[Generation generation-number]
[HostName host-name-on-higher-system]
[UserName owner-name]
[Compress {NO|COMPRESS|PACK|COMMON}]
[APbeforeGeneration external-program-processing-before-installation]
[APafterGeneration external-program-processing-after-installation]
[APWatchTimer monitoring-time-for-external-program-processing]
[LifefofResource package-storage-period]
```

```
[InstallTiming {BOOT|EXECUTE|SHUTDOWN|UAP}]
[Recover {YES|NO}]
```

For registering user data and user programs

```
Group cabinet-ID
ResourceName package-ID
[ProgramName program-name]
[UserName owner-name]
[Version version]
[PrerequisiteVersion prerequisite-version]
[Generation generation-number]
[Comments user-comment]
[HostName host-name-on-higher-system]
[Compress {NO|COMPRESS|PACK|COMMON}]
[Generator {STANDARD|NETM_DM_GF}]
[APbeforeGeneration external-program-processing-before-installation]
[APafterGeneration external-program-processing-after-installation]
[APWatchTimer monitoring-time-for-external-program-processing-for-
installation]
[LifetimeResource package-storage-period]
[InstallDirectory installation-target-directory]
[OwnerofInstallDirectory directory-owner]
[GroupofInstallDirectory directory-cabinet]
[ModeofInstallDirectory directory-file-mode]
[InstallTiming {BOOT|EXECUTE|SHUTDOWN|UAP}]
[Recover {YES|NO}]
[BackupDataKeep backup-file-storage-period]
[UAPBackupList backup-list-name]
```

Explanation

Group *cabinet-ID* ~ <uppercase alphabetic characters or numerics> ((2 characters))

Specify the ID of the cabinet where resources are to be registered. A cabinet can register up to 256 resources. When you create a new cabinet to register resources, specify the ID of the cabinet here so the cabinet is automatically created and resources can be registered. This item must be specified if you do not specify a cabinet ID in the option of the `rdsft` or `rdscm` command.

Specify a different cabinet ID for each managing server that registers resources. If you register resources with the same cabinet ID in different managing servers, the packages might not be distributed even if the package names are different when the cabinet ID is the same.

PPName *program-product-model*

Specify the model of the program product to be registered. To specify multiple program products, delimit them using space characters and enclose the set values between double quotation marks (").

A description example for specifying multiple program products is as follows:

```
PPName "P-1642-111 P-1642-421"
```

By using the regular expression of the UNIX operating system, you can simplify the specification method. A specification example using the regular expression is as follows:

- PPName *
 - PPName P-1642-*
 - PPName P-1642-??
- Specifies all the program products that are registered in a DAT or CD-ROM.
- Specifies all the program products of which names begin with P-1642-.

Specifies all the program products of which names begin with P-1642- and end with two numbers.

- PPName P-1642-[1-5]

Specifies all the program products of which names begin with P-1642- and end with a number between 1 and 5.

ResourceName *package-ID* ~ <uppercase alphabetic characters, numerics, hyphens, or underscores> ((1 to 44 characters))

Specify the name of the resource to be registered. Specify a name that is unique in the network system. This item must be specified when you register a Hitachi program product or a user program and user data without specifying the package ID in an option of the `rdsft` or `rdscm` command. When you register another company's software or an OS patch, you can omit this item. If you omit this item, the package ID is automatically generated.

ProgramName *program-name* ~ ((1 to 50 characters))

Specify the general name of the resource to be registered. Specify this name if you want a common name besides the package ID. If you do not specify this value, a space character is assumed. For registration of another company's software, if you omit the package ID and program name, the program name is automatically generated.

UserName *owner-name* ~ ((1 to 14 characters))

Specify the name of the user who owns the resource to be registered. If you do not specify this value, a space character is assumed.

Version *version* ~ <uppercase alphabetic characters, numerics, or slants> ((1 to 6 characters))

Specify the version of the resource to be registered. For a program product, the version is automatically set. For other resources, set this item to specify dates and for other purposes. If you do not specify this value, 000000 is assumed. For registration of another company's software, if you omit the package ID and version, the version is automatically generated.

PrerequisiteVersion *prerequisite-version* ~ <uppercase alphabetic characters, numerics, or slants> ((1 to 6 characters))

Specify the prerequisite version when distributing a resource to be registered.

If you specify 000000 as the prerequisite version, the resource is always distributed regardless of the prerequisite version. If you do not specify `PrerequisiteVersion`, a space character is assumed and the resource is distributed without checking the prerequisite version.

This specification becomes valid when `EXECUTE` is specified for `InstallTiming`.

Generation *generation-number* ~ <uppercase alphabetic characters or numerics> ((4 digits))

Specify the generation number of the resource to be registered. If you do not specify this value, 0000 is assumed.

Comments *user-comment* ~ ((1 to 64 characters))

Specify the user comment for the resource to be registered. This specification is valid when `NETM_DM_GF` is set for `Generator`. Do not insert a new line within a comment. If you do not specify this value, a space character is assumed.

HostName *host-name-on-higher-system* ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods> ((1 to 20 characters))

Specify the host name on higher system. If you do not specify this value, the resource is registered into the managing server specified in the settings file. To specify a host file name in a client workstation, specify the host name of the relay system.

If you do not specify a *host name on higher level* in the option of the `rdsft` or `rdscm` command, the specification in the packaging-information file is validated. The *host name on higher system* specified in the `rdsft` or `rdscm` command takes precedence over the specification in the packaging-information file.

Compress ~ {NO | COMPRESS | PACK | COMMON}

Specify the type of compression for the resource to be registered.

- NO
No compression is performed.
- COMPRESS
Use the `compress` command to compress.
- PACK
Use the `pack` command to compress.
- COMMON
Compress a shared package.

If the size of a resource is three blocks or smaller, specifying `PACK` has no effect. If an error occurs during compression, the resource is registered without compression. If you do not specify this value, the type specified in the settings file is validated.

`Generator` ~ {STANDARD|NETM_DM_GF} <<STANDARD>>

Specify the type of the generator to be started when a package is installed.

- STANDARD
Standard generator provided by JP1/IT Desktop Management 2 - Agent
- NETM_DM_GF
Generator provided by the generator tools of JP1/IT Desktop Management 2 - Agent

`APbeforeGeneration` *external-program-processing-before-installation* ~ ((1 to 60 characters))

Use the absolute path to specify the external program processing before installation which is started before the standard generator executes installation. If you also specify `APafterGeneration` (external program processing after installation), the specification value of this item plus the specification value of `APafterGeneration` must be within 60 characters.

This specification is valid when you specify `STANDARD` for `Generator`. When you specify `NETM_DM_GF`, the external program processing before installation is ignored even if it is specified.

By creating the program of the external program processing before installation under `/NETMRDS/usrcom/` (`/opt/NETMDMW/usrcom/` for HP-UX), you can use the relative path to specify this item.

Note the following when you specify the external program processing before installation:

- Up to 18 character strings (arguments) can be specified.
- Consecutive space characters are treated as a single delimiter.
- Do not use the characters that have special meaning in shell programs such as `>`, `<`, `|`, `&`, and `$`.
- Single quotation marks (`'`) are not treated as arguments.
- Double quotation marks (`"`) cannot be specified. However, when you specify a space character in a set value, enclose the entire set value between double quotation marks.
- Shell variables are invalid since they are treated as character strings.
- Do not include processing that waits for responses.

`APafterGeneration` *external-program-processing-after-installation* or *external-program-processing-after-market-software-installation* ~ ((1 to 64 characters))

Use the absolute path to specify the external program processing after installation or the external program processing after market software installation which is started after a package is installed.

This specification is valid when distributing to the workstation. The installation is ignored when distributed to a PC. When you specify `NETM_DM_GF` is specified for `Generator`, specify in less than or equal to 40 characters.

When STANDARD is specified for Generator, if you create a program that requires external program processing for installation under the /NETMRDS/usrcom/ directory (or the /opt/NETMDMW/usrcom/ directory in the case of HP-UX), you can specify the program using a relative path.

Note the following when you specify the external program processing for installation:

- Up to 18 character strings (arguments) can be specified.
- Consecutive space characters are treated as a single delimiter.
- Do not use the characters that have special meaning in shell programs such as >, <, |, &, and \$.
- Single quotation marks (') are not treated as arguments.
- Double quotation marks (") cannot be specified. However, when you specify a space character in a set value, enclose the entire set value between double quotation marks.
- Shell variables are invalid since they are treated as character strings.
- Do not include processing that waits for responses.

APWatchTimer *monitoring-time-for-external-program-processing-for-installation* or *external-program-processing-after-market-software-installation* ~ <unsigned integer> ((1 to 32767)) <<300>> (unit: seconds)

Specify the period of time (in seconds) to monitor the execution of the external program processing for installation or the external program processing after market software installation. If the external program processing for installation or the external program processing after market software installation is still executing after the specified value, the distribution-destination system executes the next processing without waiting for the end of the previous processing. The external program processing for installation or external program processing after market software installation will not be terminated forcibly. In this case, the distribution-destination system reports an installation error to the manager server. This specification is validated at each installation timing.

LifeofResource *package-storage-period* ~ <numeric> ((8 digits))

Use the YYYYMMDD format to specify the time until which the distributed package is stored in the temporary package storehouse of a relay system.

- *YYYY*
Specify the year (*YYYY*: current year to 2089).
- *MM*
Specify the month using two digits (*MM*: 01 to 12).
- *DD*
Specify the day using two digits (*DD*: 01 to 31).

If you omit this value, the number of days to keep the package, which is specified in the settings file, is validated. An error occurs if you specify a date before the registration date.

InstallDirectory *installation-target-directory* ~ <alphanumeric characters> ((1 to 64 characters))

Specify the installation target directory of user data or user programs. For a hard disk resource, you can specify this item when you register the resource using the relative path. If the specified directory does not exist in the distribution-destination system, it is created when the package is installed.

If the specified directory is not defined or if you omit this specification, the root directory (/) is assumed.

For Linux, do not specify a symbolic link for the installation target directory. Otherwise, the symbolic link will be released.

OwnerofInstallDirectory *directory-owner* ~ <unsigned integer> ((5 digits from 0 to 59999))

Specify the owner using the user number if the directory specified in InstallDirectory does not exist in the distribution-destination system. If the specified owner is not defined or if you omit this specification, root (user number 0) is assumed.

GroupofInstallDirectory *directory-cabinet* ~ <unsigned integer> ((5 digits from 0 to 59999))

Specify the cabinet if the directory specified in `InstallDirectory` does not exist in the distribution-destination system. When you specify a directory cabinet, `OwnerofInstallDirectory` must be specified. If the specified cabinet number is not defined or if you omit this specification, `sys` (cabinet number 3) is assumed.

ModeofInstallDirectory *directory-file-mode* ~ <octal number> ((3 digits from 700 to 777)) <<755>>

Specify the file mode of the directory if the directory specified in `InstallDirectory` does not exist in the distribution-destination system. For the file mode, specify only the permission mode bits using absolute values. When you specify the file mode of a directory, the following items must be specified:

- `OwnerofInstallDirectory`
- `GroupofInstallDirectory`
- `InstallDirectory`

InstallTiming ~ {BOOT|EXECUTE|SHUTDOWN|UAP} <<EXECUTE>>

Specify the timing to install software.

- `BOOT`
Install a package when the system is started.
- `EXECUTE`
Install a package when the managing server issues a distribution job.
- `SHUTDOWN`
Install a package when the system is stopped.
- `UAP`
A user application program installs a package. You can specify this value only when the distribution-destination system is Windows.

If the package has a daemon process, install the package when the system is started or stopped. The following packages cannot be installed when the system is started. Install them when the system is stopped.

- Packages that are started before the `user_daemon` step in the `/etc/rc` script
- Packages with the shared library
- Packages containing the programs that are registered into `/etc/inittab` with the `respawn` specification

Only `BOOT` can be specified for program products. If anything else is specified, the specification is ignored.

Recover ~ {YES|NO} <<NO>>

Specify whether to use the recovery facility.

- `YES`
Execute recovery if installation fails when the package is distributed.
- `NO`
Do not execute recovery if installation fails when the package is distributed.

Some program products might not be able to use the recovery facility because of the attributes of the programs. Recovery is not executed even if you specify `YES` for such program products. In addition, if the distribution-destination system does not have the backup directory, recovery is not executed even if `YES` is specified.

Socket device files are not recovered. When you write a socket device in the backup list or register a file with the name identical to that of the socket device, do not specify `YES` for `Recover`. If recovery is specified in the packaging-information file that registers a socket device, backups are not acquired when packages are distributed and the socket device file is not distributed.

For another company's software, the recovery facility is available for only the HP-UX version of the software.

BackupDataKeep *backup-file-storage-period* ~ <unsigned integer> ((0 to 999)) <<0>> (unit: days)

When you use the recovery facility at the distribution of packages, specify the number of days to keep the backup if recovery fails or is not executed. This specification is valid when you specify YES for Recover. The backup will be deleted after the number of days specified here from the date of package distribution.

Recovery can be retried while backups are saved. If you specify 0, backups are not saved. Specify 0 for the packages you do not need to retry recovery for.

UAPBackupList *backup-list-name* ~ <alphanumeric characters> ((1 to 128 characters))

To acquire a backup for the recovery facility to be executed at the distribution of the next version after a package is distributed, specify the file name of the backup list containing the file and the directory. For details about the backup list, see 6.2.1 *Acquiring backups* in PART 2. To specify the file name of the backup list, use the absolute path.

This specification is valid when the package is user data or a user program. This specification is validated when the recovery facility is executed at the distribution of the next version after a package is distributed. This specification is invalid if the recovery facility is executed at the distribution of the current package.

If you do not specify this value, only the file and the directory to be overwritten are backed up when the recovery facility is executed at the distribution of the next version.

(2) Creating the user resource path file

For the *user resource path file*, specify a directory that is registered from the hard disk. Since you can specify multiple directories or files, you can register the files in different directories as a single resource by creating this user resource path file. Use the *absolute path* to specify a directory or a file. Do not include . . in a path. A creation example of the user resource path file is as follows:

Example:

```
/users/home  
/etc/hosts  
/etc/networks
```

(3) Setting the special file definition file

To register program products using the special file that is not provided by the system as standard, you need to define such a special file in the *special file definition file*.

(a) Rules for creating the special file definition file

The special file definition file defines the information of each special file. JP1/IT Desktop Management 2 - Agent references this file for the information corresponding to the specified special file when registering a program product and accesses the provided storage medium.

The special files provided by the system as standard are defined in the special file definition file. The directory name of the special file definition file is as follows.

OS	LANG environmental variables	Directory name
HP-UX	ja_JP.SJIS	/etc/opt/NETMDMW/rdsprm/ja_JP.SJIS/DEVTYPE
	ja_JP.eucJP	/etc/opt/NETMDMW/rdsprm/ja_JP.eucJP/DEVTYPE
	Other than ja_JP.SJIS, ja_JP.eucJP	/etc/opt/NETMDMW/rdsprm/C/DEVTYPE

OS	LANG environmental variables	Directory name
Solaris	ja_JP.PCK	/NETMRDS/rdsprm/ja_JP.PCK/DEVTYPE
	ja	/NETMRDS/rdsprm/ja/DEVTYPE
	Other than ja_JP.PCK, ja	/NETMRDS/rdsprm/POSIX/DEVTYPE
AIX	Ja_JP	/NETMRDS/rdsprm/Ja_JP/DEVTYPE
	ja_JP	/NETMRDS/rdsprm/ja_JP/DEVTYPE
	Other than Ja_JP, ja_JP	/NETMRDS/rdsprm/En_US/DEVTYPE
Linux	ja_JP.UTF-8	/NETMRDS/rdsprm/ja_JP.UTF-8/DEVTYPE
	ja_JP.eucJP	/NETMRDS/rdsprm/ja_JP.eucJP/DEVTYPE
	Other than ja_JP.SJIS, ja_JP.eucJP	/NETMRDS/rdsprm/C/DEVTYPE

(b) Syntax of the special file definition file

The following shows the format and contents of the special file definition file.

```
special-file-nameTabmedium-typeTabcommentTabmedium-typeEnter
```

special-file-name

Use the absolute path from `/dev` to specify the special file name that corresponds to the tape device or the disk device where the storage medium containing the program product is to be set.

medium-type

Specify the type of the medium containing the data.

DISC

Floptical disk or MO

TAPE

CMT or DAT

ISO9660

CD-ROM

UNKNOWN

External storage medium other than disks and tapes

ILLEGAL

External storage medium such as `tty` and the hard disk

comment

Write a comment. If you do not specify a comment, specify `""`. An error occurs if you specify a space character.

medium-type

Specify the type of storage medium.

DAT

The medium is a DAT.

CD-R

The medium is a CD-ROM.

OTHER

The medium is other than above.

(c) Creation example

The following is an example of registering software using special file `/dev/dsk/c0t5d0`, when the provided recording medium is a CD-ROM.

```
/dev/dsk/c0t5d0 ISO9660 NETM/DM/WPP access CD-R
```

(d) Notes

- If the special file accesses a medium which is a type of disk, the special file must be the character type.
- The special file that accesses a CD-ROM must be the block type.

(4) Creating the UAPs to be started during installation (client services)

When you use the client services to install packages, you can start the following UAPs before and after the installation. The UAP is started by a user with superuser permissions.

External program processing for installation

The *external program processing for installation* is the processing that is started before or after installation of other software, user programs and user data, or OS patches. The external program processing for installation is divided into the *external-program-processing-before-installation* and the *external-program-processing-after-installation*.

External program processing after market software installation

The *external program processing after market software installation* is the processing that is started after a Hitachi program product is installed.

The following subsections describe how to create and specify UAP during packaging.

(a) Using the external program processing for installation

To use the external program processing for installation:

1. Create the program of the external program processing for installation.

Create the external program processing for installation to return the following return codes after the processing:

```
Normal end: 0  
Abnormal end: Other than 0
```

If the return code indicates an abnormal end, JP1/IT Desktop Management 2 - Agent handles it as an installation error. Note the following when you create the external program processing for installation:

- Do not include spaces in command path names (except for command arguments).
- The external program processing for installation is started by a user with superuser permissions.
- Do not include processing that waits for responses
- Do not output messages to the standard output and the standard error output.
- The environment variables are inherited from the ones that are active when JP1/IT Desktop Management 2 - Agent is operating.

- To implement file operations, such as copying files and logging records to a file, in an external program, make sure that the files are specified with their absolute path names.

2. In the packaging-information file, set the following attributes:

```
Generator          STANDARD
APbeforeGeneration path-name-of-external-program-processing-before-
installation
APafterGeneration path-name-of-external-program-processing-after-
installation
```

Use the absolute path name to specify the path name of the external program processing for installation. However, if you create the processing under the /NETMRDS/usrcom/ or /opt/NETMDMW/usrcom/ (for HP-UX) directory, you can use the relative path name.

3. Check the abnormal-end return codes.

If a created UAP ends abnormally, you can check the return codes in the message log files of the client service. If an installation error occurs, check the UAP return code.

If a created UAP ends abnormally, the KDDM2100-E message is output to /NETMRDS/rdsprm/MAIN.LOGF or /var/opt/NETMDMW/rdsprm/MAIN.LOGF (for HP-UX). Among the last 4 numbers output in this message, the second number indicates the UAP return code. The following example indicates an output message:

```
09.07.31 12:00:00 0000001234 0000001 KDDM2100-E : An error occurred in the specified
generator.

         43 APbeforeGen          1   255      1   2
                               ~~~~~
```

Note: The underlined part indicates the UAP return code.

The following is an example of creating the external program processing for installation for the following operation:

- External program processing before installation (/users/bin/install check)
This processing deletes the work directory before installation and outputs the installation start log.
- External program processing after installation (/users/bin/prog1 DUMMY01)
This processing installs the package (DUMMY01) and outputs the date of installation to the file (/tmp/DUMMY01).

Specifying the packaging-information file:

```
Group          A1
ResourceName   DUMMY01
:
Generator      STANDARD
APbeforeGeneration "/users/bin/install check"
APafterGeneration "/users/bin/prog1 DUMMY01"
:
```

Contents of the external program processing before installation:

```
/bin/rm -r /usrdata/WORK
RTN = $?
if [ $RTN != 0 ]
/bin/echo "Installation preparation failed (deleting work file" >> /haifu/LOG
    exit $RTN
fi
/bin/mkdir /usrdata/WORK
RTN = $?
```

```
if [ $RTN != 0 ]
/bin/echo "Installation preparation failed (creating work directory)" >> /haifu/LOG
  exit $RTN
fi
/bin/echo "Installation preparation completed" >> /haifu/LOG
exit 0
```

Contents of the external program processing after installation:

```
RESOURCE=$1
/bin/echo 'RESOURCE=$RESOURCE 'TIME=' '/bin/date' > /tmp/$RESOURCE
exit 0
```

(b) Using external program processing after installation of market software

To use the external program processing after market software installation:

1. Create the program of the external program processing after market software installation and distribute it to the distribution-destination systems.

Create the external program processing after market software installation to return the following return codes after the processing:

```
Normal end: 0
Abnormal end: Other than 0
```

Note the following when you create the external program processing after market software installation:

- Do not include spaces in command path names (except for command arguments).
 - The external program processing after market software installation is started by a user with superuser permissions.
 - Do not include processing that waits for responses.
 - Do not output messages to the standard output and the standard error output.
 - The environment variables are inherited from the ones that are active when JP1/IT Desktop Management 2 - Agent is operating.
 - To implement file operations, such as copying files and logging records to a file, in an external program that will be executed after software installation, make sure that the files are specified with their absolute path names.
2. In the packaging-information file, set the following attribute:

```
APafterGeneration path-name-of-external-program-processing-
after-market-software-installation
```

Use the absolute path name to specify the path name of the external program processing after market software installation. However, if you create the processing under the /NETMRDS/usrcom/ or /opt/NETMDMW/usrcom/ (for HP-UX) directory, you can use the relative path name.

Even if the external program processing after market software installation ends abnormally, the setup of the distributed program product is normally ended.

2.2.4 Notes on packaging

- When registering the software under the `/tmp` directory, grant the users with the reference, update, and execute privileges so all the users can access the `/tmp` directory.
- The file attributes of the distributed packages (user IDs, ID groups, access modes) are the same as those of the packager.
- Start the system as a superuser when registering Hitachi program products, another company's software, and OS patches. Any user can start the system when registering user programs and user data.
- You cannot package a resource from an end workstation to JP1/IT Desktop Management 2 - Agent (relay system) (for Windows).
- If another distribution-destination system is currently registering a resource into the cabinet that you attempt to register a resource into, you cannot register the resource. When the KDDM1528-Q message is displayed, press the **Return** key to re-execute registration.
- Packages registered to a Windows managing server by setting the prerequisite version, pre-installation process programs, and monitoring time will be invalid, regardless of whether the distribution-destination is a Windows or UNIX machine.
- When registering a Hitachi program product and distributing it from JP1/IT Desktop Management 2 - Manager, do not change the contents of the following programs if they are specified for external program processing after market software installation (external programs that are to be started immediately following installation):
 - For a Hitachi program product not for HP-UX: `/NETMRDS/COM/ppsetup`
 - For a Hitachi program product for HP-UX: `/opt/NETMDMW/lbin/ppsetup`
- If the higher system is a relay system (client workstation), the software is installed to the relay system. To perform packaging to the managing server, change the settings so that the relay system is directly connected to the managing server (end workstation) beforehand.
- JP1/IT Desktop Management 2 - Agent for UNIX can be used to remotely install Hitachi program products as a whole or in part. However, when packaging program products for distribution, you must package program products as a whole. (You cannot package only part of a program product.) In addition, when you use the `rds1st` command to display the ID of the whole or part of a program product, the IDs are not displayed in a hierarchy but are displayed on the same line.
- When you display file names or package attribute information included character code of the Japanese UTF-8 in the managing server, garbled characters might be found.

2.3 Package distribution

To distribute a package, register a *distribution job* that specifies the package to be distributed and the distribution destination in the managing server.

There are many types of distribution jobs depending on the distribution method. In this manual, they are generically referred to as a distribution job. This section describes the procedure for distribution of a package from a package storehouse of the managing server to the distribution destination system.

When the distribution job is executed, the package is distributed in the following sequence.

1. The managing server starts the relay system or end workstation, and then sends the distribution job.
2. The relay system or the end workstation executes the `rdsft -a` command to check whether there is any distribution job on the managing server. If there is a distribution job, package distribution is started according to the specification of the job.
3. After starting JP1/IT Desktop Management 2 - Agent (distribution-destination system) according to the distribution job, the relay system distributes the package to the client workstation.

If the client workstation is not active, JP1/IT Desktop Management 2 - Agent (distribution-destination system) is started when the client workstation starts. Then the distribution request is given to the relay system, and package distribution is automatically executed.

The distributed package is normally installed into the distribution-destination system automatically. However, you might sometimes need to perform installation operations at the distribution destination system.

If an error occurs during distribution, distribution is re-executed as follows after recovery from the error:

- If the error occurs between the managing server and a lower-level system, package distribution is re-executed from the point at which distribution was interrupted.
- If the error occurs between the relay system and the client, package distribution is re-executed from the beginning of the package.

2.3.1 Checking whether a distribution job exists

The end workstation executes the `rdsft -a` command to check whether there is a distribution job on the managing server for the local UNIX machine. If there is a distribution job, the package is distributed according to the contents of the job. If there is no distribution job, the process ends. When the distribution process is executed, the program name of the distributed package is output to the log file.

When the client workstation starts, JP1/IT Desktop Management 2 - Agent (distribution-destination system) automatically executes the `rdsrf -a` command to check whether there is a distribution job from the relay system. If there is a distribution job, the package is distributed to the client workstation according to the contents of the job. When the distribution process is executed, the program name of the distributed package is output to the log file. If no distribution job is found, monitoring for jobs continues. Monitoring is retried at the time interval specified in `WatchTimeofOrders` of the settings file.

If an error occurs during processing of multiple distribution jobs for the local UNIX machine, one of the following will occur:

- If an error occurs during installation
 - That distribution process is canceled, and the processing of another distribution job is executed.
- If an error occurs during communication with the managing server

All the processes are canceled immediately.

Execute the following commands to stop a package distribution that was started with the `rdsma -a` command or the `rdsrf -a` command, or to resume distribution after a stop:

- End workstation: `rdsma -q` command (stop), `rdsma -a` command (resume)
- Client workstation: `rdsrf -q` command (stop), `rdsrf -a` command (resume)

2.3.2 Notes on package distribution

Note the following at package distribution.

(1) Stopping the system during package distribution

If you stop the system during package distribution, an error, such as a communication error, occurs. If you stop the system during installation, the package at the installation destination might be damaged. Before you stop the system, confirm the users of the managing server that JP1/IT Desktop Management 2 - Agent is not currently executing package distribution.

(2) Installing packages during system operation

When you install a package during system operation, installation fails if it is executed while the target package is being started or used. Before you perform package distribution during system operation, check that the distribution-destination system is not currently using the package to be distributed.

(3) Overwriting distributed packages

Distribution is not usually executed if a job is issued to distribute the package which has the same name as the package that is already installed in the local system. However, distribution is executed when you specify overwriting at distribution.

However, for the Solaris version of another company's software, overwriting is not performed even when a package which has the same name as a package that is already installed in the local system is distributed with overwriting specified. To perform overwriting in this case, you must edit the installation management file. For details, see the documentation for the OS.

(4) Messages that are issued during command processing by the client workstation

Messages that are issued during command processing by the client workstation are not displayed on the screen, but are stored in the following files. For details about the messages that are output during command processing, see *9.1 Checking failure information by messages* in PART 4.

- `MAIN.LOGF` file
For systems other than HP-UX: `/NETMRDS/rdsprm/MAIN.LOGF`
For HP-UX: `/var/opt/NETMDMW/rdsprm/MAIN.LOGF`
- `PPINS.LOGF` file
For systems other than HP-UX: `/NETMRDS/rdsprm/PPINS.LOGF`
For HP-UX: `/var/opt/NETMDMW/rdsprm/PPINS.LOGF`

(5) Installation result from installation at system startup or system shutdown

When `BOOT` or `SHUTDOWN` is specified for the installation timing, the installation result is sent to the managing server at the following timing:

- For client workstation
The installation result is sent when the machine is booted up next time.
- For an end workstation
The installation result is sent when the system is connected to the managing server next time.

(6) Owner of the package and group

If the owner or the group of the file or directory that was packaged by using the `rdscm` command is an undefined owner or group of the distribution-destination system, this package cannot be distributed. In this case, if an installation directory that does not exist in the distribution-destination system is specified, the installation directory will not be created either.

(7) Directory attributes of the installation directory

During package distribution, if the installation directory is an existing directory, the directory attribute of the installation directory might temporarily change during distribution as shown below:

- File mode of the directory: The permission mode bit is `755`
- Owner of the directory and group: Superuser (root) and group of the superuser

(8) Distributing packages compressed in high level

If a package was packaged by a Windows packager using *High level* as the compression method, you cannot distribute the package to a UNIX distribution-destination system.

(9) Simultaneously distributing multiple software packages provided by other companies

If you are distributing software programs provided by other companies from the managing server, remember that the simultaneous distribution of more than one software package provided by other companies with just one job is not possible. You have to use one job to distribute each one of the software packages.

(10) Distributing an rpm file to Linux agents

You cannot distribute multiple RPM files at one time.

2.4 Package installation

The packages distributed by the managing server are normally installed at the distribution-destination system automatically. However, in some cases you might need to perform installation operations at the distribution-destination system. The following describes the package installation at the distribution-destination system.

2.4.1 Installing packages with installation timing specified

Unless otherwise specified, packages distributed to the distribution-destination system are immediately installed into the distribution-destination system. However, the installation fails if that software is in use or running in the distribution-destination system. To prevent such a problem, you can set an *installation timing* for the packages.

Specify the installation timing during the registration or distribution of software. The following installation timings can be specified.

- During system startup
- During system operation
- During system stop

When installation during system startup or during system stop is selected, the distributed package is stored in the hard disk of the distribution-destination system until installation.

When specifying the installation timing, note the following:

(1) Notes on specifying installation at system startup

- The following packages cannot be installed during system startup. Install these when the system is stopped.
 - Packages with user daemons which operate before the `user_daemon` step of the `/etc/rc` script
 - Packaging with common libraries
 - Packages containing programs registered with the `respawn` specification to `/etc/inittab`
- Installation requires extra hard disk space equivalent to the size of the package to be installed. Estimate the size of the hard disk during installation, by referring to *5.2 Estimating of the disk space and memory requirements* in PART 2.
- The system file must be set during installation. For details on the setting procedure, see *5.8 Setting the system files* in PART 2.

(2) Note on specifying installation during system operation

Hitachi program products cannot be installed during system operation. If you specify installation during system operation, it will be installed during system startup.

(3) Notes on specifying installation during system stop

- Installation requires extra hard disk space equivalent to the size of the package to be installed. Estimate the size of the hard disk during installation, according to *5.2 Estimating of the disk space and memory requirements* in PART 2.
- The system file must be set during installation. For details on the setting procedure, see *5.8 Setting the system files* in PART 2.

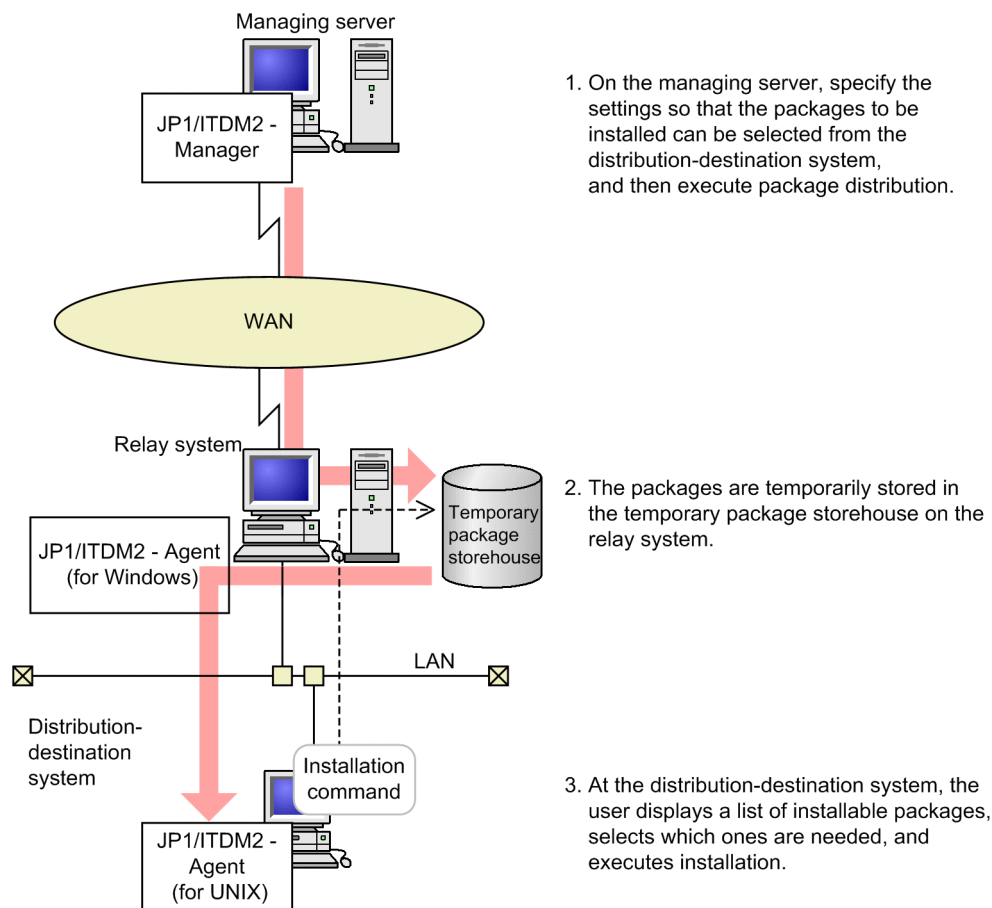
- The results of the installation are sent to the managing server during the next system startup.

2.4.2 Selecting the package to install (Send package, allow client to choose job)

When distributing packages from the managing server, you can set to allow the selection of the package to install at the distribution-destination system (*client-user selected installation*), instead of performing automatic installation.

Figure 2-2 shows the flow of the *client-user selected installation*.

Figure 2–2: Selecting packages at a distribution-destination system



To select packages to install at the distribution-destination system, execute the following commands.

- Use the `rdsinsset -l` command to check a list of distributed packages.
- Use the `rdsinsset -x` command to install packages on the local UNIX machine.

A package that has passed the installation deadline specified by the managing server cannot be installed in a distribution-destination system.

2.4.3 Recovery when installation fails

If package installation fails, both the distributed package (the new version) and the package already installed (the old version) become unusable. In such situations, you can use the *recovery facility* to restore the old version of the package.

(1) Overview of recovery

To use the recovery facility, you must specify usage at packaging time. You can also specify whether to keep the backup if recovery fails or is not executed.

When a package is distributed with recovery specified, the distribution-destination system backs up the old version before installing the package. If installation fails, the old version is restored from the backup. If recovery is successful, the backup is deleted. Also, the backup is deleted if recovery is not executed (if installation completed normally).

(2) Preparation at distribution-destination systems

To use the recovery facility, a directory for backup files must be created on each distribution-destination system. For details on creating a directory, see *5.9 Creating the backup directory* in PART 2.

Each distribution-destination system must also have sufficient disk space to back up the old version. Estimate the capacity required for the backup, and make sure that the recovery facility is operable at each system. For details on estimating the disk space required for recovery, see *5.2 Estimating of the disk space and memory requirements* in PART 2.

(3) Optional backup of user data and programs

The backup facility always backs up files that will be overwritten on the distribution-destination systems. In addition, you can optionally back up user data and user programs distributed as packages. To specify backup of user data and user programs, create a *backup list* defining the files and directories that you want to back up. Specify the prepared backup list at packaging time. When a backup list is specified for a package installed on a distribution-destination system, backup will be taken, as specified in the backup list, at distribution of the next version with the recovery facility enabled. For details on creating a backup list, see *6.2.1 Acquiring backups* in PART 2.

(4) Recovery restrictions

If either of the following errors occurs, the old version is backed up, but recovery is not executed:

- A Hitachi program product was successfully installed, but a setup error occurred.
- A timeout occurred at package installation with external program processing before or after package installation.

If the backed-up old version was kept, you can retry recovery in such cases. Also, if you keep the backup, you can retry if recovery fails. Retry can be specified at the managing server or at the distribution-destination system. For details on retrying recovery, see *9.2.1(3) Failures in the recovery facility* in PART 4.

Note that some Hitachi program products might not support recovery, depending on the program attributes. Recovery will not be executed even if specified for such Hitachi program products. Also note that, for another company's software, only the HP-UX version supports recovery.

2.4.4 Checking the installation result

The user at a distribution-destination system can check what packages are installed on that system. The user can also see if there are any uninstalled packages scheduled for installation at system startup or system shutdown. However, you

cannot use the `rdsrsc1st` command to check the packages for another company's software and OS patches installed in the local system. To view such packages, use the appropriate command provided by the OS.

Information about installed user data and user programs is managed at the distribution-destination system in a *UAP installation management file*. If the file gets too large and occupies too much disk space, delete information that is no longer needed by using the `rdslistdel` command of the client service.

2.4.5 Reporting the installation results

The installation results are reported to the managing server.

For a program product, the installation results will be reported to the managing server again at the next time.

When a program product is installed for the first time

When the program product is first installed, JP1/IT Desktop Management 2 - Agent reports the results of setup for packages which were already installed, in addition to the package distribution results. This information is recorded in the package status file of the managing server, and the job management file.

Information recorded in the job management file is not automatically deleted even if the results are normal. After confirming that the setup results are normal, delete this information.

If a setup error occurs in an already installed package

When a program product is distributed to the distribution-destination system, the installation process is executed first. After the installation completes, setup is executed.

During the setup, a setup error might occur for an already installed package if the distributed package does not match the already installed package. In this case, in addition to the package distribution information, the condition of the already installed package that caused the error will be sent to the managing server. This information is recorded in the package status file of the managing server, and the job management file.

Check for errors in the distributed package at this time.

2.4.6 File attributes when installing the package

(1) When distributing a package registered from UNIX

The file attributes at the packager are inherited by the file attributes (file mode, owner, and group) when the package is installed.

(2) When distributing a package registered from Windows

Depending on the selections (such as the **File Properties** page) made at registration, the file attributes (file mode, owner, and group) when the package is installed are defined.

(a) If "Use the permissions and owner of the installation directory" is selected in the "File Properties" page at registration, and a file for validating the file attributes is created on the distribution-destination system

The same attributes as those at the installation destination are applied to the file attributes at package installation. If an existing file at the installation destination is overwritten, the file attributes will not be changed. If a new file is installed, the attributes of the upper-level directory will be inherited.

To create a file for validating the file attributes, use the following procedure:

- For OSs other than HP-UX:
`touch /NETMRDS/rdsprm/.EnableFileProperties`
- For OSs other than HP-UX:
`touch /var/opt/NETMDMW/rdsprm/.EnableFileProperties`

(b) If (a) is not applicable to the situation

The following is applied as the file attributes when the package is installed:

- File mode: 700
- Owner: root
- Group: sys

If the OS of the distribution-destination system is AIX or Linux, and a group definition (`sys`) does not exist, the following group is applied:

`system` (For AIX)
`root` (For Linux)

2.4.7 Note on package installation

For notes about using JP1/IT Desktop Management 2 - Agent as the distribution destination, see 2.3.2 *Notes on package distribution*.

2.5 OS patch distribution

JP1/IT Desktop Management 2 can package the OS patches for correcting the problems in operating systems and distribute them to the distribution-destination systems. This way, you can centrally correct the problems in the operating systems in the distribution-destination systems that are managed by the managing server. Since the problems in the operating systems can be corrected in a batch, you do not need to apply OS patches in each distribution-destination system.

This section describes the information you need to know when you distribute an OS patch to the distribution-destination systems.

2.5.1 Formats of distributable OS patches

Table 2-6 lists the file formats of the OS patches that JP1/IT Desktop Management 2 can distribute.

Table 2–6: Distributable file formats of OS patches

OS	File format	Output example when file command is executed
HP-UX	txt	shar file
	depot	tar file
Solaris	zip	ZIP archive
	jar	
AIX	bff	backup/restore format file
Linux	rpm	RPM.xxx [#]

#

Detailed information is output in xxx.

Note that you cannot distribute the following OS patches:

- OS patches that need to be installed in the single user mode, which is one of the operating modes of operating systems
- OS patches that require responses at installation
- OS patches in file formats other than those listed in Table 2-6

2.5.2 Procedure for distributing an OS patch

This subsection describes the procedure for distributing an OS patch using JP1/IT Desktop Management 2: from the packaging of the OS patch, to the distribution to the distribution-destination systems.

To distribute an OS patch:

1. Move the target OS patch from the packager to the managing server.

In the packager, create the package of the desired OS patch and register it in the managing server.

For details on how to register an OS patch in the managing server, see *2.2 Software registration (packaging)*. When you package an OS patch, you need to be careful about how you execute the `rdscm` command in the packager or when you specify the attributes in the packaging-information file. For notes on using the packager, see *2.5.3 Notes on configuring the packager*.

2. In the managing server, execute the distribution job for the OS patch.

The OS patch is distributed to the target distribution-destination systems.

When you distribute the OS patch, you need to be careful about how you configure the overwrite installation of the OS patch. For notes on using the managing server, see *2.5.4 Notes on configuring the managing server*.

For details about the settings required for installing an OS patch in the distribution-destination systems and how to set the installation commands, see *2.5.5 Required settings in distribution-destination systems and required checking at installation*.

When you distribute an OS patch, the following log files are created. They contain the messages and error messages that are output when an installation command is executed for an OS patch.

- For systems other than HP-UX: `/NETMRDS/rdsprm/OSPATCH.LOGF`
- For HP-UX: `/var/opt/NETMDMW/rdsprm/OSPATCH.LOGF`

The return codes of the installation commands for OS patches are output to the following files:

- For systems other than HP-UX: `/NETMRDS/rdsprm/MAIN.LOGF`
- For HP-UX: `/var/opt/NETMDMW/rdsprm/MAIN.LOGF`

3. Check the installation status of the OS patch distributed to the distribution-destination systems.

Use JP1/IT Desktop Management 2 - Manager to check whether the OS patch is successfully installed in the distribution-destination systems.

You can use the following methods to check the installation status of the OS patch distributed to the distribution-destination systems:

Checking by using JP1/IT Desktop Management 2 - Manager for Windows:

Execute the *Get software information from client* job. When this job acquires both the package ID used by JP1/IT Desktop Management 2 - Agent and the name of the OS patch applied to the operating system, the OS patch is shown as follows:

```
Remote Installation Manager: Undetermined data
```

2.5.3 Notes on configuring the packager

Note the following when you move an OS patch from the packager to the managing server:

- Do not specify the `-t` option in the `rdsrm` command that is executed at packaging.
- Do not specify the following attributes in the packaging-information file that describes the information about the software:
 - `Generator`
 - `InstallDirectory`
 - `OwnerofInstallDirectory`
 - `GroupofInstallDirectory`
 - `ModeofInstallDirectory`
 - `Recover`
 - `BackupDataKeep`
 - `UAPBackupList`

For details on how to create the packaging-information file, see *2.2.3 Creating the files to be specified during packaging*.

2.5.4 Notes on configuring the managing server

Note the following when you use the managing server to set the distribution job for OS patches:

- You might not be able to change the attributes of the package when you register an OS patch in the managing server of JP1/IT Desktop Management 2 - Manager. In addition, you cannot select the **Replace existing package** check box in the **System Conditions** page in the Change Installation Conditions dialog box of JP1/IT Desktop Management 2 - Manager.
- If you are distributing OS patches from the managing server, remember that the simultaneous distribution of more than one OS patch package with just one job is not possible. You have to use one job to distribute each one of the OS patch packages.

2.5.5 Required settings in distribution-destination systems and required checking at installation

This subsection describes the settings required in the distribution-destination systems before you install the distributed OS patch and the item to be checked in the distribution-destination systems at the installation of the OS patch.

(1) Required settings in distribution-destination systems before an OS patch is installed

- In the `PATH` environment variable at the startup of JP1/IT Desktop Management 2 - Agent, specify the folder containing the installation commands for OS patches and the options in the installation commands listed in Table 2-7.

Table 2–7: Installation commands and options for OS patches

OS	Installation command for OS patches	Option to be used
HP-UX	<code>swinstall</code>	<code>-s, -x autoreboot=false,</code> <code>-x patch_match_target=true</code>
Solaris	<code>patchadd</code>	None
AIX	<code>installp</code>	<code>-a, -c, -d, -g, -q, -v, -N, -X</code>
Linux	<code>rpm</code>	<code>-h, -i, -v</code>

- Specify the maximum monitoring time for OS patch installation commands. The maximum monitoring time for the OS patch installation commands is set for the following item in the settings file: the monitoring time for the external program processing for installation or external program processing after market software installation (`APWatchTimer`). If the processing of the installation command exceeds this time, the distribution job results in an error.

Note

Depending on how the existing OS patch was installed, the distributed OS patch might not be successfully installed. Table 2-8 describes whether a new OS patch can be installed if the same OS patch already exists.

Table 2–8: Whether a new OS patch can be installed if the same OS patch already exists

Installation status	Type of distribution job	
	Normal installation	Overwrite installation
Installed manually.	N	--

Installation status	Type of distribution job	
	Normal installation	Overwrite installation
Installed using JP1/IT Desktop Management 2	--	--
Not installed.	Y	Y

Legend:

- N: The distribution job ends successfully but the OS patch is not installed.
- : The distribution jobs results in an error and the OS patch is not installed.
- Y: The distribution job ends successfully and the OS patch is installed.

(2) Required settings in distribution-destination systems when an OS patch is distributed

To display the packages of OS patches waiting to be installed or those that are already installed in the local system, specify the `u` option in the `rdsrsc1st` command and execute the command.

(3) Item to be checked in distribution-destination systems when an OS patch is installed

When the installation command for the target OS patch ends successfully, the end code is 0. Use the end code to determine whether the installation command has ended successfully.

3

File Collection

File collection refers to collection at the managing server of resources such as installed packages and execution results residing on a distribution-destination system. The files to be collected must not exceed 2 gigabytes before or after collection.

This chapter explains details of file collection.

3.1 Overview of file collection

The files that can be collected through file collection contain user data and user programs. Make sure that the file size before and after collection does not exceed 2 gigabytes. Also, the managing server that can collect files is JP1/IT Desktop Management 2 - Manager.

The following types of file collection methods are available.

3.1.1 Collection by specifying collection timing

File collection is normally executed as soon as the distribution-destination system receives a file collection job. However, collection fails if the system is currently using that resource. By specifying the collection timing at file collection, you can choose to collect the resource when the distribution-destination system shuts down or the next time the system starts. This ensures that collection will be performed without any risk of the resource being in use. The execution result of file collection with the collection timing specified is sent when the managing server executes a new instruction.

3.1.2 Collection by starting UAP before or after file collection

You can start a program for user-specific processing before or after resource collection. This is called *external program processing for collection*. The following sorts of instructions might be useful to include in external program processing for collection:

- Creation of a collected resource by linking multiple files
- Log acquisition

For details on preparing external program processing for collection, see *3.2 Creating a UAP that executes during collection*.

3.2 Creating a UAP that executes during collection

The *external program processing for collection* is the processing that is started before or after file collection. The external program processing for collection is divided into the *external program processing before collection*, which is executed before collection, and the *external program processing after collection*, which is executed after collection.

This subsection describes the procedure for using the external program processing for collection, notes on creating the external program processing for collection, and a creation example.

Procedure for using the external program processing for collection

To use the external program processing for collection:

1. Create the program of the external program processing for collection.
Create the external program processing for collection to return the following return codes after the processing.
Normal end: 0
Abnormal end: Other than 0
2. Set the external program processing for collection at the managing server.
When you create the file collection job at the managing server, set the external program processing for collection for the following items in the **Specify external programs to start on destination agent**.
Before collection: *path-name-of-external-program-processing-before-collection*
After collection: *path-name-of-external-program-processing-after-collection*
Use the absolute path name to specify the external program processing for collection.

Note on creating the external program processing for collection

- You can create the external program processing for collection in any directory. The path name must be 63 characters or less when the absolute path name is used.
- The data output by the external program processing for collection to the standard output or the standard error output is stored in the following location. To output this data to a console or other location, specify so in the external program processing for collection.
 - For systems other than HP-UX: `/NETMRDS/rdspm/CF.LOGF`
 - For HP-UX: `/var/opt/NETMDMW/rdspm/CF.LOGF`
- Grant the execution permission for the external program processing for collection.
- When the external program processing for collection is executed, the standard input is allocated to `/dev/null`. Therefore, do not include the processing for data entry from the standard input in the external program processing for collection.
- No operand is specified when the external program processing for collection is started.

Example of creating the external program processing for collection

The following shows an example for creating an external program processing for collection.

- External program processing before collection (`/local/usr/etc/cat_files`)
This processing combines multiple files and creates a single collected resource file (`/tmp/DataFile`).
- External program processing after collection (`/local/usr/etc/logprint`)
This processing deletes the collected resource file (`/tmp/DataFile`) created by the external program processing before collection and acquires the history of completed file collection in the log file.

Contents of the external program processing before collection

```
DATADIR=/local/usr/data
/bin/cat $DATADIR/DataFile_1 \
        $DATADIR/DataFile_2 \
        $DATADIR/DataFile_3 > /tmp/DataFile
exit $?
```

Contents of the external program processing after collection

```
/bin/rm /tmp/DataFile
DATE= '/bin/date'
/bin/echo "Collection completed ($DATE)" >> /local/usr/data/CF_LOG
exit 0
```

3.3 Executing a file collection job

File collection is performed by executing a *file collection job* from the managing server. On receiving a file collection job addressed to the local system, the distribution-destination system collects the specified resource and forwards it to the managing server, which stores the file in a *collection storehouse*.

3.4 Note on file collection

- When you distribute the external program processing for collection used for file collection, check that they are normally installed into the distribution-destination system before executing file collection.
- If you do not set `PROHIBITPATH=NO` in the operating-environment settings file, the following files and directories cannot be collected:
 - `/bin`, `/dev`, `/ofis`, `/usr`, `/2050`, and `/3050` directories, and the files and directories under these directories
 - `/` (root directory)
 - `/etc` directory and the directories under the `/etc` directory
 - Files other than the regular files and directories (such as device files)
- File collection uses the host name of the distribution-destination system for processing. Do not change the host name of the distribution-destination system during file collection.
- File collection uses the host name of the higher system to identify the managing server. Therefore, do not change the host name of the higher system or the contents while the temporary collection storehouse stores resources. In addition, do not change the contents of the settings file of JP1/IT Desktop Management 2 - Agent. If you do while resources are stored in the temporary collection storehouse, the resources in the temporary collection storehouse might not be sent to the managing server.
- To switch from an end workstation to a client workstation, delete the files in the temporary collection storehouse before you perform the switch. To delete the files in the temporary collection storehouse, either send them to the managing server or use the `rdscfclr` command to initialize the temporary collection storehouse.
- If the file or directory whose owner or group is undefined in the OS is included in the files to be collected, file collection fails.
- If files are collected at the time as the files are updated, an error might occur at the time when the files are extracted, even if the file collection job succeeds. Therefore, avoid files being updated when collecting the files. If it is difficult to avoid updates, copy the target files to another directory by using processing before collection, and then use those files as the target files to be collected.

4

Management of the Distribution-Destination System by the Managing Server

At the managing server, you can manage the configuration and operating status of distribution-destination systems, based on the information they report. You can also group systems to perform distribution and collection more efficiently.

This chapter describes the settings required when the managing server manages the distribution-destination system.

4.1 Overview of distribution-destination management

The JP1/IT Desktop Management 2 managing server manages the distribution-destination systems as follows:

- System configuration management

The configuration of the distribution-destination systems is automatically reported to the managing server to allow the managing server to manage the system configuration. Both the managing server and the distribution-destination system need to be set.

- Management of the inventory

Inventory is information required for management of the distribution-destination system, such as hardware statuses and types of installed software for the distribution-destination system. Execute a job to acquire the inventory from the distribution-destination system.

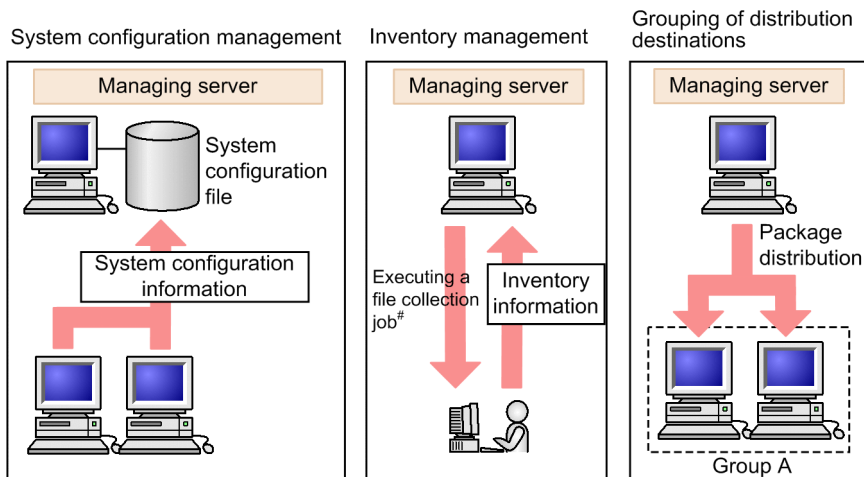
For inventory management, the managing server collects information about hard disks, software installation statuses. Some inventory information can be reported to the managing server when the information is updated at the distribution-destination system or when a new distribution-destination system is added.

- Grouping of the distribution-destination

In order to smoothly distribute and collect packages, it is possible to group the distribution-destination systems. There are two types of grouping units: the ID group and the host group.

Figure 4-1 shows the overview of management at the distribution-destination.

Figure 4–1: Overview of management at the distribution-destination



#: Some inventory information can be automatically reported to the managing server.

With JP1/IT Desktop Management 2 - Agent, you can report the local system information to the managing server either manually or automatically.

4.2 System configuration management

The managing server can recognize the system configuration based on the *system configuration information* reported from the distribution-destination systems. System configuration information includes the host name of the local system (value set in `/etc/hostname`), corresponding IP addresses, and MAC addresses. This enables easy additions and changes to clients and definitions even in a large network, thus reducing the workload of network maintenance at the managing server. The MAC address is displayed in capital letters when it is viewed on a managing server.

4.2.1 Deleting a client system from the system configuration information

Deleting JP1/IT Desktop Management 2 - Agent from the system configuration allows you to automatically report the deletion of the system to the upper-level systems. Use the `rdssys -u` command of the client services to delete the system from the system configuration information. For details about the `rdssys -u` command for JP1/IT Desktop Management 2 - Agent, see 8. *Command Operations for Client Services and Generator Tools* in PART 3.

The `rdssys -u` command only updates the system configuration information about the system in which the command is executed. If you change the settings after deleting the system, the distribution-destination system reports the changes in the definition to the managing server.

However, you can automatically delete lower-level systems from the system configuration information by selecting the check box **Synchronize changes to the system configuration** in the **System Configuration** page in the Setup for distribution that uses the Remote Install Manager window of JP1/IT Desktop Management 2 - Manager.

4.3 Inventory management

System information and software information can be managed as inventory. You can also report the inventory information to the managing server when the inventory is updated in the distribution-destination system. This section explains the inventory management method and the function for reporting the updated inventory to the managing server.

4.3.1 System information management

(1) System information

By executing a job from the managing server, you can collect and manage hardware information for the distribution-destination system (host name, IP address, disc size, memory size, and so on.). This information is called *system information*.

Understanding of the system information for the distribution-destination system at the managing server can prevent problems such as insufficient memory in the distribution-destination system during package distribution. System configuration information manages information about network configurations such as the host name, IP address, workstation type, and connection methods. System information contains hardware information for the distribution-destination system, such as the host name, IP address, disk space, free memory, and so on.

For details on how to collect and view system information, see the manual for managing server.

Note that the system information can be reported to the managing server when the information is updated in the distribution-destination system or when a new distribution-destination system is added.

(2) How to collect the system information

You can collect all of the system information by either of the following methods:

- Executing a job to collect the system information
- Automatic reporting of updated inventory information

4.3.2 Reporting of inventory information from the distribution-destination system

To collect inventory information, you must execute a job to get inventory information from the managing server. In a large system, however, executing such jobs results in a problematically large network load.

Instead of using such a job to collect inventory information, a function is available for reporting inventory information to the managing server, for example, when the inventory information of the distribution-destination system is changed. In distribution-destination system-led inventory information reporting, the necessary information can be collected from the distribution-destination system only at the necessary timings, thereby reducing the network load.

The following two kinds of methods are available for reporting inventory information from the distribution-destination system:

- Automatic reporting of updated inventory information
When the inventory information of the distribution-destination system is updated, it can be automatically reported when the system connects to the managing server.

- Reporting at automatic registration of system configuration

When a new distribution-destination system is added to the JP1/IT Desktop Management 2 system, the inventory information can be reported when the system configuration is automatically registered.

Note that the inventory information is reported when the system checks with a higher-level system for a job. To automatically report the inventory information, you must set up the system such that it checks for jobs periodically. For details about the setting method, see the explanation of `WatchTimeofOrders` under (2) *Details* in the sections listed below.

- For an end workstation
See 5.4.2 *Syntax of the end workstation settings file* in PART 2
- For a client workstation
See 5.4.3 *Syntax of the client workstation settings file* in PART 2

(1) Automatic reporting of updated inventory information

When certain inventory information is updated as a result of new software installation or patch application, for example, you can use job execution or polling to automatically report the inventory information to the managing server when the system connects to the managing server.

(a) Inventory information that is reported

This function monitors inventory information that can be utilized for security management, such as OS version and applied patches.

When the inventory information being monitored is updated, the system information including the updated inventory information and software information are reported.

Table 4-1 shows the correspondence between inventory information monitored for updates and the inventory information to be reported.

Table 4–1: Correspondence between inventory information monitored for updates and the inventory information to be reported

Inventory information monitored for updates	Inventory information to be reported
Host name	<ul style="list-style-type: none"> • System information • Information on another company's software • Software distributed by the JP1/IT Desktop Management 2 system • Hitachi program products • Applied patches
MAC address	
IP address	
OS version	System information
Client version	
Hitachi program products	<ul style="list-style-type: none"> • Information on another company's software • Hitachi program products • Applied patches
Applied patches	

Inventory information is also reported to the managing server at the timings listed below. Table 4-2 shows the correspondence between events monitored for updates and the inventory information to be reported.

Table 4–2: Correspondence between events monitored for updates and the inventory information to be reported

Events monitored for updates	Inventory information to be reported
When a new distribution-destination system is installed	<ul style="list-style-type: none"> • System information • Information on another company's software • Software distributed by the JP1/IT Desktop Management 2 system • Hitachi program products • Applied patches
When the higher-level system at the connection destination is changed	
When the operation of the higher-level system is changed such that it now uses a host ID	
When software is added or deleted	<ul style="list-style-type: none"> • Information on another company's software • Hitachi program products • Applied patches

(b) Notes

Note the following when automatically reporting inventory information:

- When inventory information is automatically reported, it is reported every time the inventory information of the distribution-destination system is updated, and as a result the server or network environment might be subjected to an overload at irregular timings. If it is necessary to ensure that the server or network environment is not subjected to overload, disable the setting for automatically reporting inventory information, and manually collect the inventory information.
- If inventory information is reported to a managing server different from the one that is specified in the distribution-destination system settings, or if inventory information is reported via multiple routes, the inventory information is not displayed correctly on the managing server. In such a case, delete the inventory information on the managing server, and execute the jobs described below.
 - *Get system information from client* job
 - In the *Get software information from client* job (In the **Options** page, under **Software to be searched**, specify **Search software listed in "Add/Remove Programs"**.)
- For **Installation date/time** in the software information, the date and time when the software information was acquired is reported. Therefore, when the *Get software information from client* job is executed on the managing server, the following types of information on the managing server are updated regardless of whether the software has been updated or reinstalled:
 - New version
 - New generation number
 - Older version
 - Installation date/time
- If the setting is disabled for regularly checking whether a job addressed to the local system is present at the higher-level system, inventory information is not reported when the distribution-destination system is started. Inventory information is reported when a job is executed from the managing server.
- If the connection destination of the distribution-destination system is switched to a different higher-level system and then switched back to the original connection destination, the information on the software that was uninstalled while the distribution-destination system was connected to another higher-level system might not be reported when the distribution-destination system returns to the original connection destination.
- When inventory information is displayed with the managing server, the MAC address is displayed in capital letters.

(2) Reporting at automatic registration of system configuration

Inventory information can be automatically reported to the managing server when a new distribution-destination system is added to the JP1/IT Desktop Management 2 system through the addition of a machine to the network, the installation of a distribution-destination system, or a change in the connection destination of the distribution-destination system.

(a) Reporting timing

Inventory information is reported to the managing server at the following times:

- When a new distribution-destination system is installed
- When the higher-level system at the connection destination is changed
- When the operation of the higher-level system is changed such that it now uses a host ID

(b) Inventory information to be reported

The following types of inventory information are reported:

- System information
- Information on another company's software

(c) Notes

Note the following when automatically reporting inventory information at automatic registration of system configuration:

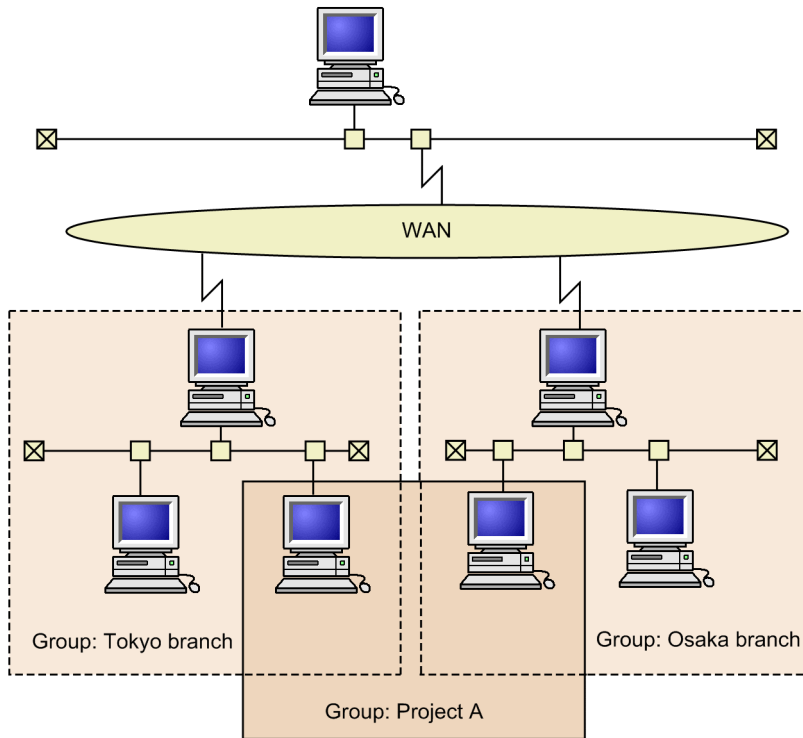
- If the setting for regularly checking whether a job addressed to the local system is present at the higher-level system is disabled, inventory information is not reported when the distribution-destination system is started. Inventory information is reported when a job is executed from the managing server.

4.4 Grouping distribution-destinations

Software distribution would be rather inefficient if the managing server had to determine requirements at each of the hundreds of distribution-destination systems on the network. Using the JP1/IT Desktop Management 2 system, you can organize systems into groups for specific purposes, and distribute packages to a particular group.

A distribution-destination system can belong to more than one group, which means that you can set overlapping groups defined by department or by project. Figure 4-2 gives an example.

Figure 4–2: Grouping distribution-destination systems



A distribution-destination system can belong to more than one group, as shown above.

4.4.1 ID group

A group of distribution-destination systems is given an identification (ID) called an *ID group*, and is handled as a logical group.

The ID group can be created from the managing server or a distribution-destination system. For an ID group created by the managing server, it is possible to register the local machine (to affiliate) from the distribution-destination system. That is, there is no need to maintain the group configuration at the managing server.

If an ID group is specified as the destination of a distribution job to be created by the managing server, the package is distributed to the distribution-destination systems belonging to that ID group. End workstations can be affiliated with ID groups only by operation from the managing server.

(1) Distributing packages to a specified ID group

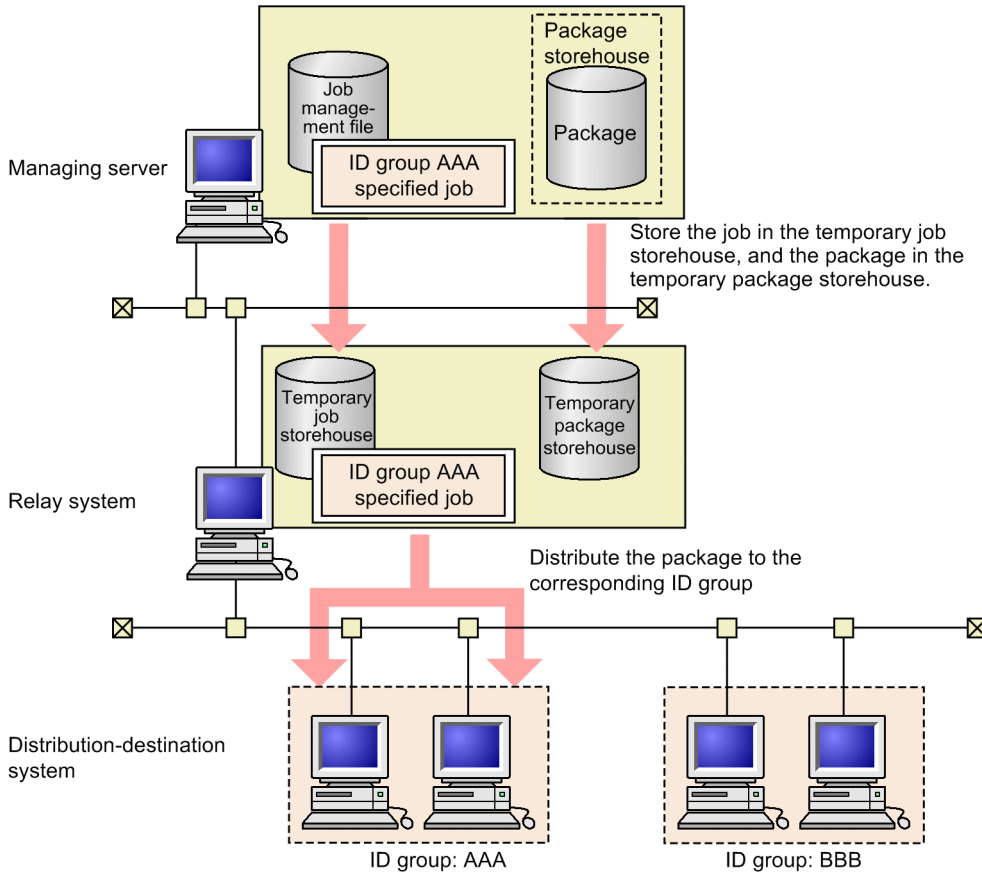
When a distribution job addressed to a specified ID group is executed from JP1/IT Desktop Management 2 - Manager, the job is temporarily kept in a *temporary job storehouse* on the relay system that manages that ID group. The package

is later distributed from the relay system to the distribution-destination systems. A job with ID group specification becomes invalid if the applicable package is deleted from the temporary package storehouse, and is automatically deleted.

As long as the job is in the temporary job storehouse, the package will be distributed automatically from the relay system to any distribution-destination system added to the ID group after execution of the job. However, this applies only if the new system is registered in the ID group by operation from the distribution-destination system side.

Figure 4-3 illustrates distribution to a specified ID group.

Figure 4–3: Distribution to a specified ID group



4.4.2 ID group definition (client services)

(1) Creating the ID group definition file

To create an ID group from the distribution-destination system in the *ID group definition file*, define the ID group to which the local system belongs, and register the file to the desired relay system. This file cannot be used when defining to an ID group registered from the managing server.

(a) File name of the ID group definition file

When the distribution-destination system registers the ID group definition file to an upper-level relay system, the group consists of one layer if the registration destination relay system does not register to that ID group. The group consists of two layers if the registration destination relay system registers to that ID group.

Use the file names shown in Table 4-3 to create the ID group definition file.

Table 4–3: File names for ID group definition file creation

ID group definition registration method	Type	File name
When registering to another relay system	Other than HP-UX	/NETMRDS/rdsprm/DMWIDUPM
	HP-UX	/etc/opt/NETMDMW/rdsprm/DMWIDUPM

#

In a relay system directly connected to the managing server, this file is always used because registration to the upper-level relay system is not possible.

If the ID group definition file shown in Table 4-3 has already been created when JP1/IT Desktop Management 2 - Agent is started, the ID group is registered according to the contents of the file. Therefore, if an ID group definition file has been created at installation, the set contents will be valid until recreated. When the ID group is correctly registered, the extension of the ID group definition file is labeled `.bak`. If registration fails, it will be labeled `.err`.

(b) Creation format of the ID group definition file

Use a text editor to create the ID group definition file. The following shows the format of the ID group definition file.

```
[LOCAL-ID]
*ID-group-1
:
*ID-group-n
```

[LOCAL-ID]

Specifies the start of the ID group definition. Enter from the first column, and enclose in brackets []. After [LOCAL-ID], do not specify space characters or tabs.

**ID-group* ~ <alphanumeric characters>((1-8 characters))

Enter * in the first column, and after the *, specify the ID group that the local UNIX machine belongs to. You cannot enter anything between * and the ID group. Do not specify space characters or tabs after the ID group.

You can specify multiple ID groups.

Create ID group definition files according to the rules below.

- When # is specified on the first column, that line is regarded as a comment.
- If the recreated ID group definition file is registered, the previous ID group definition file will become invalid. Because of this, enter all ID groups to be defined when changing the definition of the ID group, not just the ID group that is to be added.

(2) ID group definition file registration

There are two ways to register the ID group definition file to the relay system.

- Restarting the system
If you restart the system to register the file, the job corresponding to the defined ID group is executed automatically if the job is stored in the temporary job storehouse.
- Executing the `rdsiddefine -s` command
If you use the `rdsiddefine -s` command to register the file, the defined ID group is simply registered to the relay system. Therefore, even if a corresponding job is stored in the temporary job storehouse, it will not be executed automatically. To execute the job, execute the `rdsidexec` command.

If the ID group definition file cannot be registered due to a transmission error, or other problems, the ID group definition file is stored as is. Correct the cause of the error, and then try again.

If registration cannot be performed due to a syntax error of the ID group definition file, the file name is changed to a name with the extension `.err`. Correct the definition of the ID group definition file, and then execute again.

You can reference the contents of the registered file by executing the following command.

- `rdsiddefine -ll` (to reference the ID group defined by the local UNIX machine)

4.5 Reporting information to the upper-level managing server

4.5.1 Reporting distribution/collection results (client services)

By receiving reports from the distribution-destination system, the managing server manage the package distribution or file collection execution status, as well as the package status at the distribution-destination system. The managing server stores the package status at the distribution destination in the *package status file*.

4.5.2 Reporting user resource status

The distribution-destination system can place the status of the user resource integrated into the local machine in the *user resource status file*, and use the `rdsusnd` command of the client services to send this file to the managing server. The status of user resource will be reflected on the package status file of the managing server.

This applies to the following user-specific information which is not managed under JP1/IT Desktop Management 2:

- The status of packages installed locally on the distribution-destination system without using JP1/IT Desktop Management 2
- The status of packages manipulated by a user program asynchronously with installation processing by JP1/IT Desktop Management 2

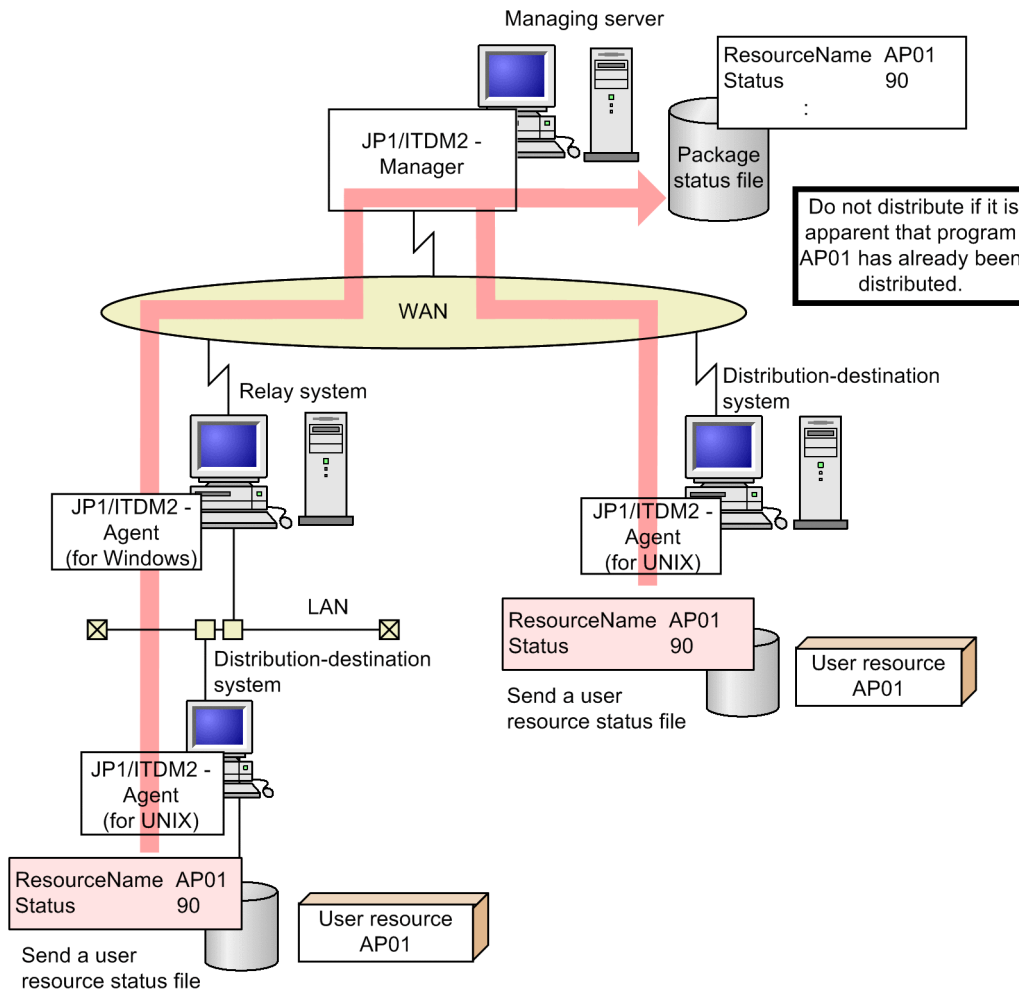
The information entered in the package status file can also be recorded at the distribution-destination system side. This prevents repeat distribution if the managing server executes a distribution job for a package with the same name as one already installed on the system.

Note, however, that this method reports the installation status of Hitachi program products, another company's software, and OS patches to the managing server.

The `rdsusnd` command for reporting the user response status can be used after job execution from the managing server succeeds at least once.

Figure 4-4 shows reporting of user resource status.

Figure 4-4: Reporting the user response status



(1) Rules for creating the user resource status file

Create the user resource status file by using the following line format, with a text editor, etc.

```
attribute-nameTabvalueEnter
```

attribute-name

Specify the item to be specified in the packaging-information file.

value

Specify the value to be set for an item in the packaging-information file.

Create the user resource status file according to the rules below.

- You can specify a space character instead of a tab character.
- To include a space character in a set value, enclose the set value between double quotation marks (").
- If you specify # in the first column, that line is treated as a comment.
- The maximum length of a line in the user resource status file is 256 bytes including the code for the pressed **Enter** key.

- If you specify more than one attribute with the same name, the set value that is specified last is validated and the preceding set values are ignored.

(2) Details about the user resource status file

(a) Format

```
ResourceName package-ID
ResultInformation {NORMAL | ERROR}
Status user-status
[Version version]
[Generation generation-number]
[Comments user-comment]
```

(b) Explanation

ResourceName package-ID ~ <uppercase alphabetic characters, numerics, hyphens, or underscores> ((1 to 44 characters))

Specify the name of the package of which distribution result is to be sent.

ResultInformation ~ {NORMAL|ERROR}

Set the distribution result of a package in the end status. Specify this item to send the distribution result of the package, which is distributed by JP1/IT Desktop Management 2 - Agent, to the managing server.

NORMAL

Set the end status (90).

ERROR

Set the end status (9F).

Status user-status ~ <hexadecimal number> ((2 digits))

Specify the distribution result of the package, which is to be sent to the managing server, as the user status. For the method of specifying the user status, see Appendix B. *Status Codes*.

Version version ~ <uppercase alphabetic characters, numerics, or slants> ((1 to 6 characters))

Specify the version of the package. If you do not specify this value, 000000 is assumed.

Generation generation-number ~ <uppercase alphabetic characters or numerics> ((4 digits))

Specify the generation number of the package. If you do not specify this value, 0000 is assumed.

Comments user-comment ~ ((1 to 50 characters))

Specify the user comment for the package. If you do not specify this value, a space character is assumed.

On the managing server, this value is displayed in the installed package list.

4.6 Using a related software product to manage the operation status

The following related software product can manage the operation status of JP1/IT Desktop Management 2 - Agent:

- JP1/IM - Manager

4.6.1 Using JP1/IM - Manager to manage the operation status

Using the *automated action function* of JP1/IM - Manager (or JP1/IM - Console), you can automatically execute a process (*action*) that corresponds to the event reported by Desktop Management 2 - Agent.

For details about the setting for using the automated action function, see 7. *JP1 Event Processing Using JP1/IM - Manager* in PART 2.

5

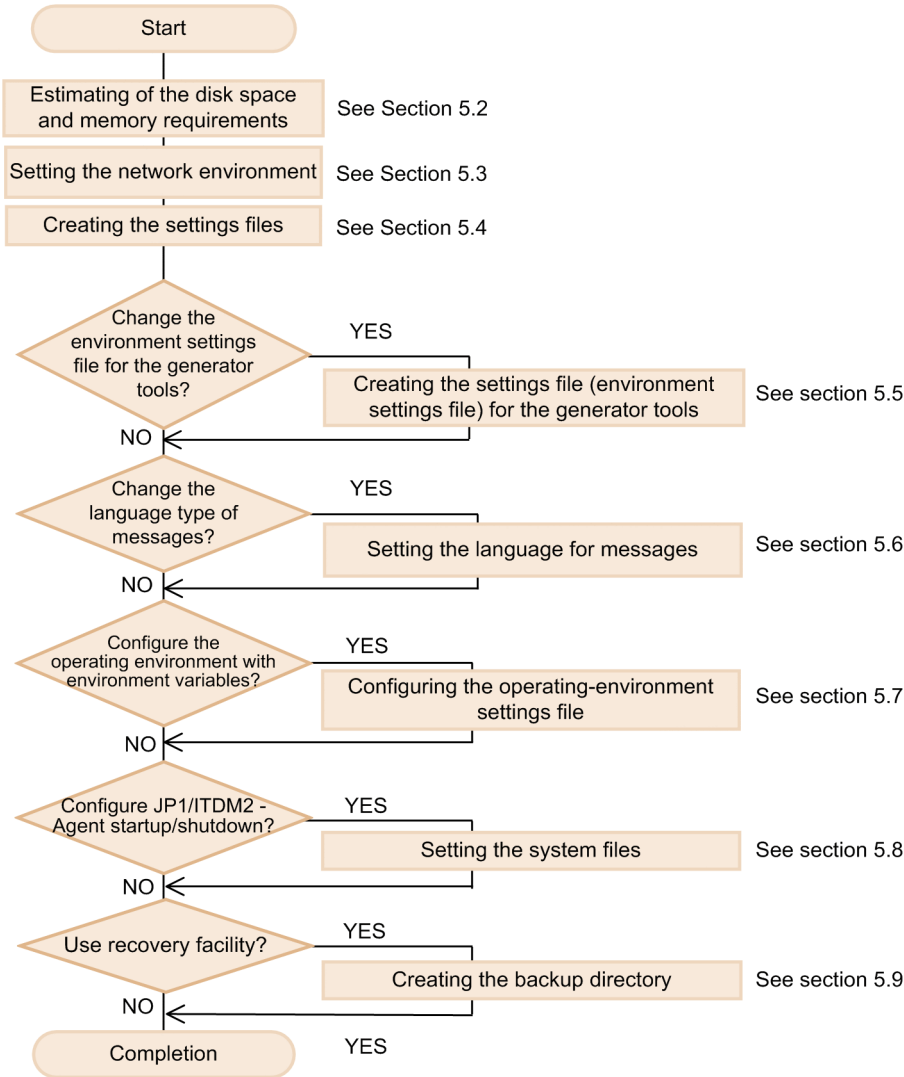
Installation Tasks

This chapter describes the tasks for installing JP1/IT Desktop Management 2 - Agent.

5.1 Procedure for setting the operating environment

Figure 5-1 shows the procedure for installing JP1/IT Desktop Management 2 - Agent.

Figure 5–1: Procedure for installing JP1/IT Desktop Management 2 - Agent



5.2 Estimating of the disk space and memory requirements

The subsections 5.2.1 and 5.2.2 show the disk space requirement for the system to be used. The amount of memory required is shown in 5.2.3 *Memory requirement*.

In the formulas shown below, the symbols $\uparrow \uparrow$ indicate that the result of the expression enclosed in the symbols are rounded up to the nearest integer.

JP1/IT Desktop Management 2 - Agent does not use the superuser's area in the file system. It can use as much area as the `df` command displays.

5.2.1 Disk space requirements for the distribution-destination system

The following shows how to estimate the disk space requirement for installing packages on the distribution-destination system.

$$\alpha + \text{maximum-package-size} \times 2 + (0.003 \times n) + 3.7 \quad (\text{units: megabytes})$$

Legend:

$$\alpha = \sum_{i=1}^n (\text{package-size } (i)) \quad (\text{Disk space of the installation location})$$

n : Number of packages to be installed

Maximum package size: Maximum size of packages for distribution

A temporary work directory is required when a package is installed in the distribution-destination system. You can obtain the size of the work directory by subtracting α from the result of the above formula.

For JP1/IT Desktop Management 2 - Agent, the name of the work directory is as follows:

- For systems other than HP-UX: `/NETMRDS`
- For HP-UX: `/var/opt/NETMDMW`

The name `/NETMRDS` in an OS other than HP-UX is a symbolic link to the directory that is actually used as the work directory. The actual work directory name might be `/opt/NETMDMW` in Linux, and `/opt/NETMRDS` in other OSs. For the work directory, the actual directory is used.

To use the distribution-destination system also as a packager, add the disk space shown in 5.2.2 *Disk space requirements for the packager*.

When using the following functions, add the disk space.

(1) Client services

(a) Installation when the system stops or starts

Installing a package when the system stops or starts requires as much free disk space as the size of the package.

$$\text{Disk space} = \sum_{i=1}^n (\text{package-size} (i) + 0.001) \quad (\text{units: megabytes})$$

Legend:

n : Number of packages to be installed

(b) Recovery from an installation failure

When the recovery facility creates a backup copy of the previous version of the package, it requires as much disk space as the previous version of the package.

For a Hitachi program product

$$\text{Disk space} = \sum_{i=1}^n (\text{package-size} (i) + 0.1) \quad (\text{units: megabytes})$$

Legend:

n : Number of packages to be installed at system shutdown or startup

For another company's software

When the recovery facility is used to distribute the HP-UX version of another company's software, the standard OS installation command `swinstall` is executed at the distribution-destination systems with the `-x autorecover_product=true` option specified. Because the files created by the installation are backed up, as much disk space as that used for the backup is required.

For user data and a user program (when a backup list is not used)

$$\text{Disk space} = \sum_{i=1}^n (\text{package-size} (i) + (\text{total-file-name-length} \times 3)) \quad (\text{units: bytes})$$

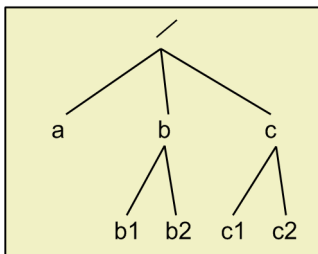
Legend:

n : Number of packages to be distributed when the recovery facility is specified

package-size: Size of an installed package

The following shows an example of calculating the total file name length.

Distributed packages



/a directory name length = 2

/b /b1 directory name length = 5

/b /b2 directory name length = 5

/c /c1 directory name length = 5

/c /c2 directory name length = 5

Total file name length: 22

For user data and a user program (when a backup list is used)

$$\text{Disk space} = \sum_{i=1}^n (\text{package-size} (i) + (\text{backup-list-size} \times 3)) \quad (\text{units: bytes})$$

Legend:

n : Number of packages to be distributed when the recovery facility is specified

package-size: Size of an installed package

backup-list-size: Size of a backup list

(c) Log file

Message log file for the client services

The following shows the amount of disk space required by the files below.

- For systems other than HP-UX: /NETMRDS/rdsprm/MAIN.LOGF
- For HP-UX: /var/opt/NETMDMW/rdsprm/MAIN.LOGF

$\text{Disk space} = 298 \times (\text{maximum-number-of-message-log-files}) + 24$	(units: bytes)
--	----------------

Legend:

maximum-number-of-message-log-files: Value specified in `MaxEntryofMessage` of the settings file

If the maximum value specified in `MaxEntryofMessage` is exceeded, information is overwritten.

Hitachi program product distribution information

The following files require 128 kilobytes of disk space. If file size exceeds 128 kilobytes, the file is deleted, and then created again. The information is output to the new file.

- For systems other than HP-UX: /NETMRDS/rdsprm/PPINS.LOGF
- For HP-UX: /var/opt/NETMDMW/rdsprm/PPINS.LOGF

Distribution information about another company's software

The following files require 10,240 kilobytes of disk space. If the file size exceeds 10,240 kilobytes, the existing information is moved to the `ISVSOFT.LOGF.bak` backup file, and new information is output to `ISVSOFT.LOGF`.

- For systems other than HP-UX: /NETMRDS/rdsprm/ISVSOFT.LOGF
- For HP-UX: /var/opt/NETMDMW/rdsprm/ISVSOFT.LOGF

The size of the `ISVSOFT.LOGF` file can be changed using the operating-environment settings file. For details on this file, see *5.7.2 Items set in the operating-environment settings file*.

OS patch distribution information

The following files store messages output during unarchiving and installation command execution of OS patches. For both files, the currently stored messages are replaced with new ones every time an OS patch distribution job is executed. If multiple OS patch distribution jobs are created and executed, the files store the messages for each of the distributed OS patches.

- For systems other than HP-UX:
 - /NETMRDS/rdsprm/OSPATCH.LOGF
 - /NETMRDS/rdsprm/UNACV.LOGF
- For HP-UX
 - /var/opt/NETMDMW/rdsprm/OSPATCH.LOGF
 - /var/opt/NETMDMW/rdsprm/UNACV.LOGF

File for storing information output during collection processing by a user program

The following files require 20 kilobytes of disk space: If the file size exceeds 20 kilobytes, information is overwritten.

- For systems other than HP-UX: /NETMRDS/rdsprm/CF.LOGF
- For HP-UX: /var/opt/NETMDMW/rdsprm/CF.LOGF

(2) Generator tools

(a) Installation-scheduled packages

The disk space requirement for the directory for installation-scheduled packages (`/opt/NETMDMGF/HOKAN/`).

$$\text{Disk space} = \sum_{i=1}^n (0.94 + \text{package-size}) \quad (\text{units: kilobytes})$$

Legend:

n : Number of installation-scheduled package

(b) Log file

Log file for the generator tools (`/opt/NETMDMGF/GF.LOGF`)

$$\text{Disk space} = 0.24 (\text{header}) + \sum_{i=1}^n (0.24 + (\text{record})) \quad (\text{units: kilobytes})$$

Legend:

n : Maximum number of records that the log file can contain

If the file size exceeds the disk capacity shown above, information is overwritten.

Error log for the generator tools (`/opt/NETMDMGF/.dmgfllog`)

The following files require 13,380 kilobytes of disk space. If the file size exceeds 13,380 kilobytes, information is overwritten.

5.2.2 Disk space requirements for the packager

The packager temporarily uses a work directory. You can use the following formula to estimate the disk space requirement for the work directory.

$$\text{maximum-package-size} + (\text{maximum-package-size} + 0.0008 \times \text{number-of-packages-registered-at-the-cabinet}) + 0.06 \quad (\text{units: megabytes})$$

maximum-package-size: The largest of all the packages to be distributed.

For JP1/IT Desktop Management 2 - Agent, the name of the work directory is as follows:

- For systems other than HP-UX: `/NETMRDS`
- For HP-UX: `/var/opt/NETMDMW`

The name `/NETMRDS` in an OS other than HP-UX is a symbolic link to the directory that is actually used as the work directory. The actual work directory name might be `/opt/NETMDMW` in Linux, and `/opt/NETMRDS` in other OSs. For the work directory, the actual directory is used.

If the packager is also used as a relay system or distribution-destination system, add the size indicated in the following subsections:

- When the packager is also used as a distribution-destination system, see [5.2.1 Disk space requirements for the distribution-destination system](#).

When using the following file with the client services, add the disk space.

(1) Registration information file

This file stores software attribute information that can be registered with a single operation on a window.

$$\text{Disk space} = \sum_{i=1}^n \frac{(\text{number-of-registered-programs}) \times 1,024}{512} \times 512 \text{ (units: bytes)}$$

Legend:

n : Number of job files to be saved

(2) Message log file

Message log file for the client services

The following shows the amount of disk space required by the files below.

- For systems other than HP-UX: `/NETMRDS/rdspmr/MAIN.LOGF`
- For HP-UX: `/var/opt/NETMDMW/rdspmr/MAIN.LOGF`

$$\text{Disk space} = 298 \times (\text{message-log-file-count-upper-limit}) + 24 \text{ (units: bytes)}$$

Legend:

message-log-file-count-upper-limit: Value specified in `MaxEntryofMessage` of the settings file

If the maximum value specified in `MaxEntryofMessage` is exceeded, information is overwritten.

5.2.3 Memory requirement

Check the memory requirement for the client services in the *Release Notes*.

5.2.4 Changing the work directory

If the free space in the work directory that is being used temporarily becomes insufficient in the distribution-destination system or the packager, take either of the following actions:

- Increase the partition size of the work directory.
- Change the work directory.

The following procedure shows how to change the work directory. Before using the procedure, make sure that you are logged in as a superuser.

Note that if you change the work directory, the changed work directory is not deleted when JP1/IT Desktop Management 2 - Agent is uninstalled. When uninstalling JP1/IT Desktop Management 2 - Agent, manually delete the changed work directory.

1. Terminate the process.

- For systems other than HP-UX:

For a client workstation

```
rdshf -q
```

```
/NETMRDS/COM/rdskillsrv
```

For an end workstation

```
/NETMRDS/COM/rdssnde -q
```

```
/NETMRDS/COM/rdskillsrv
```

- For HP-UX:

For a client workstation

```
/opt/NETMDMW/bin/rdsrf -q  
/opt/NETMDMW/lbin/rdskillsrv
```

For an end workstation

```
/opt/NETMDMW/lbin/rdssnde -q  
/opt/NETMDMW/lbin/rdskillsrv
```

2. Change the work directory.

The example below shows how to set the work directory when sufficient free space is available under /home.

- For systems other than HP-UX and Linux:

When /NETMRDS is a symbolic link:

```
unlink /NETMRDS  
cp -rp /opt/NETMRDS /home  
rm -rf /opt/NETMRDS  
ln -s /home/NETMRDS /NETMRDS
```

When /NETMRDS is an actual directory:

```
cp -rp /NETMRDS /home  
rm -rf /NETMRDS  
ln -s /home/NETMRDS /NETMRDS
```

- For HP-UX:

```
cp -rp /var/opt/NETMDMW /home  
rm -rf /var/opt/NETMDMW  
ln -s /home/NETMDMW /var/opt/NETMDMW
```

- For Linux:

```
unlink /NETMRDS  
cp -rp /opt/NETMDMW /home  
rm -rf /opt/NETMDMW  
ln -s /home/NETMDMW /NETMRDS  
ln -s /home/NETMDMW /opt/NETMDMW
```

The work directory also contains the following files, which have the socket attribute:

- For systems other than HP-UX: /NETMRDS/SCTSV/xxx (xxx: variable)
- For HP-UX: /var/opt/NETMDMW/SCTSV/xxx (xxx: variable)

An attempt to move a file that has the socket attribute might fail. If an attempt to move a file fails, the file is re-created when the process starts. You can therefore ignore an error message that appears if moving fails.

3. Start the process.

- For systems other than HP-UX: /NETMRDS/COM/rdsstart
- For HP-UX: /opt/NETMDMW/lbin/rdsstart

5.3 Installation

This section describes how to install JP1/IT Desktop Management 2 - Agent for each OS of the target host.

5.3.1 Installation in HP-UX

This subsection describes the installation procedure in HP-UX.

Note that the names of files and directories on the installation media might be different from the names used in this subsection, depending on the hardware environment. Use the actual file and directory names displayed by the `ls` command.

1. Log on as the root user to the host where you want to install the programs, or use the `su` command to assume root user privileges.
2. Stop JP1/IT Desktop Management 2 - Agent when JP1/IT Desktop Management 2 - Agent is already installed on the host.
3. Load the distribution media.
4. Execute the `mount` command to mount the applicable device.

For example, to mount the applicable device to the mount directory, execute the following command:

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

Note that the command to execute varies depending on the environment.

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

```
mount-directory-name/IPFHPUX/SETUP mount-directory-name
```

Hitachi Program Product Installer starts and the initial window appears.

6. From the initial window, enter `I`.
A list of programs that can be installed is displayed.
7. Move the cursor to the **JP1/IT Desktop Management 2 - Agent**, select it by pressing the space key, and then enter `I`.
JP1/IT Desktop Management 2 - Agent is installed.
8. Upon a successful installation, enter `Q`.
This returns to the initial window of Hitachi Program Product Installer.

5.3.2 Installation in Solaris

This subsection describes the installation procedure in Solaris.

Note that the names of files and directories on the installation media might be different from the names used in this subsection, depending on the hardware environment. Use the actual file and directory names displayed by the `ls` command.

1. Log on as the root user to the host where you want to install the programs, or use the `su` command to assume root user privileges.
2. Stop JP1/IT Desktop Management 2 - Agent when JP1/IT Desktop Management 2 - Agent is already installed on the host.
3. Load the distribution media.
4. Execute the `mount` command to mount the applicable device.

For example, to mount the applicable device to the mount directory, execute the following command:

```
mount -r -F hsfs device-special-file-name mount-directory-name
```

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

Note that the command to execute varies depending on the environment.

```
mount-directory-name/solaris/setup mount-directory-name
```

Hitachi Program Product Installer starts and the initial window appears.

6. From the initial window, enter `I`.
A list of programs that can be installed is displayed.
7. Move the cursor to the **JP1/IT Desktop Management 2 - Agent**, select it by pressing the space key, and then enter `I`.
JP1/IT Desktop Management 2 - Agent is installed.
8. Upon a successful installation, enter `Q`.
This returns to the initial window of Hitachi Program Product Installer.

5.3.3 Installation in AIX

This subsection describes the installation procedure in AIX.

Note that the names of files and directories on the installation media might be different from the names used in this subsection, depending on the hardware environment. Use the actual file and directory names displayed by the `ls` command.

1. Log on as the root user to the host where you want to install the programs, or use the `su` command to assume root user privileges.
2. Stop JP1/IT Desktop Management 2 - Agent when JP1/IT Desktop Management 2 - Agent is already installed on the host.
3. Load the distribution media.
4. Execute the `mount` command to mount the applicable device.

For example, to mount the applicable device to the mount directory, execute the following command:

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

Note that the command to execute varies depending on the environment.

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

```
mount-directory-name/aix/setup mount-directory-name
```

Hitachi Program Product Installer starts and the initial window appears.

6. From the initial window, enter **I**.

A list of programs that can be installed is displayed.

7. Move the cursor to the **JP1/IT Desktop Management 2 - Agent**, select it by pressing the space key, and then enter **I**.

JP1/IT Desktop Management 2 - Agent is installed.

8. Upon a successful installation, enter **Q**.

This returns to the initial window of Hitachi Program Product Installer.

5.3.4 Installation in Linux

This subsection describes the installation procedure in Linux.

Note that the names of files and directories on the installation media might be different from the names used in this subsection, depending on the hardware environment. Use the actual file and directory names displayed by the `ls` command.

1. Log on as the root user to the host where you want to install the programs, or use the `su` command to assume root user privileges.
2. Stop JP1/IT Desktop Management 2 - Agent when JP1/IT Desktop Management 2 - Agent is already installed on the host.
3. Load the distribution media.
4. Execute the `mount` command to mount the applicable device.

For example, to mount the applicable device to the mount directory, execute the following command:

```
mount -r -o mode=0544 device-special-file-name mount-directory-name
```

Note that the command to execute varies depending on the environment.

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

```
mount-directory-name/LINUX/setup mount-directory-name
```

Hitachi Program Product Installer starts and the initial window appears.

6. From the initial window, enter **I**.

A list of programs that can be installed is displayed.

7. Move the cursor to the **JP1/IT Desktop Management 2 - Agent**, select it by pressing the space key, and then enter **I**.

JP1/IT Desktop Management 2 - Agent is installed.

8. Upon a successful installation, enter **Q**.

This returns to the initial window of Hitachi Program Product Installer.

5.3.5 Installation in Mac OS

This subsection describes the installation procedure in Mac OS.

In the case of Mac OS, you can install JP1/IT Desktop Management 2 - Agent by using a GUI or a command line. In both cases, the password of the login user must be entered because the administrator authority is required for installation.

Use the installation package for installation. The installation package has the following naming convention: `jpl1tdm2_vvrrss_macos.pkg`, where `vvrrss` is replaced with the version number plus the revision number.

(1) Setup automatically when installing

If you want to enable automatic setup upon the installation of JP1/IT Desktop Management 2 - Agent, you have to first create settings files that can be automatically set up and then store them under the same directory where the installation package is placed. When set up in this way, JP1/IT Desktop Management 2 - Agent automatically starts at the end of setup.

The following table describes the settings files that can be automatically set up.

Table 5–1: Files that can be automatically set up

File path	Description
<i>same-path-as-the-installation-package/</i> <code>RDSSETFL.txt</code>	This file is copied to the settings file (<code>/NETMRDS/rdsprm/RDSSETFL</code>) during the installation process. If you want JP1/IT Desktop Management 2 - Agent to automatically start after the installation, you must specify the mandatory items (<code>ManagingHost</code> and <code>WorkstationType</code>) in this file. For details about setting files, see 5.5 Creating settings files .
<i>same-path-as-the-installation-package/</i> <code>profile.txt</code>	This file is copied to the operating-environment settings file (<code>/NETMRDS/buff/.profile</code>) during the installation process. For details about the operating-environment settings file, see 5.8 Configuring the operating-environment settings file .

(2) Installation procedure using GUI

Following describes how to install using GUI:

1. Load the distribution media.
The loaded distribution media is automatically mounted. If the distributed media cannot be loaded due to reasons such as no CD drive on the Mac OS device, place the installation package in the Mac OS device by transferring it through the network or other means.
2. On the Finder, double-click the file containing the installation package.
The Introduction window appears.
3. In the Introduction window, click the **Continue** button.
The Installation Type window appears.
If the Destination Select window appears, select **Install for all users of this computer**, and then click the **Continue** button. You cannot change the installation destination.

4. In the Installation Type window, click the **Install** button.
5. Enter the password and then click the **Install Software** button.
JP1/IT Desktop Management 2 - Agent is installed. After the completion of the installation, the following message appears:
The installation was completed successfully.

(3) Installation procedure using command line

Following describes how to install using command line:

1. Execute **Terminal** from **Utility**.
2. Change the current directory to the one under which the installation package is located.
3. Execute the following command to start the installer.

```
sudo installer -pkg file-name-of-installation-package -target /
```

When prompted, enter the password. When the installation is completed, the following message is output to the terminal:

```
installer: Package name is JP1/IT Desktop Management 2 - Agent  
installer: Installing at base path /  
installer: The install was successful.
```

5.3.6 Update with Remote Installation under JP1/IT Desktop Management 2

This HITACHI software is certified for Remote Installation under JP1/IT Desktop Management 2. The following options are available for Remote Installation.

Update

Remote Installation installs JP1/IT Desktop Management 2 - Agent in the same directory as the existing JP1/IT Desktop Management 2 - Agent. The configuration of the existing JP1/IT Desktop Management 2 - Agent remains after the update.

To perform the update by using Remote Installation provided by JP1/IT Desktop Management 2, both the registration source and the distribution destinations must be running the same OS.

(1) In case of except Mac OS

Following describes how to update in case of except Mac OS:

1. Start the JP1/IT Desktop Management 2 - Agent.
2. Execute the following command to check the special file or the Hitachi Program Product storage directory:

```
rds1st /dev/cdrom#
```

Check the command output to confirm the presence of the JP1/IT Desktop Management 2 - Agent installation media.

#

This example assumes that the special file is `/dev/cdrom`.

3. Execute `rdsft` command, and package the JP1/IT Desktop Management 2 - Agent.

For details about packaging, see [2.2.2 Packaging procedure](#). The following example shows using the `rdsft` command:

```
rdsft -c -SP-CC8142-7JCL -C/dev/cdrom# -gXX
```

#

This example assumes that the mount point directory is `/dev/cdrom`.

4. Distribute the package of JP1/IT Desktop Management 2 - Agent which is packaged, using the Remote Install Manager of JP1/IT Desktop Management 2 - Manager.

5. Reboot the system.

If you specify the installation to take place when the system is started (default setting), the system must be rebooted twice. If you specify the installation to take place when the system is not running, the system must be rebooted just once.

(2) In case of Mac OS

Following describes how to update in case of Mac OS:

1. Start the JP1/IT Desktop Management 2 - Agent.

2. Load the distribution media.

The loaded distribution media is automatically mounted. If the distributed media cannot be loaded due to reasons such as no CD drive on the Mac OS device, place the installation package in the Mac OS device by transferring it through the network or other means.

3. Change the current directory to the one under which the installation package is located.

4. Execute `rdscm` command, and package the JP1/IT Desktop Management 2 - Agent.

You need to specify the `-ISVSOFT` option, and package as another company's software. The following example shows using the `rdscm` command:

```
sudo rdscm -ISVSOFT -djp1itdm2_1200_macos.pkg -gXX
```

5. Distribute the package of JP1/IT Desktop Management 2 - Agent which is packaged, using the Remote Install Manager of JP1/IT Desktop Management 2 - Manager.

6. Restart the JP1/IT Desktop Management 2 - Agent.

5.3.7 Uninstallation

This subsection describes the uninstallation procedure.

(1) In case of except Mac OS

Following describes how to uninstall in case of except Mac OS:

1. Log on as the root user to the host where you want to install the programs, or use the `su` command to assume root user privileges.
2. Stop the JP1/IT Desktop Management 2 - Agent.
3. Execute the following command to start Hitachi Program Product Installer:

```
/etc/hitachi_setup
```

Hitachi Program Product Installer starts and the initial window appears.

4. From the initial window, enter `D`.
A list of programs that can be uninstalled is displayed.
5. Move the cursor to the **JP1/IT Desktop Management 2 - Agent**, select it by pressing the space key, and then enter `D`.
JP1/IT Desktop Management 2 - Agent is uninstalled.
6. Upon a successful uninstallation, enter `Q`.
This returns to the initial window of Hitachi Program Product Installer.

(2) In case of Mac OS

Following describes how to uninstall in case of Mac OS:

1. Stop the JP1/IT Desktop Management 2 - Agent.
2. Execute **Terminal** from **Utility**.
3. Execute the following command to start the uninstaller.

```
sudo /NETMRDS/jplitdm2_uninstall
```

If you do not want a confirmation message to appear when you uninstall JP1/IT Desktop Management 2 - Agent, execute the following command:

```
sudo /NETMRDS/jplitdm2_uninstall -f
```

When prompted, enter the password.

4. From the uninstaller window, enter `y`.
When the uninstallation is completed, the following message is output to the terminal:

```
Forgot package 'jp.co.hitachi.jplitdm2' on '/'.  
Hitachi Program Product Installer
```

5.3.8 Notes on installation and uninstallation

- Before uninstalling JP1/IT Desktop Management 2 - Agent, stop all the processes running on JP1/IT Desktop Management 2 - Agent.
- Performing overwrite installation or update causes the information contained in the log file (`MAIN.LOGF`) to be cleared.

- Uninstalling JP1/IT Desktop Management 2 - Agent does not cause the JP1/IT Desktop Management 2 - Agent devices registered in JP1/IT Desktop Management 2 - Manager to be automatically deleted. You have to manually delete them from JP1/IT Desktop Management 2 - Manager.

5.4 Setting the network environment

JP1/IT Desktop Management 2 - Agent uses the file transfer server facility that is automatically started at the system startup to control the following file transfer:

- File transfer between the managing server and an end workstation
- File transfer between a relay system and a client workstation

The file transfer server facility runs on an end workstation and starts automatically at system startup.

To use the file transfer server facility, you must set the port number in all the UNIX machines running JP1/IT Desktop Management 2 - Agent. You must also assign a port number to the file transfer server facility of each managing server. The following describes how to perform the following settings that are required in each UNIX machine that runs JP1/IT Desktop Management 2 - Agent:

- Setting the file transfer server facility and the operating environment of each UNIX machine
- Setting for connecting a firewall
- Creating the files necessary for JP1/IT Desktop Management 2 - Agent

See 5.3.5 *Examples of operating environment setup* for examples for setting the operating environment of each UNIX machine.

5.4.1 Setting the port numbers

The port number settings differ depending on the type of the workstation to be used.

The following shows the defaults when the port number is not specified.

- netmdm: 31021
- netmdmw: 31002
- netmdmclt: 31001

(1) When the machine is used as an end workstation

Specify port numbers for the file transfer server facility in the `/etc/services` file. Specify the same port numbers as were specified for JP1/IT Desktop Management 2 - Manager. The following shows the syntax of the `/etc/services` file.

```
[ $\Delta_0$ netmdm $\Delta_1$ port-number/tcp]
[ $\Delta_0$ netmdmw $\Delta_1$ port-number/tcp]
[ $\Delta_0$ netmdmclt $\Delta_1$ port-number/tcp]
```

port-number ~ <unsigned integer>((5001-65535))

Specifies a port number. For the port number, specify a number that is unique within the network system.

netmdmw *port-number*/tcp

Specifies a port number when communication is to take place inside the end workstation.

`netmdmclt port-number/tcp`

Specifies the number of the port that receives a start request from a higher-level system.

This specification is required when the system connects to the managing server via a firewall. If this specification is omitted, port number 31001 is assumed.

(2) When the machine is used as a client workstation

Specify port numbers for the file transfer server facility in the `/etc/services` file. Specify the same port numbers as were specified for JP1/IT Desktop Management 2 - Agent (relay system) (Windows version). The syntax of the `/etc/services` file is described below.

```
[Δ0netmdmwΔ1port-number/tcp]
[Δ0netmdmcltΔ1port-number/tcp]
```

`port-number` ~ <unsigned integer>((5001-65535))

Specifies a port number for the relay system's file transfer server facility. For the port number, specify a number that is unique within the network system.

`netmdmclt port-number/tcp`

Specifies the number of the port that receives a start request from a higher-level system.

This specification is required when the system connects to the managing server via a firewall. If this specification is omitted, port number 31001 is assumed.

5.4.2 Setting the host name

Specify the host names described below in the `/etc/hosts` file.

- JP1/IT Desktop Management 2 - Agent (distribution-destination system)

Specify the host name of the local system and higher-level system. When the system is used in a DNS environment, register the host names of the local system and higher-level system at the name server.

If you use JP1/IT Desktop Management 2 - Agent in a firewall environment, the host name definition differs depending on the firewall environment. For details on the host name definition in a firewall environment, see *5.3.4 Settings when using firewalls*.

Note

- If your system uses a name server in a TCP/IP environment, do not specify host name aliases that differ only in the case of the letters, but are otherwise identical. That is, do *not* specify aliases such as the following:

Example (Invalid network information specified in `/etc/named.db`.)

```
host.hitachi.com      IN A      123.456.0.7
HOSTNAME.hitachi.com IN CNAME  host.hitachi.com
HostName.hitachi.com IN CNAME  host.hitachi.com
```

- To change the host name or IP address of the local system, make sure that no job is being executed, stop JP1/IT Desktop Management 2 - Agent, and then change the host name or IP address. In addition, delete the files below in either of the following cases: (i) If the host name is specified for the working key in the settings of the managing server, and the host name of the local system (local host name of the OS or DMHOSTNAME of the operating-environment settings file) is changed, or (ii) if the IP address is specified for the working key, and the IP address

of the local system (the local IP address of the OS or DMIPADDR of the operating-environment settings file) is changed.

For systems other than HP-UX: /NETMRDS/rdsprm/.myname

For HP-UX: /var/opt/NETMDMW/rdsprm/.myname

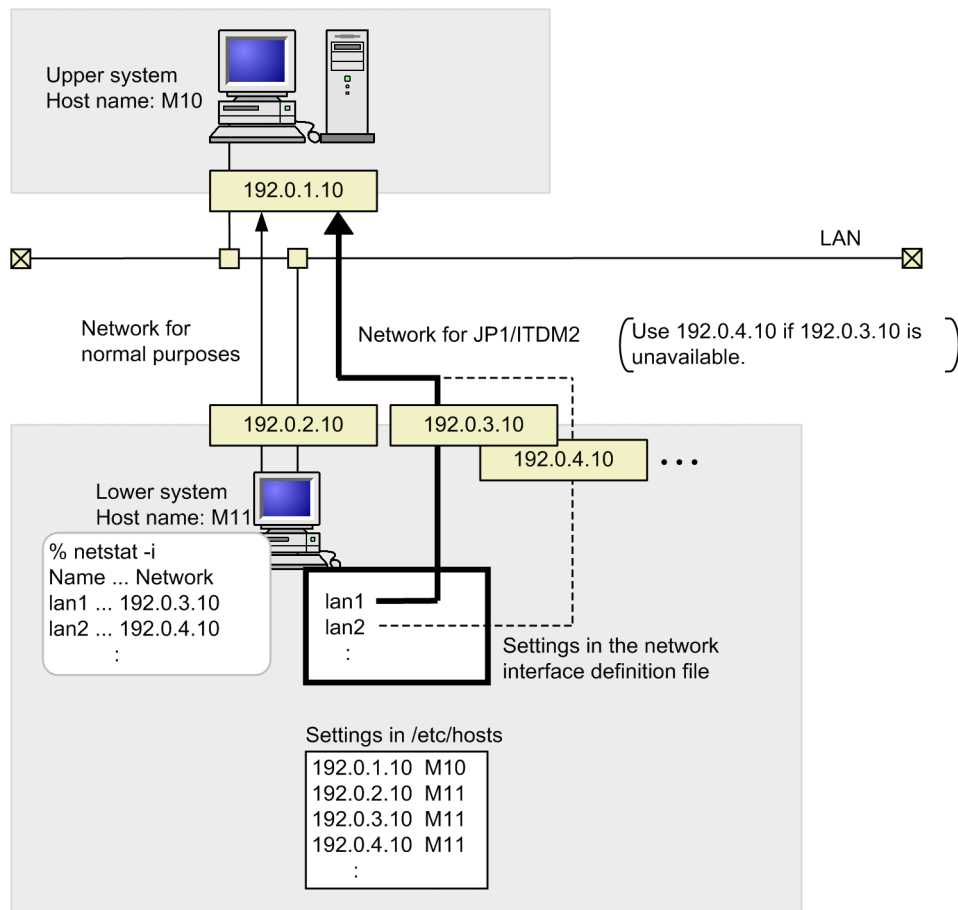
5.4.3 Defining the network interface for JP1/IT Desktop Management 2

You can define two or more network connections in the managing server, and use one specifically for JP1/IT Desktop Management 2. Define the connections in a network interface definition file. This enables the network connection to be switched automatically when JP1/IT Desktop Management 2 is used.

In the network interface definition file, specify the network interface to be used by JP1/IT Desktop Management 2. You must also define each network in the /etc/hosts file. For details about setting an /etc/hosts file, see 5.3.2 *Setting the host name*.

Figure 5-2 shows how to define a network interface definition file.

Figure 5-2: Defining a network interface definition file



File name of the network interface definition file:

- System other than HP-UX: /NETMRDS/rdsprm/IFCONFIG
- HP-UX: /etc/opt/NETMDMW/rdsprm/IFCONFIG

Rules for defining a network interface definition file:

- Define the network interfaces displayed when you execute the `netstat` command with the `-i` option specified. Write one interface name per line, starting with the interface that has highest priority.
- You can write up to 8 lines. Definitions exceeding this limit are invalid.
- The characters from the start of a line to the next line feed code are interpreted as one line. If more than one network interface name is written in a line, the second and subsequent names are invalid.
- A space or tab at the beginning of a line is invalid. Spaces at the end of a line are also invalid.
- Begin a comment with a slash and asterisk (`/*`), and end it with an asterisk and slash (`*/`). To insert a comment in a line in which the network interface name is defined, insert one or more space characters between the network interface name and the comment. Note that the tab symbol cannot be specified here.
- Restart JP1/IT Desktop Management 2 - Agent for the settings in the definition file to take effect.

The following example shows how to define multiple network interface names in the network interface definition file:

```
net1          /* Primary */
net2          /* Secondary */
net3          /* Tertiary */
net4          /* Fourth */
net5          /* Fifth */
net6          /* Sixth */
net7          /* Seventh */
net8          /* Eighth */
```

In this example, `net1` to `net8` are the network interface names and the top name has the highest priority. The comments show the priority level of each network interface name.

Network interface selection sequence

The network to be used for JP1/IT Desktop Management 2 is selected in the following sequence:

1. When JP1/IT Desktop Management 2 is used, the system selects the network defined first in the network interface definition file.
2. If the system cannot connect to the first network, the second definition is selected. If still unsuccessful, the system tries each network in turn, in order of priority.
3. If the system cannot connect to any of the defined networks, the retry count set in the `RetryCount` parameter in the settings file determines the subsequent processing, as follows.

1 set in `RetryCount` in the settings file:

Connection fails, and JP1/IT Desktop Management 2 is unable to start.

2 or higher set in `RetryCount` in the settings file:

The system waits for a specified length of time (`RetryInterval` in the settings file), then tries again to make the connection, starting from the first network in the definition file.

This process is repeated for the number of times set in `RetryCount`. If connection still fails, JP1/IT Desktop Management 2 is unable to start.

Note

- If a network has frequent connection failures, define a lower priority for that network, or delete the definition.
- To clear the network interface settings, delete the following files:

For systems other than HP-UX:

`/NETMRDS/rdsprm/IFCONFIG`

`/NETMRDS/rdsprm/.ifconfig`

For HP-UX:

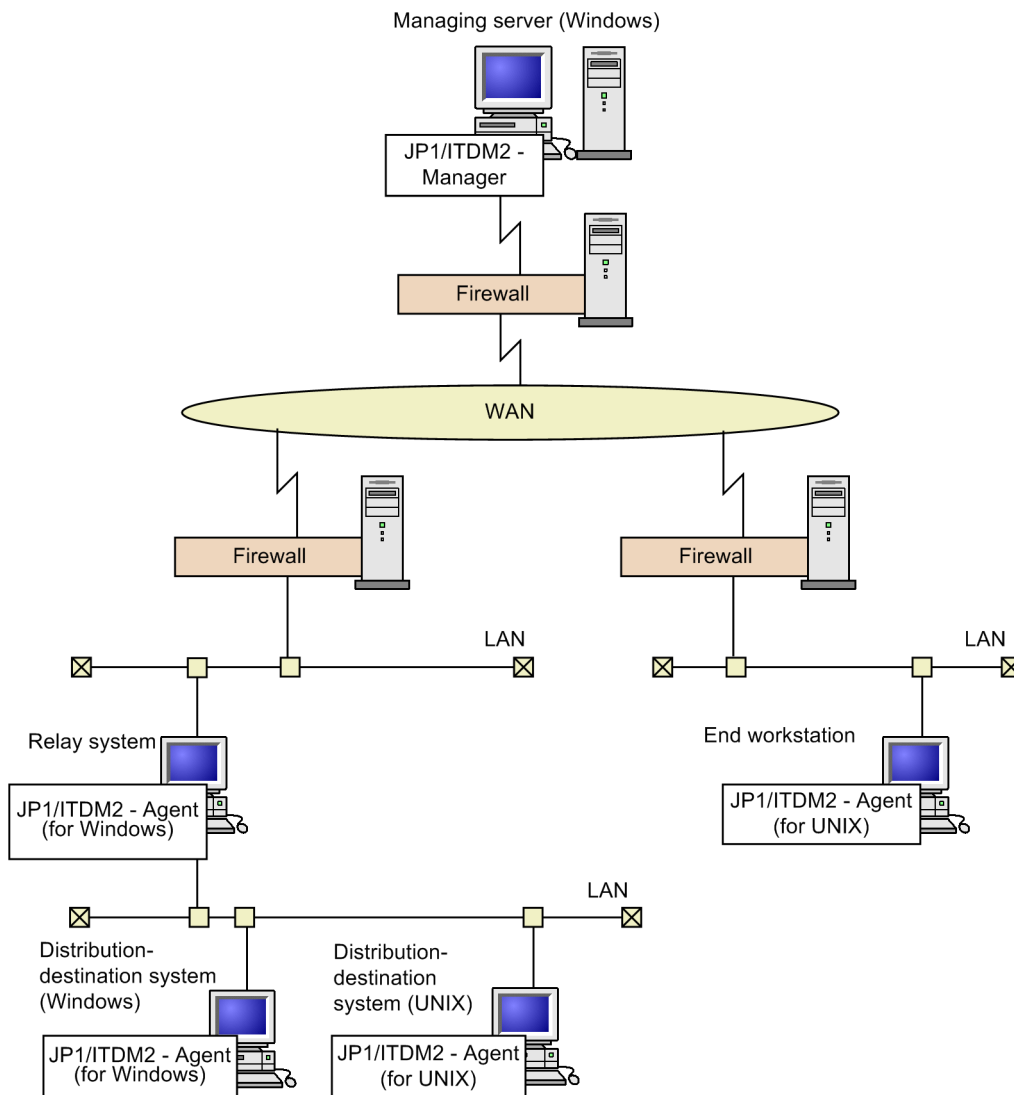
```
/etc/opt/NETMDMW/rdsprm/IFCONFIG  
/var/opt/NETMDMW/rdsprm/.ifconfig
```

- Specify the network interface definition file settings so that JP1/IT Desktop Management 2 - Agent can use a specific network when communicating with the higher-level system specified for ManagingHost in the settings file. In the settings, you cannot define a network used by the higher-level system to communicate with JP1/IT Desktop Management 2 - Agent in situations such as job execution. You cannot control the network used for communication from the higher-level system to JP1/IT Desktop Management 2 - Agent.
- In an environment in which multiple IP addresses are assigned to one network interface, such as in a cluster environment, the first IP address that can be obtained from the defined network interface name is used for communication. If the first IP address cannot be used to communicate with the higher-level system, a communication error occurs. In this case, clear the settings specified in the network interface definition file.

5.4.4 Settings when using firewalls

Figure 5-3 shows an example of the JP1/IT Desktop Management 2 system configuration that uses firewalls.

Figure 5-3: Example of the JP1/IT Desktop Management 2 system configuration using firewalls



When you distribute a package from the managing server through a firewall, you can install a relay system within the firewall to reduce the number of nodes to be defined in the firewall.

For details on the environment settings of the managing server for distributing packages via a firewall, see the manual of your managing server.

(1) Useable firewalls

Table 5-1 shows most popular firewalls that can be used with JP1/IT Desktop Management 2 system.

Table 5–2: Most popular firewalls that can be used with JP1/IT Desktop Management 2 - Agent

Firewall type	Gateway environment	IP address specified in the /etc/hosts file
Application gateway firewall	General purpose TCP gateway (Plug-G/W)	Assign the address that corresponds to the service names (port number) used in JP1/IT Desktop Management 2 - Agent on the machines where the managing server and the relay system are installed.
Packet filtering firewall	Packet filtering G/W+NAT function [#]	Assign the global address specified in the host name definition of the managing server and the relay system as the local host address.

#

NAT (Network Address Translation) is a facility for making the intra-network addresses invisible to the external networks. NAT also prevents the intra-network addresses from leaking to the external networks. There are two address translation policies:

- Fixed-address allocation
- Dynamic address allocation

JP1/IT Desktop Management 2 can only use the fixed-address allocation policy (STATIC mode).

(2) Port numbers used in JP1/IT Desktop Management 2

When you use JP1/IT Desktop Management 2 in a firewall environment, you must set port numbers in the firewall.

Table 5-2 shows port numbers used in JP1/IT Desktop Management 2.

Table 5–3: Port numbers used in JP1/IT Desktop Management 2

Communication between:	Port number	Protocol	Sender information	Recipient information
Manager and relay systems	31001	tcp	Manager:Ephemeral [#]	Relay system:31001
	31021	tcp	Relay system:Ephemeral [#]	Manager:31021
Relay systems and clients	31001	tcp	Relay system:Ephemeral [#]	Client:31001
	31002	tcp	Client:Ephemeral [#]	Relay system:31002
Manager and clients	31001	tcp	Manager:Ephemeral [#]	Client:31001
	31002	tcp	Client:Ephemeral [#]	Client:31002
	31021	tcp	Client:Ephemeral [#]	Manager:31021

#

Idle Ephemeral ports are allocated automatically by TCP/IP, normally within the port number range from 1024 to 5000.

5.4.5 Examples of operating environment setup

This subsection shows configurations of a JP1/IT Desktop Management 2 system, and provides setup examples for the machines in the system for each configuration.

(1) Setup example for connection to a Windows managing server

Figure 5-4 shows an example system configuration for connection to a Windows managing server. Figure 5-5 shows the environment settings for this configuration.

Figure 5-4: System configuration for connection to a Windows managing server

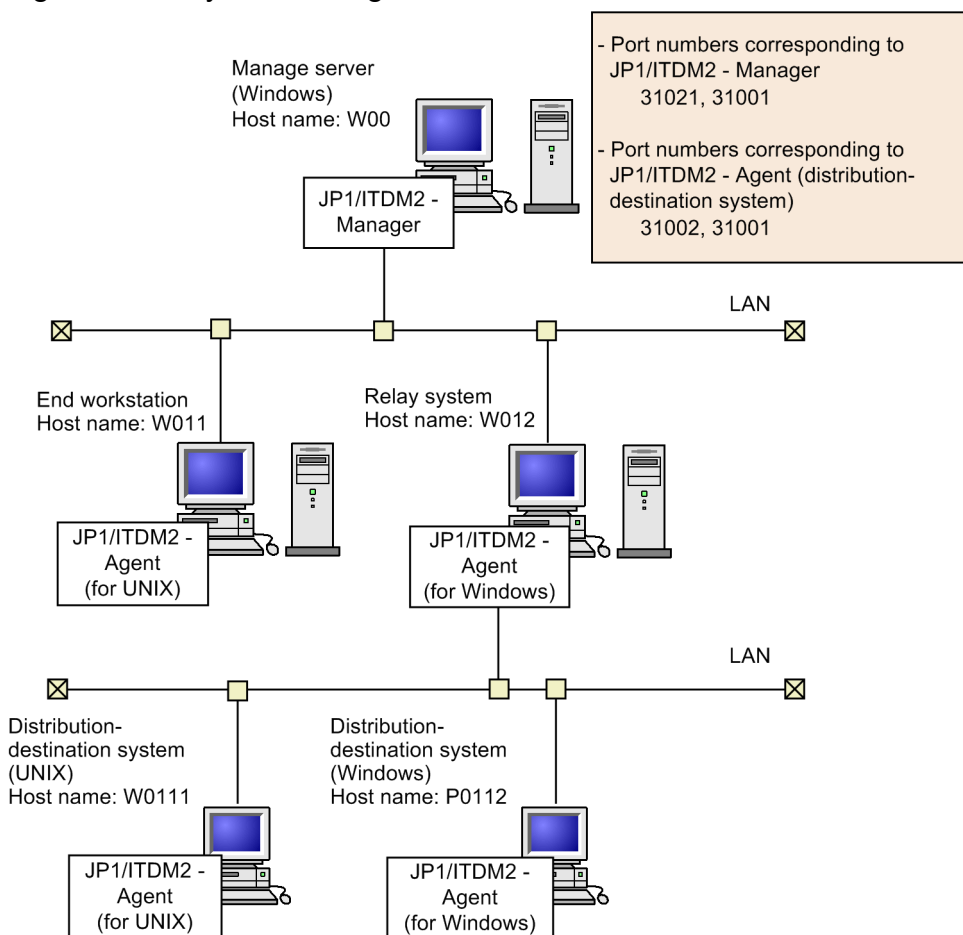


Figure 5–5: Example environment settings for connection to a Windows managing server

Managing server Host name: W00

```
/etc/hosts      /etc/services
W00 W012
W011 P0112     netmdm 31021/tcp
                netmdmclt 31001/tcp
```

End workstation Host name: W011

```
/etc/hosts      /etc/services
W00
W011           netmdm 31021/tcp
                netmdmw 31002/tcp
                netmdmclt 31001/tcp
```

```
/NETMRDS/rdspm/RDSSETFL
```

```
ManagingHost W00
WorkstationType END
```

Relay system Host name: W012

```
/etc/hosts      /etc/services
W00 P0112
W012           netmdm 31021/tcp
W011           netmdmw 31002/tcp
                netmdmclt 31001/tcp
```

Distribution-destination system (UNIX) Host name: W0111

```
/etc/hosts      /etc/services
W012
W0111         netmdmw 31002/tcp
                netmdmclt 31001/tcp
```

```
/NETMRDS/rdspm/RDSSETFL
```

```
ManagingHost W012
WorkstationType CLIENT
```

(2) Setup example for using firewalls

Figure 5-6 shows an example system configuration with firewalls between the managing server and relay system. Figure 5-7 shows the environment settings for this configuration.

Figure 5–6: System configuration for connection to firewalls

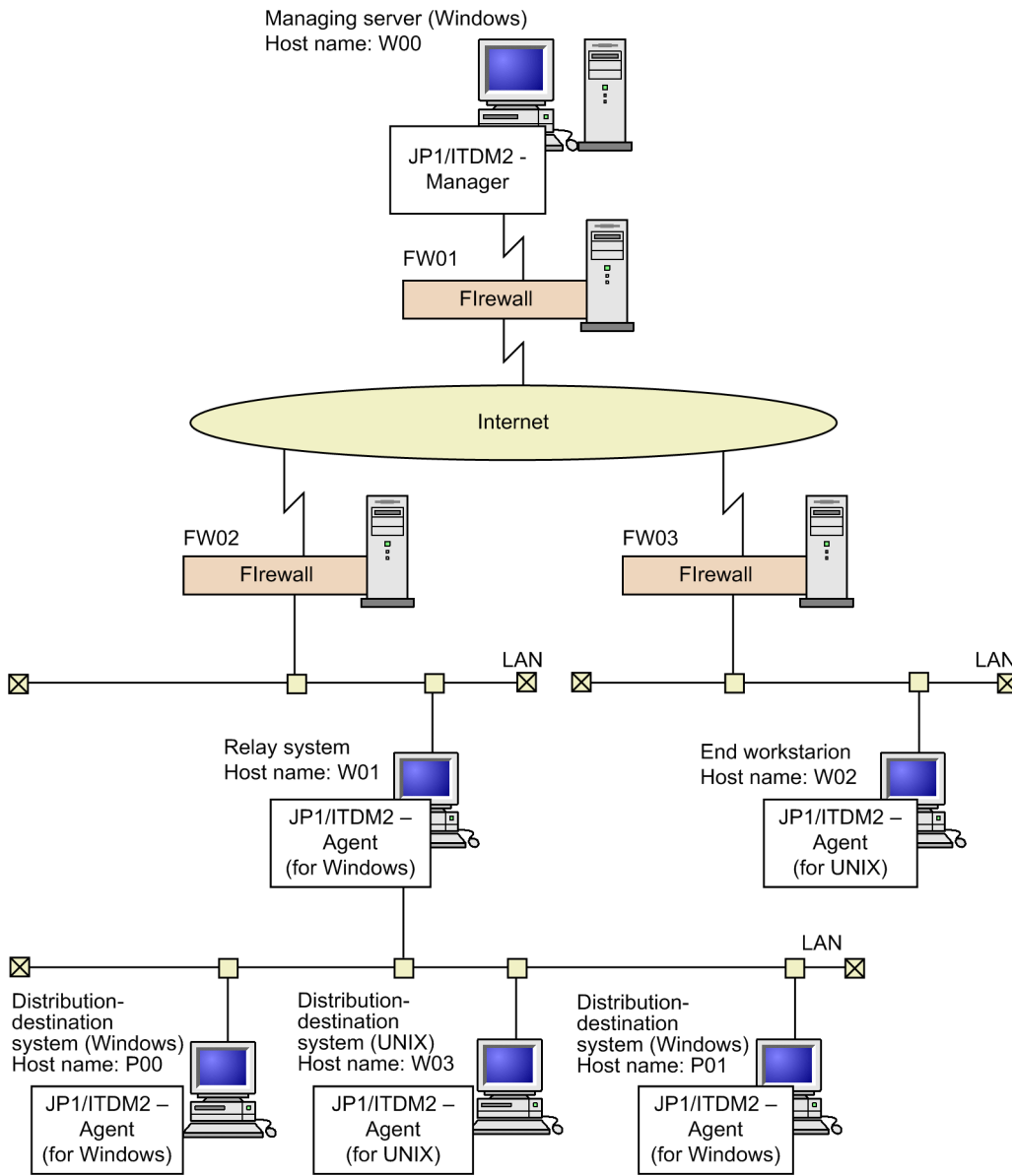


Figure 5–7: Example environment settings for connection to firewalls

Managing server Host name: W00

/etc/hosts

```
IP address: 200.200.10.200 Host name: NETMDM
W01 250.100.10.100
W02 250.200.10.100
```

/etc/services

```
netmdm 31021/tcp
netmdmw 31002/tcp
netmdmclt 31001/tcp
```

Firewall FW01

FW address: 200.100.10.100 Definition: Assign port number 30000 to 200.100.10.200

Firewall FW02

FW address: 250.100.10.100 Definition: Assign port number 30002 to 250.100.10.200

Relay system Host name: W01

/etc/hosts

```
IP address: 250.100.10.200 Host name: NETMDMW1
NETMDM 200.100.10.100
```

/etc/services

```
netmdm 31021/tcp
netmdmw 31002/tcp
netmdmclt 31001/tcp
```

Firewall FW03

FW address: 250.200.10.100 Definition: Assign port number 30002 to 250.200.10.200

End workstation Host name: W02

/etc/hosts

```
IP address: 250.200.10.200 Host name: NETMDMW2
NETMDM 200.100.10.100
```

/etc/services

```
netmdm 31021/tcp
netmdmw 31002/tcp
netmdmclt 31001/tcp
```

/NETMRDS/rdsprm/RDSSETFL

```
ManagingHost NETMDM
```

Distribution-destination system (Windows) Host name: P00

Skipped

Distribution-destination system (UNIX) Host name: W03

Skipped

Distribution-destination system (Windows) Host name: P01

Skipped

5.5 Creating settings files

The settings files define the operating environment of JP1/IT Desktop Management 2 - Agent. Create a settings file for the client services. This section describes how to create the settings files.

5.5.1 General rules for the settings files

This section describes the rules that apply to the settings files for the client services.

(1) Creating a new settings file

Use a text editor to create the settings files. The following shows the names of the settings files.

Settings file for the client services

For systems other than HP-UX: /NETMRDS/rdsprm/RDSSETFL

For HP-UX: /etc/opt/NETMDMW/rdsprm/RDSSETFL

If a settings file has been created upon startup, JP1/IT Desktop Management 2 - Agent configures the operating environment according to the settings file.

- When the operating environment has been successfully set
Extension `.bak` is added to the end of the settings file name.
- When the operating environment cannot be set
Extension `.err` is added to the end of the settings file name.

When the settings file is created, the specified contents will be valid until the settings file is changed. For details on how to change the settings file, see (5) *Changing the settings file*.

(2) Format of settings files

Create settings files in the following format:

```
attribute-nameTabvalueEnter
```

attribute-name

In *attribute-name*, specify an item you want to set in the settings file.

value

In *value*, specify the value of *attribute-name* you want to set for the UNIX machine.

The details to specify in a settings file differ depending on the facility that is being used. For details about the settings files, see 5.4.2 and 5.4.3. For the packager settings, use the same settings as for the individual UNIX machines.

(3) Rules for creating a settings file

- You can enter a space character instead of a tab character.
- If you enter a pound sign (#) in the first column, the line is assumed to be a comment.
- Each line in a settings file can contain up to 256 bytes including the code for the pressed **Enter** key.

- If you specify the same attribute name more than once, only the last one specified takes effect. All the other attributes specified before the last one are ignored.
- When you do not specify an item, the following values take effect.
 - The first time the settings file is created: Default
 - When the contents of the settings file have been changed: The specified value of the settings file before it was changed
- Specify the host name according to (4) *Specifying host names*.
- If the pressed **Enter** key inserts a Windows linefeed code, the settings cannot be correctly specified.

(4) Specifying host names

The host names you specify in the `ManagingHost` attribute in settings files and in `hostname` of each UNIX machine must also be specified in the `/etc/hosts` file. You cannot specify aliases. The `/etc/hosts` files of the nodes in the same network must have the same Internet address and host name definition. The following shows the relationship between the host name of `/etc/hosts` and its alias names:

```
Internet-address host-name alias
```

For details on Internet addresses, host names, and their aliases, see the appropriate manual for each operating system.

(5) Changing the settings file

Follow the procedures below when changing the settings file.

1. To change the `ManagingHost` value, execute the `rdssys -u` command to delete the value from the system configuration information. Also delete the following files:

- For systems other than HP-UX: `/NETMRDS/rdsprm/.myname`
- For HP-UX: `/var/opt/NETMDMW/rdsprm/.myname`

Before changing the value of `WorkstationType`, make sure that all jobs addressed to the system to be changed have been completed.

2. Stop processes in the following order:

Execute one of the following commands to stop the process for reporting the results:

For a client workstation: `rdserf -q`

For an end workstation: `/NETMRDS/COM/rdssnde -q (/opt/NETMDMW/lbin/rdssnde -q for HP-UX)`

Execute the following command to stop the resident process:

For systems other than HP-UX: `/NETMRDS/COM/rdskillsrv`

For HP-UX: `/opt/NETMDMW/lbin/rdskillsrv`

3. Delete `.bak` from the settings file name to resume the original name.
4. Either restart the system or start the process by executing the following command:
 - For systems other than HP-UX: `/NETMRDS/COM/rdsstart`
 - For HP-UX: `/opt/NETMDMW/lbin/rdsstart`

Specify the workstation type for JP1/IT Desktop Management 2 - Agent in `WorkstationType` of the settings file. To change the workstation type in connection with a network configuration change, the following steps are necessary in addition to the procedure described above:

- Before making the change, ensure that all jobs addressed to the system have been completed.
- Ensure that the prerequisite programs have been installed.
- Change the workstation type in `WorkstationType` of the settings file. Also reassess other settings according to the workstation type change.

(6) Actions to be taken for data migration from JP1/IT Desktop Management 2 - Agent

When you replace machines and migrate the data from JP1/IT Desktop Management 2 - Agent, you need to back up the settings file and some other files.

You can migrate JP1/IT Desktop Management 2 - Agent data only when the migration-source system and the migration-destination system use the same OS. The version of JP1/IT Desktop Management 2 - Agent must also be the same.

The following files need to be backed up:

- Settings file
- Temporary collection storehouse^{#1}
- For systems other than HP-UX
 - `/NETMRDS/rdsprm/NS000000`^{#2}
 - `/NETMRDS/rdsprm/.myname`^{#2}
 - `/NETMRDS/.uap/uplistd`^{#2}
 - `/NETMRDS/rdsprm/.delvadr`^{#2}
 - `/NETMRDS/rdsprm/.delvadr.ex`^{#2}
 - `/NETMRDS/rdsprm/.delvadr.opt`^{#2}
- For HP-UX
 - `/var/opt/NETMDMW/rdsprm/NS000000`^{#2}
 - `/var/opt/NETMDMW/rdsprm/.myname`^{#2}
 - `/var/opt/NETMDMW/.uap/uplistd`^{#2}
 - `/var/opt/NETMDMW/rdsprm/.delvadr`^{#2}
 - `/var/opt/NETMDMW/rdsprm/.delvadr.ex`^{#2}
 - `/var/opt/NETMDMW/rdsprm/.delvadr.opt`^{#2}

#1

If the settings file contains the following, a backup is required:

- END is set in `WorkstationType`.

#2

When you pre-install JPI/IT Desktop Management 2 - Agent, for example, in cases where you copy the hard disk containing JPI/IT Desktop Management 2 - Agent to install JPI/IT Desktop Management 2 - Agent, delete these files after you install JPI/IT Desktop Management 2 - Agent.

5.5.2 Syntax of the end workstation settings file

This section explains the content to specify in an end workstation settings file.

(1) Format

```
ManagingHost host-name
WorkstationType END
[WatchTimeofOrders distribution-job-monitoring-interval]
[RetryCount retry-count]
[RetryInterval retry-interval]
[ServerRetryCount retry-count]
[ServerRetryInterval retry-interval]
[DeliveryRetryCount package-distribution-and-file-collection-retry-count]
[DeliveryRetryInterval package-distribution-and-file-collection-retry-interval]
[TransferDataSize {512|1024|2048|4096}]
[LifeofResource number-of-days]
[Compress {NO|COMPRESS|PACK|COMMON}]
[AutoAction {YES|NO}]
[DetailStatusInf {YES|NO}]
[SystemLogOutputLevel {0|1|2|3}]
[MaxEntryofMessage maximum-message-count-for-message-log-file]
[ReceiveWaitTime file-transfer-response-timeout]
[RebootPermission {YES|NO}]
```

(2) Details

ManagingHost *host-name* ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods>((1 to 64 characters))

Specify the address of the managing server. If the managing server is running in a cluster environment, specify a host name that is compatible with the logical IP address defined by the cluster software. For details about operations in a cluster environment, see the *JPI Version 11 JPI/IT Desktop Management 2 Overview and System Design Guide*.

WorkstationType END

Specify END, which indicates an end workstation.

WatchTimeofOrders *package-distribution-and-file-collection-retry-count* ~ <unsigned integer> ((0 to 60)) <<5>>
(in minutes)

To check from the end workstation for the presence of a distribution job on the managing server, specify in minutes the time interval for monitoring the execution of the command to check for the presence of a distribution job (`rdsma` command).

If you execute the `rdsma` command when this attribute is set, the system monitors the execution of the command at the specified intervals.

If you specify 0 for this attribute, the system monitors the command only once.

RetryCount *retry-count* ~ <unsigned integer>((1 to 9))<<3>> (number of times)

In *retry-count*, specify the maximum number of times the system performs a retry if it cannot establish an association or connection with the managing server. If you specify 9, the system will retry endlessly.

RetryInterval *retry-interval* ~ <unsigned integer>((1 to 99))<<1>> (in units of 10 seconds)

In *retry-interval*, specify the interval at which the system performs a retry if it cannot establish an association or connection with the managing server. Specify a value in units of 10 seconds.

ServerRetryCount *retry-count* ~ <unsigned integer>((1 to 9))<<3>> (number of times)

In *retry-count*, specify the maximum number of times the system performs a retry if it cannot establish a connection to the file transfer server facility. If you specify 9, the system will retry endlessly.

ServerRetryInterval *retry-interval* ~ <unsigned integer>((1 to 99))<<5>> (in seconds)

In *retry-interval*, specify the interval at which the system performs a retry if it cannot establish a connection to the file transfer server facility. Specify a value in seconds.

DeliveryRetryCount *package-distribution-and-file-collection-retry-count* ~ <unsigned integer>((0 to 9))<<0>> (number of times)

In *package-distribution-and-file-collection-retry-count*, specify the maximum number of times the system retries the package distribution (or file collection) command if a line failure occurs during package distribution (or file collection). If you specify 0, the system does not perform a retry.

DeliveryRetryInterval *package-distribution-and-file-collection-retry-interval* ~ <unsigned integer>((1 to 99))<<3>> (in units of 10 seconds)

In *package-distribution-and-file-collection-retry-interval*, specify the interval at which the system retries the package distribution (or file collection) command if a line failure occurs during package distribution (or file collection). Specify a value in units of 10 seconds. Note that if the `DeliveryRetryCount` attribute is set to 0, the system ignores the `DeliveryRetryInterval` attribute.

TransferDataSize ~ {512 | 1024 | 2048 | 4096}<<1024>>

Specify the size of the buffer for exchanging data with the managing server in a TCP/IP environment.

Select one of the buffer sizes, considering the network environment between the end workstation and the managing server.

LifeofResource *number-of-days* ~ <unsigned integer>{1 to 999}<<1>>

In *number-of-days*, specify the number of days for storing resources. If the expiration date of a resource is not specified in the packaging-information file, the resource is stored in the temporary package storehouse for the number of days specified in this attribute. The default is one day (following registration).

Compress ~ {NO | COMPRESS | PACK | COMMON}<<NO>>

Specify the compression method for the packages you want to register.

NO

Does not compress the packages.

COMPRESS

Uses the `compress` command to compress the packages.

PACK

Uses the `pack` command to compress the packages.

COMMON

Compresses shared packages.

Specifying `PACK` has no effect on a package consisting of three or fewer blocks. If compression of a package fails, the package is registered but is not compressed. The value specified in this attribute becomes the default for the packages for which the compression method is not specified in the packaging-information file.

AutoAction ~ {YES | NO}<<NO>>

Specify whether to send a JP1 event to JP1/Base if an error occurs or if the status changes.

YES

Sends a JP1 event.

NO

Does not send a JP1 event.

For details on automated actions and other operations using JP1 events, see 7. *JP1 Event Processing Using JP1/IM - Manager*.

DetailStatusInf ~ {YES | NO}<<NO>>

Specify whether or not to report the details of the job execution status to the managing server.

YES

Reports the details of the job status.

NO

Does not send a detailed report.

When YES is specified, the job status is reported as follows on the managing server side:

- If a distribution job that installs a package during system operations is executed, the end status of the job changes to 0x80 when transfer of the package to the distribution-destination system is completed.
- When multiple distribution jobs are executed simultaneously, the end of execution is reported for each job.

SystemLogOutputLevel ~ {0 | 1 | 2 | 3}<<3>>

Specify the level for the messages to be output to the syslog file.

0

Does not output messages.

1

Outputs error messages and system error messages (messages whose ID ends with E or S).

2

Outputs error messages, system error messages, and warning messages (messages whose ID ends with E, S, or W).

3

Outputs all the messages to be output to syslog. The following messages are output to syslog:

- Messages that are output if an error occurs except an error due to incorrect specification of operands in commands
- Messages that are output during normal operations when JP1/IT Desktop Management 2 is running in the background

The following table lists the messages that the client services output to syslog.

Message ID	Facility	Level
KDDMnnnn-E	LOG_USER	LOG_ERR
KDDMnnnn-S	LOG_USER	LOG_CRIT
KDDMnnnn-W	LOG_USER	LOG_WARNING
KDDMnnnn-I	LOG_USER	LOG_INFO

Legend:

nnnn: A four-digit number is displayed as the message code.

MaxEntryofMessage *maximum-message-count-for-message-log-file* ~ <unsigned integer>((300 to 99999))<<300>>

Specify the maximum number of messages that can be stored in a message log file.

If you change this value to be smaller than it was before, the message log file is edited beginning from the latest message up to the new maximum that you specified. Delete unnecessary messages and retain the necessary ones. Editing of the message log file temporarily requires additional disk space for the value you specified here. Before specifying this value, make sure that there is sufficient free space on the disk.

ReceiveWaitTime *file-transfer-response-timeout* ~ <unsigned integer>((0 to 2147483647))<<240>> (unit: seconds)

Specifies in seconds the time to monitor for a response from the server after a file is sent.

If there is no response from the server within the specified file transfer time, the system assumes that communication failed. If you specify 0, response is not monitored.

Make sure the value you specify here is not less than the sleep time between transmissions (FileTransferSleepTime) set in the manager services settings file; otherwise, a communication error will occur when there is a pause between transmissions.

RebootPermission ~ {YES | NO} <<NO>>

Specify whether or not to automatically reboot the OS when OS rebooting is specified in the package specified in the distribution job. To automatically reboot the OS in JP1/IT Desktop Management 2 - Agent, you need to specify automatic rebooting of JP1/IT Desktop Management 2 - Agent in the system file. See 5.8 *Setting the system files*.

YES

The OS is rebooted following package installation. However, the OS is not rebooted if OS rebooting is not specified in the package.

NO

The OS is not rebooted.

5.5.3 Syntax of the client workstation settings file

This section explains the content to specify in the client workstation settings file.

(1) Format

```
ManagingHost relay-system-host-name
WorkstationType CLIENT
[WatchTimeofOrders distribution-job-monitoring-interval]
[ServerRetryCount retry-count]
[ServerRetryInterval retry-interval]
[LifefofResource number-of-days]
[Compress {NO|COMPRESS|PACK|COMMON}]
[AutoAction {YES|NO}]
[DetailStatusInf {YES|NO}]
[SystemLogOutputLevel {0|1|2|3}]
[MaxEntryofMessage maximum-message-count-for-message-log-file]
[ReceiveWaitTime file-transfer-response-timeout]
[EnableMultiServer {YES|NO}]
[RebootPermission {YES|NO}]
```


(2) Details

ManagingHost *relay-system-host-name* ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods>((1 to 64 characters))

Specify the host name of the relay system to which the local UNIX machine connects.

WorkstationType CLIENT

Specify CLIENT, which indicates a client workstation.

WatchTimeofOrders *distribution-job-monitoring-interval* ~ <unsigned integer | MANUAL>((0 to 1280, MANUAL)) <<5>> (in minutes)

Specify in minutes the time interval for monitoring the relay system for the presence of a distribution job addressed to the local client workstation when the `rdsrf -a` command is executed.

MANUAL

Jobs are not monitored. Even when a job arrives via the relay system, the local client workstation does not start.

0

Jobs are monitored only once. When a job arrives via the relay system, the local client workstation starts.

1-1280

Executes the `rdsrf -a` command at the specified time interval to monitor for jobs. When a job arrives via the relay system, the local client workstation starts.

ServerRetryCount *retry-count* ~ <unsigned integer>((1 to 9))<<3>> (number of times)

In *retry-count*, specify the maximum number of times the system performs a retry if it cannot establish a connection to the file transfer server facility. If you specify 9, the system will retry endlessly.

ServerRetryInterval *retry-interval* ~ <unsigned integer>((1 to 99))<<5>> (in seconds)

In *retry-interval*, specify the interval at which the system performs a retry if it cannot establish a connection to the file transfer server facility. Specify a value in seconds.

LifeofResource *number-of-days* ~ <unsigned integer>((1 to 999))<<1>>

In *number-of-days*, specify the number of days for storing resources. If the expiration date of a resource is not specified in the packaging-information file, the resource is stored in the temporary package storehouse for the number of days specified in this attribute. The default is one day (following registration).

Compress ~ {NO | COMPRESS | PACK | COMMON}<<NO>>

Specify the compression method for the packages you want to register.

NO

Does not compress the packages.

COMPRESS

Uses the `compress` command to compress the packages.

PACK

Uses the `pack` command to compress the packages.

COMMON

Compresses shared packages.

Specifying PACK has no effect on a package consisting of three or fewer blocks. If compression of a package fails, the package is registered but is not compressed. The value specified in this attribute becomes the default for the packages for which the compression method is not specified in the packaging-information file.

AutoAction ~ {YES | NO}<<NO>>

Specify whether to send a JP1 event to JP1/Base if an error occurs or if the status changes.

YES

Sends a JP1 event.

NO

Does not send a JP1 event.

For details on automated actions and other operations using JP1 events, see 7. *JP1 Event Processing Using JP1/IM - Manager*.

DetailStatusInf ~ {YES | NO}<<NO>>

Specify whether or not to report the details of the job execution status to the managing server.

YES

Reports the details of the job status.

NO

Does not send a detailed report.

When YES is specified, job status is reported as follows on the managing server side:

- If a distribution job that installs a package during system operation is executed, the end status of the job changes to 0x80 when transfer of the package to the distribution-destination system is completed.
- When multiple distribution jobs are executed simultaneously, the end of execution is reported for each job.

SystemLogOutputLevel ~ {0 | 1 | 2 | 3}<<3>>

Specify the level for the messages to be output to the syslog file.

0

Does not output messages.

1

Outputs error messages and system error messages (messages whose ID ends with E or S).

2

Outputs error messages, system error messages, and warning messages (messages whose ID ends with E, S or W).

3

Outputs all the messages to be output to syslog. The following messages are output to syslog:

- Messages that are output if an error occurs, except an error due to incorrect specification of operands in commands
- Messages that are output during normal operations when JP1/IT Desktop Management 2 is running in the background

MaxEntryofMessage *maximum-message-count-for-message-log-file* ~ <unsigned integer>((300 to 99999))<<300>>

Specify the maximum number of messages that can be stored in a message log file.

If you change this value to be smaller than it was before, the message log file is edited beginning from the latest message up to the new maximum that you specified. Delete unnecessary messages and retain the necessary ones. Editing of the message log file temporarily requires additional disk space for the value you specified here. Before specifying this value, make sure that there is sufficient free space on the disk.

ReceiveWaitTime *file-transfer-response-timeout* ~ <unsigned integer>((0 to 2147483647))<<240>> (unit: seconds)

Specifies in seconds the time to monitor for a response from the server after a file is sent.

If there is no response from the server within the specified file transfer time, the system assumes that communication failed. If you specify 0, response is not monitored.

Make sure the value you specify here is not less than the sleep time between transmissions (`FileTransferSleepTime`) set in the relay system's client services settings file; otherwise, a communication error will occur when there is a pause between transmissions.

`EnableMultiServer ~ {YES|NO} <<NO>>`

Specifies whether or not to accept jobs executed at multiple higher-level systems. A system configuration that has multiple higher-level servers is called a *multiserver*.

YES

Specify this when operating on a multiserver.

According to this specification, job execution results are sent to the host that downloaded the job, instead of to the host specified in `ManagingHost`. However, if a package is selected and installed, job execution results are sent to `ManagingHost`.

NO

Specify this when not operating on a multiserver.

With this setting, job execution results, even those downloaded from other hosts, may be sent to `ManagingHost`.

`RebootPermission ~ {YES | NO} <<NO>>`

Specify whether or not to automatically reboot the OS when OS rebooting is specified in the package specified in the distribution job. To automatically reboot the OS in JP1/IT Desktop Management 2 - Agent, you need to specify automatic rebooting of JP1/IT Desktop Management 2 - Agent in the system file. See *5.8 Setting the system files*.

YES

The OS is rebooted following package installation. However, the OS is not rebooted if OS rebooting is not specified in the package.

NO

The OS is not rebooted.

5.6 Creating the settings file (environment settings file) for the generator tools

The environment settings file defines the operating environment of the generator tools of JP1/IT Desktop Management 2 - Agent. This section describes how to create the environment settings file for the generator tools. If you do not create the environment settings file, the generator tools use the defaults. You do not need to create the environment settings file if there is no problem with using the existing defaults.

5.6.1 Environment settings file name

Create the environment settings file for the generator tools from a copy of the sample file that JP1/IT Desktop Management 2 - Agent provides. The following shows the locations of the sample file and actual settings file.

Sample file is located at the following path:

```
/NETMDMGF/profile.sample
```

Create the actual environment settings file at the following path:

```
/NETMDMGF/profile
```

5.6.2 Syntax of the environment settings file

(1) Format

```
[NETMDMGF_HOKAN=directory-for-installation-scheduled-packages]  
[LOGFileDirectory=log-file-directory]  
[LOGFileRecordMax=number-of-records]  
[SystemLogOutputLevel={0|1|2|3}]  
[EvtlogLevel={0|1|2}]  
[CommandWait=timeout]  
[GF_WatchTimer={ON|OFF}]  
[ERR_CONTINUE={ON|OFF}]  
[NETMDMGF_UAPGEN=UAP-installation-work-directory]  
[NETMDMGF_UPTGEN=UAP-installation-work-directory]
```

(2) Details

NETMDMGF_HOKAN *directory-for-installation-scheduled-packages* ~ <1 to 64 alphanumeric characters> <</NETMDMGF/HOKAN>>

This attribute specifies the name of the directory for temporarily storing the installation-scheduled packages that are not installed yet. If a directory that does not exist is specified, distribution that uses generator tools cannot be performed.

LOGFileDirectory *log-file-directory* ~ <1 to 64 alphanumeric characters> <</NETMDMGF>>

This attribute specifies the name of the directory for storing log files. If a directory that does not exist is specified, logs cannot be output to files.

LOGFileRecordMax *number-of-records* ~ <numerics>((1 to 9999)) <<100>>

This attribute specifies the maximum number of records that the log file can contain. This attribute is effective only when you initialize the log file.

SystemLogOutputLevel ~ <numerics> {0 | 1 | 2 | 3} <<3>>

This attribute specifies the output level of the messages that may be output to the syslog file. However, if you specify or omit both of these attributes in the environment settings file, the value that `SystemLogOutputLevel` explicitly or implicitly specifies prevails.

0

Does not output messages.

1

Outputs messages only during startup, shutdown, and when an error occurs.

2

Outputs messages only during startup, shutdown, and when an error or warning occurs.

3

Outputs only start, termination and runtime messages. The runtime messages include messages about normal processing and abnormal processing.

The following table lists the messages that the generator tools output to syslog.

Message ID	Facility	Level
KDGFnnnn-E	LOG_USER	LOG_ERR
KDGFnnnn-S	LOG_USER	LOG_CRIT
KDGFnnnn-W	LOG_USER	LOG_WARNING
KDGFnnnn-I	LOG_USER	LOG_INFO

Legend:

nnnn: A four-digit number is displayed as the message code.

EvtntlogLevel ~ <numerics> {0 | 1 | 2} <<0>>

This attribute specifies the level for outputting messages as JP1 events.

0

Does not output messages.

1

Only outputs messages at the start of installation or when an error occurs.

2

Outputs messages during startup/shutdown, UAP startup/shutdown, and when an error occurs.

CommandWait *timeout* ~ <numerics>((1 to 9999)) <<3600>>

This attribute specifies the timeout (in seconds) for the command waiting until the target file is unlocked. Specifying 9999 prevents the timeout from occurring. The command waiting time indicates the waiting time that occurs due to an exclusive control for the `rdsupt` command that runs as an extended function of the client services and that is executed by the user.

GF_WatchTimer ~ <characters> {ON | OFF} <<ON>>

This attribute specifies whether to monitor the UAP execution time.

ON

Monitors the execution time.

If the user command does not terminate although this attribute is set to ON and a timeout occurs, the system assumes that the user command failed and continues processing. If this occurs, the user command is not forcibly terminated. The timer uses the time specified in the `APWatchTimer` attribute in the packaging information file. The initial value of `APWatchTimer` is 300.

OFF

Does not monitor the execution time.

`ERR_CONTINUE` ~ <characters> {ON|OFF} <<ON>>

This attribute specifies whether to terminate the processing if an error occurs in the `rdsupt` command.

ON

Continues the processing even when an error occurs.

OFF

Terminates the processing when an error occurs.

If OFF is specified and an error occurs during installation processing by the `rdsupt` command, the installation of the next package is not executed.

`NETMDMGF_UAPGEN` *UAP-installation-work-directory* ~ <1 to 64 alphanumeric characters> <</usr/bin/UAPGEN>>

Specify the name of the work directory for UAP-based installation. Note that storing other subdirectories and files in the specified directory will cause an installation error.

`NETMDMGF_UPTGEN` *UAP-installation-work-directory* ~ <1 to 64 alphanumeric characters> <</usr/bin/UPTGEN>>

Specify the name of the work directory for UAP-based installation that is used during installation on the day of application. Note that storing other subdirectories and files in the specified directory will cause an installation error.

5.7 Setting the language for messages

You use the `LANG` and `TZ` environment variables to set the language and the time of the messages output by JP1/IT Desktop Management 2 - Agent.

The following shows values that can be specified in the environment variable `LANG`:

OS type	English
HP-UX	C
Solaris	POSIX#1
AIX	En_US#1
Linux	C

#1

If the environment variable `LANG` is set to C, this value will be assumed.

If English is specified at the environment variable `LANG`, all messages will be output in English, which will have no effect on control. If no `LANG` is specified, or if a value not shown in the table is specified, English will be used.

5.7.1 Files that specify `LANG` and `TZ`

When setting the language environment, set `LANG` and `TZ` in the file shown below.

Definition file of the operating system

This file affects the messages that are output when JP1/IT Desktop Management 2 - Agent starts automatically at the system startup. For details about the automatic startup of JP1/IT Desktop Management 2 - Agent, see [5.8 Setting the system files](#).

If you specify `WatchTimeofOrders` in the settings file of the client services and execute a job, the `LANG` and `TZ` settings in the definition file of the operating system take effect. If a job is executed by the startup request from a higher-level managing server or a relay system, the `LANG` and `TZ` settings in the operating-environment settings file take effect.

The file to be defined differs depending on the operating system. The following shows the definition file for each operating system:

- For HP-UX
`/etc/rc.config.d/any-file-name`
- For Solaris
`/etc/default/init`
- For AIX
`/etc/environment`
- For Linux
`/etc/init.d/functions`

The definition file might also differ depending on the version of the operating system. Check the applicable file in the applicable manual of your operating system.

When you define the environment variables that are required to execute JP1/IT Desktop Management 2 - Agent except `LANG` and `TZ` in the definition file of the operating system, you can pass those environment variables to the external program processing before installation and the external program processing after installation.

`.profile` under the user home directory

This file affects the messages that are output when the logged-on user executes a command.

You can check whether a relay system has a distribution job for the local client workstation by setting `WatchTimeofOrders` in the settings file. To do so, you specify the `-a` option in the `rdsrf` command and execute the command. When you check the relay system in this way, this file also affects the messages that are output when the distribution job is executed.

Operating-environment settings file

This file affects the messages that are output when a job is executed by the startup request issued from an upper-level managing server or a relay system.

For the contents of the operating-environment settings file, see *5.7 Configuring the operating-environment settings file*.

5.7.2 Example of changing the language

The following example shows how to set the language in the Japanese environment. When you write the following in `/etc/rc` (`/etc/TIMEZONE` for HP-UX and Solaris), the third line is not necessary.

```
LANG=ja_JP.SJIS
TZ=JST-9
export LANG TZ
```


5.8 Configuring the operating-environment settings file

JP1/IT Desktop Management 2 - Agent uses the settings file and the operating-environment settings file for defining the operating environment.

In the operating-environment settings file, define only the items described in 5.7.2 *Items set in the operating-environment settings file*. Define other environment variables in the definition file of the operating system. For details about the definition file of the operating system, see 5.6.1 *Files that specify LANG and TZ*.

This section describes the operating-environment settings file.

To change the operating-environment settings file, stop the process before making changes. Restart the process after you have made changes to the file.

5.8.1 File name for the operating-environment settings file

You can copy the sample file provided by JP1/IT Desktop Management 2 - Agent to create the operating-environment settings file. The following shows the names of the sample file and the file to be created for the operating-environment settings:

Sample file

- For systems other than HP-UX: `/NETMRDS/buff/profile.txt`
- For HP-UX: `/etc/opt/NETMDMW/buff/profile.txt`

File to be created for the operating-environment settings

- For systems other than HP-UX: `/NETMRDS/buff/.profile`
- For HP-UX: `/etc/opt/NETMDMW/buff/.profile`

To enable a settings item in the model file, delete the pound sign (#) prefixed to the item so that the item begins at column 1. If you start JP1/IT Desktop Management 2 - Agent without creating the operating-environment settings file, an operating-environment settings file that has the same content as the sample file will be automatically created.

5.8.2 Items set in the operating-environment settings file

(1) Locale for messages

For the locale for the messages output by JP1/IT Desktop Management 2 - Agent, specify the language in the `LANG` environment variable and the time zone in the `TZ` environment variable. The following is an example for setting the locale.

```
LANG=C
TZ=JST-9
export LANG TZ
```

An English environment is set by default. Specify the language only when you need to change the default environment to a different environment. Note that the messages output to syslog are output in English. You cannot change the output language.

(2) Retry count for sending processing results

Use this item to set the number of retries to be performed if the transmission of the processing results to the managing server fails. See below for details on how to specify this item. You do not need to use the `export` statement. Do not specify this item if `CLIENT` is specified for `WorkstationType` in the settings file.

```
SNDCNT=retry-count
```

In *retry-count*, specify a value in the range from 0 to 9. If you do not specify this item, retries are performed until the transmissions are completed. Transmissions are retried every minute.

If the number of retries exceeds the specified value, the KDDM0541-W message is output to syslog and the `MAIN.LOGF` log file. If this message has been output, correct the error, and then perform either of the operations below. Transmissions are retried every minute or at the time interval specified for `WatchTimeofStatus` in the settings file of JP1/IT Desktop Management 2 - Agent. If a value greater than or equal to 2 or greater is specified, that value becomes the number of retries to be performed.

Operation from the managing server:

Executes a job for an end workstation.

Processing by the end workstation:

- For systems other than HP-UX

```
rdsft -a [-h host-name-of-the-higher-level-system]
```

- For HP-UX

```
/opt/NETMDMW/bin/rdsft -a [-h host-name-of-the-higher-level-system]
```

(3) Retry count and retry interval for using a socket to start a resident server for TCP/IP

You can specify the retry count and retry interval for using a socket to start a resident server for TCP/IP as follows:

```
BINDRETRY=retry-count  
BINDRETRYINTERVAL=retry-interval
```

In *retry-count*, specify a value from 1 to 256. The default is 20. In *retry-interval*, specify a value from 1 to 300 in seconds. The default is 60.

(4) No-response timeout

You can use the `COMWAT` environment variable as follows to set the timeout for no-response in the communication between a relay system and a client.

```
COMWAT=timeout
```

In *timeout*, set a value from 0 to 2,147,483,647 in seconds. If 0 is specified for the value, no monitoring is performed. The default is 60.

Important

Don't specify 0 to the value of COMWAT in the operating-environment settings file on Linux.

(5) Controlling outputting messages to /dev/console as well as MAIN.LOGF

If JP1/IT Desktop Management 2 - Agent fails to output a message to the standard output, specify the following to output a message to the console:

```
CONSOLEMSG=YES
```

If you specify NO, the message is not output. The default is NO.

If you specify YES, processing in JP1/IT Desktop Management 2 - Agent might be delayed because of a console lock. We recommend specifying NO.

Even if NO is specified, the content of the message is output to message log files and syslog files for client services.

(6) Time period for checking whether a resident server for TCP/IP was deactivated by a socket

When you want to check whether a resident server for TCP/IP was deactivated by a socket, use the variable below to specify the no-communication period. If the no-communication status lasts for the specified period, JP1/IT Desktop Management 2 - Agent assumes that the resident server for TCP/IP was deactivated by a socket.

```
SOCKETLOOP=time-period
```

In *time-period*, you can specify a value from 300 to 65,535 in seconds. The default is 300.

(7) Removing restrictions on the paths for package registration and collection

By default, the following cannot be specified as paths for packaging and file collection:

- /
- /usr, /bin, /dev, /ofis, /2050, /3050 (including sub-directories and files when collecting a file)
- /etc (including sub-directories when collecting a file)

To allow these paths to be used, enter the following setting:

```
PROHIBITPATH=NO
```

As #PROHIBITPATH=NO is specified in the model file, delete the leading # symbol to enable the value. You do not need to use the `export` statement. If you omit this value, YES is assumed and the paths prohibited by default cannot be used for packaging or collection.

(8) Size of another company's software installation log file

When another company's software is distributed, installation information is output to the *another company's software installation log file* (ISVSOFT.LOGF). The maximum size of this file is set as shown below:

```
MAXSIZE_ISV_LOGF=size
```

In *size*, specify the number of kilobytes in the range from 10,240 to 2,097,152. The default is 10,240 (KB).

If the size of the ISVSOFT.LOGF file exceeds the maximum, the information currently stored in the file is moved to the backup file, ISVSOFT.LOGF.bak, and new information is output to ISVSOFT.LOGF.

(9) Host name of the local system

Specify in the following format the local system's host name reported by the facility for automatically registering the system configuration:

```
DMHOSTNAME=host-name
```

In *host-name*, specify a host name from which an address can be resolved. You can use a maximum of 32 alphanumeric characters, including hyphens (-), underscores (_), and periods (.) to specify the host name. If you omit this entry or specify an invalid value, the host name acquired by the `hostname` command is used.

Before changing this setting, make sure that no jobs are being executed.

Important

The value of DMHOSTNAME specified in the operating-environment settings file is only valid for the client services. For the distributor tools and the generator tools, the host name displayed by the `hostname` command is used as the local host name.

(10) IP address of the local system

Specify in the following format the local system's IP address reported by the facility for automatically registering the system configuration:

```
DMIADDR=IP-address
```

In *IP-address*, specify an IP address with which communication is possible.

If you omit this entry, the system assumes an IP address as follows:

- When DMHOSTNAME is specified: The IP address for the host name specified in DMHOSTNAME
- When DMHOSTNAME is also omitted: The IP address for the host name that can be acquired by the `hostname` command

Before changing this setting, make sure that no jobs are being executed.

(11) Process monitoring interval

Using the format shown below, specify the interval at which to check whether or not the `rdsregular` process is alive.

```
PROCESSCHKINTERVAL=monitoring-interval
```

Specify the monitoring interval as a value from 0 to 65,535 in seconds. If 0 is specified, monitoring of the `rdsregular` process is not performed. The default value is 10 seconds. Note that there is a 10-second error in the monitoring interval.

(12) Reporting of inventory information to a higher-level system during a system change

When a system change is detected and it is necessary to automatically report the system information and software information to a higher-level system, specify the following:

```
REALTIME_INVENTORY=YES
```

If this specification is omitted, NO is assumed and system changes are not detected.

When you specify YES here, you must also specify the following:

- Client services settings file

```
EnableMultiServer NO
```

- Operating-environment settings file

```
FILESET_MANAGEMENT=YES (for AIX only)
```

(13) Reporting of information on another company's software in file set units

In AIX, to report the information on another company's software in file set units, specify the following:

```
FILESET_MANAGEMENT=YES
```

If this specification is omitted, NO is assumed and the software information is reported in package units. This specification is valid only in AIX.

If you change this specification, file set information and package information will coexist. To avoid this, first delete the software on the managing server and then change the setting.

(14) Reporting inventory information to a higher-level system during the initial polling

To report the system information and software information to a higher-level system at the time of the initial polling, specify the following:

```
INVENTORY_UPLOAD=YES
```

If you specify NO, the information is not reported. The default is YES.

If YES is specified, you must also specify the following:

- Client services settings file

EnableMultiServer NO

(15) Converting the character encoding of package information and information about collected resources

You can use Japanese to enter package information such as the package name. To prevent corrupted characters in package information such as the package name when the language environment used is different from that of the managing server and distribution-destination system, specify the following for the packager and distribution-destination system:

```
CONVERT_CHARSET=SJIS
```

The specification is valid in the following cases:

- When Shift JIS encoding is used for the managing server and EUC encoding or UTF-8 encoding is used for the language environment of the packager, you want to display the package information such as package names correctly without corrupted characters.
- When Shift JIS encoding is used for the managing server and EUC encoding or UTF-8 encoding is used for the language environment of the distribution-destination system, you want to distribute file names and directory names correctly without corrupted characters.
- When Shift JIS encoding is used for the distribution-destination system and EUC encoding or UTF-8 encoding is used for the language environment of the packager, you want to distribute file names and directory names correctly without corrupted characters.

The items converted by this function are listed below.

(a) If this function is enabled for the packager

At packaging, the following items of package information are converted from the language environment of the packager to Shift JIS encoding:

- Program name
- Owner name
- Name of an installation directory
- User comments
- External program processing before installation
- External program processing after installation
- Names of files and directories

(b) If this function is enabled for the distribution-destination system

At the time of distributing the resources, the following items of package information are converted from Shift JIS encoding to the language environment of the distribution-destination system:

- Program name
- Owner name
- Name of an installation directory

- User comments
- External program processing before installation
- External program processing after installation
- Names of files and directories
- Names of linkage files
- Name of the UAP used for installation
- Name of the end-linked file

At the time of collecting the resources, the following items of collected resource information are converted from Shift JIS encoding to the language environment of the distribution-destination system:

- Names of resource files
- External program processing before collection
- External program processing after collection

The following items of collected resource information are converted from the language environment of the distribution-destination system to Shift JIS encoding:

- Names of files and directories

If this specification is omitted, package attribute information and collection information, for which Japanese can be used for input, will not be converted.

(16) Path name of a temporary work directory

To change the path name of a temporary work directory to be used for processing in JP1/IT Desktop Management 2 - Agent, specify the following:

```
DMTMPDIR=path-name-of-a-temporary-work-directory
```

You can specify a maximum of 128 alphanumeric characters, excluding spaces, for the path name of a temporary work directory. If this specification is omitted, or a specified directory does not exist, the following directories are assumed:

- For systems other than HP-UX: /NETMRDS/WORK/tmp
- For HP-UX: /var/opt/NETMDMW/WORK/tmp

(17) Time to wait until a forced installation stop when the system is starting or stopping

To avoid delaying the startup or shutdown of an OS because of the time taken for installation processing while the system is starting or stopping, you can forcibly stop installation while the system is starting or stopping. To forcibly stop installation while the system is starting or stopping, specify the time until installation is forcibly stopped as follows:

```
FORCESTOP_WAITTIME=wait-time-until-forced-stop
```

Specify the time to wait until the forced stop in minutes in the range from 0 to 1440. If you specify 0, installation will not be forcibly stopped. If this specification is omitted or the specified value is invalid, 0 is assumed, and installation will not be forcibly stopped.

If installation is forcibly stopped, a message that indicates that the process has been stopped might be displayed on the window.

5.9 Setting the system files

System files must be set to execute the following processing using the client services of JP1/IT Desktop Management 2 - Agent:

- Starting JP1/IT Desktop Management 2 - Agent automatically
- Stopping JP1/IT Desktop Management 2 - Agent
- Installing packages at system startup
To execute this process, you must start JP1/IT Desktop Management 2 - Agent before the distributed software starts.
- Installing packages at system shutdown
To execute this process, you must stop JP1/IT Desktop Management 2 - Agent after the distributed software has stopped.

This section explains how to set the system file for each OS type.

5.9.1 Setting HP-UX system files

Link the file (`/sbin/init.d/netmdmw`) used for starting and stopping JP1/IT Desktop Management 2 - Agent, and for executing installation at system startup or system shutdown, with the following files.

Settings for starting JP1/IT Desktop Management 2 - Agent automatically and installing packages at system startup:

```
ln -s /sbin/init.d/netmdmw /sbin/rc2.d/Sxxxnetmdmw
```

Settings for stopping JP1/IT Desktop Management 2 - Agent and installing packages at system shutdown:

```
ln -s /sbin/init.d/netmdmw /sbin/rc1.d/Kyyynetmdmw
```

In *xxx* and *yyy*, specify any 3-digit number. If the number duplicates another file number, the order of the files is determined by the whole file name. Note that a *text busy* error occurs and installation fails if:

- A resident system that starts earlier than `Sxxxnetmdmw` (*xxx* is smaller than the value specified here) is installed at system startup.
- A resident system that stops later than `Kyyynetmdmw` (*yyy* is larger than the value specified here) is installed at system shutdown.

5.9.2 Setting Solaris system files

Link the file (`/etc/init.d/netmdmw`) for executing automatic startup of JP1/IT Desktop Management 2 - Agent, installation at system startup, and installation at system shutdown as shown below.

Settings for starting JP1/IT Desktop Management 2 - Agent automatically and installing packages at system startup:

```
ln -s /etc/init.d/netmdmw /etc/rc2.d/SxxNETMDMW
```

Settings for package installation at system shutdown:

```
ln -s /etc/init.d/netmdmw /etc/rc0.d/KyyNETMDMW
```

In *xx* and *yy*, specify any 2-digit number. If the number duplicates another file number, the order of the files is determined by the whole file name. Note that a *text busy* error occurs and installation fails if:

- A resident system that starts earlier than SxxNETMDMW (xx is smaller than the value specified here) is installed at system startup.
- A resident system that stops later than KyyNETMDMW (yy is larger than the value specified here) is installed at system shutdown.

5.9.3 Setting AIX system files

The following describes the necessary settings for starting JP1/IT Desktop Management 2 - Agent automatically, and for installing packages at the startup or shutdown of the system.

Settings for starting JP1/IT Desktop Management 2 - Agent automatically and for installing packages at system startup:

JP1/IT Desktop Management 2 - Agent provides a file (/NETMRDS/COM/netmdmw) for automatic starting and package installation at system startup. Use the following command to add the entries to the /etc/inittab file.

```
mkitab "netmdmw:2:wait:/NETMRDS/COM/netmdmw > /dev/console 2>&1
#NETM/DM/W"
```

This command adds the entries to the end line of the /etc/inittab file. When installing packages at system startup, a resident system that is activated before JP1/IT Desktop Management 2 - Agent cannot distribute anything.

Settings for installing packages at system shutdown:

Use a text editor to open the etc/rc.shutdown file and add the following at the end of the file. Make sure that the package to be installed does not start when JP1/IT Desktop Management 2 - Agent starts.

- For an end workstation

```
if [ -x /NETMRDS/COM/rdssnde ]; then
  /NETMRDS/COM/rdssnde -q
fi
if [ -x /NETMRDS/COM/rdskillsrv ]; then
  /NETMRDS/COM/rdskillsrv
fi
if [ -x /NETMRDS/COM/rdsinstall ]; then
  /NETMRDS/COM/rdsinstall
fi
```

- For a client workstation

```
if [ -x /usr/bin/rdsrf ]; then
  /usr/bin/rdsrf -q
fi
if [ -x /NETMRDS/COM/rdskillsrv ]; then
  /NETMRDS/COM/rdskillsrv
fi
if [ -x /NETMRDS/COM/rdsinstall ]; then
  /NETMRDS/COM/rdsinstall
fi
```

If the /etc/rc.shutdown file does not exist, perform the following procedure to set the attributes in the /etc/rc.shutdown file:

1. chmod 550 /etc/rc.shutdown
2. chown root /etc/rc.shutdown
3. chgrp shutdown /etc/rc.shutdown

5.9.4 Setting Linux system files

(1) Setting system files for Red Hat Enterprise Linux Server 6

Link the file(/etc/rc.d/init.d/jplnetmdmw) for executing automatic startup and shutdown of JP1/IT Desktop Management 2 - Agent, installation at system startup, and installation at system shutdown as shown below.

Settings for starting JP1/IT Desktop Management 2 - Agent automatically and installing packages at system startup:

- If started in a text environment:

```
ln -s /etc/rc.d/init.d/jplnetmdmw /etc/rc.d/rc3.d/Sxxjplnetmdmw
```

- If started in a graphical environment:

```
ln -s /etc/rc.d/init.d/jplnetmdmw /etc/rc.d/rc5.d/Sxxjplnetmdmw
```

Settings for installing packages at system shutdown:

```
ln -s /etc/rc.d/init.d/jplnetmdmw /etc/rc.d/rc0.d/Kyyjplnetmdmw
```

Settings for installing packages at system restart:

```
ln -s /etc/rc.d/init.d/jplnetmdmw /etc/rc.d/rc6.d/Kyyjplnetmdmw
```

In *xx* and *yy*, specify any 2-digit number. If the number duplicates another file number, the order of the files is determined by the whole file name. Note that a *text busy* error occurs and installation fails if:

- A resident system that starts earlier than *SxxNETMDMW* (*xx* is smaller than the value specified here) is installed at system startup.
- A resident system that stops later than *KyyNETMDMW* (*yy* is larger than the value specified here) is installed at system shutdown.

If the software to be updated by software distribution starts automatically when the system starts, and JP1/IT Desktop Management 2 - Agent is used to distribute the software when the system starts, you must start JP1/IT Desktop Management 2 - Agent before the software to be updated starts. Similarly, if software is to be updated by software distribution when the system shuts down, the software to be updated must stop before JP1/IT Desktop Management 2 - Agent stops.

(2) Setting system files for Red Hat Enterprise Linux Server 7

The following describes the necessary settings for starting JP1/IT Desktop Management 2 - Agent automatically, and for installing packages at the startup or shutdown of the system.

Settings that enable automatic starting and stopping:

```
systemctl enable jplnetmdmw.service
```

Settings that disable automatic starting and stopping:

```
systemctl disable jplnetmdmw.service
```

Check whether automatic starting and stopping is enabled:

```
systemctl is-enabled jplnetmdmw.service
```

If the setting is enabled, `enabled` is displayed. If the setting is disabled, `disabled` is displayed.

5.10 Creating the backup directory

If you want to use the recovery facility in a UNIX machine, you must create the directory for storing a backup of the previous version.

5.10.1 How to create the backup directory

Only the superuser (root) can create the backup directory. Log in as a superuser to create the backup directory. Set one of the following as the directory name:

- For systems other than HP-UX: /NETMRDS/BACKUP/
- For HP-UX: /var/opt/NETMDMW/BACKUP/

Use the following commands to create the backup directory:

```
cd /NETMRDS
mkdir BACKUP
chmod o-rx BACKUP
```

5.10.2 Notes on creating the backup directory

The backup of the recovery facility requires a large amount of disk space. Creating the backup directory in the root file system may lower the system performance. We recommend that you mount the backup directory to a drive other than the root file system.

6

Operating the System

This chapter describes various operations when using JP1/IT Desktop Management 2 - Agent as a lower-level system.

6.1 Managing the temporary collection storehouse

This section describes how to manage the temporary collection storehouse of the end workstations used for file collection.

6.1.1 Initializing the temporary collection storehouse

To initialize the temporary collection storehouse of an end workstation, execute the `rdscfclr` command of the client services. The temporary collection storehouse is also initialized when the `rdscfclr` command is executed in a UNIX machine that is not using the temporary collection storehouse.

6.1.2 Forcibly deleting resources from the temporary collection storehouse

The temporary collection storehouse of an end workstation temporarily stores the collected resources. When the managing server executes the *Collect files from distribution-destination system* job, the collected resources are collected into the managing server and deleted from the temporary collection storehouse.

To forcibly delete the resources in the temporary collection storehouse, execute the `rdscfclr` command of the client services, or execute the *Delete collected files from relay system* job from the managing server.

6.1.3 Allocating the temporary collection storehouse

JP1/IT Desktop Management 2 - Agent automatically creates/manages the temporary collection storehouse using the following name.

- For systems other than HP-UX: `/NETMRDS/RCF/RSC/`
- For HP-UX: `/var/opt/NETMDMW/RCF/RSC/`

The temporary collection storehouse is created in the partition where JP1/IT Desktop Management 2 - Agent is installed. Therefore, when the size of the temporary collection storehouse increases, it may affect the operation of JP1/IT Desktop Management 2 - Agent. To avoid this, create a temporary collection storehouse in a different partition and mount that storehouse in the `/NETMRDS/RCF/RSC/` directory.

6.2 Package backup

This section describes how to acquire the *backups* used in the recovery facility and how to manage the backups.

6.2.1 Acquiring backups

When a package specified with the recovery facility is distributed, JP1/IT Desktop Management 2 - Agent acquires the backup of the old version before installing the package. The following paragraphs describe the methods of acquiring backups for each type of package.

(1) Hitachi program products

JP1/IT Desktop Management 2 - Agent acquires the backup of the old version of the distributed package. If an error has occurred during the installation of the old package, the backup is not acquired. The backup is acquired if a setup error has occurred.

(2) Another company's software

The recovery facility is available for only the HP-UX version of another company's software.

When the recovery facility is used to distribute the HP-UX version of another company's software, the standard OS installation command `swinstall` is executed at the distribution-destination systems with the `-x autorecover_product=true` option specified. At this time, a backup of the old version of the distributed software is acquired.

(3) User data and user programs

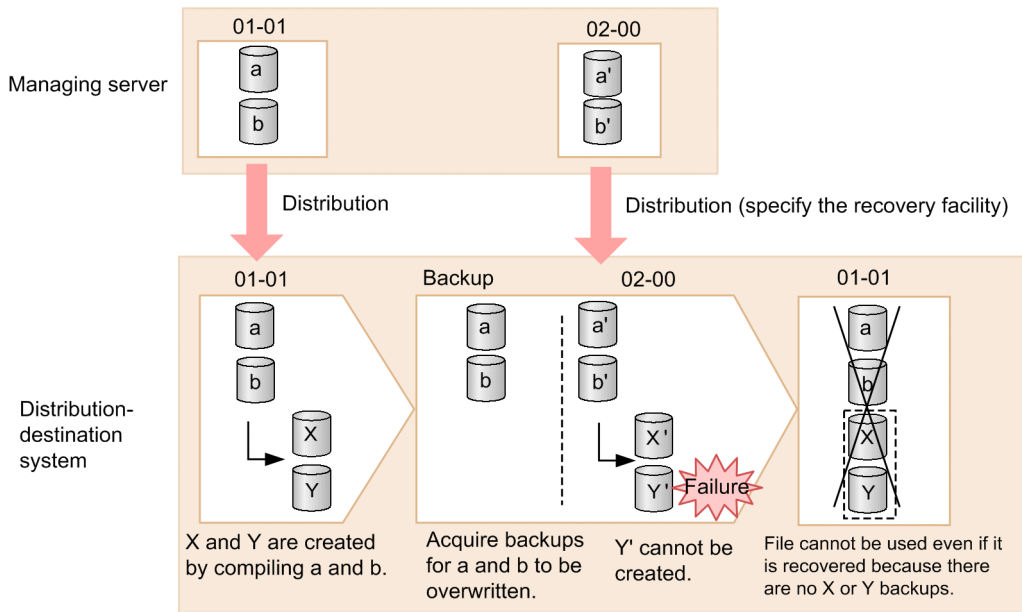
The backup for files to be overwritten is usually acquired. However, you can acquire the backup of your choice by using the *backup list*.

(a) Acquiring backups without using the backup list

If packages without a backup list specification are installed, only the backup for files and directories to be overwritten are acquired when you execute the recovery facility during distribution of the next versions. Accordingly, the backup for files and directories created after being installed in the distribution-destination system is not acquired.

Figure 6-1 shows recovery without using the backup list.

Figure 6–1: Recovery without using the backup list

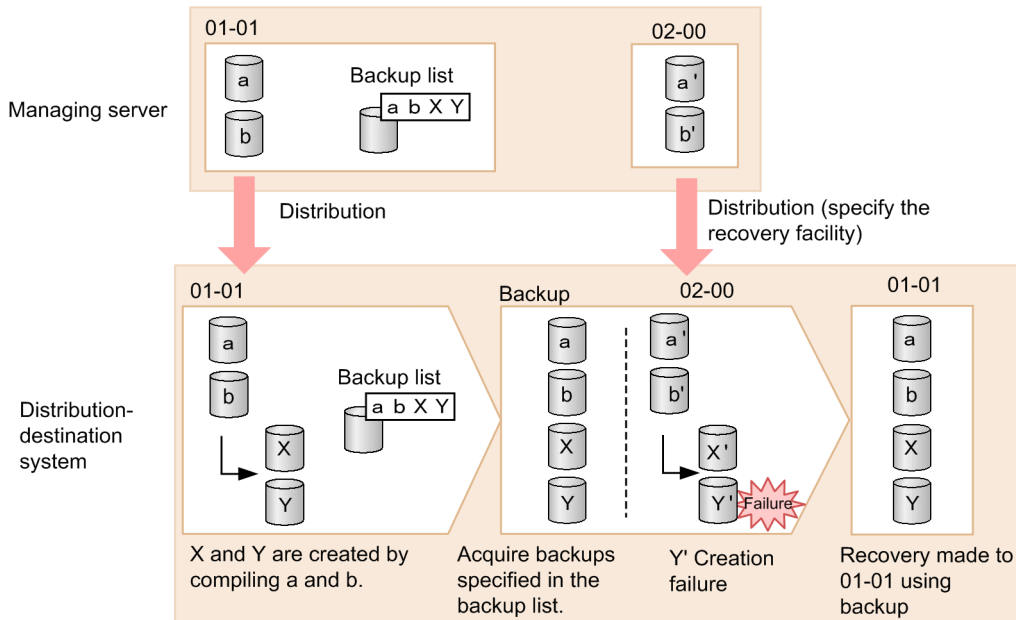


(b) Acquiring backups using the backup list

If you specify the file and directory names created after installation in the backup list, their backups can be acquired. After creating the backup list, specify the name of the backup list in the `UAPBackupList` of the registered files. Accordingly, the backup will be acquired according to the backup list specification after the package that specified the backup list is installed when the recovery facility executes distribution in the following versions.

Figure 6-2 shows recovery using the backup list.

Figure 6–2: Recovery using the backup list



In the backup list, specify the files and directories to be created after installation, and the files and directories of packages to be overwritten.

Note the following when writing files and directories in the backup list:

- Either the absolute paths or the relative paths can be used to specify files and directories. Relative paths can be used for the files under the directory of the previous installation target.
- After each entry, press the **Enter** key. One line can contain one entry.
- You cannot write the entries using the UNIX regular expression.
- You cannot use apostrophes (') when writing directory names and file names.
- Do not write socket devices.

6.2.2 Managing backups

If recovery fails, you can retry recovery if the backup is saved. This subsection describes how to specify the backup file storage period and how to manage the backup directory.

For details on managing backups of the HP-UX version of another company's software, see the documentation for the OS.

(1) Specifying the backup file storage period

To specify the backup file storage period, specify `BackupDataKeep` in the packaging-information file. To save a backup, specify the number of days to keep it. If you do not save the backup (recovery is not retried), specify 0 (default).

The backup is deleted when the following command is executed after the number of days specified here elapses from the package distribution date.

- `rdsrf` and `rdsft` commands

However, backups are not deleted when the `rdsft` command for packaging is executed.

(2) Displaying backups

To check the information about the saved backups, execute the `rdsrecover` command of the client services.

(3) Deleting unnecessary backups

Delete unnecessary backups to prevent the disk from becoming full. You can delete backups as follows:

- Execute the *Delete backup file* job in the managing server.
- Execute the `rdsclear` command of the client services in a UNIX distribution system.

When you use the `rdsbkclear` command of the client services, the execution result is not reported to the managing server. In this case, execute the *Get installed package status* job from the managing server to reflect the execution result in the managing server.

6.3 Acquiring software information

You can acquire information for software installed on lower-level systems from the managing server.

Software information acquisition is executed while the system is running even if you specify the acquisition execution timing.

Note that information about deleted software is not reported to the managing server, and therefore is not automatically deleted from the managing server. To check the latest software information, delete the package status file of the managing server, and then acquire software information.

The acquisition method depends on the means used to acquire the software information. The following table shows the software information acquisition methods.

Acquisition means	Acquisition method	
	First acquisition	Second or later acquisition
Execute a job to acquire software information	Acquires all information.	Acquires all information.
Use the function for automatically reporting updated inventory information	Acquires all information.	Differences from the first acquisition are acquired

The following shows software information that is acquired from the distribution-destination system.

Managing server	Acquired information
Windows (GUI)	
Remotely installed software	Information for Hitachi program products and UAPs is acquired.
All software	<p>Search results derived from the search list are acquired in addition to Hitachi program products and other companies' software and patch information[#]. If you select Specify drive to be searched for, all fixed drives are searched.</p> <p>Other companies' software information and patch information is acquired from the output results of the following command:</p> <p>HP-UX</p> <pre>/usr/sbin/swlist -lproduct</pre> <p>Solaris</p> <pre>/usr/bin/pkginfo -l -c application</pre> <p>Command to acquire patch information: <code>/usr/bin/showrev -p</code></p> <p>AIX</p> <pre>/usr/bin/lslpp -lc</pre> <p>Command to acquire patch information: <code>/usr/sbin/instfix -ic</code></p> <p>Linux</p> <pre>/bin/rpm -qai</pre>

#

For systems other than Linux, patch information is not acquired by default. To acquire patch information, delete the patch-information suppressing file by using the following methods. Note that patch information is always acquired for Linux.

- For AIX and Solaris:

```
rm /NETMRDS/rdsprm/.ForbidPatchInformation
```
- For HP-UX:

```
rm /var/opt/NETMDMW/rdsprm/.ForbidPatchInformation
```

To suppress patch information again, create a patch-information suppressing file by using the following methods.

- For AIX and Solaris:

```
touch /NETMRDS/rdsprm/.ForbidPatchInformation
```

- For HP-UX:

```
touch /var/opt/NETMDMW/rdsprm/.ForbidPatchInformation
```

Important

- Version and generation-number might be displayed not in upper case letter but in lower case letter when you display other company's software information on the managing server.
- The last update date of the installed package information may remain blank on the managing server. In this case, execute the Acquire information for software installed from the managing server.

The following table describes the software information items that you can view when you display **Installed Software Details** by using the managing server.

Item	OS				
	HP-UX	Solaris	AIX	Linux	MacOS
Software Name	Y	Y	Y	Y	Y
Version	Y	Y	Y	Y	Y
Software Vendor	N	N	N	N	N
Support URL	N	N	N	N	N
Purchasing Status	N	N	N	N	N
Product ID	N	N	N	N	N
GUID	N	N	N	N	N
Software type	N	N	N	N	N
Installation Date [#]	Y	Y	Y	Y	Y
Installation Folder	N	N	N	N	N
Windows Store app	N	N	N	N	N

Legend:

Y:Can be collected

N:Cannot be collected

#

Installation Date displays the date on which software information was acquired.

7

JP1 Event Processing Using JP1/IM -Manager

JP1/IT Desktop Management 2 - Agent issues JP1 events that are compatible with the JP1/Base, and other programs. By using JP1 programs such as JP1/IM - Manager, you can automatically execute processes according to events and display events on the viewer.

This chapter describes the processing of JP1 events that mainly use JP1/IM - Manager.

7.1 Overview of the operations using JP1/IM - Manager

When JP1/IT Desktop Management 2 - Agent issues a JP1 event, you can perform the following by using a JP1 program such as JP1/IM - Manager.

- Automatically execute processing according to the event (*automated action function*)
- Display the events on the viewer of the integrated console

A system that executes an action in response to a JP1 event issued is called a *manager*. A system that reports JP1 events to the manager is called an *agent*. Table 7-1 shows the combinations of JP1 programs required to execute the automated action function. These combinations also apply to the client services and generator tools.

Table 7–1: Applicable combinations of JP1 programs

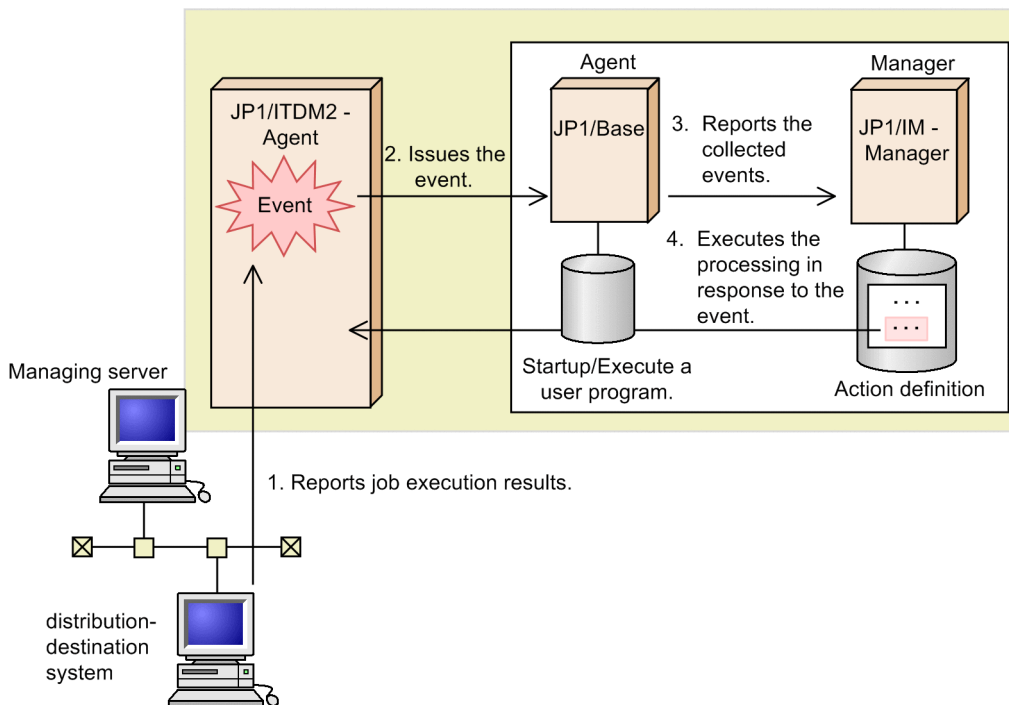
Agent	Manager
JP1/Base	JP1/Integrated Management - Manager

This section focuses on the automated action function to provide an overview of operations using JP1/IM - Manager.

7.1.1 Overview of the automated action function

If an error occurs in the local system, the automated action function is executed as shown in Figure 7-1.

Figure 7–1: Flow of processing for the automated action function using job completion events



1. The distribution-destination system reports job execution results to the managing server using either the result-reporting file or the status information file.
2. JP1/IT Desktop Management 2 - Agent issues a JP1 event associated with that information.
3. JP1/Base collects the JP1 events issued by JP1/IT Desktop Management 2 - Agent and reports them to JP1/IM - Manager.

4. After receiving the JP1 event, JP1/IM - Manager automatically processes an (*action*) based on the action definition for that event. This function is called the *automated action function*.

7.1.2 Preparations for using the automated action function

A server program provided by JP1/Base to enable event registration and acquisition is called an *event server*. This section explains the preparations for using the automated action function. Both the event server side and the JP1/IT Desktop Management 2 - Agent side require this preparation.

(1) Preparation on the event server side

(a) Using JP1/IM - Manager and JP1/Base

Define automated actions for the event IDs on the console.

(2) Preparation on the JP1/IT Desktop Management 2 - Agent side

On the JP1/IT Desktop Management 2 - Agent side, specify whether to send events, types of events to be sent, and other information in the settings file of the client service and in the settings file of the generator tools.

(a) Settings for the client services

The following item is set in the client services settings file. For details on this item, see 5.4.2 *Syntax of the end workstation settings file*, or 5.4.3 *Syntax of the client workstation settings file*.

- `AutoAction`

(b) Settings for the generator tools

The following shows the item to be set in the environment settings file for the generator tools. For details on this item, see 5.5 *Creating the settings file (environment settings file) for the generator tools*.

- `EvtLogLevel`

7.1.3 Notes on using the automated action function

This subsection shows the points you must remember when using the automated action function.

- Before using the automated action function, start the event server and the remote manager, and the automated action function of JP1/IM - Manager.
- You cannot use the automated action function when the system starts or when the system terminates.
- You cannot use the automated action function for the following messages:
 - Response-required messages
 - KDDM0527-E
 - KDDM0528-E
- You cannot use the automated action function if an error occurs while you are using the generator tools to install user data or a user program.

- If JP1/Base is not active on the system where you want to use the automated action function, client services output the following message; however, client services continue processing:

```
KDDM0527-E: Could not connect the event server.
```

- When you use the automated action function, if the distribution-destination system uses HP-UX, Solaris, or AIX, set the language environment of messages to English, Shift JIS encoding, or EUC encoding. If you set the language environment of messages to UTF-8, you cannot use the automated action function.

7.2 Details of JP1 events that JP1/IT Desktop Management 2 - Agent may send

7.2.1 JP1 Events issued by the client services

Table 7-2 shows JP1 events issued by the client services.

Table 7–2: JP1 event list (client services)

Event ID	Event name	When the event is issued
00010100	Communication error event	When a communication error occurs between the distribution-destination systems.
00010101	Event that reports abnormal termination of the file transfer server facility	When an error occurs at TCP/IP or the file transfer server facility.
00000000	Messages	All messages output by the client services are reported as JP1 events. Messages output to the log file are also reported as JP1 events.

The following explains the contents of each type of JP1 event issued by the client services. In addition, *Severity* is set as both an extended attribute and a main attribute for the JP1 events issued for JP1/Base. The severity of each event is displayed in the viewer of the integrated console.

(1) Communication error events

Table 7-3 shows attributes of the communication error event issued by the client services. Table 7-4 shows detailed information. To determine the cause of the communication error, acquire error information for the other communication party which is shown in Table 7-5, in addition to error information for the system where the communication error occurred.

Table 7–3: Attributes of the communication error event

Attribute type	Item	Attribute name	Content
Main attribute	Event ID	--	00010100
	Message	--	--
	Detailed information	--	Provided Detailed information format Text Maximum length of detailed information 474 bytes Characters used to delimit items of detailed information Space character
Extended attribute	Common information	Severity	SEVERITY ALERT

Legend:

--: Not applicable.

Table 7–4: Detailed information on the communication error event

Item name	Contents	Maximum length (Bytes)	Format
Workstation type	Workstation type specified in the settings file of the client services	6	Character string
Local UNIX machine name	Host name of the local UNIX machine	64	Character string
Error occurrence date	Shown in the <i>YY:MM:DD</i> format	8	Character string
Error occurrence time	Shown in the <i>hh:mm:ss</i> format	8	Character string
Line type	Type (TCP/IP) of line where the error occurred	4	Character string
Location of communication error occurrence	Location where the error occurred (For details on the relationship between the character string and the error occurrence location, see Table 7-5.)	128	Character string
Transfer file name	Name of the transfer file where the error occurred	256	Character string

Table 7–5: Details on the character strings indicating the locations where the communication error occurred

Character string	When the communication error occurred	Where the communication error occurred
CONNECTION	Acquisition of a connection with another system	Between the local system and the directly connected higher-level system (managing server or relay system)
READR	When a file is being received from another system	
READN	After a file is received from another system	
WRITER	When a file is being sent to another system	
WRITEN	After a file is sent to another system	
DISCONNECT	The connection with the other system has been terminated	
iConnect_getserve	Acquisition of connection with the file transfer server facility	Within the local system, or between the local system and the file transfer server facility of the relay system
iConnect_gethost		
iConnect_socket		
iConnect_connect		
iConnect_retryout		
iConnect_sendmsg		
iConnect_rcvmsg		
iConnect_illegal		
iCatch		
iCatch_notready		
iCatch_sendmsg		
iCatch_rcvmsg		

Character string	When the communication error occurred	Where the communication error occurred
iCatch_illegal	When a file has been received from the file transfer server facility	Within the local system, or between the local system and the file transfer server facility of the relay system
iCast	When a file has been sent to the file transfer server facility	
iCast_notready		
iCast_sendmsg		
iCast_rcvmsg		
iCast_illegal		
iDisconnect_close	When the local system is disconnected from the file transfer server facility	

(2) Event that reports abnormal termination of the file transfer server facility

Table 7-6 shows the attributes of the event that reports abnormal termination of the file transfer server facility, which are issued by the client services. Table 7-7 shows detailed information.

Table 7–6: Attributes of the event that reports abnormal termination of the file transfer server facility

Attribute type		Item	Attribute name	Contents
Main attribute		Event ID	--	00010101
		Message	--	--
		Detailed information	--	Provided Detailed information format Text Maximum length of detailed information 88 bytes Characters used to delimit items of detailed information Space character
Extended attribute	Common information	Severity	SEVERITY	CRITICAL

Legend:

--: Not applicable.

Table 7–7: Detailed information on the event that reports abnormal termination of the file transfer server facility

Item name	Contents	Maximum length (Bytes)	Format
Workstation type	Workstation type specified in the settings file of the client services	6	Character string
Local UNIX machine name	Host name of the local UNIX machine	64	Character string
Error occurrence date	Shown in <i>YY:MM:DD</i> format	8	Character string

Item name	Contents	Maximum length (Bytes)	Format
Error occurrence time	Shown in <i>hh:mm:ss</i> format	8	Character string
Signal number	Signal number where the interruption occurred	2	Decimal character string

7.2.2 JP1 Events issued by the generator tools

Table 7-8 shows JP1 events issued by the generator tools.

Table 7–8: JP1 event list (generator tools)

Event ID	Event name	When the event is issued
00010701	Error/installation start event	When an error occurs, installation starts, or a severe error or warning error occurs.
00010702	Function execution event	When any of the following occurs: <ul style="list-style-type: none"> • The generator tools startup. • The generator tools stop. • Installation stops. • A startup UAP starts. • A startup UAP stops. • Resource deletion starts. • Resource deletion stops.

The following explains the contents of each type of JP1 event issued by the generator tools. In addition, *Severity* is set as both an extended attribute and a main attribute at the JP1 events issued for JP1/Base. The severity of each event is displayed in the viewer of the integrated console.

(1) Installation start event

Table 7-9 shows attributes of installation start events.

Table 7–9: Attributes of installation start events

Attribute type	Item	Attribute name	Contents
Main attribute	Event ID	--	00010701
	Message	--	--
	Detailed information	--	None
Extended attribute	Common information	Severity	SEVERITY Error/severe error/warning error: ERROR Installation start: NOTICE
		Object type	OBJECT_TYPE COMMAND
		Object name	OBJECT_NAME JP1/IT Desktop Management 2 - Agent
		Product name	PRODUCT_NAME /HITACHI/JP1/ITDM2
		Occurrence type	OCCURRENCE Error/severe error/warning error: END Installation start: START

Legend:

--: Not applicable.

(2) Function execution event

Table 7-10 shows attributes of function execution events.

Table 7–10: Attributes of function execution events

Attribute type		Item	Attribute name	Contents
Main attribute		Event ID	--	00010702
		Message	--	--
		Detailed information	--	None
Extended attribute	Common information	Severity	SEVERITY	NOTICE
		Object type	OBJECT_TYPE	COMMAND
		Object name	OBJECT_NAME	JP1/IT Desktop Management 2 - Agent
		Product name	PRODUCT_NAME	/HITACHI/JP1/ITDM2
		Occurrence type	OCCURRENCE	Generator tools stop/installation stop/startup UAP stop/resource deletion stop: END Generator tools start/startup UAP start/resource deletion start: START

Legend:

--: Not applicable.

(3) Examples of messages output to the event log file

The following shows an example of a generator tool message that is output to the event log file.

```
95/08/21/10:14.31 00010700:00000000 sns107 root NETMDMGF[UPTA]: 01732
1. 2. 3. 4. 5. 6. 7.
KDFG1012-S This is an invalid generator method. (mx_yougen/-3)
8.
```

1. Date/time when the message was logged

This item indicates the date/time when the message was logged.

2. Event ID

This item indicates the event ID of the generator tools.

3. Host name

This item indicates the host name of the UNIX machine where the generator tools were started.

4. ID of the user

This item indicates the ID of the user who started the generator tools.

5. Program name

This item indicates that the message was output from the generator tools.

6. Program ID

This item indicates the ID code for the command.

YGEN: `yougen` (the main command of the generator tools)

UPTA: `rdsupt` (command for installing packages based on the schedule)

UDEL: `rdsupdel` (command for cooperative command deletion)

7. ID of the process

This item indicates the ID of the process that invoked the command.

8. Message

This item is output in Japanese or in English, as specified by the environment variable `LANG`.

8

Command Operations for Client Services and Generator Tools

This chapter describes the syntax of commands for the client services and generator tools of JP1/IT Desktop Management 2 - Agent on a command by command basis.

Types of commands

Table 8-1 lists the commands for the client services and generator tools of JP1/IT Desktop Management 2 - Agent. In this table, the commands for generator tools are marked with the superscript #2.

Some commands for JP1/IT Desktop Management 2 - Agent are executed by the search path name. Place the following path name at the beginning of the command name. For the commands that are executed by the search path name, check the *Format* section in the explanation of each command.

- For systems other than HP-UX: /NETMRDS/COM/
- For HP-UX: /opt/NETMDMW/bin/, /opt/NETMDMW/lbin/

Table 8–1: Commands for JP1/IT Desktop Management 2 - Agent (client services and generator tools)

Classification	Command name	Option	Function outline	Authority for execution	Command executability	
					End WS	Client WS
Packaging and package distribution	rdsft	-c	Packaging	Super ^{#1}	Y	Y
		-a	Package distribution	Super	Y	N
	rdscm		Registering a shared package	Any	Y	Y
	rdslst		Displaying resources appropriate to packaging	Super	Y	Y
	rdsrf	-a	Package distribution to a client workstation (distribution of a package to the local UNIX machine)	Super	N	Y
		-q	Package distribution to a client workstation (stopping the processing of the rdsrf command)	Super	N	Y
	rdsinsset	-l	Selecting a package to be installed (displaying a list of packages)	Super	Y	Y
		-x	Selecting a package to be installed (installing packages)	Super	Y	Y
	rdsrsclst	Specify nothing	Displaying packages installed or to be installed	Super	Y	Y
		-i	Displaying installed packages	Super	Y	Y
		-w	Displaying packages to be installed	Super	Y	Y
	rdsupt ^{#2}		Installing packages according to specified installation date/time	Super	Y	Y
	rdssts		Checking the operation status of the command for package distribution	Any	Y	Y

Classification	Command name	Option	Function outline	Authority for execution	Command executability	
					End WS	Client WS
Collecting files	<code>rdscfclr</code>		Initializing the temporary collection storehouse	Super	Y	Y
Job management	<code>rdsma</code>	<code>-a</code>	Monitoring for a distribution job (starting monitoring for a distribution job)	Super	Y	N
		<code>-q</code>	Monitoring for a distribution job (stopping monitoring for a distribution job)	Super	Y	N
ID group management and usage	<code>rdsiddefine</code>	<code>-s</code>	Registering an ID group definition file	Super	N	Y
		<code>-ll</code>	Displaying the contents of ID group definition files	Super	N	Y
		<code>-dl</code>	Clearing ID group definitions	Super	N	Y
	<code>rdsidexec</code>		Executing jobs of a specified ID group	Super	N	Y
User resource management	<code>rdslstdel</code>		Deleting user resource installation information	Super	Y	Y
	<code>rdsusnd</code>		Reporting the user resource status	Any	Y	Y
Troubleshooting	<code>rdsrecover</code>		Recovery when installation has failed	Super	Y	Y
	<code>rdsbkclear</code>		Deleting a backup	Super	Y	Y
deleting system configuration	<code>rdssys</code>	<code>-u</code>	deleting system configuration information of local system from upper-level system	Super	Y	Y
Start and shutdown of JP1/IT Desktop Management 2 - Agent	<code>rdsstart</code>		Starting JP1/IT Desktop Management 2 - Agent	Super	Y	Y
	<code>rdskillsrv</code>		Shutting down JP1/IT Desktop Management 2 - Agent	Super	Y	Y

Legend:

--: No applicable options.

Super: Only a superuser can issue the command.

Any: Any user can issue the command with their chosen user name.

Y: Can be executed on an applicable UNIX machine.

N: Cannot be executed on an applicable UNIX machine.

#1

Any user can issue the command with their chosen user name when registering user data and a user program.

#2

Command for generator tools

Method of command input

Enter commands from the standard input, using a shell. You may use any shell you like.

Command format

The following shows an example of the command input format. % indicates the prompt of the shell.

```
%command-name Δ 1.[-a 1.file-name] [2.-a 3.file-name] ...
```

Legend:

1. Argument 2. option 3. operand

Follow the instructions for individual command syntax explained hereafter. Enter all commands in alphanumeric characters according to the standard UNIX format. Space characters might not be required between the option and the operand. For details, see the format of each command.

Command name

The file name of the command you want to execute.

Option

An option is an alphabetical character starting with a hyphen (-). An error occurs if multiple hyphens or a hyphen alone is entered for an option.

The option may be specified with a character string called an operand to clarify the attribute of options.

When specifying options, note the following:

- Specify the options in the order they appear in the *Format* section in each command description.
- If the same option is specified more than once, the command may result in an error or the last specified option may become valid, depending on the characteristics of the command.
- When entering a space character in the character string of the operand, enclose the character string in double quotations ("").

The following shows an example of option -d with operands 1 and 2.

```
%Command name -d "1 2"
```

How to read the command syntax description

The following sections explain the commands for the client services and generator tools of JP1/IT Desktop Management 2 - Agent in alphabetical order.

The following shows the format of descriptions for each command. A command description does not contain items not applicable to the command.

You can use any shell to execute a command.

Description

Outlines the function of the command.

Format

Indicates the command input format. For details on the syntax symbols, see Appendix *G.5 Conventions: Fonts and symbols*.

Options

Describes the functions and specification methods for each option. The options are listed in alphabetical order. Enter the required options according to the order they appear in the *Format* section.

Example

Provides a specification example of the command.

Display format

Explains the display format at the time of command execution.

End code

Describes end codes of command execution. The system does not display an end code. So, use a method such as a shell program to determine and use the end code. End codes when a signal occurs are unpredictable.

Notes

Explains notes and restrictions on command execution.

rdsbkclear

The `rdsbkclear` command deletes a backup.

Description

This command deletes the backup of a package.

Format

```
rdsbkclear -rpackage-ID
```

Option

`-rpackage-ID`

Specify the ID of a backup package you want to delete. Specify the package ID parameter using the following format:

For a program product

Specify its program product designation.

For user data and a user program

Specify the package ID specified at packaging.

End code

End code	Meaning
0	Terminated normally.
1	No appropriate backup exists.
3	Option is incorrect.
7	The user who issued the command is not a superuser.
9	System error occurred (failed to delete the backup).

Notes

- JP1/IT Desktop Management 2 - Agent does not notify the managing server of the execution result of the `rdsbkclear` command. Execute a *Get installed package status* job from the managing server and update the package status file.
- The `rdsbkclear` command cannot delete a backup of the HP-UX version of another company's software.

rdscfclr

The `rdscfclr` command initializes the temporary collection storehouse.

Description

This command initializes the temporary collection storehouse. All packages in the temporary collection storehouse are deleted.

Format

- For systems other than HP-UX

```
/NETMRDS/COM/rdscfclr
```

- For HP-UX

```
/opt/NETMDMW/bin/rdscfclr
```

End code

End code	Meaning
0	Terminated normally.
1	The user who issued the command is not a superuser.
2	System error occurred.
99	Command processing terminated because of signal reception.

rdscm

The `rdscm` command registers a shared package.

Description

This command specifies that a user program and user data on a hard disk are to be registered as a shared package. You can also use this command to register another company's software, register OS patches, and register user programs and user data to be distributed to machines that run on the same OS as the OS of the local machine.

Format

```
rdscm [-ISVSOFT]
[-kpassword]
[{-duser-resource-path|-Duser-resource-path-file-name}]
[-gcabinet-ID]
[-rpackage-ID]
[-pprogram-name]
[-vversion]
[-Vprerequisite-version]
[-Ggeneration-number]
[-hupper-level-system-host-name]
[-mmanaging-host-name]
[-Linstallation-mode]
[-Q]
[-tinstallation-date/time]
[packaging-information-file-name]
[-Nservice-name]
[-REBOOT]
[-ISVRESresponse-file-name]
[-ISVADMINinstallation-management-file-name]
```

Options

`-Duser-resource-path-file-name` ~ ((1 to 128 characters))

Specify the name of a user resource path file. Specifying this option enables JP1/IT Desktop Management 2 - Agent to execute packaging of multiple directories and files in a batch. For details on how to create a user resource path file, see 2.2.3(2) *Creating the user resource path file*. You must not specify the `-D` option together with the `-d` option. Do not specify a path using two consecutive periods (. .).

If you omit the `-D` option, JP1/IT Desktop Management 2 - Agent distributes directories or files under `/NETMRDS/UPUPL/hd/` or `/var/opt/NETMDMW/UPUPL/hd/` (HP-UX). If packaging of an empty directory is executed, only the directory frame is restored on the distribution destination.

`-duser-resource-path` ~ ((1 to 128 characters))

Specify the absolute or relative path of a directory or file that stores the resources you want to package.

You must not specify option `-d` together with option `-D`. Do not specify a path using two consecutive periods (. .).

If you omit the `-d` option, JP1/IT Desktop Management 2 - Agent distributes directories or files under `/NETMRDS/UPUPL/hd/` or `/var/opt/NETMDMW/UPUPL/hd/` (HP-UX). If you package an empty directory, only the directory frame is restored on the distribution destination.

When you register another company's software or an OS patch, always specify this item using a relative path. Additionally, when you register an OS patch, specify a file name.

`-Ggeneration-number` ~ <uppercase alphabetic characters or numerics> ((4 digits))

Specify the generation number of the package of resources you want to package. Unless you specify this option and a generation number, the corresponding specification in the packaging-information file is effective. The specification in the `-G` option has priority over that in the packaging-information file.

`-gcabinet-ID` ~ <uppercase alphabetic characters or numerics> ((2 characters))

Specify a cabinet ID for packaging. Full up to 256 resources can be packaged in one cabinet. To create a new cabinet and package into it, specify a cabinet ID in this option for the cabinet, then JP1/IT Desktop Management 2 - Agent automatically creates the cabinet and can execute packaging.

Register different cabinet IDs with different managing servers. If you register different packages with the same cabinet ID in different managing servers, you may not be able to distribute the packages.

Unless you specify the `-g` option and a cabinet ID, the cabinet ID specified in the packaging-information file is effective. The specification in the `-g` option has priority over that in the packaging-information file. If you do not use the packaging-information file, always specify the `-g` option.

`-hupper-level-system-host-name` ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods> ((1 to 64 characters))

If you want to use an end workstation to perform packaging to an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

`-ISVADMinstallation-management-file-name` ~ ((1 to 128 characters))

Specify the absolute path name of the installation management file when you register the Solaris version of another company's software.

When another company's software is distributed, the appropriate standard OS installation command is executed at the distribution-destination systems. At this time, the file specified in the `-ISVADM` option is used for the `-a` option of the standard OS installation command `pkgadd`.

If you omit the `-ISVADM` option, place the installation management file in the path defined by the `pkgadd` command.

For details on the installation management file, see the documentation for the OS.

`-ISVRESresponse-file-name` ~ ((1 to 128 characters))

Specify the absolute path of the response file or the directory that contains the response file when you register the HP-UX or Solaris version of another company's software that requires user responses during installation.

When another company's software is distributed, the appropriate standard OS installation command is executed at the distribution-destination systems. At this time, the file or directory specified in the `-ISVRES` option is used for the following standard OS installation command option:

- HP-UX: `swinstall -cdirectory-name`
- Solaris: `pkgadd -rfile-name`

For details on the response file, see the documentation for the OS.

`-ISVSOFT`

Specify this as the first option when you register another company's software.

`-kpassword` ~ <uppercase alphabetic characters or numerics> ((1 to 8 characters))

Specify a password for registering resources with the managing server. Specify a password that has been set to identify a packager on the managing server.

When registering with JP1/IT Desktop Management 2 - Manager

Enter the password you specified when you created the relational database. Do not enter any password unless you are using a relational database.

If you omit this parameter, JP1/IT Desktop Management 2 - Agent displays a message prompting password input. If you want to input a password without having it displayed on the screen, enter a password in response to this message. If you specify option `-Q`, you must also specify the `-k` option.

`-L` *installation-mode*

Specify the installation mode for packages to be stored into the package storehouse.

G

GUI installation mode

B

Background installation mode

If you omit the `-L` option, JP1/IT Desktop Management 2 - Agent assumes the background installation mode. The `-L` option is effective for distribution-destination systems of Windows. For non-Windows distribution-destination systems, JP1/IT Desktop Management 2 - Agent ignores this option.

`-m` *managing-host-name* ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods> ((1 to 64 characters))

If you want to use a client workstation to perform packaging to an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

`-OSPATCH`

Specify this option when you distribute OS patches. When you specify this option, package IDs are automatically acquired from the archive file names of the OS patches even if you do not specify the package IDs. The following rules apply when a package ID is automatically given:

- Among the characters that are included in the archive file name of the OS patch, those that cannot be used in package ID are replaced by hyphens (-).
- Upper-case alphabetic characters are used without change.
- Lower-case alphabetic characters are replaced by corresponding upper-case alphabetic characters.
- If the name of the OS patch archive file has more than 44 characters, the name is truncated following the 42nd character and two hyphens (--) are appended.

Note the following when you specify this option to distribute an OS patch:

- You must specify the `-d` option as well when you specify this option.
- When you package an OS patch, use a relative path name to specify the OS patch file in the `-d` option.
- You cannot specify this option when the `-D` option is specified.

`-p` *program-name* ~ ((1 to 50 characters))

Specify a general name to assign to the package of resources you want to package. Specify this name if you want to assign the package a generally known name other than the package ID. Unless you specify the `-p` option and a program name, the corresponding specification in the packaging-information file is effective. The specification in the `-p` option has priority over that in the packaging-information file.

If you do not specify the name of the packaging-information file and if you omit the `-p` option, JP1/IT Desktop Management 2 - Agent assumes a space character. However, for another company's software, if you omit the `-r` and `-p` options, the program name is automatically generated.

`-Q`

Specify this option if you want JP1/IT Desktop Management 2 - Agent to immediately quit the ongoing processing without waiting for the response in case a password input error or some other error should occur during packaging operation. If you specify the `-Q` option, you must not omit the `-k` option.

Specify the `-Q` option so that the command processing will terminate immediately in the following case:

- You do not give a password to the command.
- The password is incorrect.
- Packaging for another distribution-destination system is being executed for the target group for packaging.

Also, you might specify the `-Q` option so that JP1/IT Desktop Management 2 - Agent will quit the command execution without displaying the KDDM1544-Q message. This message prompts you to decide whether to overwrite the specified package if the same package ID exists.

`-REBOOT`

Specify this option to restart the operating system after you distribute the package. This option is enabled when `Yes` is specified for `RebootPermission` of the settings file.

`-rpackage-ID` ~ <uppercase alphabetic characters, numerics, hyphens, or underscores> ((1 to 44 characters))

Specify an ID for the package you want to register. The package ID must be unique in the network system. Unless you specify this option and a package ID, the package ID specified in the packaging-information file is effective. The specification in the `-r` option has priority over that in the packaging-information file.

If you do not use the packaging-information file, always specify the `-r` option. However, you can omit the `-r` option when you register another company's software or an OS patch. If you omit the `-r` option, the package ID is automatically generated. For details on this automatic generation, see 2.2.2(2)(c) *Automatic generation of package IDs* in PART 1.

`-tinstallation-date/time`

Specify the date and time that the user program and user data will be installed, in `YYYYMMDDHHMM` format.

When distributed to a PC, the packages will be installed automatically when the installation date/time is reached. When distributed to a workstation, you need to execute the `rdsupt` command. The package that has reached the installation date/time when the `rdsupt` command is executed will be installed.

When specifying the `-t` option, specify `NETM_DM_GF` in `Generator`.

`-vprerequisite-version` ~ <uppercase alphabetic characters, numerics, or slants> ((1 to 6 characters))

Specify a prerequisite version for distributing the package you want to register. The prerequisite version specified in the `-v` option has priority over that specified in the packaging-information file. If you omit specifying the `-v` option, the corresponding specification in the packaging-information file is effective.

If you specify `000000` as the prerequisite version parameter, JP1/IT Desktop Management 2 - Agent unconditionally distributes the package, regardless of the prerequisite version. If this parameter specification exists in neither packaging-information file nor `-v` option, JP1/IT Desktop Management 2 - Agent assumes a blank and distributes the package without checking the prerequisite version.

For another company's software, the `-v` option has no effect.

`-vversion` ~ <uppercase alphabetic characters, numerics, or slants> ((1 to 6 characters))

Specify the version of the package you want to register. Unless you specify this option and a version, the corresponding specification in the packaging-information file is effective. The specification in the `-v` option has priority over that in the packaging-information file.

If you do not specify the name of the packaging-information file and omit the `-v` option, JP1/IT Desktop Management 2 - Agent assumes a space character. However, for another company's software, if you omit the `-r` and `-v` options, the version is automatically generated.

packaging-information-file-name

Specify the absolute or relative pathname of the packaging-information file. If you omit specifying the packaging-information file parameter, user resource path parameter, and user resource path file parameter, JP1/IT Desktop Management 2 - Agent assumes the following path of the packaging-information file as appropriate:

- `/NETMRDS/UPUPL/AC000000`
- `/var/opt/NETMDMW/UPUPL/AC000000 (HP-UX)`

If you do not use the packaging-information file, always specify the cabinet ID in the `-g` option. For a Hitachi program product or a user program and user data, if you do not use the packaging-information file, always specify the package ID in the `-r` option.

End code

End code	Meaning
0	Terminated normally.
2	Free disk space is insufficient. Delete unnecessary files.
3	Interface is invalid. Review the settings file or packaging-information file.
4	System error occurred. Contact system administrator.
5	Communication error occurred. Contact system administrator.
6	Internal error occurred. Contact system administrator.
7	Activation impossible. Contact system administrator.
8	Packaging of the same package ID has already been done or packaging of the same package ID for the same group is now being done from another terminal. In the former case, review the packaging-information file or delete the package registered by previous packaging. In the latter case, re-execute the command after a while.
9	An invalid package has been registered. Delete the invalid package.
10	Number of registered packages exceeds the limit. Contact the system administrator of the managing server.
11	Packaging is now being done from another terminal. Re-execute the command after a while.

Notes

- If you do not set `PROHIBITPATH=NO` in the operating-environment settings file, you cannot specify `/`, `/ofis`, `/usr`, or `/etc` as the user resource path for packaging. You may specify one directory or file under these directories (`/etc/hosts`, `/etc/passwd`, etc.), but you cannot specify a file or a special file directly under the root directory.
- As the user resource path parameter, do not specify the absolute path of `/NETMRDS/UPUPL/hd` (other than HP-UX) or `/var/opt/NETMDMW/UPUPL/hd` (HP-UX).
- When you specify a directory as the user resource path, make sure that the length of the file names under the directory does not exceed 128 bytes.
- When executing this command in the background (by appending an ampersand (`&`) to the end of the command), make sure that you specify the `-Q` option.

Example

- When registering another company's software `/home/usr/aaa.rpm`
Move to the `/home/usr` directory, and then enter the following command:

```
rdscm -ISVSOFT -knetmdm00 -gTT -rISVSOFT -daaa.rpm
```

- When registering another company's software `/home/usr/aaa/bbb` with the response file `/tmp/ISVSOFT/ISVSOFT.res` and the installation management file `/tmp/ISVSOFT/ISVSOFT.adm` specified
Move to the `/home/usr/aaa/bbb` directory, and then enter the following command:

```
rdscm -ISVSOFTE -knetmdm00 -gTT -rISVSOFTE -dbbb \  
-ISVRES/tmp/ISVSOFTE/ISVSOFTE.res -ISVADM/tmp/ISVSOFTE/ISVSOFTE.adm
```

rdsft

The `rdsft` command executes packaging and remotely installs packages.

Description

1. Instructs the system to register a program product from a tape- or disk-based device or a hard disk.
2. Requests packaging of user data and user programs from the hard disk.
3. Instructs an end workstation to distribute a package according to a distribution job from the managing server.

Format

1. Packaging of a program product

```
rdsft -c
[-kpassword]
{-s|-Spackaging-target-program-product-designation}
[-gcabinet-ID]
[-hupper-level-system-host-name]
[-Q]
-C{special-file-name|hitachi-program-product-storage-directory}
[packaging-information-file-name]
```

2. Packaging of user data and user programs

```
rdsft -c
[-kpassword]
[{-duser-resource-path|-Duser-resource-path-file}]
[-gcabinet-ID]
[-rpackage-ID]
[-pprogram-name]
[-vversion]
[-Vprerequisite-version]
[-Ggeneration-number]
[-hupper-level-system-host-name]
[-mmanaging-host-name]
[-Q]
[packaging-information-file-name]
```

3. Package distribution

```
rdsft -a
[-hupper-level-system-host-name]
```

Options

-a

In an end workstation, when there is a distribution job addressed to the local UNIX machine, this option instructs that the package be distributed according to that distribution job. The command processing terminates after completion of all jobs of distribution to your own UNIX machine.

In case an error occurs during the processing of multiple jobs of distribution to your own UNIX machine, JP1/IT Desktop Management 2 - Agent operates as follows:

- If an error occurs during installation in process, JP1/IT Desktop Management 2 - Agent aborts the processing of the distribution job involved in the error and proceeds to another distribution job.

- If an error occurs during communication with the managing server, JP1/IT Desktop Management 2 - Manager aborts the processing of all distribution jobs.

JP1/IT Desktop Management 2 - Agent terminates processing if there is no job of distribution to your own UNIX machine.

If the upper-level system contains no system configuration information of the local UNIX machine, or the local UNIX machine contains system configuration information that should be reported to the upper-level system, the system configuration information is reported when the local UNIX machine is connected to the upper-level system.

-C*special-file-name* or *hitachi-program-product-storage-directory* ~ ((1 to 128 characters))

When registering Hitachi program products, you must specify this option.

special-file-name

Specify the absolute pathname from `/dev/` of a special file for a tape or disk device that stores the resources you want to package. For details on how to specify a special file name, see 2.2.2(1) *Registering Hitachi program products*.

If you want to perform packaging of a program product, using a special file that is not standard for the system, you must define the special file beforehand in a special file definition file. For details on how to define a special file, see 2.2.3(3) *Setting the special file definition file*.

hitachi-program-product-storage-directory

Specify the absolute path of the directory where the Hitachi program products are stored. Note that you cannot specify the root directory (`/`). The specified Hitachi program product storage directory must contain OS directories named like those listed below. These directories may be named in lowercase letters. Do not store anything other than these OS directories in the specified Hitachi program product storage directory.

HPUX, IPFHPUX, LINUX, IPLINUX, AIX, SOLARIS

-c

Specify this option to register resources with the managing server.

Make sure that the size of the resource does not exceed 2 gigabytes before and after registration. Registered resources can only be distributed to machines with the same operating system as the registration source.

-D*user-resource-path-file-name* ~ ((1 to 128 characters))

Specify the name of a user resource path file. Specifying this option enables JP1/IT Desktop Management 2 - Agent to execute packaging of multiple directories and files in a batch. For details on how to create a user resource path file, see 2.2.3(2) *Creating the user resource path file*. You must not specify the `-D` option together with the `-d` option. Do not specify a path using two consecutive periods (`. .`) as the user resource path file parameter. If you omit this parameter, JP1/IT Desktop Management 2 - Agent distributes directories or files under `/NETMRDS/UPUPL/hd/` (other than HP-UX) or `/var/opt/NETMDMW/UPUPL/hd/` (HP-UX). If packaging of an empty directory is executed, only the directory frame is restored on the distribution destination.

-d*user-resource-path* ~ ((1 to 128 characters))

Specify the absolute or relative path of a directory or file that stores the resources you want to package.

You must not specify option `-d` together with option `-D`. Do not specify a path using two consecutive periods (`. .`).

If you omit the `-d` option, JP1/IT Desktop Management 2 - Agent distributes directories or files under `/NETMRDS/UPUPL/hd/` (other than HP-UX) or `/var/opt/NETMDMW/UPUPL/hd/` (HP-UX). If packaging of an empty directory is executed, only the directory frame is restored on the distribution destination.

-G*generation-number* ~ <uppercase alphabetic characters or numerics> ((4 digits))

Specify the generation number of the package you want to register.

The generation number specified in the `-G` option has priority over that specified in the packaging-information file.

If you omit the `-G` option, the corresponding specification in the packaging-information file is effective.

`-gcabinet-ID` ~ <uppercase alphabetic characters or numerics> ((2 characters))

Specify a cabinet ID for packaging. Full up to 256 resources can be packaged in one cabinet. To creating a new cabinet and packaging into it, specify a cabinet ID in this option to the cabinet, then JP1/IT Desktop Management 2 - Agent automatically creates the cabinet and can execute packaging.

Register different cabinet IDs with different managing servers. If you register different packages with the same cabinet ID in different managing servers, you may not be able to distribute the packages.

Unless you specify the `-g` option and a cabinet ID, the cabinet ID specified in the packaging-information file is effective. The specification in the `-g` option has priority over that in the packaging-information file. If you do not use the packaging-information file, always specify the `-g` option.

`-hupper-level-system-host-name` ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods > ((1 to 64 characters))

If you want to use an end workstation to perform packaging or job confirmation for an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

`-kpassword` ~ <uppercase alphabetic characters or numerics> ((1 to 8 characters))

Specify a password for registering resources with the managing server. Specify a password that has been set to identify a packager on the managing server.

When registering with JP1/IT Desktop Management 2 - Manager

Use the password you specified when you created a relational database. Do not specify any password unless you use a relational database.

If you omit the `-k` option, JP1/IT Desktop Management 2 - Agent displays a message prompting password input. If you want to input a password without having it displayed on the screen, enter a password in response to this message. If you specify option `-Q`, you must not omit the `-k` option.

`-mmanaging-host-name` ~ <uppercase alphabetic characters, numerics, hyphens, underscores, or periods > ((1 to 64 characters))

If you want to use a client workstation to perform packaging to an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of the upper-level system.

`-pprogram-name` ~ ((1 to 50 characters))

Specify a general name to assign to the package you want to register. Specify this name if you want to assign the package a generally known name other than the package ID. Unless you specify the `-p` option and a program name, the corresponding specification in the packaging-information file is effective. The specification in the `-p` option has priority over that in the packaging-information file. If you do not specify the name of the packaging-information file and if you omit the `-p` option, JP1/IT Desktop Management 2 - Agent assumes a space character.

`-Q`

Specify this option if you want JP1/IT Desktop Management 2 - Agent to immediately quit the ongoing processing without waiting for the response in case a password input error or some other error should occur during packaging operation. If you specify the `-Q` option, you must not omit the `-k` option.

Specify the `-Q` option so that the command processing will terminate immediately in the following case:

- You do not give a password to the command.
- The password is incorrect.
- Packaging for another distribution-destination system is being executed for the target group for packaging.

Also, you may specify the `-Q` option so that JP1/IT Desktop Management 2 - Agent will quit the command execution without displaying the KDDM1544-Q message. This message prompts you to decide whether to overwrite the specified package if the same package ID exists.

`-rpackage-ID` ~ <uppercase alphabetic characters, numerics, hyphens, or underscores> ((1 to 44 characters))

Specify an ID for the package you want to register. The package ID must be unique in the network system.

The package ID specified in the `-r` option has priority over that specified in the packaging-information file. If you omit the `-r` option, the corresponding specification in the packaging-information file is effective. If you apply a system that does not use the packaging-information file, always specify the `-r` option.

`{-s | -S packaging-target-program-product-designation}` ~ ((1 to 128 alphanumeric characters))

Specify a program product that is a target of packaging. To package a Hitachi program product that has a general and individual model name, you cannot specify the individual model name. You can only specify a general name.

`-s`

Indicates the packaging of a program product specified in the packaging-information file.

`-S packaging-target-program-product-designation`

Indicates that you must specify the designation of a program product you want to register. Specify the program product designation with 128 or less characters including space characters and special characters.

You must specify either of the `-s` and `-S` options.

`-V prerequisite-version` ~ <uppercase alphabetic characters, numerics, or slants>((1 to 6 characters))

Specify a prerequisite version for distributing the package you want to register. The prerequisite version specified in the `-V` option has priority over that specified in the packaging-information file. If you omit specifying the `-V` option, the corresponding specification in the packaging-information file is effective.

If you specify `000000` as the prerequisite version parameter, JP1/IT Desktop Management 2 - Agent unconditionally distributes the package, regardless of the prerequisite version.

If this parameter specification does not exist in neither packaging-information file nor `-V` option, JP1/IT Desktop Management 2 - Agent assumes a space character and distributes the package of resources without checking the prerequisite version.

`-v version` ~ <uppercase alphabetic characters, numerics, or slants>((1 to 6 characters))

Specify the version of the package you want to register.

The version specified in the `-v` option has priority over the corresponding specification in the packaging-information file. If you omit the `-v` option, the specification in the packaging-information file is effective.

packaging-information-file-name

Specify the absolute or relative pathname of the packaging-information file. For packaging of user data and user programs, if you omit specifying the packaging-information file parameter, user resource path parameter, and user resource path file parameter, JP1/IT Desktop Management 2 - Agent assumes the following path of the packaging-information file as appropriate:

`/NETMRDS/UPUPL/AC000000` (other than HP-UX)

`/var/opt/NETMDMW/UPUPL/AC000000` (HP-UX)

If you do not use the packaging-information file, when you enter the command for packaging, always specify the following option(s) as appropriate:

For packaging of program products

`-gcabinet-ID`

For packaging of user data and user programs

`-gcabinet-ID`

`-rpackage-ID`

End code

End code	Meaning
0 or 1	Terminated normally.

End code	Meaning
2	Free disk space is insufficient. Delete unnecessary files.
3	Interface is invalid. Review the settings file or packaging-information file.
4	System error occurred. Contact system administrator.
5	Communication error occurred. Contact system administrator.
6	Internal error occurred. Contact system administrator.
7	Activation impossible. Contact system administrator.
8	Packaging of the same package ID has already been done or packaging of the same package ID for the same group is now being done from another terminal. In the former case, review the packaging-information file or delete the package registered by previous packaging. In the latter case, re-execute the command after a while.
9	An invalid package has been registered. Delete the invalid package.
10	Number of registered packages exceeds the limit. Contact the system administrator of the managing server.
11	Packaging is now being done from another terminal. Re-execute the command after a while.

Notes

- If the distribution job requests distribution of the package with the same package ID as one of the packages installed in your own UNIX machine, JP1/IT Desktop Management 2 - Agent usually does not install distributed packages. However, if distribution is by a forced distribution job, JP1/IT Desktop Management 2 - Agent installs distributed packages.
- If you do not set PROHIBITPATH=NO in the operating-environment settings file, you cannot specify `/`, `/ofis`, `/usr`, or `/etc` as the user resource path for packaging user data or user programs. You may specify one directory or file under these directories (`/etc/hosts`, `/etc/passwd`, etc.), but you cannot specify a file or a special file directly under the root directory.
- As the user resource path parameter, you cannot specify the absolute path of `/NETMRDS/UPUPL/hd` (other than HP-UX) or `/var/opt/NETMDMW/UPUPL/hd` (HP-UX).
- When you specify a directory as the user resource path, make sure that the length of the file names under the directory does not exceed 128 bytes.
- As the user resource path, you cannot specify a directory that contains a symbolic link.
- When executing this command in the background (by appending an ampersand (&) to the end of the command), make sure that you specify the `-Q` option.

rdsiddefine

The `rdsiddefine` command registers an ID group definition file, displays ID groups, and clears ID group definition.

Description

1. Registers an ID group definition file.
2. Displays the contents of the ID group definition files registered on an upper-level relay system.
3. Clears all ID group definitions.

Format

1. Registering an ID group definition file

```
rdsiddefine -s [-dID-group-name] [-k [password] ]  
                [-grelay-system-name]
```

2. Displaying the contents of ID group definition files

```
rdsiddefine -ll [-a]
```

3. Clearing ID group definitions

```
rdsiddefine -dl
```

Options

-a

Displays all ID groups registered from the local system with the groups classified by relay system. If you omit this option, JP1/IT Desktop Management 2 - Agent displays only the ID groups registered with the relay systems specified for `ManagingHost` in the settings file for client services.

-dID-group-name

- 1 to 32 characters except `!, ", %, ', *, ., /, <, >, ?, @, \, |` for an ID group registered from the managing server
- 1 to 8 characters uppercase alphabetic characters and numerics for an ID group registered from a distribution-destination system

Specify this option and parameter to add an ID group definition of your own UNIX machine. Do not assign a name beginning with `networkID_` to the ID-group-name argument.

If you omit this option, JP1/IT Desktop Management 2 - Agent registers an ID group specified in the ID group definition file (`/NETMRDS/rdsprm/DMWIDUPM`). However, if you add definition to an ID group registered from the managing server, register it by using this option. You cannot add it by other means.

To define ID groups from the managing server, match the character set between platforms. Using different kinds of character sets may result in packages not being distributed.

-dl

This option deletes the local system name from all ID groups in which the local system is registered. The ID groups from which the local system name is deleted are those being managed either by the relay system that is specified in the client services settings file, or by the relay system in which the local client has been registered. You cannot delete the local system definition by specifying a specific relay system.

`-grelay-system-name`

Specify the host name or IP address of the relay system on which you want to register the ID group. If this option is omitted, the ID group is registered in the relay system specified in `ManagingHost` of the client services settings file. Therefore, do not specify the relay system specified in `ManagingHost` in the `-g` option.

`-kpassword`

Specify a password of the ID group you want to add. If the ID group specified in the `-d` option is the ID registered from the managing server and has no password setting, specify `-k` only.

`-ll`

Displays the contents of the ID group definition files registered with an upper-level relay system in the same format as for the ID group definition file. This option displays only the group ID registered by the `rdsiddefine -s` command from the distribution destination system. This option does not display any group ID registered from the upper-level system.

`-s`

Registers an ID group definition file.

Display format

The `rdsiddefine -ll` command with the `-a` option specified displays ID-group definitions as follows:

```
+ManagingHost ← Indicates an upper-level relay system specified in the settings file.
[LOCAL-ID]
*ID1
*ID2
:
:
+RELAY1 ← Name of the relay system specified in the option of command.
*ID1
*ID2
:
```

End code

End code	Meaning
0	Terminated normally.
1	The ID group definition file does not exist.
2	Interface is incorrect. Alternatively, the user who issued the command is not a superuser.
3	You specified simultaneous execution of the <code>rdsiddefine</code> and <code>rdsidexec</code> commands.
253	Communication error occurred.
254	System error occurred.
255	Error other than the above occurred.

Notes

- Should a communication error or some other error occur during the operation of registering an ID group definition file, JP1/IT Desktop Management 2 - Agent saves the ID group definition file as is. By re-executing the `rdsiddefine` command or restarting the system, you can register the ID group definition file.

- Once you have changed the ID group definition by means of the `rdsiddefine` command, execute the `rdsidexec` command. By executing the `rdsidexec` command, JP1/IT Desktop Management 2 - Agent executes the jobs relevant to the added ID group.
- When clearing an ID group, JP1/IT Desktop Management 2 - Agent cancels the installation awaiting jobs on the distribution-destination systems that belong to the cleared ID group.
- If an ID group defined from a client workstation or relay system is overwritten with overwrite registration specified for the managing server's ID registration facility, you cannot cancel the ID group definition by specifying the `-s` option from the client workstation or relay system in which the ID group was defined. To cancel the ID group definition, you must specify the `-dm` option at the definition-destination relay system.

rdsidexec

The `rdsidexec` command executes jobs for a specified ID group.

Description

This command executes the jobs relevant to the ID group added by the `rdsiddefine` command among those stored in the temporary job storehouse.

Format

```
rdsidexec
```

End code

End code	Meaning
0	Terminated normally.
1	No relevant jobs exist.
2	Interface is incorrect. Alternatively, the user who issued the command is not a superuser.
3	You specified simultaneous execution of the <code>rdsiddefine</code> and <code>rdsidexec</code> commands.
253	Communication error occurred.
254	System error occurred.
255	Error other than the above occurred.

Note

After you change the ID group definition by means of the `rdsiddefine` command, JP1/IT Desktop Management 2 - Agent executes all jobs relevant to the ID groups not processed by the execution of the `rdsidexec` command.

rdsinsset

The `rdsinsset` command selects packages to be installed.

Description

This command selects whether distributed packages are installed.

1. Displays a list of installation-enabled packages.
2. Installs installation-enabled packages.

Format

1. Displaying a list of installation-enabled packages

```
rdsinsset -l
```

2. Installing installation-enabled packages

```
rdsinsset -x -rfull-package-ID[full-package-ID...]
```

Options

`-l`

Displays a list of installation-enabled packages.

`-rfull-package-ID`

Specify a full package ID to execute the command for the package(s) identified by it. You may specify multiple full package ID parameters. To specify a full package ID, follow the format below:

```
package-type-code.cabinet-ID.package-ID[.version[.generation-number]]
```

If you omit the version and generation number parameters, JP1/IT Desktop Management 2 - Agent executes the command for all packages that meet the conditions of the remaining parameters.

`-x`

Installs installation-enabled packages.

Display format

Example 1

The display format of the installation-enabled package list (for a client workstation) follows.

```
rdsinsset -l
001 C.UP.USRDATA01.0100.0000 USRDATA01 001129 WAIT 70000000
002 C.PP.C-8811-082.0206.0000 NETM-DM 000831 * WAIT 70000000
1.      2.      3.      4.      5.      6.      7.
```

Legend: 1. Serial number 2. Full package ID 3. Program name
4. Installation period of package 5. Installation period expired mark
6. Package status 7. Execution status

Example 2

The display format of the installation-enabled package list (for an end workstation) follows.

```

rdsinsset -l
001 C.UP.USRDATA01.0100.0000 USRDATA01 ***** WAIT 70000000
002 C.PP.C-8811-082.0206.0000 NETM-DM ***** WAIT 70000000
1. 2. 3. 4. 5.

```

Legend: 1. Serial number 2. Full package ID 3. Program name
4. Package status 5. Execution status

Example 3

The display format when installation-enabled packages have been installed follows.

```

rdsinsset -x -rC.PP.C-8811-082.0206.0000
KDDM3083-I: C.PP.C-8811-082.0206.0000 was selected.
KDDM3091-I: Executing package installation.

```

Notes

- Installation is impossible for the packages marked with an installation period expired mark (*) in the list of installation-enabled packages.
- Installation is impossible for packages distributed from hosts other than the host specified in `ManagingHost`.
- If you specify a package in which OS rebooting is specified, perform key inputs according to the messages that are output (KDDM0559-Q and KDDM0560-Q). By performing this operation, you can now install the package and reboot the OS.
- In the installation-enabled package list, ERROR is displayed as the resource status of a package that is being split-distributed.
- The `rdsinsset -x` command installs already-installed packages again even if overwriting is not specified.
- For packages that are installed at system startup or system shutdown, reboot the system after the `rdsinsset -x` command has been executed.
- You cannot execute this command in the background (you cannot execute this command by appending an ampersand (&) to the end of the command).

rdskillsrv

The `rdskillsrv` command stops JP1/IT Desktop Management 2 - Agent.

Description

This command stops JP1/IT Desktop Management 2 - Agent.

Format

- For systems other than HP-UX

```
/NETMRDS/COM/rdskillsrv
```

- For HP-UX

```
/opt/NETMDMW/lbin/rdskillsrv
```

End code

End code	Meaning
0	Terminated normally.
1	The user who issued the command is not a superuser.

Notes

- Before you execute the `rdskillsrv` command, execute one of the following commands and stop the result-reporting process:
For a client workstation: `rdstrf -q`
For an end workstation: `/NETMRDS/COM/rdssnde -q` (`opt/NETMDMW/lbin/rdssnde -q` in the case of HP-UX)

rdslstdel

The `rdslstdel` command deletes user resource installation information.

Description

This command deletes user resource installation information from the local system.

Format

- For systems other than HP-UX

```
/NETMRDS/COM/rdslstdel [-rpackage-ID]
```

- For HP-UX

```
/opt/NETMDMW/bin/rdslstdel [-rpackage-ID]
```

Option

`-rpackage-ID` ~ <uppercase alphabetic characters, numerics, hyphens, or underscores> ((1 to 44 characters))

Specify the package ID of the user resource installation information you want to delete. As the package ID parameter, specify the same ID as you specified when packaging the resources. If you omit the `-r` option, JP1/IT Desktop Management 2 - Agent deletes all user resource installation information from the local system.

End code

End code	Meaning
0	Terminated normally. Alternatively, the specified user resource installation information does not exist.
-1	Failed to delete the user resource installation information.

Notes

- Pay careful attention to that deletion of user resource installation information may cause some difference from the actual installation status.
- JP1/IT Desktop Management 2 - Agent does not notify the managing server of the result of execution of the `rdslstdel` command. If you want to delete the corresponding information from the managing server, request the managing server to delete it.

rdslst

The `rdslst` command displays resources appropriate to packaging.

Description

1. Outputs the program product designation, version number, and program name if the program product specified by the `-S` option is stored in the special file or in the Hitachi program product storage directory.
2. Outputs program product designations, version number, and program names stored in the packaging-information file specified by the `-f` option.

Format

1. Displaying resources by specifying a packaging target program product designation

```
rdslst [-Spackaging-target-program-product-designation] {  
    special-file-name|hitachi-program-product-storage-directory  
}
```

2. Displaying resources by specifying a packaging-information file name

```
rdslst [-ffile-name] {  
    special-file-name|hitachi-program-product-storage-directory  
}
```

Options

`-ffile-name` ~ ((1 to 128 characters))

Specify the name of a packaging-information file to check the specified program product. Specify the absolute path of the file name.

`-Spackaging-target-program-product-designation` ~ ((1 to 128 characters))

Specify the basic designation of a program product to check that it has been stored into the storage medium. Specify this parameter with 128 or less characters including space characters and special characters.

You can specify the designation of a program product by using regular expressions for the UNIX operating system.

special-file-name

Specify the name of a special file compatible with the device on which the storage medium is set. For details on how to specify a special file name, see *2.2.2(1) Registering Hitachi program products*.

If you want to perform packaging of a Hitachi program product, using a special file that is not standard for the system, you must define the special file beforehand in a special file definition file. For details on how to define a special file, see *2.2.3(3) Setting the special file definition file*.

hitachi-program-product-storage-directory

Specify the absolute path of the directory where the Hitachi program products are stored. Note that you cannot specify the root directory (`/`). The specified Hitachi program product storage directory must contain OS directories named like those listed below. These directories may be named in lowercase letters. Do not store anything other than these OS directories in the specified Hitachi program product storage directory.

HPUX, IPFHPUX, LINUX, IPLINUX, AIX, SOLARIS

Example

The following is an example of specifying the `-S` option and packaging target program product designation parameter by using the normal representation system of UNIX operating system.


```
rds1st -S'P-1642-*' /dev/cmt00 1.  
rds1st -S'P-1642-[1-5]B1' /dev/rfpd00 2.
```

Legend:

1. Displays all program products stored into a CMT beginning with the designation "P-1642-".
2. Displays the following program products stored into a floptical disk.
 - P-1642-1B1
 - P-1642-2B1
 - P-1642-3B1
 - P-1642-4B1
 - P-1642-5B1

Note

When displaying the contents of program products stored on CD-ROM, execute the `rds1st` command in an unmounted condition.

rdsma

The `rdsma` command monitors for a distribution job.

Description

This command monitors for a distribution job existing on the managing server. You can specify a period of intervals of monitoring for a distribution job in `WatchTimeofOrders` in the settings file. JP1/IT Desktop Management 2 - Agent monitors for a distribution job at intervals of the period specified in this operand.

Format

```
rdsma { -a [-hupper-level-system-host-name] | -q }
```

Options

-a

Starts monitoring for a distribution job.

-*upper-level-system-host-name* ~ <alphanumeric characters, hyphens, or underscores> ((1 to 64 characters))

If you want to use an end workstation to check for a job of an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

-q

Stops monitoring for a distribution job.

Notes

By using the following files, JP1/IT Desktop Management 2 - Agent automatically starts or stops `rdsma` command operation, at the startup or shutdown of JP1/IT Desktop Management 2 - Agent. Create the file by using the `touch` command, etc.

- For systems other than HP-UX: `/NETMRDS/rdsprm/.rdsmaauto`
- For HP-UX: `/var/opt/NETMDMW/rdsprm/.rdsmaauto`

rdsrecover

The `rdsrecover` command recovers packages when installation has failed.

Description

1. Displays the stored backup information (package-ID, version, program name).
2. Recovers the package specified in option `-r` to the old version.

Format

1. Displaying backup information

```
rdsrecover
```

2. Recovery to the old version

```
rdsrecover -rpackage-ID
```

Option

`-rpackage-ID`

Recovers the package identified by package-ID to the old version. Specify a package ID using the following format:

For a program product

Specify its program product designation.

For user data and user programs

Specify the package ID assigned to the resources when packaging them.

Display format

The format of a display of stored backup information is as follows:

```
1 P-1654-111 0102 FSED2/WS
2 UAP-DATA 010000 User program
3 UAP-NEW
1. 2. 3. 4.
```

Legend:

1. Output serial number 2. Package ID 3. Version 4. Program name

Note: Displays only the package ID for a backup of a newly distributed package of user data and user programs, the backup created by specifying the command for recovery.

End code

End code	Meaning
0	Terminated normally.
1	No backup exists.
2	Recovery impossible, because of invalid backup.
3	Option is incorrect.
7	The user who issued the command is not a superuser.

End code	Meaning
8	Error occurred in program product setup processing.
9	System error occurred (failed to recover).

Notes

- JP1/IT Desktop Management 2 - Agent does not notify the managing server of the execution result of the `rdsrecover` command. Execute *Get installed package status* job from the managing server and update the package status file.
- You cannot use the `rdsrecover` command to display backup information or perform recovery for the HP-UX version of another company's software.

rdsrf

The `rdsrf` command distributes packages to a client workstation.

Description

This command specifies that packages be distributed to the local client workstation.

Format

1. Distributing packages to the local UNIX machine

```
rdsrf -a[-mmanaging-host-name]
```

2. Stopping the processing of the `rdsrf` command

```
rdsrf -q
```

Options

`-a`

If there is a distribution job addressed to the local UNIX machine, specify this option to distribute the packages according to that distribution job. After all distribution jobs addressed to the local UNIX machine have been finished or if there is no distribution job addressed to the local UNIX machine, JP1/IT Desktop Management 2 - Agent checks again for distribution jobs at the monitoring interval specified in `WatchTimeofOrders` of the settings file. Checking takes place until the `rdsrf -q` command is executed.

If an error occurs during the processing of multiple distribution jobs addressed to the local UNIX machine, JP1/IT Desktop Management 2 - Agent operates as follows:

- If an error occurs during the installation process, JP1/IT Desktop Management 2 - Agent aborts the processing of the distribution job involved in the error and proceeds to another distribution job.
- If an error occurs during communication with a relay system, JP1/IT Desktop Management 2 - Agent aborts the processing of all distribution jobs.

`-mmanaging-host-name` ~ <alphanumeric characters, hyphens, or underscores> ((1 to 64 characters))

If you want to use a client workstation to check for a job of an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

`-q`

Specifies that processing of the `rdsrf -a` command is to stop. If you execute the `rdsrf -q` command during package distribution, the distribution process stops after the package distribution in progress has terminated. If the `rdsrf -q` command is executed during a retry interval, the distribution process stops immediately.

Notes

- If a distribution job specifies a package that has the same name as a package already installed on the local UNIX machine, the distribution job is not executed. If the package is distributed as part of a forcible distribution job, the distribution job is executed.
- Since the `rdsrf -a` command is automatically executed when the client workstation starts, normally there is no need for you to execute it. If you want to restart the distribution process after stopping it by entering the `rdsrf -q` command, execute the `rdsrf -a` command.

- Messages during command processing are not displayed on the screen, but are stored in one of the files listed below. For details about the messages that are issued during command processing, see *9.1 Checking failure information by messages* in PART 4.

For systems other than HP-UX

`/NETMRDS/rdsprm/MAIN.LOGF` or

`/NETMRDS/rdsprm/PPINS.LOGF`

For HP-UX

`/var/opt/NETMDMW/rdsprm/MAIN.LOGF` or

`/var/opt/NETMDMW/rdsprm/PPINS.LOGF`

rdsrsclst

The `rdsrsclst` command displays packages installed or to be installed.

Description

1. Displays packages installed on the local system and packages that wait for installation.
2. Displays packages installed on the local system.
3. Displays packages that are waiting for installation at the startup or shutdown of the local system, but does not display any packages that are waiting for installation on the installation date.

Format

1. Displaying installed packages and packages that wait for installation

```
rdsrsclst
```

2. Displaying installed packages

```
rdsrsclst -i [p] [u]
```

3. Displaying packages that wait for installation

```
rdsrsclst -w [b] [s]
```

Options

`b`

Specify this option if you want a display of packages to be installed at the startup of the system from among the packages that wait for installation.

`-i`

Specify this option to make a display of packages installed on the local system.

`p`

Specify this option if you want a display of program products from among the packages installed on the local system.

`s`

Specify this option if you want a display of packages to be installed at the shutdown of the system from among the packages that wait for installation.

`u`

Specify this option if you want a display of user data and user programs from among the packages installed on the local system.

`-w`

Specify this option to make a display of packages that wait for installation on the local system.

Display format

The `rdsrsclst` command displays packages as follows:

Example 1

An example follows of displaying all packages that have been installed in the local system.

```
rdsrsclst -i
P001 P-1611-111 0203 HI-UX/WE2/BS
U001 UAP-DATA 0100 UAPDATA01
1. 2. 3. 4.
```

Legend: 1. Output serial number
The first character indicates the type of the package.
P: Indicates the installed package of a program product.
U: Indicates the installed package of user data and user programs.
2. Package ID
3. Version
4. Program name

Example 2

An example follows of displaying all packages that are waiting to be installed in the local system.

```
rdsrsclst -w
B001 P-1611-211 0201 HI-UX/WE2/EX
S001 UAP-DATA2 0101 UAPDATA02
1. 2. 3. 4.
```

Legend: 1. Output serial number
The first character indicates installation timing.
B: Indicates that the package is installed at the startup of the system.
S: Indicates that the package is installed at the shutdown of the system.
2. Package ID
3. Version
4. Program name

Notes

- The version information of another company's software and OS patches installed in the local system cannot be displayed using the `rdsrsclst` command. To display another company's software and OS patch packages, use the command provided by the OS.
- When the packages that are waiting to be installed are displayed, resource names, version numbers, and program names are not displayed for any jobs other than *Install package* jobs.

rdsstart

The `rdsstart` command starts JP1/IT Desktop Management 2 - Agent.

Description

This command starts JP1/IT Desktop Management 2 - Agent.

Format

- For systems other than HP-UX

```
/NETMRDS/COM/rdsstart
```

- For HP-UX

```
/opt/NETMDMW/lbin/rdsstart
```

End code

End code	Meaning
0	Terminated normally.
1	Terminated abnormally.

Note

- Execute the `rdsstart` command while JP1/IT Desktop Management 2 - Agent is stopped.

rdssts

The `rdssts` command checks the operation status of the package distribution command.

Description

This command checks the operation status of the command for package distribution.

Format

```
rdssts
```

End code

End code	Meaning
0	The execution of the command for package distribution stopped.
1	The execution of the command for package distribution is in progress.
254	The command for package distribution terminated abnormally.
255	Error occurred in the initialization processing of the command for package distribution.

rdssys

The `rdssys` command deletes the system configuration information of the local machine from the upper-level system.

Description

This command requests the upper-level system (relay system or managing server) to delete the system configuration information of the local UNIX machine from the upper-level system.

As described below, the execution results of the `rdssys` command differ depending on the system in which the command is executed.

- When the command is executed on the distribution-destination system
When the relay system receives the execution of the `rdssys` command, it deletes the system configuration of the machine within the relay system that executed the `rdssys` command and then sends a report to the upper-level system.

If you change the settings after the execution of the `rdssys` command, JP1/IT Desktop Management 2 - Agent reports the managing server of the change in the definition.

Format

```
rdssys -u
```

Option

-u

Notifies the upper-level system of the deletion of the information of the local UNIX machine from the system configuration information.

End code

End code	Meaning
0	Terminated normally.
1	Interface is incorrect. Alternatively, the user who issued the command is not a superuser.
2	System error occurred.
253	Communication error occurred.
254	System error occurred.
255	Error other than the above occurred.

rdsupt

The `rdsupt` command installs packages according to specified installation date/time.

Description

This command installs the packages that are due for installation. When you specify options, JP1/IT Desktop Management 2 - Agent determines whether an installation is due by referring to the date and time specified in the options.

Format

```
rdsupt [{-ddate-for-installation-date-reference|  
-tshift-time-for-installation-date-reference}]
```

Options

`-ddate-for-installation-date-reference`

Specify a date in the `YYMMDD` format by which JP1/IT Desktop Management 2 - Agent judges whether an installation is due. JP1/IT Desktop Management 2 - Agent installs a package if the package installation date you specified when entering the command for package distribution has reached the date specified in this option.

YY

Last two digits of a year from 1990 to 2089 (90 to 89)

MM

Month (01 to 12)

DD

Day (01 to 31)

`-tshift-time-for-installation-date-reference ~ <numeric>` ((2 digits from 00 to 23))

Specify the time in hours by which JP1/IT Desktop Management 2 - Agent judges whether an installation date is due. JP1/IT Desktop Management 2 - Agent installs a package if the package installation date/time you specified when entering the command for package distribution has reached the time specified in this option. For example, if you specify `-t08`, JP1/IT Desktop Management 2 - Agent determines that an installation date starts from 8:00, and that the previous day lasts until 7:59.

End code

End code	Meaning
0	Terminated normally.
250	Internal error occurred.
251	Communication error occurred.
252	System error occurred.
253	Interface is incorrect. Alternatively, the user who issued the command is not a superuser.
254	Hard disk space is insufficient.

Notes

- This command is a generator tools command.

- If you specify both `-d` and `-t` options, the first specified option is effective.
- JP1/IT Desktop Management 2 - Agent automatically executes the `rdsupt` command. Normally there is no need for you to execute this command.
- This command must be executed by a superuser. If it is executed by a general user, the command terminates in an error. In such a case, first log back in as a superuser, re-issue the job to the target system, and then re-execute this command as a superuser.

rdsusnd

The `rdsusnd` command reports the user resource status.

Description

This command reports the text contents of a user resource status file to the managing server.

Format

```
rdsusnd user-resource-status-file-name
[-n]
[-hupper-level-system-host-name]
[-mmanaging-host-name]
```

Options

`-hupper-level-system-host-name` ~ <alphanumeric characters, hyphens, or underscores> ((1 to 64 characters))

If you want to use an end workstation to report a user resource status to an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

`-mmanaging-host-name` ~ <alphanumeric characters, hyphens, or underscores> ((1 to 64 characters))

If you want to use a client workstation to report a user resource status to an upper-level system other than what is specified in `ManagingHost` in the settings file, specify the host name of that upper-level system.

`-n`

Specify this option to disable writing into the user resource status file from the UNIX machine.

user-resource-status-file-name

Specify the absolute pathname of a user resource status file as the file name. For details on the user resource status file, see *4.5.2 Reporting user resource status*.

End code

End code	Meaning
0	Terminated normally.
249	Impossible to allocate memory.
250	System error occurred.
251	The user resource status file is invalid.
252	Options are incorrect.
253	Internal error occurred.
254	Communication error occurred.
255	Hard disk space is insufficient.

Notes

- Enter the options of the `rdsusnd` command in order as arranged in the *Format* section. An incorrect sequence in which you specified the options results in an error.

- If JP1/IT Desktop Management 2 - Agent fails to send the contents of the user resource status file because of a communication error, it attempts to send again to the managing server the next time it executes the `rdsusnd` command.
- The `rdsusnd` command cannot report the installation status of a Hitachi program product, another company's software, or an OS patch to the managing server.

9

Troubleshooting

This chapter describes how to take action if a failure occurs while using JP1/IT Desktop Management 2 - Agent.

9.1 Checking failure information by messages

JP1/IT Desktop Management 2 - Agent outputs a failure message if it detects a failure. There are two types of failure messages: One is directly output to the place where the user is located, and the other is output to the syslog file. In addition, JP1/IT Desktop Management 2 - Agent stores detailed failure messages in message log files separately from failure messages stored in the syslog file. The detailed failure messages include maintenance information of JP1/IT Desktop Management 2 - Agent.

For failure causes and corrective actions, see *10. Messages*. If you cannot identify the failure cause from the messages, see *9.3 Acquiring failure information* and use the necessary commands to collect detailed failure information.

9.1.1 Failure information during packaging

Messages issued during packaging are displayed directly on the screen. When a failure occurs at a relay system during packaging from a client workstation, see the relay system's log files.

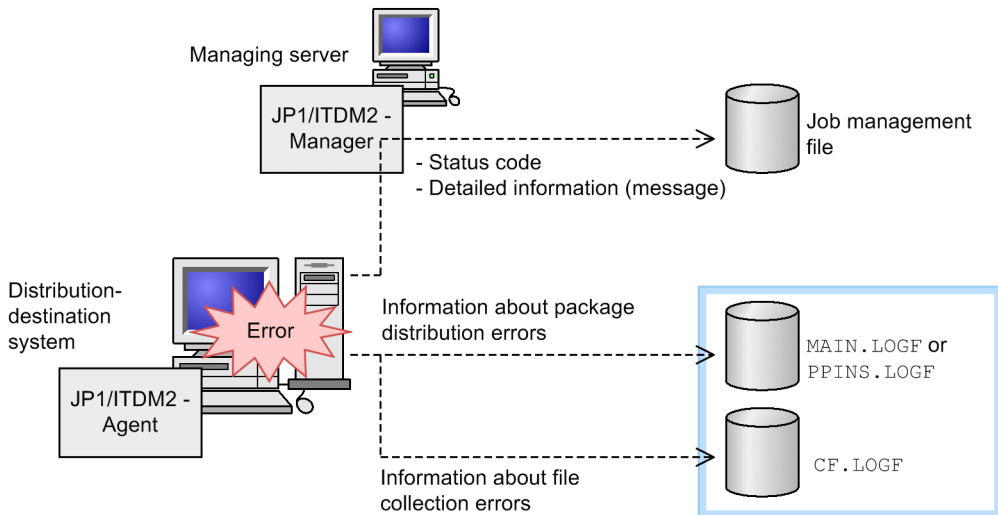
9.1.2 Failure information during package distribution or file collection

The status of a UNIX machine to which packages are being distributed or from which files are being collected is sent to the managing server as a status code (end status or user status). For the meanings of status codes, see *Appendix B. Status Codes*.

If a failure occurs at the distribution-destination system, detailed information is also stored in the managing server's job management file. For details about the storage method, see *10.1.2 Formats for messages output during package distribution or during file collection*.

Figure 9-1 shows the storage of failure information during package distribution or file collection.

Figure 9–1: Storage of failure information during package distribution or file collection



For the file names of `MAIN.LOGF`, `PPINS.LOGF`, and `CF.LOGF`, see *(2) Checking the local system's failure information*.

If you cannot identify the failure cause by referring to the status code, `MAIN.LOGF`, `PPINS.LOGF`, or `CF.LOGF`, you need to acquire the failure information of JP1/IT Desktop Management 2 - Agent on the UNIX machine. For the acquisition method, see *9.3 Acquiring failure information*.

(1) Checking the managing server's failure information

To check the details of the managing server's failure information, you can use one of the commands or the window described below.

For the Windows version of the managing server

Job Status window

(2) Checking the local system's failure information

You can use the `cat` command or a pager command such as `pg` and `more` to check the details of the message log files listed below.

Important

If you refer to the log files of this product by using the `vi` editor, the text might appear garbled. In that case, refer to the log files by using other tools (the `cat` command, etc.) than the `vi` editor.

Functions	Contents of the message log file	Message log file name
Client services	Failure information about distribution of user data or user programs and failure information during file collection	For systems other than HP-UX /NETMRDS/rdsprm/MAIN.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/MAIN.LOGF
	Failure information about distribution of program products	For systems other than HP-UX /NETMRDS/rdsprm/PPINS.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/PPINS.LOGF
	Failure information about distribution of another company's software	For systems other than HP-UX /NETMRDS/rdsprm/ISVSOFT.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/ISVSOFT.LOGF
	Failure information about installing OS patches	For systems other than HP-UX /NETMRDS/rdsprm/OSPATCH.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/OSPATCH.LOGF
	Failure information about unarchiving OS patches	For systems other than HP-UX /NETMRDS/rdsprm/UNACV.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/UNACV.LOGF
	Failure information about applying patches	For systems other than HP-UX /NETMRDS/rdsprm/PPPATCH.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/PPPATCH.LOGF

Functions	Contents of the message log file	Message log file name
Client services	Failure information about external program processing for collection	For systems other than HP-UX /NETMRDS/rdsprm/CF.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/CF.LOGF

An example of the MAIN.LOGF file as displayed by the `cat` command follows.

```

DATA COUNT 199
 1.
00.05.31 10:10:05 00001012 00000021 KDDI1001-E : A TCP/IP communi-
 2.          3.          4.          5.
cation error occurred E7 FGET_PCM_CMDF 19 0 0 2
          6.          7.          8.

```

1. Message output number

Indicates the output location of the message in the message log file.

2. Output date and output time

Indicates the date and time when the message is output. The date and time follow the local standard time and are in the time zone of the parent process that started JP1/IT Desktop Management 2 - Agent, and results adjusted for Daylight Savings Time are stored.

3. Process ID

Indicates the process ID of the JP1/IT Desktop Management 2 - Agent process that output the message.

4. Serial message output number in process

Indicates the serial message output number within the JP1/IT Desktop Management 2 - Agent process.

5. Message

Contains text indicating the nature of the failure. The language type of the message depends on the language environment of the process that activated JP1/IT Desktop Management 2 - Agent.

6. JP1/IT Desktop Management 2 - Agent maintenance information 1

Indicates maintenance information for JP1/IT Desktop Management 2 - Agent.

7. JP1/IT Desktop Management 2 - Agent maintenance information 2

Indicates maintenance information for JP1/IT Desktop Management 2 - Agent.

8. JP1/IT Desktop Management 2 - Agent maintenance information 3

Indicates maintenance information for JP1/IT Desktop Management 2 - Agent.

When JP1/IT Desktop Management 2 - Agent maintenance information 2 contains a system call name, the second number in maintenance information 3 indicates the error number (`errno`) of the system call.

For distribution of another company's software, the second number in maintenance information 3 indicates the return value of the OS installation command.

(3) Checking the messages in the syslog file

Messages that are output to `/NETMRDS/rdsprm/MAIN.LOGF` (`/var/opt/NETMDMW/rdsprm/MAIN.LOGF` in the case of HP-UX) are output to the syslog file. For the storage location of the syslog file, see the manual of the applicable OS.

Messages issued during system shutdown are not output to the syslog file.

The storage format of the syslog file follows.

```
Sep 18 10:08:21 hostx NETMAF[1012] KDDI1001-E : A Communication error of TCP/IP
occurred. 1. 2. 3. 4.
```

1. Output date and output time

Indicates the date and time when the message is output. The date and time follow the local standard time and are in the time zone of the parent process that started JP1/IT Desktop Management 2 - Agent, and results adjusted for Daylight Savings Time are stored.

2. Host name

Indicates the host name of the managing server that output the message.

3. Process ID

Indicates the process ID of the JP1/IT Desktop Management 2 - Agent server process that output the message.

4. Message

Contains text indicating the nature of the failure.

If an error occurs during file transfer, the message text that is output to the syslog file is always the same, regardless of the actual source message. Therefore, the message text output to the syslog file does not match the message code. However, message text that correctly matches the message code is output to the `MAIN.LOGF` file of the distribution-destination system at the file-transfer request source.

The following shows the message text that is output to the syslog file when an error occurs during file transfer.

```
KDDM9xxx-*: An error occurred in the file transfer server.
```

Legend:

.xxx: Message code

*: Message type

9.2 Failure types and troubleshooting

This section describes the cause of failures and corrective actions for the type of failure.

9.2.1 Failures in the client services

(1) Failures during program product setup

Phenomena	Method of investigation	Causes and corrective actions
The end status of the package status file of JP1/IT Desktop Management 2 - Manager is AF	<p>The distributed program product is not installed properly. This is recorded as an error job in both the package status file and in the job management file. In this case, investigate the cause of the failure using the following procedure.</p> <ol style="list-style-type: none"> 1. Confirm whether the prerequisite program products for the distributed program product are properly installed. 2. Use the <code>cat</code> command to reference the following file to check the cause of the abnormal termination of program product installation. <p>For systems other than HP-UX: <code>/NETMRDS/rdsprm/PPINS.LOGF</code></p> <p>For HP-UX: <code>/var/opt/NETMDMW/rdsprm/PPINS.LOGF</code></p>	If the version of the prerequisite program product is incorrect, re-distribute just the applicable version of the program product. The program product that resulted in the error does not need to be re-distributed.

(2) Installation failure during system stop

Phenomena	Method of investigation	Causes and corrective actions
Package installation failure	<p>Because power is shut off immediately after this failure, the failure cannot be checked at that time. At the next startup of the system, a message appears showing up to ten packages for which installation failed. The number of these packages is also displayed.</p> <p>See the following log files for failure information.</p> <ul style="list-style-type: none"> • For systems other than HP-UX <code>/NETMRDS/rdsprm/MAIN.LOGF</code> <code>/NETMRDS/rdsprm/PPINS.LOGF</code> • For HP-UX <code>/var/opt/NETMDMW/rdsprm/MAIN.LOGF</code> <code>/var/opt/NETMDMW/rdsprm/PPINS.LOGF</code> 	Resolve the problem and retry.
Program product installation failure	<p>The package that failed installation cannot be used during the next system startup, because this package might prevent the daemon process from being started.</p> <p>See the following log files for failure information.</p> <ul style="list-style-type: none"> • For systems other than HP-UX <code>/NETMRDS/rdsprm/PPINS.LOGF</code> • For HP-UX <code>/var/opt/NETMDMW/rdsprm/PPINS.LOGF</code> 	<p>Perform one of the following according to the failure information.</p> <ul style="list-style-type: none"> • For insufficient disk space Delete unneeded files, and then re-distribute the program product. • For a system error Request the system administrator for repair of the UNIX machine file system. After repairs are completed, re-distribute the program product. • For a text busy error Because the installed program product was operating until power was shut off, you cannot

Phenomena	Method of investigation	Causes and corrective actions
Program product installation failure	<p>The package that failed installation cannot be used during the next system startup, because this package might prevent the daemon process from being started.</p> <p>See the following log files for failure information.</p> <ul style="list-style-type: none"> For systems other than HP-UX /NETMRDS/rdsprm/PPINS.LOGF For HP-UX /var/opt/NETMDMW/rdsprm/PPINS.LOGF 	<p>install it with JP1/IT Desktop Management 2 - Agent again.</p> <p>Install the program product from the setup of the operating system.</p>

(3) Failures in the recovery facility

Phenomena	Method of investigation	Causes and corrective actions
Recovery failed	<p>The execution results of recovery, and the storage status of backup, are notified to the job management file and package status file of the managing server as the recovery status. For details on the recovery status, see Appendix B. <i>Status Codes</i>.</p>	<p>The procedure for retrying recovery is as follows:</p> <ol style="list-style-type: none"> 1. Analyze the recovery status at the managing server. 2. Confirm the backup storage status. 3. Execute the <i>Recovery</i> job at the managing server. <p>If it is not possible to retry recovery from the managing server, retry recovery or check the storage status of backup using the following procedure:</p> <ol style="list-style-type: none"> 1. Execute the <i>rdsrecover</i> command on a UNIX machine. This step is unnecessary when recovery has already been retried or the backup has already been deleted. 2. Execute the <i>Get installed package status</i> job from the managing server, and acquire the execution results for the command.
Insufficient free space in the backup directory	N/A	<p>Use one of the following methods to delete unnecessary backup data to acquire free disk space.</p> <ul style="list-style-type: none"> Execute the <i>Delete backup file</i> job from the managing server. Execute the <i>rdsbkclear</i> command from the UNIX machine. Afterwards, execute the <i>Get installed package status</i> job from the managing server, and then apply the deletion results.

Legend:

N/A: Not applicable

(4) Insufficient hard disk space

The client services of JP1/IT Desktop Management 2 - Agent require at least five megabytes of space in the hard disk. Delete any unnecessary files to acquire free disk space.

9.2.2 Failures in a program performing user-specific processing

This section describes the procedures when a failure occurs in a program performing user-specific processes. The following shows the applicable programs.

- External program processing for installation
- External program processing after market software installation
- External program processing for collection

Phenomena	Method of investigation	Causes and corrective actions
A program error occurs or the program receives signal and terminates abnormally.	<p>The process is stopped, and a status code is sent to the job management file of JP1/IT Desktop Management 2 - Manager. Check the status code on the managing server side.</p> <p>To check on machine where the failure occurred, view the following log files using the <code>cat</code> command.</p> <ul style="list-style-type: none"> • For systems other than HP-UX /NETMRDS/rdsprm/MAIN.LOGF /NETMRDS/rdsprm/CF.LOGF • For HP-UX /var/opt/NETMDMW/rdsprm/MAIN.LOGF /var/opt/NETMDMW/rdsprm/CF.LOGF 	Resolve the problem and retry.
The external program processing for installation does not end within the monitoring time.	<p>The installation did not end within the monitoring time specified in <code>APWatchTimer</code> of the registration file.</p> <p>The installation is stopped, and the next installation process is being performed. The status of the package for which the installation process was stopped is sent to the managing server with the installation failure status code.</p>	<p>For an external program processing before installation, re-distribute the package from the managing server after correcting the failure.</p> <p>For an external program processing after installation, check whether the package installation has been completed normally in the distribution-destination system.</p> <p>If the package is installed correctly, change the status code of the package status file at the managing server as indicated below to complete normally:</p> <ol style="list-style-type: none"> 1. In the user resource status file, specify the status code to notify to the managing server. 2. Execute the <code>rdsusnd</code> command to send the file to the managing server. <p>For details on how to create the user resource status file, see <i>4.5.2 Reporting user resource status</i> in PART 1.</p> <p>If the installation has failed, re-distribute the package from the managing server.</p>
The external program processing after market software installation does not end within the monitoring time.	N/A	<p>Because the program product setup has been completed normally, there is no need to re-distribute the package. Re-execute the external program processing after market software installation, at the distribution-destination system.</p>

Legend:

N/A: Not applicable

9.3 Acquiring failure information

If you cannot identify the failure cause even by referencing the failure information described in *9.1.2 Failure information during package distribution or file collection*, use the following commands to acquire detailed failure information:

- `rdscsltget` command
This command acquires the failure information and core-related information of the distribution-destination system's client services and generator tools.
- `rdscletslget` command
This command acquires the core-related information of the distribution-destination system's client services and generator tools.
- `rdsgget` command
Acquires failure information of client services.

These commands are located in the `/usr/bin` directory (or in the `/opt/NETMDM/bin` directory for HP-UX).

Execute these commands as a superuser.

rdscsltget command

Description

This command acquires the failure information and core-related information of the distribution-destination system's client services and generator tools, using a UNIX machine. Core-related information is contained in the core file and OS libraries that are required for investigating failures.

Format

```
rdscsltget -o
```

```
[ -t work-directory-path ]  
[ -S [ -c core-file-path ] ]
```

Options

- o
Outputs failure information of the distribution-destination system's client services and generator tools to the standard output in `cpio` format.
- t *work-directory-path*
Specify the absolute path of the directory to be used as the work area when core-related information is output. If you omit this option, the command follows the `DMTMPDIR` settings of the operating-environment settings file.
- S
Outputs core-related information to the standard output in `cpio` format in addition to the failure information.
- c *core-file-path*
Use an absolute path to specify the core file of JP1/IT Desktop Management 2. When you specify this option, you must specify the `-S` option as well. If you omit this option, the core file is automatically found from the following directories:

For operating systems other than HP-UX

- /NETMRDS/
- /NETMDMGF/
- /usr/bin/NETMDMGF/

For HP-UX

- /var/opt/NETMDMW/
- /etc/opt/NETMDMW/
- /opt/NETMDMW/
- /NETMDMGF/

Example

To store failure information in a storage device, use an absolute path in the following format to specify the special file name for the storage medium starting from /dev:

```
rdscsltget -o -t /home2 -S -c /tmp/core > special-file-name
```

To output failure information to a hard disk, use an absolute path or a relative path in the following format to specify the output file name:

```
rdscsltget -o -t /home2 -S -c /tmp/core > user-specified-file-name
```

End code

End code	Meaning
0	Command processing terminated normally.
1	The command failed to acquire failure information.

rdscslsget command

Description

This command acquires the core-related information of the distribution-destination system's client services and generator tools, using a UNIX machine. Core-related information is contained in the core file and OS libraries that are required to investigate failures.

Format

```
rdscslsget -o  
  [-t work-directory-path]  
  [-c core-file-path]
```

Options

-o

Outputs core-related information of the distribution-destination system's client services and generator tools to the standard output in `cpio` format.

-t *work-directory-path*

Specify the directory to be used as the work area when core-related information is output. If you omit this option, the command follows the `DMTMPDIR` settings of the operating-environment settings file.

-c *core-file-path*

Use an absolute path to specify the core file output by JP1/IT Desktop Management 2. If you omit this option, the core file is automatically found from the following directories:

For operating systems other than HP-UX

- `/NETMRDS/`
- `/NETMDMGF/`
- `/usr/bin/NETMDMGF/`

For HP-UX

- `/var/opt/NETMDMW/`
- `/etc/opt/NETMDMW/`
- `/opt/NETMDMW/`
- `/NETMDMGF/`

When you execute the command without specifying this option, an error occurs if:

- The core file does not exist.
- There are multiple core files.

If there are multiple core files, the path for each core file is output to the standard error output.

Example

To store core-related information in a storage medium, use an absolute path in the following format to specify the special file name for the medium starting from `/dev`:

```
rdscrltslget -o > special-file-name
```

To output core-related information to a hard disk, use an absolute path or a relative path in the following format to specify the output file name:

```
rdscrltslget -o > user-specified-file-name
```

End code

End code	Meaning
0	Command processing terminated normally.
1	A command argument is invalid.
255	Command processing terminated abnormally.

rdsgget command

Description

1. Outputs failure information of client services to the standard output in the cpio format.
2. Uses the output file of the `rdsgget -o` command as the standard input to acquire failure information of client services. The acquired file is restored under the current directory.

Format

1. Outputting failure information to the standard output in the cpio format

```
rdsgget -o [-f identifier]
```

2. Using the output result of the `-o` option as the input to output failure information

```
rdsgget -i [-t]
```

Options

`-f identifier`

Specifies information to be output with the `-o` option. Use this option when the storage device to store failure information is small. If you omit the `-f` option, all the information is output.

identifier

- `base`:
Acquires failure information of client services.
- `Detail`:
Acquires detailed failure information which is not acquired with `base` other than communication-related information.
- `tcp_ip`:
Acquires settings information of TCP/IP.

`-i`

Uses the output file of the `rdsgget -o` command as the standard input to acquire failure information of client services. The acquired file is restored under the current directory.

`-o`

Outputs failure information of client services to the standard output in the cpio format.

`-t`

Uses the file output with the `-o` option as the standard input to output only the directory information.

Example

- To store failure information in a storage device

```
rdsgget -o > special-file-name
```

- To output failure information to the hard disk

```
rdsgget -o > user-specified-file-name
```

- To restore failure information

```
rdsget -i < special-file-name
```

Special file name

Specify a special file name matching with the storage device to be registered, using the absolute path starting with `/dev/`. For how to specify a special file name, see the operating system manual. The following lists some of special file names.

- When using a built-in CMT
`/dev/cmt00`
- When using a DAT
`/dev/datxx` (*xx* varies depending on the connection method or setting method.)
- When using a built-in floptical disk
`/dev/rfpd00`
- When using a CD-ROM
`/dev/cdxx` (*xx* varies depending on the connection method or setting method.)

Remarks

- To collect failure information, the work area for collection is required. If you specify the name of the directory in the environment variable `TMPDIR`, a file to be used as the work area is created under the directory. Specify a directory that has sufficient free space for `TMPDIR`. If you do not specify `TMPDIR`, the command follows the `DMTMPDIR` settings of the operating-environment settings file.

10

Messages

This chapter explains the JP1/IT Desktop Management 2 - Agent messages.

The messages that are output during packaging are displayed on the screen. The messages output during package distribution or during file collection are stored in the job management file of the managing server as detail codes.

10.1 Message format

10.1.1 Message output format

Each message is shown in the following format:

KDDM $nnnn$ - M (or KDGF $nnnn$ - M)

$XX...XX$

Cause

$yy...yy$

Action

$zz....zz$

KDDM $nnnn$ - M (or KDGF $nnnn$ - M)

Message ID

KDDM: Message for the client services for JP1/IT Desktop Management 2 - Agent

KDGF: Message for the generator tools

$nnnn$: Any number indicating a message code

M : Indicates one of the following message types:

I: Information message

E: Error message

K: Processing message

Q: Query message

S: System error message

W: Warning message

$XX...XX$

Message text

$yy...yy$

Explains the cause of the message. Omitted if no explanation is necessary.

$zz....zz$

Explains an action to take. Omitted if no action is necessary.

For messages that can be output during packaging, message IDs and the message text are displayed on the screen. These contents are also contained in the following files:

- For systems other than HP-UX: /NETMRDS/rdsprm/MAIN.LOGF
- For HP-UX: /var/opt/NETMDMW/rdsprm/MAIN.LOGF

10.1.2 Formats for messages output during package distribution or during file collection

The message code (the numerical part of a message ID) of a message reported during package distribution or file collection is sent to the managing server.

Detailed information is set from the 94th byte of the job management file, and uses four bytes per message. The section where a message code is not set is padded with (0x00). Up to seven message codes are sent to the managing server. The 8th and subsequent message codes are not sent.

An example of detailed information is as follows:

2205	2189	2055				
------	------	------	--	--	--	--

2205

KDDM2205-E: An error occurred during the receiving of the file.

2055

KDDM2055-E: Could not find the specified packages in the managing server.

In this example, you can determine that an error occurred during file transfer because the specified packages could not be found in the managing server. Consider all the detail codes that are set to determine the cause of an error.

In the system of a Windows manager server, you can check messages in the Job Execution Status window to check the detailed information stored in the job management file. For details of how to check the contents of the job management file, see the manual provided for the managing server.

10.1.3 Severity of messages that are reported to the managing server

JP1/IT Desktop Management 2 sets the severity of a message for reporting the result of a job. JP1/IT Desktop Management 2 - Agent determines the severity of an error according to the following criteria and then reports it to the managing server.

Critical error

The UNIX machine cannot process a job.

Major error

An error occurred while processing a job.

Minor error

An error occurred in a job being processed due to an error that occurred in another job.

10.2 Messages for client services

This section lists the messages for the client services.

KDDM0001-E

An error occurred during the processing of a settings file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /etc/opt/NETMDMW for HP-UX) failed.

KDDM0002-E

Memory became insufficient.

Cause

An error occurred while attempting to obtain a work area.

Action

System resources (such as a buffer area) may temporarily be insufficient. Wait for a while, then retry.

KDDM0003-E

A specified parameter is invalid.

Cause

The control statement specified in a file contains an invalid parameter.

Action

Correct the parameter, then retry.

KDDM0005-E

The format of the settings file is invalid.

Action

Correct the settings file, then retry.

KDDM0006-E

An error occurred during the processing setup.

Cause

An error occurred while initializing the client services.

Action

Delete all unnecessary files (other than MAIN.LOGF, RDSSETFL.bak, AC000000.def, etc.) under the directory that stores the settings files for the client services and then reinitialize the client services.

KDDM0010-I

Attribute name = 'xxxxx'

Cause

The attribute name is incorrect.

Action

See the message output immediately before this message or immediately after this message.

KDDM0011-I

xxxxx

Cause

xxxxx indicates the name and version number of the program being processed. If the message output immediately before this message is KDDM2097-E, the name of a non-existent external program for performing processing before or after installation is indicated. If the KDDM2540-W, KDDM2541-W, KDDM2542-W, KDDM9045-E, KDDM9046-E, KDDM9048-W, KDDM9050-W, KDDM9052-W, or KDDM9054-W message is output immediately before this message, a deleted file name is indicated.

Action

See the message output immediately before this message.

KDDM0012-E

An error occurred in exclusive lock processing.

Cause

A hard disk error occurred during an exclusive lock for maintaining a processing sequence.

Action

Check if the disk failed. If the disk is normal, system resources (a disk, etc.) may temporarily be insufficient. Re-execute the command.

KDDM0013-E

An error occurred during the processing of the program product installation management file.

Cause

A system error occurred.

Action

Check if the disk with the system directory (/etc/) failed. If the disk is normal, system resources (a memory, etc.) may temporarily be insufficient. Re-execute the command.

KDDM0014-E

A request to the file transfer server facility is invalid.

Cause

The program processing request to the file transfer server facility is incorrect.

Action

Check the connection to the upper-level system.

KDDM0015-E

An error occurred in the file transfer server facility.

Action

Check if the upper-level system failed. Check the value of `ManagingHost` in the settings file of JP1/IT Desktop Management 2 - Agent and the setting of the upper-level connection destination.

- If the name resolution process, which converts a computer name or a domain name into an IP address or a MAC address, works correctly
- If the port to be used is correct

KDDM0016-E

An error occurred in the file transfer program.

Action

Check the connection to the upper-level system.

KDDM0017-E

An error occurred in the processing after sending a file.

Action

Check if the upper-level system failed.

KDDM0018-E

A system call error occurred.

Action

Check if the disk failed. If the disk is normal, system resources (a disk, etc.) may temporarily be insufficient. Re-execute the command. Also, check the message immediately before this message, if there is one.

KDDM0019-E

The file does not exist.

Cause

No sending or receiving files exist for the file transfer server facility.

Action

Check if the file specified in the upper-level system was deleted.

KDDM0020-E

A communication error occurred in the file transfer server facility.

Action

Check the connection to the upper-level system.

KDDM0021-E

An error occurred during the processing of a communication message.

Cause

The destination system failed, or the communication server has an internal conflict.

Action

Restart the system. If the error still recurs, collect the error information and contact the program developer. Also, check the message immediately before this message, if there is one.

KDDM0022-E

An error occurred in the program.

Action

Check if the disk failed. Also, check the message immediately before this message, if there is one.

KDDM0023-E

A communication error occurred in the file transfer server facility.

Action

Check the connection to the upper-level system.

KDDM0024-E

An option is invalid.

Cause

An invalid option is specified, or the specification is out of order.

Action

Check the command name and the option, then retry.

KDDM0025-E

The host file name is specified incorrectly.

Action

Check the host file name, then retry.

KDDM0026-E

The password is specified incorrectly.

Cause

The password does not match the one defined in the managing server.

Action

Check the password and specify a correct password.

KDDM0027-E

No password is specified.

Cause

-k *password* is missing in the `rdsft` command.

Action

Specify -k *password*.

KDDM0028-E

The directory name is specified incorrectly.

Cause

The directory name is missing, or it consists of more than 128 characters.

Action

Specify the directory name that consists of up to 128 characters.

KDDM0029-E

The packaging-information file name is specified incorrectly.

Cause

The packaging-information file name is missing, or it consists of more than 128 characters.

Action

Specify the packaging-information file name that consists of up to 128 characters.

KDDM0030-E

An option is missing.

Cause

The required option is missing.

Action

Check the option, then retry.

KDDM0031-E

There is an error in the startup method for JP1/IT Desktop Management 2.

Action

Start JP1/IT Desktop Management 2 by a command of the client services.

KDDM0035-E

A command option is invalid.

Cause

The command contains an invalid option.

Action

See the message output immediately before this message.

KDDM0036-E

The password is invalid.

Cause

The password does not match the one defined in the managing server.

Action

Check the password, specify a correct password and then retry.

KDDM0037-E

An error occurred during the processing of the settings file.

Action

See the message output immediately before this message.

KDDM0039-E

An error occurred in the program.

Cause

A system error occurred.

Action

See the message output immediately before this message.

KDDM0041-E

An option check generated an error.

Action

Check the command name and the option, then retry.

KDDM0042-E

An error occurred during the processing of the settings file output.

Action

Delete `/NETMRDS/rdsprm/NETSETFL` (`/etc/opt/NETMDMW/rdsprm/NETSETFL` for HP-UX), recreate the settings file and then re-execute the command. The names of the settings files are as follows:

- For systems other than HP-UX: `/NETMRDS/rdsprm/RDSSETFL`
- HP-UX: `/etc/opt/NETMDMW/rdsprm/RDSSETFL`

KDDM0043-E

An error occurred during the processing of the settings file input.

Action

Delete `/NETMRDS/rdsprm/NETSETFL` (`/etc/opt/NETMDMW/rdsprm/NETSETFL` for HP-UX), recreate the settings file and then re-execute the command. The names of the settings files are as follows:

- For systems other than HP-UX: `/NETMRDS/rdsprm/RDSSETFL`
- HP-UX: `/etc/opt/NETMDMW/rdsprm/RDSSETFL`

KDDM0044-E

Another process is updating the settings file.

Action

Wait for the process being executed to complete, then perform the setting.

KDDM0045-E

The value for `ManagingHost` in the client environment is specified incorrectly.

Action

Correct the value for `ManagingHost`, then retry.

KDDM0046-E

An error occurred during the processing of a user-specified file.

Action

Check the contents of the file.

KDDM0048-E

No environment is set up for JP1/IT Desktop Management 2 yet.

Action

Set the operating environment for the client services, then retry.

KDDM0049-E

An error occurred during the processing of a directory.

Cause

An error occurred while opening or reading a directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM0050-W

An error occurred in the system call.

Cause

An error occurred in an `access` system call for the file. Processing continues.

KDDM0051-E

A TCP/IP communication error occurred.

Action

Check the connection to the upper-level system.

KDDM0052-E

The response from the file transfer server facility is invalid.

Action

Check the connection destination.

KDDM0053-E

The default value for `netmdmw` was already used.

Cause

The client services set the `netmdmw` port number in `/etc/services`, but that number has been used for another port.

Action

Set a new `netmdmw` port number in `/etc/services`.

KDDM0054-E

There is no response in TCP/IP communication.

Cause

There is no response during the specified time period for TCP/IP communication.

Action

See the next message ID.

KDDM0055-E

There is no response from the file transfer server facility in file transfer server facility communication.

Cause

There is no response during the specified time period for communication with the file transfer server facility.

A possible cause is that the time set in the file transfer response timeout (`ReceiveWaitTime`) in the settings file is shorter than the file transfer sleep time (`FileTransferSleepTime`) set in the settings file of the upper-level system.

Action

Re-enter the values in the settings files and retry the operation.

KDDM0057-E

The default value for `netmdmclt` was already used.

Cause

The client services set the `netmdmclt` port number in `/etc/services`, but that number has been used for another port.

Action

Set `netmdmclt` in `/etc/services`.

KDDM0058-E

The format of the distribution situation file is old.

Cause

The format of the distribution situation file is old.

Action

Convert the file by using the command for converting the distribution situation file (`rdsdlvcnv`), and then retry the operation.

KDDM0059-I

A child process did not exist.

Cause

The child process has already ended.

Action

Continue processing.

KDDM0060-I

```
func = fff, rtn = rrr, errno = eee, arg = (aaa1, aaa2, ...)
```

Cause

An error was detected during a system call or a call to a library function.

fff: System call name or library function name

rrr: Return value of the function

eee: Error code

aaa: Argument used when the function is called

The items followed by - are not output. This message may take more than one line. If there is a continuing line, > is displayed at the end of the line. If a line has a previous line, the line begins with >.

Action

This message may contain the reason of failure if another error message appears after this message or if JP1/IT Desktop Management 2 is running abnormally. Check the error code after `errno` in the applicable manual of your operating system.

KDDM0061-W

System information does not exist.

Cause

The system information indicated in maintenance information 2 of JP1/IT Desktop Management 2 - Agent in the message log file (for operating systems other than HP-UX: /NETMRDS/rdsprm/MAIN.LOGF, for HP-UX: /var/opt/NETMDMW/rdsprm/MAIN.LOGF) does not exist.

KDDM0062-E

Conversion of data from xxxxxx to yyyyyy has failed.

Cause

Code conversion of data that can be entered in Japanese failed.

xxxxxx: Encoding of the code conversion source (SJIS-WIN (IBM-943, PCK, sjis), EUC, UTF8 (utf8, UTF-8))

yyyyyy: Encoding of the code conversion destination (SJIS-WIN (IBM-943, PCK, sjis), EUC, UTF8 (utf8, UTF-8))

Action

There is no converter (code set) in the distribution-destination system you are using.

Use the following command to check the converter (code set):

For HP-UX:

```
# find /usr/lib -name lsjisutf8.sl
```

Make sure that the following information is output:

```
/usr/lib/nls/iconv/methods.1/lsjisutf8.sl
```

```
/usr/lib/nls/iconv/methods.2/lsjisutf8.sl
```

```
/usr/lib/nls/iconv/pa20_64/methods.2/lsjisutf8.sl
```

For Solaris:

```
# ls /usr/lib/iconv
```

Make sure that the following files are included in the output result:

- PCK%UTF-8.so
- UTF-8%PCK.so

For AIX and Linux:

```
# iconv -l
```

Make sure that the following information is included in the output result:

- IBM-943 (for AIX), or SJIS-WIN (for Linux)
- UTF-8

KDDM0500-E

The -s option and the -S option cannot be specified simultaneously.

Action

Check the option, then retry.

KDDM0501-E

The -d option and the -D option cannot be specified simultaneously.

Action

Check the option, then retry.

KDDM0503-E

An option is specified, but it should not be.

Action

Check the option, then retry.

KDDM0504-E

The value for *xxxxx* is invalid.

Cause

Among the specified options, the value of *xxxxx* is incorrect.

Action

Check the option, then retry.

KDDM0505-E

Required option *xxxxx* is specified incorrectly.

Cause

The required option (*xxxxx*) is not specified or is incorrect.

Action

Check the option, then retry.

KDDM0506-E

A packaging-information file name is specified incorrectly.

Action

Check the packaging-information file name, then retry.

KDDM0509-E

A system error occurred.

Action

Check if the disk failed. If the disk is normal, system resources (a memory, etc.) may temporarily be insufficient. Re-execute the command or the job.

KDDM0511-E

An error occurred during the displaying of backup information.

Cause

A system error occurred.

Action

Re-execute the `rdsrecover` command. If the error recurs, restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM0514-W

xxxxx errors occurred during an attempt to install packages while the system was terminating.

Action

See the `/NETMRDS/rdsprm/MAIN.LOGF` (`/var/opt/NETMDMW/rdsprm/MAIN.LOGF` for HP-UX) file to check the causes of the errors.

KDDM0515-E

No xxxxx option is specified.

Cause

The xxxxx option is missing.

Action

Check the specification of the option, then retry.

KDDM0516-E

The value for the attribute name (xxxxx) in the settings file is specified incorrectly.

Action

Check the contents of the settings file, then retry.

KDDM0517-E

The value for the attribute name (xxxxx) in the host file is specified incorrectly.

Action

Check the contents of the host file, then retry.

KDDM0518-E

Errors occurred during an attempt to install xxxxx packages while the system was terminating.

Action

Check the error message during installation.

KDDM0519-E

A special file must be specified.

Cause

The special file is not specified in the `rds1st` command.

Action

Specify the special file in the `rds1st` command, then retry.

KDDM0520-E

The operating environment for JP1/IT Desktop Management 2 is incorrect.

Cause

A file or a directory does not exist for the client services.

Action

Check if you deleted the file or directory under `/NETMRDS/` (or `/var/opt/NETMDMW` for HP-UX). If you have deleted it, reinstall JP1/IT Desktop Management 2 - Agent.

KDDM0521-E

The value for the attribute name (`xxxxx`) in the user resource status file is specified incorrectly.

Cause

An incorrect value is specified for the keyword indicated as `xxxxx` in the user resource status file that is specified using the `rdsusnd` command.

Action

Correct the value of `xxxxx`, then retry.

KDDM0522-E

No package ID is specified in the user resource status file.

Cause

A package ID is missing in the user resource status file specified by the `rdsusnd` command.

Action

Specify the package ID in the user resource status file, then retry.

KDDM0523-E

No user status is specified in the user resource status file.

Cause

A user status is missing in the user resource status file specified by the `rdsusnd` command.

Action

Specify the user status in the user resource status file, then retry.

KDDM0524-E

The specified user resource status file does not exist.

Cause

The user resource status file specified by the `rdsusnd` command does not exist.

Action

Specify a correct user resource status file, then retry.

KDDM0525-E

The format of the specified user resource status file is invalid.

Cause

The format of the user resource status file that is specified using the `rdsusnd` command is incorrect.

Action

Specify the name of a correct user resource status file, or correct the contents of the user resource status file and then retry.

KDDM0527-E

Could not connect the event server.

Action

Restart the event server. If the error recurs, contact the system administrator.

KDDM0528-E

An attempt to register in the event server failed.

Action

Check the status of the JP1/Base server.

KDDM0529-E

The super user is not executing the `rdslst` command.

Cause

A general user executed the `rdslst` command.

Action

Log in as a superuser and then re-execute the command.

KDDM0530-E

This command cannot operate in an end workstation.

Action

Execute the command at the client workstation where you want to perform package distribution with an ID group specified.

KDDM0531-E

The `xxxxx` option cannot be specified in a relay system directly connected to the managing server.

Action

Specify the `xxxxx` option when executing the command at the relay system or the client workstation that is not directly connected to the managing server and that you want to perform package distribution with an ID group specified.

KDDM0532-E

The `xxxxx` option cannot be specified in a client.

Action

This option is not supported.

KDDM0533-E

Could not reference the ID group settings in the relay system directly connected to the managing server.

Cause

The following ID group definition file cannot be created on the relay system that is directly connected to the managing server. Therefore, it cannot be referenced.

For systems other than HP-UX: `/NETMRDS/rdsprm/DMWIDUPM`

For HP-UX: `/etc/opt/NETMDMW/rdsprm/DMWIDUPM`

Action

Execute the `rdsiddefine -lc` command.

KDDM0534-E

No host name is defined.

Cause

The host name specified by the `-m` option of a command is not defined in `/etc/hosts`.

Action

Check the definitions in `/etc/hosts`, then retry.

KDDM0535-E

The super user is not executing the `xxxxx` command.

Cause

A general user attempted to execute a command that only a superuser can execute.

Action

Execute the command as a superuser.

KDDM0536-E

This command cannot operate in a client.

Action

Execute the command at the relay system where you want to perform package distribution with an ID group specified.

KDDM0541-W

Saved the file because there were too many transmissions.

Cause

The number of errors exceeded the limit for file transfer to the upper-level system.

Action

Check if the upper-level system failed or if a communication error occurred.

KDDM0543-W

The user inventory item list has not been updated.

Action

You do not have to update the user information.

KDDM0546-E

Message log file could not be resized because there was not enough free disk space.

Cause

The amount of available disk space is insufficient for storing the message log file.

Action

Delete unnecessary files and set up the environment again.

KDDM0547-E

Message log file could not be resized because a system error occurred.

Action

Set up the environment again.

KDDM0548-E

host=xxxxx, system call=yyyyy, errno=zzz

Cause

Communication with xxxxx failed.

Action

See the message output immediately before this message.

KDDM0549-E

host=xxxxx

Cause

An error occurred during communication with xxxxx.

Action

See the message output immediately before this message.

KDDM0550-E

An error occurred while *xxxxx* was being processed.

Cause

An error occurred while reading the network interface definition file. The file name of the network interface definition file is *xxxxx*.

Action

Delete and then recreate the file.

KDDM0552-W

xxxxx is an invalid interface name.

Cause

Entry *xxxxx* in the network interface definition file is incorrect.

Action

Correct the contents of the entry. The file names of the network interface files are as follows:

- For systems other than HP-UX: /NETMRDS/rdsprm/IFCONFIG
- For HP-UX: /etc/opt/NETMDMW/rdsprm/IFCONFIG

KDDM0553-E

The connection via *xxxxx* has failed.

Cause

The connection via the entry *xxxxx* in the network interface definition file has failed.

Action

Check the settings of the network specified by that entry. The file names of the network interface files are as follows:

- For systems other than HP-UX: /NETMRDS/rdsprm/IFCONFIG
- For HP-UX: /etc/opt/NETMDMW/rdsprm/IFCONFIG

KDDM0554-W

Since the file transfer from a higher connection destination is interrupted, *xxxxx* cannot be executed.

Cause

Because the file transfer from the upper-level system is canceled, the command indicated in *xxxxx* cannot be executed.

Action

Execute the command after the file transfer has been restarted.

KDDM0555-E

Installation of the OS patch has failed.

Cause

The OS patch installation command does not exist or an error occurred during the execution of the OS patch installation command.

Action

Check whether the directory containing the OS patch installation command is written in environment variable `PATH`. When the directory exists, reference the installation log file of the OS patch (for operating systems other than HP-UX: `/NETMRDS/rdsprm/OSPATCH.LOGF`, for HP-UX: `/var/opt/NETMDMW/rdsprm/OSPATCH.LOGF`) and the message log file (for operating systems other than HP-UX: `/NETMRDS/rdsprm/MAIN.LOGF`, for HP-UX: `/var/opt/NETMDMW/rdsprm/MAIN.LOGF`) to correct the cause of the failure. Then re-execute the processing.

KDDM0556-E

Unarchiving of the OS patch has failed.

Cause

The system failed to unarchive the OS patch.

Action

Reference the unarchive log file of the OS patch (for operating systems other than HP-UX: `/NETMRDS/rdsprm/UNACV.LOGF`, for HP-UX: `/var/opt/NETMDMW/rdsprm/UNACV.LOGF`) and correct the cause of the failure. Then re-execute the processing.

KDDM0557-E

The archive form of the OS patch is incorrect.

Cause

The distributed OS patch is for another operating system or the operating system is not equipped to handle the archive format of the distributed OS patch.

Action

Check whether the distributed OS patch is applicable to the operating system in the distribution-destination system. When the OS patch is applicable, execute the OS patch installation command in the distribution-destination system.

KDDM0558-E

Reboot of the OS has failed.

Cause

Execution of the `reboot` command failed. The cause of the `reboot` command execution failure is as follows:

- The `reboot` command cannot be executed.
- The `reboot` command terminated abnormally.

Action

Check the following:

- The `reboot` command must be in the specified location and you must have execution permissions.
- Check whether the `reboot` command is operating correctly.

KDDM0559-Q

The selected package, requires an OS reboot after installation. Do you want to continue with installation? (To continue, press the Return key; to stop, press the e key)

Cause

The selected package is set to restart the operating system after it is installed.

Action

If you do not want to install the package immediately, press the **e** key. Re-execute the command when you install the package.

KDDM0560-Q

The selected package requires an OS reboot after installation. Do you want to reboot the OS now? (To continue, press the Return key; to stop, press the **e** key)

Cause

The selected package requires rebooting of the OS after installation.

Action

If you do not want to reboot the OS immediately, press the **e** key and manually reboot the OS.

KDDM0561-W

Since the program identifier is an OS patch, package properties and job properties will be disregarded.

Cause

The attribute specified in the program to be installed is invalid when the program is an OS patch.

Action

If the program to be installed is an OS patch, the following attributes are ignored when the program is installed:

- Installation date and time
- Installation specification
- Installation target directory
- Directory owner
- Directory group
- Directory mode
- Recovery specification
- Backup storage period
- Installation target file name

KDDM0562-W

The installed package requires a reboot of the OS.

Cause

The installed package is set to restart the operating system at packaging and when the distribution job is issued.

Action

If **Yes** is not set for **RebootPermission** in the environment settings file, restart the operating system manually.

KDDM0563-E

Installation of the OS patch did not finish within the monitoring time. Monitoring processing will now stop.

Cause

The installation job for the OS patch fails since the OS patch installation command did not end within the monitoring period.

Action

For the results of the installation of the OS patch, see the installation log file of the OS patch (`NETMRDS/rdspm/OSPATCH.LOGF`).

KDDM0564-I

Rebooting the OS.

Cause

Reboots the OS.

KDDM0565-I

Starting to install the OS patch.

Cause

Installation of the OS patch will now be executed.

KDDM0566-I

Completed installing the OS patch.

Cause

Installation of the OS patch has completed.

KDDM0567-E

An error occurred while acquiring anti-virus products information.

Cause

An error occurred while acquiring anti-virus products information.

Action

See the message output immediately before this message.

KDDM0568-S

An attempt to generate an environment for interprocess communication has failed.

Cause

The memory may be insufficient.

Action

Check the remaining space in the memory and re-execute the processing.

KDDM0569-E

An attempt to communicate with the `xxxxx` process has failed.

Cause

Process `xxxxx` may have stopped.

`xxxxx`: Process name

Action

Restart the client services and re-execute the processing.

KDDM0570-E

An attempt to generate an environment for interprocess communication has failed.

Cause

The directory of JP1/IT Desktop Management 2 may have been deleted.

Action

Re-install JP1/IT Desktop Management 2 - Agent and re-execute the processing.

KDDM0571-E

An attempt to communicate with the `xxxxx` process has failed.

Cause

Process `xxxxx` may have stopped.

`xxxxx`: Process name

Action

Restart the client services and re-execute the processing.

KDDM0572-W

`xxxxx` was stopped because a signal was received.

Cause

The `xxxxx` process was terminated because a signal that indicates an event such as an interrupt or line disconnection was received.

`xxxxx`: Process name

Action

Restart the system as described in *5.4.1(5) Changing the settings file* in PART 2.

KDDM0573-I

Installation of another company's software will now begin.

Cause

Installation of another company's software will now start.

KDDM0574-I

Installation of another company's software has finished.

Cause

Installation of another company's software is being ended.

KDDM0575-E

An attempt to install another company's software has failed.

Cause

The standard OS installation command does not exist. Alternatively, an error occurred during execution of the installation command.

Action

Check whether the directory that contains the standard OS installation command has been specified in the `PATH` environment variable. If the directory has been specified, check the following installation log file for another company's software, correct the error, and then re-execute the installation:

- For systems other than HP-UX: `/NETMRDS/rdsprm/ISVSOFT.LOGF`
- For HP-UX: `/var/opt/NETMDMW/rdsprm/ISVSOFT.LOGF`

KDDM0576-E

The format of the installation file of another company's software is not supported.

Cause

The software to be installed was packaged on a machine that runs on an OS that differs from the OS of the distribution destinations.

Action

Perform packaging from a machine that runs on the same OS as the OS of the distribution destinations.

KDDM0577-W

The package and instruction attributes will be ignored because the program identifier is of another company's software.

Cause

During installation of another company's software, attributes invalid for the software were specified.

Action

Keep in mind that the following attributes are ignored during installation of another company's software when you distribute the software:

- Prerequisite version
- Installation date/time
- Generator
- Comment
- Installation target directory
- Name of the file at the installation destination
- Directory owner
- Directory group
- Directory mode
- Recovery facility (for systems other than HP-UX)
- Backup storage period

- Backup list name

KDDM0578-E

Monitoring processing will now stop because installation of another company's software did not finish within the monitoring time.

Cause

Installation of another company's software did not finish within the monitoring period. As a result, the distribution job for the software has failed.

Action

Use the following installation log file for another company's software to check the results of installing another company's software:

- For systems other than HP-UX: `/NETMRDS/rdsprm/ISVSOFT.LOGF`
- For HP-UX: `/var/opt/NETMDMW/rdsprm/ISVSOFT.LOGF`

KDDM0580-W

No value is specified for `xxxxxx`.

Cause

Data cannot be sent to the upper-level system because no value is specified for `xxxxxx`, which is a required item.

Action

Enter a value, and then send the data to the upper-level system again.

KDDM0581-I

Conversion of the system configuration information has finished normally.

Cause

Conversion of the system configuration information has finished normally.

KDDM0582-E

Conversion of the system configuration information has failed.

Cause

An error occurred during conversion of the system configuration information.

Action

Check whether the disk that contains the client services directory has an error. In HP-UX, the name of the directory might be `/NETMRDS`. In other OSs, the name of the directory might be `/var/opt/NETMDMW`. If there is no disk error, since the most likely cause of the error is temporarily insufficient system resources (such as memory), re-execute the command.

KDDM0583-E

JP1/IT Desktop Management 2 is running.

Cause

Conversion of system configuration information was canceled because JP1/IT Desktop Management 2 - Agent was active.

Action

Stop JP1/IT Desktop Management 2 - Agent, and then retry.

KDDM0584-E

HOSTID is not set for CLIENT_KEY in the operating-environment settings file.

Cause

Conversion of system configuration information was canceled because the CLIENT_KEY entry in the operating-environment settings file was not set to HOSTID.

Action

Make sure that the CLIENT_KEY entry in the operating-environment settings file is set to HOSTID, and then retry the operation.

KDDM0999-E

An error occurred during the accessing of the message catalog.

Action

Set the language environment, then retry. If the error recurs, restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM1001-E

An error occurred in a workstation.

Action

Cancel processing. The amount of space in the root file system may be insufficient. Delete unnecessary files, then retry. If the error recurs, contact the system administrator to check the file system.

KDDM1003-E

The specified directory does not exist in the user resource path.

Cause

Packaging from a hard disk is impossible because the directory does not exist in the user resource path.

Action

Cancel processing. Specify a correct directory, then retry.

KDDM1004-E

Too many resources were packaged to the specified cabinet.

Cause

The number of packages registered with the specified group exceeded the maximum number of resources (256) that can be packaged in the cabinet in the job management file of the managing server.

Action

Cancel processing. Delete unnecessary packages.

KDDM1005-E

This program cannot be packaged.

Cause

The floppy disk containing a program that cannot be packaged is mounted.

Action

Cancel processing.

KDDM1006-W

The specified directory is invalid.

Cause

Since an invalid directory is specified, packaging cannot be done from a hard disk.

Action

Cancel processing. Specify a correct directory, then retry.

KDDM1007-W

An error occurred in the channel.

Cause

An error occurred in the channel. The managing server may not be turned on.

Action

Cancel processing. If the error recurs after retry, contact the system administrator.

KDDM1008-E

No disk space is left.

Cause

There is no free space in a hard disk.

KDDM1009-W

Delete unnecessary files, and retry.

Action

Cancel processing. Delete unnecessary files.

KDDM1010-E

An attempt was made to package a program that is not a UAP.

Cause

The floppy disk containing a program other than application program is mounted, or the floppy disk failed.

Action

Cancel processing. Check the contents of the floppy disk and the settings of the packaging-information file, and then retry.

KDDM1011-E

An attempt was made to package a provided recording medium, but it is not a program product.

Cause

A medium containing a program other than a program product is mounted, or a medium failed.

Action

Check the medium, then retry.

KDDM1012-E

An error occurred during packaging.

Cause

The UNIX machine failed.

Action

Cancel processing. The amount of space in the root file system may be insufficient. Delete unnecessary files, then retry. If the error recurs, contact the system administrator to check the file system.

KDDM1013-E

No packaging-information file exists.

Action

Cancel processing. Correct the packaging-information file, then retry.

KDDM1014-E

The value for the attribute name in the packaging-information file is invalid.

Action

Cancel processing. Correct the packaging-information file, then retry.

KDDM1015-E

A required item for the packaging-information file is missing.

Cause

A cabinet ID is missing in the packaging-information file. If you registered a user program, a package ID or a program name is not specified in the packaging-information file.

Action

Cancel processing. Correct the packaging-information file, then retry.

KDDM1016-E

An invalid attribute name is specified in the packaging-information file.

Action

Cancel processing. Correct the packaging-information file, then retry.

KDDM1017-E

The format of the packaging-information file is invalid.

Action

Cancel processing. Correct the packaging-information file, then retry.

KDDM1018-E

An error occurred during the processing of the packaging-information file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, the required files for the client services might be deleted. Reinstall them.

KDDM1019-W

The specified software is already packaged.

Cause

The software you attempted to package have already been registered in the cabinet.

KDDM1020-W

Delete and repackage the packages in the managing server.

Action

Cancel processing. Delete the packages in the cabinet from the managing server, then retry.

KDDM1021-W

The same name software was already packaged in the managing server in an invalid format.

Cause

The software you attempted to register is already registered in an incorrect format.

KDDM1022-W

Delete and package the software in the managing server.

Action

Cancel processing. Delete the packages in the cabinet from the managing server, then retry.

KDDM1023-E

The floppy disk is being used.

Cause

The floppy disk is mounted.

Action

Unmount the floppy disk and then press the **Enter** key. For details of how to unmount the floppy disk, see the UNIX manual. Press the **e** key to cancel processing.

KDDM1024-E

An error occurred in that medium device.

Cause

The device with the medium mounted failed.

Action

Check if the device with the medium mounted failed. Remount the medium, then retry. If this error has occurred on a CD-ROM drive in AIX, mount and unmount the CD-ROM drive, and then retry.

KDDM1025-E

No recording medium is installed.

Action

Mount the medium and then press the **Enter** key. Press the **e** key to cancel processing.

KDDM1026-E

The floppy disk format is incorrect. Insert a correctly formatted disk.

Cause

A floppy disk with a program other than program products is mounted, or the floppy disk failed.

Action

Press the **Enter** key to remove the floppy disk and check program products. If an error occurred when using the floppy disk with the program products, contact the system administrator. Press the **e** key to cancel processing.

KDDM1027-E

The provided recording medium was inserted in the wrong order.

Action

Mount the medium in a correct order, then retry.

KDDM1028-W

Software is being packaged on other terminals.

Cause

Since another terminal possesses the access privilege for the managing server, packaging is impossible.

Action

Wait for a while, then retry.

KDDM1029-I

If you want to re-package, press a Return key.

Action

Press the **Enter** key to re-package. Press the **e** key to cancel processing.

KDDM1030-E

Other users are using the recording medium.

Action

Cancel processing. Wait for other users to complete their use of the medium, then retry.

KDDM1031-W

The multivolume name specification was invalidated.

Cause

The multi-volume name is incorrect and it is invalidated.

Action

Check the multi-volume name.

KDDM1034-I

*** Packaging a program ***

Cause

Packaging of a program starts.

KDDM1035-I

Insert a recording medium into the device.

Action

Mount the medium to be packaged into the device.

KDDM1036-I

The inserted floppy disk was read.

Cause

Packaging of data in the floppy disk starts.

KDDM1037-I

Insert the provided recording medium *n/m* into the device. (To continue = Return key; to stop = the **e** key)

Action

Mount the medium (*n*th medium of the *m* media provided) and then press the **Enter** key. Press the **e** key to cancel processing.

KDDM1038-K

Now packaging software. Please wait a moment.

Cause

Software is being packaged.

KDDM1039-I

Packaging program *xxxxx*

Cause

xxxxx indicates the name of a program being packaged.

KDDM1040-I

(Press the e key to stop.)

Action

Press the **e** key to terminate processing.

KDDM1041-I

Insert and press the Return key.

Action

Mount a floppy disk into the device and then press the **Enter** key.

KDDM1042-E

The response key is invalid. Respond by pressing another key.

Action

Press a correct response key.

KDDM1043-K

Now reading software. Please wait for a moment.

Cause

Reading is proceeding.

KDDM1044-I

Please confirm, then press the Return key.

Action

Check the contents of the previous message and then press the **Enter** key.

KDDM1045-E

An attempt was made to package software which is a program product.

Cause

A program product is specified for packaging a user resource.

Action

Specify a correct user resource, then retry.

KDDM1046-E

An attribute value specified in the host file is invalid.

Action

Specify a correct host file, then retry.

KDDM1047-E

Host file *xxxxx* does not exist.

Cause

The *xxxxx* host file does not exist.

Action

Specify a correct host file, then retry.

KDDM1048-E

The format of the host file is invalid.

Action

Recreate a host file, then retry.

KDDM1049-E

An error occurred during the processing of the host file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM1050-E

An invalid attribute name is specified in the host file.

Action

Specify a correct attribute name in the host file, then retry.

KDDM1051-E

The host file name is invalid.

Action

Specify a correct host file name, then retry.

KDDM1052-I

Completed reading software.

Cause

The software set for the device has been loaded.

KDDM1053-I

Remove the inserted recording medium.

Action

Input from the medium is terminated. Eject the medium from the device.

KDDM1054-I

To restart packaging, press the Return key.

Action

Press the **Enter** key to start packaging. Press the **e** key to cancel processing.

KDDM1056-I

Packaging the following software:

KDDM1057-I

If it is correct, press the Return key.

Action

If a software is correct, press the **Enter** key. Press the **e** key to cancel processing.

KDDM1060-E

No packaging-information file exists.

Action

Specify a correct packaging-information file, then retry.

KDDM1061-E

The format of the packaging-information file is invalid.

Action

Specify a correct packaging-information file, then retry.

KDDM1063-E

An invalid attribute is being specified for a packaging-information file.

Action

Specify a correct attribute name for a packaging-information file, then retry.

KDDM1064-E

The packaging-information file name specification is invalid.

Action

Specify a correct packaging-information file name, then retry.

KDDM1065-E

Could not find the specified program product in the packaging-information file.

Cause

The program product does not exist in the packaging-information file.

Action

Specify a correct program product name in the packaging-information file, then retry.

KDDM1066-E

The specified program product is not stored in the provided recording medium.

Cause

All program products do not exist.

Action

Mount a correct medium into the device, then retry.

KDDM1067-E

The program product is not in the provided cassette tape.

Action

Mount a correct provided magnetic tape cassette into the device, then retry.

KDDM1068-E

The provided recording medium is not inserted.

Action

Mount the provided recording medium, then retry.

KDDM1069-E

The management floppy disk is not inserted.

Action

Mount the management floppy disk into the device.

KDDM1071-Q

=>

Action

Press the **e** key to terminate processing.

KDDM1072-E

An error occurred during the processing of the provided recording medium.

Action

Check if the medium failed.

KDDM1073-E

The format of the provided cassette tape is invalid.

Action

Check the provided magnetic tape cassette, then retry.

KDDM1074-E

The formats of the provided cassette tape and the management floppy disk do not match.

Action

Combine the provided magnetic tape cassette and the management floppy disk correctly, then retry.

KDDM1075-E

An error occurred during the reading of the management floppy disk.

Action

Check the disk status.

KDDM1076-E

The format of the management floppy disk is invalid.

Action

Mount a correct management floppy disk, then retry.

KDDM1078-I

Insert the provided cassette tape into the device.

KDDM1079-I

Insert the management floppy disk into the device.

KDDM1080-E

The format of the provided cassette tape is invalid.

Action

Check the provided magnetic tape cassette, then retry.

KDDM1081-E

The format of the management floppy disk is invalid.

Action

Check the management floppy disk, then retry.

KDDM1082-E

The value for the attribute name specified in the packaging-information file is invalid.

Action

Specify a correct attribute name in the packaging-information file, then retry.

KDDM1083-I

Remove the provided recording medium.

Action

Processing terminated. Remove the provided recording medium.

KDDM1088-W

Could not find the specified program product 'xxxxx'.

Cause

The provided recording medium does not contain the xxxxx program product.

Action

Check the provided recording medium.

KDDM1089-W

Too many packages are already packaged in the specified cabinet, so *n/m* resources cannot be packaged.

Cause

You attempted to add *m* software items but you cannot add all of them. You can package up to 256 software items in a cabinet.

Action

Cancel processing. Only *m* minus *n* software items can be packaged in the cabinet.

KDDM1090-W

The software specified in the packaging-information file or command are already packaged.

Cause

The software specified in the packaging-information file or the option of the `rdsft` or `rds cm` command have been packaged.

KDDM1091-W

The following software can not be packaged.

Cause

The software specified in the packaging-information file and indicated in the KDDM1095-I message cannot be packaged.

Action

Cancel processing. The KDDM1095-I message indicates the software that cannot be packaged.

KDDM1092-W

The following software is already packaged. (*n/m*)

Cause

The *n*th software of *m* software specified in the packaging-information file has already been packaged.

Action

Cancel processing. The KDDM1095-I message indicates the packages that have already been packaged. Delete the packages in the cabinet from the managing server, then retry.

KDDM1093-W

The following software was packaged in an invalid format. (*n/m*)

Cause

Among *m* software products that are specified in the packaging-information file, the *n*th software product is registered in an incorrect format.

Action

Cancel processing. The KDDM1095-I message, which appears immediately after this message, shows the package that is registered in an incorrect format. Delete the packages in the cabinet from the managing server, then retry.

KDDM1094-I

Packaging the following software. (*n/m*)

Cause

The *n*th software of *m* specified in the packaging-information file is packaged. The KDDM1095-I message indicates the ID of the software to be packaged.

KDDM1095-I

xxxxx

Cause

xxxxx is a software.

Action

See the message output immediately before this message.

KDDM1096-E

An error occurred during the processing of the management floppy disk.

Action

Check if the management floppy disk failed.

KDDM1098-E

The super user is not packaging the program product.

Cause

The program product is not registered by a superuser.

Action

You must log in as a superuser to register the program product.

KDDM1099-I

Completed packaging software.

KDDM1100-I

Packaging terminated.

KDDM1101-E

Could not package in the specified cabinet (xxxxx).

Cause

You attempted to package resources exceeding the maximum number of resources that can be packaged in the cabinet (256).

Action

Package the resources to another cabinet.

KDDM1102-I

xxxxx

Cause

xxxxx indicates the model of the program product, the program name and the sequence number of the provided recording medium.

KDDM1103-E

An error occurred during the processing of the xxxxx file.

Cause

A hard disk error occurred while processing the xxxxx file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM1501-E

Packaging of the target program product is specified incorrectly.

Cause

An invalid program product to be registered is specified in the packaging-information file or the option of the `rdsft` command.

Action

Correct the specification of the program product to be registered, then retry.

KDDM1502-E

The provided recording medium now set is invalid.

Cause

The program product to be processed is not stored in the provided recording medium, or the provided recording medium is mounted in an incorrect order.

Action

Mount a correct medium and then press the **Enter** key. Press the **e** key to cancel processing.

KDDM1503-Q

Enter a password.

Action

Enter a password.

KDDM1504-Q

Re-enter the password.

Cause

The password is missing, or the password specified consists of 8 characters or more.

Action

Check the password, then retry.

KDDM1507-I

Confirm the program product specification.

Action

Check the program product specified in the packaging-information file or the option of the `rdsft` command.

KDDM1508-I

To continue packaging, press the Return key.

Action

Press the **Enter** key to continue packaging.

KDDM1510-E

The special file name can not be used for packaging of program product.

Cause

The specified special file name or the Hitachi program product storage directory cannot be used for registering program products.

Action

Check the specified special file name or the Hitachi program product storage directory, and then execute the command again.

KDDM1514-E

Could not find the UAP backup list file.

Cause

The UAP backup list file does not exist.

Action

Check the specification of the UAP backup list file, then retry.

KDDM1515-E

An error occurred during the processing of the UAP backup list file.

Action

See the message output immediately before this message.

KDDM1517-E

Could not find a user resource path file.

Action

Check the specification of the user resource path file, then retry.

KDDM1518-E

The user resource path file is invalid.

Cause

The directory with a relative path specified is specified in the user resource path file, or the directory with "." is specified.

Action

Correct the coding in the user resource path file, then retry.

KDDM1519-E

A directory that does not exist in the user resource path was specified.

Cause

The directory does not exist in the user resource path preventing packaging from a hard disk.

Action

Cancel processing. Check the specification of the user resource path, then retry.

KDDM1520-E

Could not find the specified directory in the user resource path file.

Cause

Some directories specified in the user resource path file do not exist in the UNIX machine.

Action

Cancel processing. Check the coding in the user resource path file, then retry.

KDDM1521-E

The provided recording medium now set is invalid.

Cause

Incorrect data exists in the provided recording medium.

Action

Check the contents of the medium.

KDDM1522-W

Ignoring the specification of the installation directory.

Cause

The installation target directory is specified in the packaging-information file. However, it is a hard disk software for which an absolute path is specified as the installation target directory, so this specification is ignored and the software is packaged.

KDDM1523-E

The user resource path is specified incorrectly.

Cause

The user resource path contains the directory with ". .".

Action

Cancel processing. Check the specification of the user resource path, then retry.

KDDM1524-E

An error occurred in the xxxxx command.

Cause

An error occurred during processing of the xxxxx command.

Action

Check the contents of CPIO.LOGF.

KDDM1525-E

The value specified for the attribute name (xxxxx) in the packaging-information file is invalid.

Action

Check the contents of the packaging-information file, then retry.

KDDM1526-W

Software xxxx is already packaged.

Action

Cancel processing. Delete the package in the cabinet from the managing server, then retry.

KDDM1527-W

Software xxxx is packaged in an invalid format.

Action

Cancel processing. Delete the package in the cabinet from the managing server, then retry.

KDDM1528-Q

Software is being packaged on other terminals. (To re-packaging = Return key; to stop = the e key)

Action

Press the **Enter** key for re-packaging. Press the **e** key to cancel processing.

KDDM1529-I

Now packaging software xxxxx.

Cause

The xxxxx software is being packaged.

KDDM1530-I

Now packaging the xxxxth software.

Cause

The xxxxth software is being packaged.

KDDM1531-W

Cannot install program product xxxxx while the system is being started.

Cause

The xxxxx program product cannot be installed when the system starts up. You can install it after the system shuts down.

KDDM1532-W

Cannot install program product xxxxx while the system is running.

Cause

Installing the xxxxx program product is impossible while the system is running. You can install it after the system shuts down.

KDDM1533-W

Could not package software xxxxx.

Cause

The xxxxx software cannot be packaged.

Action

Cancel processing.

KDDM1534-Q

Confirm program product packaging. (To continue = Return key; to stop = the e key)

Action

Press the **Enter** key to continue packaging. Press the **e** key to cancel processing.

KDDM1535-Q

Insert the provided recording medium. (To continue = Return key; to stop = the e key)

Cause

The device does not contain the provided recording medium.

Action

Mount the medium and then press the **Enter** key. Press the **e** key to cancel processing.

KDDM1536-Q

Insert a correct provided recording medium. (To continue = Return key; to stop = the e key)

Cause

The provided recording medium that is mounted in the device does not contain the program product to be processed.

Action

Mount a correct medium and then press the **Enter** key. Press the **e** key to cancel processing.

KDDM1537-Q

Insert the provided recording medium in a correct order. (To continue = Return key; to stop = the e key)

Cause

The order of mounting the medium is incorrect.

Action

Mount the medium in a correct order and then press the **Enter** key. Press the **e** key to cancel processing.

KDDM1538-Q

Respond by pressing a correct key. (To continue = Return key; to stop = the e key)

Cause

The response key is incorrect.

Action

Press the **Enter** key to continue processing. Press the **e** key to cancel processing.

KDDM1539-Q

Insert the provided recording medium that contains the program product. (To continue = the Return key; to stop = the e key)

Cause

A recording medium or directory that does not contain the program product is specified.

Action

Press the **Enter** key to continue processing. Press the **e** key to cancel processing.

KDDM1540-E

The special file definition file is specified incorrectly.

Action

Correct the coding in the special file definition file, then retry.

KDDM1541-E

The UAP backup list file is invalid.

Action

Correct the coding in the UAP backup list file, then retry.

KDDM1542-E

There are no software under the *xxxxx* directory.

Cause

The `-d` or `-D` option is missing for the packaging command. An attempt was made to register a file or directory stored in the directory indicated by *xxxxx* (`/NETMRDS/UPUPL/hd` for systems other than HP-UX, `/var/opt/NETMDMW/UPUPL/hd` for HP-UX), but the directory contains no software.

Action

Specify an existing file or directory in the `-d` or `-D` option, or copy the software to be packaged to `/NETMRDS/UPUPL/hd` (`/var/opt/NETMDMW/UPUPL/hd` for HP-UX).

KDDM1544-Q

Software *xxxxx* was already packaged. (To forcibly package software = the Return key; to stop = the e key)

Cause

The packages that have the same name as `xxxxx` have already been packaged.

Action

You can press either the **Enter** key or the **e** key. Press the **Enter** key to force the replacement of existing packages with the new ones. Press the **e** key to cancel processing.

KDDM1547-E

Because `xxxxx` for the archive object is neither a usual file nor a directory it cannot be processed.

Cause

Because the `xxxxx` file is neither a usual file nor directory, it cannot be processed.

Action

Specify a correct path, then retry.

KDDM1548-E

The user resource path is specified by an absolute path.

Cause

The specified user resource path contains a directory name.

Action

When you specify a user resource path, move to the current directory containing the OS patch file and then specify the file name.

KDDM1549-I

Because the package ID was omitted, the file name will be converted to the package ID. Package ID = `AAAAA`

Cause

The package ID was omitted when the OS patch was packaged.

If you omit the package ID when you package an OS patch, the system automatically assigns a package ID. After that, the package ID is `AAAAA`.

KDDM1550-E

Conversion of the package ID has failed.

Cause

When you packaged an OS patch without specifying a package ID, an error occurred during the conversion of the file name to the package ID.

Action

Specify a package ID and re-execute packaging.

KDDM1551-E

The `rdsft` command cannot be used to package an OS patch.

Cause

The `rdsft` command has been executed to package an OS patch.

Action

Use the `rdscm` command to package an OS patch.

KDDM1552-E

The `rdsft` command cannot be used to package another company's software.

Cause

An attempt was made to use the `rdsft` command to package another company's software.

Action

When you want to package another company's software, use the `rdscm` command.

KDDM1553-E

An attempt to generate resource information of another company's software has failed.

Cause

An error occurred in the command that generates resource information.

Action

Check whether the directory that contains the command that acquires resource information about another company's software has been specified in the `PATH` environment variable. If the directory has been specified, specify the package ID and then re-execute packaging.

KDDM1554-E

The program product cannot be packaged using the specified model name. (model name = *kkk*)

Cause

The specified model name cannot be packaged. This message is also output if the program product is packaged by specifying an itemized model name included in the integrated model name.

kkk: Specified model name

Action

Make sure that the model name specified for packaging is correct. Also make sure that the specified model name is not an itemized model name. If the model name is correct, the content of the provided recording medium might be corrupt.

KDDM1555-I

PackageSize = *xxx* byte

Cause

Displays the size of the package file.

KDDM1556-I

InstallDirectory = *xxxxx*

Cause

Displays the installation target directory.

KDDM1557-I

APbeforeGeneration = xxxxx

Cause

Displays the external program processing before installation.

KDDM1558-I

APafterGeneration = xxxxx

Cause

Displays the external program processing after installation.

KDDM2004-E

Cannot secure a communication line.

Cause

The communication line cannot be reserved because of the following causes:

- The association cannot be established.
- Remote mount failed.

Action

Check the remote system to communicate, then retry. If the error recurs, contact the system administrator.

KDDM2006-E

An error occurred in the program.

Cause

A system error occurred.

Action

See the message immediately before this message.

KDDM2007-E

Cannot check hard disk capacity.

Cause

A hard disk error occurred.

Action

See the message output immediately before this message.

KDDM2008-E

There is not enough free space on the hard disk.

Cause

The free space on the hard disk is less than 5 megabytes.

Action

Estimate and acquire the required amount of free space on the hard disk, and then retry. For details on how to estimate hard disk space, see *5.2 Estimating of the disk space and memory requirements* in PART 2.

KDDM2011-E

The directory name or the file name is specified incorrectly.

Action

See the message immediately before this message.

KDDM2019-E

Cannot acquire the node name.

Cause

An error occurred while collecting a node name.

Action

See the message output immediately before this message.

KDDM2020-E

Stopping processing because a signal was received.

Cause

A signal such as an interrupt or disconnection signal was received.

Action

Retry the operation. If the error recurs, restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM2021-E

An error occurred during the sending of a result-reporting file.

Action

See the message output immediately before this message.

KDDM2022-E

An error occurred during the processing of a result-reporting file.

Cause

A hard disk error occurred while processing the result-reporting file (`/NETMRDS/WORK/SND/CD000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/SND/CD000000` for HP-UX).

Action

Delete the result-reporting file, then retry. If the error recurs, restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM2023-W

Stopping processing because a signal was received.

Cause

The signal indicating termination of the system is received.

KDDM2024-E

An error occurred during the sending of the status information file.

Action

See the message output immediately before this message.

KDDM2025-E

An error occurred during the processing of the status information file.

Cause

A hard disk error occurred while processing the status information file (`/NETMRDS/WORK/SND/S0000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/SND/s0000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2027-E

Cannot connect the managing server.

Cause

Connection to the managing server is impossible due to the following causes:

- The communication line is disconnected.
- An invalid host name (UNIX version of the managing server) is specified.

Action

Check the specification of the managing server name (UNIX or Windows version) and retry. If an error still occurs after retrying, contact the system administrator.

KDDM2028-E

An error occurred during the remote installation.

Action

See the message output immediately before this message.

KDDM2029-E

An error occurred during the processing of a resource file.

Action

See the message output immediately before this message.

KDDM2030-E

The program identifier of the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, re-package the software and distribute them.

KDDM2031-E

An error occurred during installation.

Action

See the message output immediately before this message.

KDDM2032-E

An error during the expanding of packages.

Action

See the message output immediately before this message.

KDDM2033-E

An error occurred during the opening of the job file.

Cause

An error occurred while opening the job file (`/NETMRDS/RFSWORK/C0000000` for systems other than HP-UX, `/var/opt/NETMDMW/RFSWORK/C0000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2034-E

An error occurred during the opening of the log file.

Cause

An error occurred while opening the log file that is set in the settings file.

Action

Delete the log file, then retry. If the error recurs, restart the system. If the error still recurs, check the file system.

KDDM2035-E

An error occurred during the saving.

Action

See the message output immediately before this message.

KDDM2036-E

An error occurred during the processing of `xxxxx` file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2037-E

An error occurred during the collecting of statuses.

Action

See the message output immediately before this message.

KDDM2038-E

An error occurred during the processing of the status collection file.

Action

See the message output immediately before this message.

KDDM2039-I

Could not find the job file.

Cause

The processing of the job file terminated normally.

KDDM2040-E

An error occurred during the receiving of the job file.

Action

See the message output immediately before this message.

KDDM2041-E

An error occurred during the copying of the job file.

Action

See the message output immediately before this message.

KDDM2042-I

Deleted the job file.

Cause

The processing of the job file terminated normally.

KDDM2043-E

An error occurred during the processing of the result-reporting file.

Cause

An error occurred while processing the result-reporting file (`/NETMRDS/WORK/SND/CD000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/SND/CD000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2044-E

An error occurred in an exclusive lock for the result-reporting file.

Action

See the message output immediately before this message.

KDDM2045-E

An error occurred in an exclusive lock for the status information file.

Action

See the message output immediately before this message.

KDDM2046-E

An error occurred during the opening of the status information file.

Cause

An error occurred while opening the status information file (`/NETMRDS/WORK/SND/S0000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/SND/s0000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2047-E

The same software already exists.

Action

See the message output immediately before this message.

KDDM2048-E

Cannot install the new program product.

Action

Only the updated revision of the program product can be distributed.

KDDM2049-E

The same version of that software already exists.

Action

See the message output immediately before this message.

KDDM2050-E

An error occurred during the sending of the job file to the client.

Action

See the message output immediately before this message.

KDDM2051-E

An error occurred in an exclusive lock for the job file.

Action

See the message output immediately before this message.

KDDM2054-E

Cannot check hard disk capacity.

Action

See the message output immediately before this message.

KDDM2055-E

Could not find the specified packages in the managing server.

Cause

The managing server does not contain the packages.

Action

Contact the system administrator of the managing server to report that packages are missing.

KDDM2056-E

An error occurred during the receiving of a resource file.

Action

See the message output immediately before this message.

KDDM2057-E

The job division in the job file is invalid.

Cause

A job that does not correspond to the job division is received.

Action

Contact the system administrator of the managing server.

KDDM2058-E

The length of a record in the job file is invalid.

Cause

The job file contains two records or more.

Action

Reset the job file.

KDDM2059-E

An error occurred during the processing of the initialization definition.

Action

See the message output immediately before this message.

KDDM2060-E

Cannot create the file for managing server transmission.

Action

See the message output immediately before this message.

KDDM2061-E

The number of arguments is invalid.

Action

Check the number of arguments.

KDDM2062-E

An argument is invalid.

Cause

The argument does not begin with -d.

Action

Check the argument.

KDDM2063-E

An error occurred during the checking of packaged software.

Action

See the message output immediately before this message.

KDDM2064-E

An error occurred during the opening of the UAP installation management file.

Cause

A hard disk error occurred while opening the UAP installation management file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2065-E

An error occurred during the creating of the status information file.

Action

See the message output immediately before this message.

KDDM2066-E

An error concerning `getcwd` occurred in the system.

Cause

An error occurred in a `getcwd` system call.

Action

Change the current directory, then retry.

KDDM2067-E

Could not find the directory where packages are stored.

Cause

The packages are not normally packaged.

Action

Re-package the software.

KDDM2069-E

A file in which a multivolume file name was stored is invalid.

Cause

An error occurred in an `access` system call for the file that contains a multi-volume file name.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2070-E

A file in which a multivolume file name was stored cannot be input.

Cause

A hard disk error occurred while reading the file that contains a multi-volume file name.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2071-E

Cannot create a multivolume file.

Cause

A hard disk error occurred while creating the file that contains a multi-volume file name.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2072-E

An error occurred during the opening of the multivolume file.

Cause

A hard disk error occurred while opening the multi-volume file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2073-E

An error occurred in the UAP installation management file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2074-E

Cannot read the UAP installation management file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2075-E

Cannot write a status collection-information file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2076-E

Cannot create a status collection-information file.

Cause

A status collection-information file cannot be created due to a hard disk error.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2077-E

An error occurred during the processing of the resource file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2078-E

Cannot read the resource file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2079-E

Cannot secure the reading area for the resource file.

Action

System resources (a buffer area, etc.) may temporarily be insufficient. Wait for a while, then retry.

KDDM2080-E

Cannot create the resource structure file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2081-E

Cannot write the resource structure file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2082-E

Cannot delete the work area for the installation operation.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2083-E

The work area for the installation operation is invalid.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2084-E

Cannot create the work area for the installation operation.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2085-E

Could not install the program product.

Action

See the message output immediately before this message.

KDDM2086-E

Could not install user data.

Action

See the message output immediately before this message.

KDDM2087-E

Could not install a UAP.

Action

See the message output immediately before this message.

KDDM2089-E

The resource structure file is invalid.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2090-E

Cannot install the resource structure file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2091-E

Could not create a file.

Cause

An error occurred in a `create` system call for a 0-byte file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2092-E

Cannot change the access mode for the resource structure file.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2093-E

Cannot change the owner of the resource structure file.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2094-E

The directory additional information file is invalid.

Cause

An error occurred in a `stat` system call for the directory additional information file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2095-E

Cannot change the access mode for the directory information file.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2096-W

Cannot change the owner of the additional information file.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2097-E

Could not find the specified generator.

Cause

An invalid generator division is specified for the job file.

Action

Check the generator or an application program for external program processing after installation.

KDDM2098-E

A specified generator is invalid.

Cause

A hard disk error occurred.

Action

Check the generator or an application program for external program processing after installation.

KDDM2099-E

Could not start the specified generator.

Cause

A system error occurred.

Action

Check the generator or an application program for external program processing after installation.

KDDM2100-E

An error occurred in the specified generator.

Cause

A system error occurred.

Action

Check the generator or an application program for external program processing before or after installation.

KDDM2104-E

Cannot create a directory.

Action

See the message output immediately before this message.

KDDM2105-E

Cannot change the access mode of the directory.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2106-E

Cannot change the owner of the directory.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2107-E

Cannot secure the reading area for the resource structure file.

Cause

A system error occurred.

Action

System resources (a buffer area, etc.) may temporarily be insufficient. Wait for a while, then retry.

KDDM2108-E

Cannot read a resource structure file.

Cause

An error occurred in a `read` system call for the package configuration file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2109-E

Cannot secure the reading area for the directory information file.

Cause

A system error occurred.

Action

System resources (a buffer area, etc.) may temporarily be insufficient. Wait for a while, then retry.

KDDM2110-E

An error occurred during the processing of the resource structure file.

Cause

An error occurred in an `open` system call for the package configuration file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2111-E

Could not restore the file.

Action

See the message output immediately before this message.

KDDM2112-E

Could not restore the directory.

Action

See the message output immediately before this message.

KLINKID=kddm2117zzze">KDDM2117-E

Cannot create the `xxxxx` directory.

Cause

A hard disk error occurred.

`xxxxx`

`/NETMRDS/UPAREA` for systems other than HP-UX, or `/var/opt/NETMDMW/UPAREA` for HP-UX.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2118-E

Could not restore packages.

Action

See the message output immediately before this message.

KDDM2120-E

An error occurred during the processing of the program product management file.

Cause

A hard disk error occurred while copying the program product management file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2121-E

Could not install packages.

Action

See the message output immediately before this message.

KDDM2122-E

Could not save.

Action

See the message output immediately before this message.

KDDM2123-E

Status collection failed.

Action

See the message output immediately before this message.

KDDM2124-I

Status collection completed.

KDDM2125-I

Distributing *xxxxx*.

Cause

The packages for the *xxxxx* program are distributed.

KDDM2126-I

Saving *xxxxx*.

Cause

The packages for the *xxxxx* program are stored.

KDDM2127-E

Could not copy the resource file.

Action

See the message output immediately before this message.

KDDM2128-E

Could not parse the resource file.

Action

See the message output immediately before this message.

KDDM2129-E

Could not delete the *xxxxx* directory.

Cause

The *xxxxx* directory could not be deleted.

xxxxx

/NETMRDS/UPAREA for systems other than HP-UX, or */var/opt/NETMDMW/UPAREA* for HP-UX.

Action

See the message output immediately before this message.

KDDM2130-E

The *xxxxx* directory is invalid.

Cause

An error occurred in an `access` system call for the directory indicated by *xxxxx* (*/NETMRDS/UPAREA* for systems other than HP-UX, or */var/opt/NETMDMW/UPAREA* for HP-UX).

Action

Check if the disk with the directory containing the client services (such as */NETMRDS* for systems other than HP-UX, or */var/opt/NETMDMW* for HP-UX) failed.

KDDM2131-E

Cannot change the access mode of the *xxxxx* directory.

Cause

A system error occurred.

xxxxx

/NETMRDS/UPAREA for systems other than HP-UX, or */var/opt/NETMDMW/UPAREA* for HP-UX.

Action

Check if the disk with the directory containing the client services (such as */NETMRDS* for systems other than HP-UX, or */var/opt/NETMDMW* for HP-UX) failed.

KDDM2132-E

Cannot create a job file in the *xxxxx* directory.

Cause

A hard disk error occurred.

xxxxx

/NETMRDS/UPAREA for systems other than HP-UX, or /var/opt/NETMDMW/UPAREA for HP-UX.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2133-E

Cannot write a job file in the xxxxx directory.

Cause

A hard disk error occurred.

xxxxx

/NETMRDS/UPAREA for systems other than HP-UX, or /var/opt/NETMDMW/UPAREA for HP-UX.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2134-E

Could not copy a multivolume file.

Action

See the message output immediately before this message.

KDDM2135-E

The multivolume file is invalid.

Cause

A system error occurred.

Action

Check if the upper-level system failed. If the upper-level system is normal, re-package the software and distribute them.

KDDM2137-E

Cannot delete the xxxxx directory.

Cause

The following directory cannot be deleted.

xxxxx

/NETMRDS/UPAREA/hd for systems other than HP-UX, or /var/opt/NETMDMW/UPAREA/hd for HP-UX.

Action

See the message output immediately before this message.

KDDM2138-E

Cannot change the access mode of the `xxxxx` directory.

Cause

The access mode of the following directory cannot be changed.

`xxxxx`

`/NETMRDS/UPAREA/hd` for systems other than HP-UX, or `/var/opt/NETMDMW/UPAREA/hd` for HP-UX.

Action

See the message output immediately before this message.

KDDM2139-E

An error occurred during the waiting for the generator to complete.

Cause

A system error occurred.

Action

The generator may forcibly be terminated due to an interrupt such as a command. Examine the log to check if the generator failed.

KDDM2141-E

Could not delete a record from the resource management file.

Action

See the message output immediately before this message.

KDDM2142-E

Could not create a new resource attribute file.

Action

See the message output immediately before this message.

KDDM2143-E

Could not rewrite the resource attribute file.

Action

See the message output immediately before this message.

KDDM2144-E

Could not delete the resource attribute file.

Action

See the message output immediately before this message.

KDDM2145-E

Could not delete a record from the resource attribute file.

Action

See the message output immediately before this message.

KDDM2148-E

Cannot copy the resource file.

Action

See the message output immediately before this message.

KDDM2149-E

Cannot copy the resource management file.

Action

See the message output immediately before this message.

KDDM2150-E

Cannot copy the resource attribute file.

Action

See the message output immediately before this message.

KDDM2153-E

A resource management file is invalid.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2154-E

A resource attribute file is invalid.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2155-E

A resource file is invalid.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2160-E

There are more than 1296 cabinets.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the distribution job.

KDDM2161-E

Could not create a new resource management file.

Action

See the message output immediately before this message.

KDDM2162-E

Could not rewrite the resource management file.

Action

See the message output immediately before this message.

KDDM2163-E

Could not add a record to the resource management file.

Action

See the message output immediately before this message.

KDDM2164-E

Cannot read the resource management file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2165-E

Cannot create the resource management file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2166-E

Cannot read the resource attribute file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2167-E

Cannot create the resource attribute file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2168-E

Cannot write the resource management file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2169-E

Cannot write the resource attribute file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2171-E

Cannot write the job file in the `xxxxx` directory.

Cause

A hard disk error occurred.

`xxxxx`

`/NETMRDS/UPAREA` for systems other than HP-UX, or `/var/opt/NETMDMW/UPAREA` for HP-UX.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2172-E

Cannot create the `xxxxx` directory.

Cause

The following directory cannot be created.

`xxxxx`

`/NETMRDS/UPAREA/hd` for systems other than HP-UX, or `/var/opt/NETMDMW/UPAREA/hd` for HP-UX.

Action

See the message output immediately before this message.

KDDM2173-E

An error occurred during the processing of the directory information file.

Action

See the message output immediately before this message.

KDDM2174-E

Cannot move the directory.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2175-E

Cannot acquire the current directory.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2177-E

An error occurred during the checking of packages.

Action

See the message output immediately before this message.

KDDM2182-E

An error occurred during the copying of the file.

Cause

A hard disk error occurred while opening the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2183-W

An error occurred during the processing of a file.

Cause

A hard disk error occurred while opening the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2184-E

An error occurred during the deleting of the file.

Cause

An error occurred in a `stat` system call.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2185-E

Cannot delete the file.

Cause

A hard disk error occurred while deleting the file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2186-E

An error occurred during the creating of the file.

Cause

A hard disk error occurred while creating the file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2187-E

Could not place an exclusive lock on the file.

Action

The client service is retrying to lock the file. No action is required.

KDDM2190-E

An error occurred during the performing of a remote mount.

Action

See the message output immediately before this message.

KDDM2193-E

Could not place an exclusive lock on the status information file for the relay system.

Action

The program is retrying to lock the file. No action is required.

KDDM2194-E

Could not find the status information file in the client.

Action

See the message output immediately before this message.

KDDM2195-E

Could not copy the status information file.

Action

See the message output immediately before this message.

KDDM2196-I

Could not find the job file on this same workstation.

Cause

The processing of the job file terminated normally.

KDDM2197-E

Could not place an exclusive lock on the job file for the relay system.

Action

The client service is retrying to lock the file. No action is required.

KDDM2198-E

Could not copy the job file.

Action

See the message output immediately before this message.

KDDM2199-E

Could not find the result-reporting file.

Action

The client service is retrying to find the file. No action is required.

KDDM2200-E

Could not place an exclusive lock on the result-reporting file.

Action

The client service is retrying to lock the file. No action is required.

KDDM2201-E

An error occurred during the copying of the result-reporting file.

Action

See the message immediately before this message.

KDDM2202-E

Could not copy the result-reporting file.

Action

See the message output immediately before this message.

KDDM2203-E

An error occurred during the performing of a remote unmount.

Action

See the message output immediately before this message.

KDDM2204-E

Could not acquire the size of the send file.

Cause

A hard disk error occurred in a `stat` system call for the send file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2205-E

An error occurred during the receiving of the file.

Action

Wait for a while, then retry. If the error recurs, restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM2206-E

An error occurred during the sending of the file.

Action

Wait for a while, then retry. If the error recurs, restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM2207-E

Cannot delete the directory.

Cause

A hard disk error occurred while deleting the directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2208-E

An error occurred during the deleting of the file and directory.

Cause

A hard disk error occurred in a `stat` system call for the directory to delete the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2209-E

Could not acquire the date.

Action

See the message output immediately before this message.

KDDM2210-E

Could not acquire the time.

Action

See the message output immediately before this message.

KDDM2211-E

An error occurred during the processing of the operating status management file.

Cause

A hard disk error occurred while creating a file that manages the operating status of the client services.

Action

Delete the following files and retry.

Systems other than HP-UX:

- /NETMRDS/rdsprm/rdsstsft
- /NETMRDS/rdsprm/rdsstsrft

HP-UX:

- /var/opt/NETMDMW/rdsprm/rdsstsft
- /var/opt/NETMDMW/rdsprm/rdsstsrft

If the error still occurs after retrying, restart the system.

If the error still occurs after restarting the system, collect error information, and then contact the program developer.

KDDM2212-E

Using pack to compress software generated an error.

Cause

An attempt was made to compress software that cannot be compressed, or there is no pack command.

Action

Send the software to the managing server without compression.

KDDM2213-E

Using user command to compress software generated an error.

Cause

There is no user command, or the user command terminated abnormally.

Action

Send the software to the managing server without compression.

KDDM2214-E

Using unpack to decompress software generated an error.

Cause

The hard disk failed, or there is no `unpack` command.

Action

Check if extended utility 1 is installed. If it is installed, contact the system administrator.

KDDM2215-E

Using user command to decompress software generated an error.

Cause

There is no user command, or the user command terminated abnormally.

Action

Check if the user command exists.

KDDM2216-I

Could not find the file managing the status of JP1/IT Desktop Management 2.

Cause

The processing of files terminated normally.

KDDM2217-E

An error occurred during the processing of the program product installation management file.

Cause

A system error occurred.

Action

Check if the disk with the system directory (such as `/`, `/etc`, `/dev` or `/bin`) failed.

KDDM2228-E

The `xxxxx` directory is invalid.

Cause

An error occurred in a `stat` system call for the directory indicated by `xxxxx` (`/NETMRDS/RDSADV/` for systems other than HP-UX, `/var/opt/NETMDMW/RDSADV/` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2232-E

An error occurred during the processing of the status information file and result-reporting file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2233-E

Could not place an exclusive lock on the status information file.

Action

See the message output immediately before this message.

KDDM2234-E

Could not create the status information file.

Action

See the message output immediately before this message.

KDDM2235-E

Could not create the result-reporting file.

Cause

An error occurred in a `link` system call for the result-reporting file.

Action

See the message output immediately before this message.

KDDM2238-E

Cannot write the status information file.

Cause

A hard disk error occurred.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient. Retry distribution.

KDDM2241-E

Could not send the status information file.

Action

See the message output immediately before this message.

KDDM2242-E

Could not send the result-reporting file.

Action

See the message output immediately before this message.

KDDM2243-E

Could not connect the managing server.

Action

See the message output immediately before this message.

KDDM2245-E

The cabinet name of the packaging-information file is specified incorrectly.

Action

Correct the cabinet ID of the packaging-information file.

KDDM2246-E

An error occurred during the acquiring of date information.

Action

See the message output immediately before this message.

KDDM2247-E

An error occurred during the processing of the directory.

Cause

An error occurred in a `stat` system call for the directory.

Action

Check if the disk with the directory specified as a software failed.

KDDM2249-E

Could not find the directory specified by the packaging-information file.

Cause

There is no packaging-information file in the directory.

Action

Create the packaging-information file in the directory.

KDDM2250-E

An error occurred during the processing of the packaging-information file.

Cause

The size of the packaging-information file is incorrect.

Action

Check the contents of the packaging-information file.

KDDM2251-E

There is an error in the packaging-information file.

Action

See the message output immediately before this message.

KDDM2253-E

An error occurred during the performing of the stat processing for the resource management file.

Cause

An error occurred in a `stat` system call for the package management file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2254-E

An error occurred during the performing of the stat processing for the resource attribute file.

Cause

An error occurred in a `stat` system call for the package attribute file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2255-E

The specified software is already packaged in an invalid format.

Cause

Packaging may have terminated incompletely.

Action

Delete the packages in the managing server and then re-package them.

KDDM2256-E

Completed packaging the specified package.

Action

If you want to re-package the software, delete the package of the software from the managing server and then re-package it.

KDDM2257-E

The directory name for the packages is invalid.

Action

See the message output immediately before this message.

KDDM2258-E

Could not find the specified directory.

Action

Create the directory, or correct the specification of the directory.

KDDM2260-E

Could not find the packaging-information file.

Action

Check the file, then retry. Alternatively, create the packaging-information file in the directory.

KDDM2261-E

An error occurred during the deleting of the resource management file.

Action

See the message output immediately before this message.

KDDM2262-E

An error occurred during the receiving of the resource management file.

Action

See the message output immediately before this message.

KDDM2263-E

An error occurred during the sending of the resource attribute file.

Action

See the message output immediately before this message.

KDDM2264-E

An error occurred during the deleting of the resource attribute file.

Action

See the message output immediately before this message.

KDDM2265-E

An error occurred during the sending of the resource management file.

Action

See the message output immediately before this message.

KDDM2266-E

An error occurred during the receiving of the resource attribute file.

Action

See the message output immediately before this message.

KDDM2267-E

The resource attribute file is being updated on another terminal.

Action

Retry the operation.

KDDM2268-E

Compressing the resource file generated an error.

Action

See the message output immediately before this message.

KDDM2269-E

An error occurred during the copying of the resource file.

Action

See the message output immediately before this message.

KDDM2270-E

An error occurred during the sending of the resource file.

Action

See the message output immediately before this message.

KDDM2271-E

An error occurred during the deleting of the resource file.

Action

See the message output immediately before this message.

KDDM2272-E

Cannot package software.

Cause

The number of resources to be packaged exceeded the maximum number of resources (256) that can be packaged in the cabinet.

Action

Delete unnecessary packages in the managing server and then re-package the resources.

KDDM2273-E

Creating the directory generated an error.

Cause

An error occurred while creating the work directory.

Action

See the message output immediately before this message.

KDDM2274-E

Cannot register the specified directory.

Action

Check the directory name, specify a correct directory and then retry.

KDDM2275-E

Cannot register the specified file.

Action

Check the file name, specify a correct directory and then retry.

KDDM2276-E

An error occurred during the setting up of the program product.

Action

Determine the cause of the error according to the procedure described in *9.2.1(1) Failures during program product setup*.

KDDM2277-E

An error occurred during the processing of the program product installation management file.

Cause

An error occurred while accessing `/etc/.hitachi/pplisd/pplisd`.

Action

Make sure `/etc/.hitachi/pplisd/pplisd` exists. If it does not exist, restore `/etc/.hitachi/pplisd/pplisd`. If it does exist, make sure that there is no error in the system directory (`/etc`) disk.

KDDM2278-E

The settings file is in an invalid format.

Action

Check the format of the settings file.

KDDM2279-E

An attribute name for the settings file is specified incorrectly.

Action

Check the contents of the settings file, then retry.

KDDM2280-E

An attribute name that is necessary for the settings file is missing.

Action

Check the combination of the attribute names, then retry.

KDDM2281-E

An invalid attribute name is specified in the settings file.

Cause

An incorrect attribute name is specified in the settings file. Alternatively, the method for applying the settings file in which `MaxEntryofMessage` is written is incorrect.

Action

Check the combination of the attribute names, then retry. Apply the settings file according to the procedure described in (5) *Change the settings file* in 5.4.1 *General rules for the settings files*.

KDDM2282-E

An error occurred during setup.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2283-E

A resource management file is being updated on another terminal.

Action

Retry the operation.

KDDM2285-E

Cannot secure a communication line.

Cause

No association can be established since the communication line is disconnected.

Action

Check the settings of the lower levels and then re-execute the processing. If an error occurs again, contact the system administrator.

KDDM2286-E

The generator division of the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2288-E

The installation division of the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2289-E

The installation division or generator division of the job file is invalid.

Cause

The installation division or the generator division in the job file specifying the application program is incorrect.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2290-E

The job division of the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2291-E

The virtual file name for the job file is invalid.

Cause

The virtual file name for the software in the job file is incorrect.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2294-E

Job deletion for the job file is specified incorrectly.

Cause

An attempt was made to delete a job from a system other than the relay system.

Action

Delete a job from the relay system.

KDDM2295-E

An error occurred during the processing of the job file.

Cause

An error occurred while processing the job file

(/NETMRDS/WORK/RCV/C0000000 for systems other than HP-UX, /var/opt/NETMDMW/WORK/RCV/C0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2296-E

An error occurred during the processing of the job file.

Cause

An error occurred while processing the job file

(/NETMRDS/RFSWORK/C0000000 for systems other than HP-UX, /var/opt/NETMDMW/RFSWORK/C0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2297-E

An error occurred during the processing of the job file.

Action

See the message output immediately before this message.

KDDM2298-E

An error occurred during the performing of stat processing for the job file.

Cause

An error occurred in a `stat` system call for the job file

(/NETMRDS/RFSWORK/C0000000 for systems other than HP-UX, /var/opt/NETMDMW/RFSWORK/C0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2299-E

The size of a job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2300-E

An error occurred during the retrieving of the job file.

Cause

An error occurred while retrieving the job file
(/NETMRDS/RFSWORK/C0000000 for systems other than HP-UX, /var/opt/NETMDMW/RFSWORK/C0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2301-E

An error occurred during the writing of the job file.

Cause

An error occurred while writing the job file
(/NETMRDS/RFSWORK/C0000000 for systems other than HP-UX, /var/opt/NETMDMW/RFSWORK/C0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2302-E

An error occurred during the opening of the result-reporting file.

Cause

An error occurred while opening the result-reporting file
(/NETMRDS/WORK/SND/CD000000 for systems other than HP-UX, /var/opt/NETMDMW/WORK/SND/CD000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2303-E

An error occurred during the writing of the result-reporting file.

Cause

An error occurred while writing the result-reporting file

(/NETMRDS/WORK/SND/CD000000 for systems other than HP-UX, /var/opt/NETMDMW/WORK/SND/CD000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2304-E

An error occurred during the writing of the status information file.

Cause

An error occurred while writing the status information file

(/NETMRDS/WORK/SND/S0000000 for systems other than HP-UX, /var/opt/NETMDMW/WORK/SND/S0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2305-E

An error occurred during the writing of the log file.

Cause

An error occurred while writing the log file that is set by the settings file.

Action

Delete the log file, then retry. If the error recurs, restart the system. If the error still recurs, check the file system.

KDDM2306-E

An error occurred during the performing of lseek processing for the job file.

Cause

An error occurred in a lseek system call for the job file

(/NETMRDS/WORK/RCV/C0000000 for systems other than HP-UX, /var/opt/NETMDMW/WORK/RCV/C0000000 for HP-UX).

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2307-E

An error occurred during the performing of read processing for the job file.

Cause

An error occurred in a `read` system call for the job file

(`/NETMRDS/WORK/RCV/C0000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/RCV/C0000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2308-E

An error occurred during the performing of write processing for the job file.

Cause

An error occurred in a `write` system call for the job file

(`/NETMRDS/WORK/RCV/C0000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/RCV/C0000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2309-E

An error occurred during the creating of the job file.

Cause

A hard disk error occurred while creating the job file of the client workstation in the relay system.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2310-E

An error occurred during the opening of the job file.

Cause

An error occurred while opening the job file

(`/NETMRDS/WORK/RCV/C0000000` for systems other than HP-UX, `/var/opt/NETMDMW/WORK/RCV/C0000000` for HP-UX).

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2312-E

There is not enough free space on the hard disk.

Cause

The space required to store packages is insufficient.

Action

Delete unnecessary files in the hard disk, then retry.

KDDM2313-E

Cannot connect the managing server.

Action

See the message output immediately before this message.

KDDM2315-E

The distribution-destination for the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2316-E

The distribution-destination for the job file is specified incorrectly.

Cause

The node name is not specified for the distribution-destination system.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2317-E

The distribution-destination name for the job file is invalid.

Cause

The distribution destination name is specified incorrectly.

Action

Check the distribution-destination name, and then contact the system administrator of the managing server to report that a retry was attempted.

KDDM2319-E

An error occurred during the performing of link processing for the job file.

Cause

A hard disk error occurred while linking the job file that contains the deleted job.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2321-E

An error occurred during the deleting of the job file.

Cause

A hard disk error occurred while opening the job file that contains the job that you attempted to delete.

Action

Check if the disk with the system directory (such as `/tmp` or the directory specified by `DMTMPDIR` in the operating-environment settings file) failed, and make sure there is sufficient disk space.

KDDM2322-I

Could not find the job file.

Cause

The job is not registered, or it is already being executed in the client workstation.

KDDM2323-E

An error occurred during the processing of the job file.

Cause

The path name is too long.

Action

Check the path in the `/NETMRDS/RDSADV/ (/var/opt/NETMDMW/RDSADV/ for HP-UX)` directory, then retry.

KDDM2324-E

An error occurred during the acquiring of directory information for the job file.

Cause

A hard disk error occurred during acquiring the information about the `/NETMRDS/RDSADV/ (/var/opt/NETMDMW/RDSADV/ for HP-UX)` directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2325-E

An error occurred during the opening of the directory for the job file.

Cause

A hard disk error occurred while opening the `/NETMRDS/RDSADV/ (/var/opt/NETMDMW/RDSADV/ for HP-UX)` directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2326-W

An empty directory was specified.

Cause

There are no files in the directory.

Action

Create the resource files in the directory.

KDDM2330-E

Memory became insufficient during the processing of the job file.

Cause

The sufficient memory could not be reserved.

Action

Retry the operation.

KDDM2331-E

An error occurred during the reading of the job file.

Cause

A hard disk error occurred while reading the file in the `/NETMRDS/RDSADV/ (/var/opt/NETMDMW/RDSADV/` for HP-UX) directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2332-E

An error occurred during the performing of lseek processing for the job file.

Cause

An error occurred in a `lseek` system call for the job file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2333-E

An error occurred during the reading of the job file.

Cause

A hard disk error occurred while reading the job file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2334-E

An error occurred during the writing of the job file.

Cause

A hard disk error occurred while writing the job file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2335-E

An error occurred during the acquiring of information for the job file.

Cause

A hard disk error occurred while acquiring the information about the job file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2336-E

An error occurred during the processing of the job file.

Cause

The size of the job file is incorrect.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2337-E

An error occurred during the opening of the job file.

Cause

A hard disk error occurred while opening the job file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2338-E

An error occurred during the opening of the result-reporting file.

Cause

A hard disk error occurred while opening the result-reporting file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2339-E

An error occurred during the writing of the result-reporting file.

Cause

A hard disk error occurred while writing the result-reporting file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2341-E

Could not find the job file.

Action

Set the job file.

KDDM2342-E

The job file is invalid.

Cause

A hard disk error occurred in a `stat` system call for the job file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2343-E

The length of a record in the job file is invalid.

Action

Reset the job file.

KDDM2344-E

The job file is invalid.

Cause

A hard disk error occurred while opening the job file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2345-E

The job file is invalid.

Cause

A hard disk error occurred while reading the job file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2346-E

An argument is invalid.

Action

Specify a directory name that consists of up to 128 characters, in the argument.

KDDM2347-E

The program identifier for the job file is invalid.

Action

Specify blank for the program identifier of the job file, then retry.

KDDM2348-E

An error occurred during the retrieving of the UAP installation management file.

Cause

A hard disk error occurred while retrieving the UAP installation management file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2349-E

An error occurred during the writing of the UAP installation management file.

Cause

A hard disk error occurred while writing the UAP installation management file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2350-E

An error concerning chdir occurred in the system.

Cause

An error occurred in a `chdir` system call.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2351-E

An error occurred during installation.

Cause

The hard disk or the system failed while installing the resource file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2352-E

A multivolume file name stored in the file is invalid.

Cause

A hard disk error occurred while opening the file that stores the multi-volume file names.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2353-E

An error occurred during the reading of a multivolume file.

Cause

A hard disk error occurred while reading the multi-volume file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2354-E

An error occurred during the writing of a multivolume file.

Cause

A hard disk error occurred while writing the multi-volume file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2355-E

An error occurred during the performing of access processing for a multivolume file.

Cause

A hard disk error occurred in an `access` system call for the multi-volume file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2356-E

An error occurred during the performing of a status collection.

Cause

An error occurred while processing the program product installation management file.

Action

See the message output immediately before this message.

KDDM2357-E

An error occurred during the performing of a status collection.

Cause

An error occurred while processing the UAP installation management file.

Action

See the message output immediately before this message.

KDDM2358-E

The size of the data part of the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2359-E

The type of installation for the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2361-E

The cabinet ID for the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2362-E

This version of the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2363-E

The generation number of the job file is invalid.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the *distribution* job.

KDDM2364-E

The virtual file name for the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2365-E

Capacity 2 for the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2366-E

The resource structure code for the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2367-E

Stopped processing because a signal was received.

Action

Retry the operation. If the error recurs, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM2368-E

The directory additional information file is invalid.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2369-E

The resource structure file is invalid.

Cause

An error occurred in a `stat` system call for the package configuration file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2370-E

The job file is invalid.

Action

See the message output immediately before this message.

KDDM2371-E

The *xxxxx* directory is invalid.

Cause

A system error occurred.

xxxxx

/NETMRDS/UPAREA for systems other than HP-UX, or /var/opt/NETMDMW/UPAREA for HP-UX.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2372-E

Cannot create the *xxxxx* directory.

Cause

The following directory cannot be created.

xxxxx

/NETMRDS/UPAREA for systems other than HP-UX, or /var/opt/NETMDMW/UPAREA for HP-UX.

Action

See the message output immediately before this message.

KDDM2373-E

Stopped processing because a signal was received.

Action

Retry the operation. If the error recurs, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM2374-E

The generator ended abnormally.

Action

See an error message of the generator.

KDDM2377-E

An error occurred during the saving of packages.

Cause

The program failed.

Action

See the message output immediately before this message.

KDDM2378-E

The job file is invalid.

Cause

Capacity 2 of the file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2379-E

Cannot change the access mode of the `xxxxx` directory.

Cause

A system error occurred.

`xxxxx`

`/NETMRDS/UPAREA/hd` for systems other than HP-UX, or `/var/opt/NETMDMW/UPAREA/hd` for HP-UX.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2380-E

The job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2381-E

An error occurred during the processing of a multivolume file.

Action

See the message output immediately before this message.

KDDM2382-E

An error occurred during the processing of a multivolume file.

Cause

An error occurred in an `access` system call for the multi-volume file.

Action

See the message output immediately before this message.

KDDM2383-E

An error occurred during the processing of a resource file.

Cause

A system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2385-E

The directory additional information file is invalid.

Cause

An error occurred in an `open` system call for the directory additional information file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2386-E

The directory additional information file is invalid.

Cause

An error occurred in a `read` system call for the directory additional information file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2387-E

An error occurred during the performing of stat processing for the resource structure file.

Cause

An error occurred in a `stat` system call for the package configuration file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2388-E

An error occurred during the performing of link processing for the resource structure file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2389-E

An error occurred during the processing of the UAP installation management file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2390-E

Cannot check hard disk capacity.

Cause

The hard disk or the system failed while checking the hard disk space that is available.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2391-W

An error occurred during the copying of the file.

Cause

A hard disk error occurred while reading the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2392-W

An error occurred during the copying of the file.

Cause

A hard disk error occurred while writing the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2393-E

Cannot create the directory.

Cause

A hard disk error occurred while creating the directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2394-E

An error occurred during the deleting of the file and directory.

Cause

A hard disk error occurred while opening the directory to delete the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2395-E

An error occurred during the deleting of the file and directory.

Cause

The work area cannot be reserved.

Action

Terminate other processing, then retry. If the error recurs, increase the memory allocation.

KDDM2396-E

An error occurred during the deleting of the file and directory.

Cause

A hard disk error occurred while reading the directory to delete the file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2397-E

An error occurred during the deleting of the file and directory.

Cause

A hard disk error occurred in a `stat` system call for the file to be deleted.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2398-E

An error occurred during the deleting of the file and directory.

Cause

A hard disk error occurred while deleting the directory.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2399-E

An error occurred during the deleting of the file and directory.

Cause

A hard disk error occurred while deleting the file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2400-E

The file that manages the operating status of JP1/IT Desktop Management 2 is invalid.

Cause

A hard disk error occurred while writing the file that manages the operating status of the client services.

Action

Delete both of the following files and retry.

For systems other than HP-UX:

```
/NETMRDS/rdspm/rdsstsft  
/NETMRDS/rdspm/rdsstsrft
```

For HP-UX:

```
/var/opt/NETMDMW/rdspm/rdsstsft  
/var/opt/NETMDMW/rdspm/rdsstsrft
```

If the error still occurs after retrying, restart the system. If the error still occurs after restarting the system, collect error information, and then contact the program developer.

KDDM2402-E

An option for the job file is invalid.

Action

Check if the upper-level system failed. If the system is normal, re-package the software and then perform distribution for them.

KDDM2405-E

The `xxxxx` directory is invalid.

Cause

A hard disk error occurred.

`xxxxx`

`/NETMRDS/RDSADV` for systems other than HP-UX, or `/var/opt/NETMDMW/RDSADV` for HP-UX.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2406-E

An error occurred during the processing of the status information file and the result-reporting file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2407-E

Could not place an exclusive lock on the result-reporting file.

Action

See the message immediately before this message.

KDDM2409-E

Could not create the status information file.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2413-E

The package ID in the packaging-information file is specified incorrectly.

Action

Correct the package ID in the packaging-information file.

KDDM2414-E

The generation number in the packaging-information file is specified incorrectly.

Action

Correct the generation number in the packaging-information file.

KDDM2415-E

The package expiration specification in the packaging-information file is invalid.

Action

Correct the package expiration date in the packaging-information file.

KDDM2419-E

An error occurred during the processing of the packaging-information file.

Cause

An error occurred in an `open` system call for the packaging-information file.

Action

Check if the disk with the packaging-information file failed.

KDDM2420-E

An error occurred during the performing of read processing for the packaging-information file.

Cause

An error occurred in a `read` system call for the packaging-information file.

Action

Check if the disk with the packaging-information file failed.

KDDM2421-E

An error occurred during the receiving of the resource management file.

Action

See the message output immediately before this message.

KDDM2422-E

An error occurred during the performing of open processing for the resource management file.

Cause

An error occurred in an `open` system call for the package management file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2423-E

An error occurred during the performing of read processing for the resource management file.

Cause

An error occurred in a `read` system call for the package management file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2424-E

An error occurred during the performing of open processing for the resource attribute file.

Cause

An error occurred in an `open` system call for the package management file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2425-E

An error occurred during the performing of read processing for the resource attribute file.

Cause

An error occurred in a `read` system call for the package attribute file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2426-E

An error occurred during the deleting of a directory.

Cause

An error occurred while deleting the work directory.

Action

See the message output immediately before this message.

KDDM2427-E

An error occurred during the deleting of the resource attribute file.

Action

See the message output immediately before this message.

KDDM2428-E

Could not find the specified directory.

Action

Create the directory, or correct the directory specification and then retry.

KDDM2429-E

Could not find the specified directory.

Cause

The directory is not a directory.

Action

Correct the directory specification.

KDDM2430-E

An error occurred during the deleting of the resource management file.

Action

See the message output immediately before this message.

KDDM2431-E

An error occurred during the performing of write processing for the resource attribute file.

Cause

An error occurred in a `write` system call for the package attribute file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETTDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2432-E

An error occurred during the performing of write processing for the resource management file.

Cause

An error occurred in a `write` system call for the package management file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETTDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2433-E

An error occurred during the deleting of the resource management file.

Action

See the message output immediately before this message.

KDDM2434-E

An error occurred during the performing of `cpio` processing for the resource file.

Cause

An error occurred while executing the `cpio` command.

Action

See the message output immediately before this message.

KDDM2435-E

An error occurred during the sending of the resource attribute file.

Action

See the message output immediately before this message.

KDDM2436-E

An error occurred during the deleting of the resource attribute file.

Action

Check the connection to the upper-level system. If it is normal, check if the upper-level system failed.

KDDM2437-E

An error occurred during the performing of stat processing for the directory.

Cause

An error occurred in a `stat` system call for the work directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2438-E

An error occurred during the performing of read processing for the directory.

Cause

An error occurred in a `read` system call for the work directory.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2439-E

An error occurred during the processing of the directory.

Cause

An error occurred in a `stat` system call for the check directory.

Action

Check if the disk with the system directory (such as `/`, `/etc`, `/dev` or `/bin`) failed.

KDDM2440-E

An error occurred during the processing of the program product installation management file.

Cause

An error occurred while accessing `/etc/.hitachi/pplisd/pplisd`.

Action

Make sure `/etc/.hitachi/pplisd/pplisd` exists. If it does not exist, restore `/etc/.hitachi/pplisd/pplisd`. If it does exist, make sure that there is no error in the system directory (`/etc`) disk. If the disk is normal, system resources (a memory, etc.) may temporarily be insufficient. Re-execute the command.

KDDM2444-E

Using `compress` to compress packages generated an error.

Cause

The `compress` command could not be activated.

Action

Check if the disk failed. If the disk is normal, system resources (a disk, etc.) may temporarily be insufficient. Re-execute the command.

KDDM2445-E

An error occurred during the processing of the distribution status file.

Action

Examine the log file to check if the distribution status server facility failed. If the distribution status server facility is normal, restart it and then re-execute the command. If the error recurs, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM2446-I

Started distribution status server facility processing.

KDDM2447-I

Completed distribution status server facility processing.

KDDM2448-I

Displaying the list of distribution statuses.

KDDM2449-I

Completed displaying distribution statuses.

KDDM2451-I

There is no corresponding distribution status.

KDDM2453-E

The distribution status server facility is not started.

Action

Start the distribution status server facility.

KDDM2454-W

The distribution status server facility already started.

KDDM2455-I

Started the distribution status server facility.

KDDM2456-I

Stopped the distribution status server facility.

KDDM2457-E

Stopped processing because the distribution status server facility received a signal.

Action

Restart the distribution status server facility and then re-execute the command. If the error recurs, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM2458-E

Cannot initialize the distribution status file while the distribution status server facility is being started.

Action

Stop the distribution status server facility and then initialize the distribution status file.

KDDM2459-I

Completed deleting the distribution status.

KDDM2461-E

Not enough space in the distribution status file.

Action

Delete unnecessary records.

KDDM2462-S

A system error occurred in the file distribution status server.

Action

Restart the distribution status server facility. If the error recurs, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM2467-I

Cannot start because distribution is still in progress.

Action

Wait for distribution to complete, then retry.

KDDM2470-E

The backup contains no corresponding packages.

Action

Specify a correct package ID.

KDDM2472-I

Registration of the user key will now end.

KDDM2473-E

Could not register the user key.

Action

See the message output immediately before this message.

KDDM2474-E

Canceling registration of the user key because a system error occurred.

Action

The message immediately before this message indicates the cause. Examine the log file.

KDDM2475-I

Completed modifications to the user key.

KDDM2476-E

Could not modify the user key.

Cause

See the message output immediately before this message.

KDDM2477-E

Canceling modifications to the user key because a system error occurred.

Action

The message immediately before this message indicates the cause. Examine the log file.

KDDM2478-W

The user key is already registered.

Action

To modify the user key, use the `rdskey` command.

KDDM2479-E

The user key is not registered.

Action

Use the `rdskey` command to register the user key, and then retry the operation.

KDDM2480-E

Canceling encryption of the software because a system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2481-E

The software cannot be decoded because the key does not match.

Cause

The key of the managing server does not match the key of the distribution-destination system.

Action

Register or reset the key of the distribution-destination system, and then retry the operation.

KDDM2482-E

The format of the system key is invalid.

Action

Set the correct system key, and then retry the operation.

KDDM2483-E

Canceling decoding the software because a system error occurred.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM2484-E

The user key cannot be modified because the existing user key does not match.

Action

Set the existing user key correctly, and then retry the operation.

KDDM2487-I

Registered ID group (xxxxx).

Cause

Registering the ID group succeeded.

xxxxx

ID group

KDDM2488-E

Could not register ID group (xxxxx).

Cause

The ID group could not be registered.

xxxxx

ID group

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the job.

KDDM2489-E

Could not decode password during the registering of ID group (xxxxx).

Cause

The password could not be decoded while registering the ID group.

xxxxx

ID group

Action

See the message output immediately before this message.

KDDM2490-I

Deleted ID group (xxxxx).

Cause

Deleting the ID group succeeded.

xxxxx

ID group

KDDM2491-E

Could not delete ID group (xxxxx).

Cause

The ID group could not be deleted.

xxxxx

ID group

Action

See the message output immediately before this message.

KDDM2492-I

Changed password id (xxxxx).

Cause

Changing the password of the ID group succeeded.

xxxxx

ID group

KDDM2493-E

Could not change password for ID group (xxxxx).

Cause

The password of the ID group could not be changed.

xxxxx

ID group

Action

See the message output immediately before this message.

KDDM2494-W

ID group (xxxxx) is already registered.

Cause

The xxxxx ID group has already been registered.

Action

To overwrite the ID group, specify to overwrite it and then register it.

KDDM2495-E

Could not report registration of the ID group (xxxxx/yyyy).

Cause

The definitions of the ID group could not be reported. ID group registration by overwriting is successful even if this message is output.

xxxxx

ID group

yyyyy

Client name of the distribution-destination system that is requested to add to the group

Action

Recover from the failure and then re-register the ID group from the managing server.

KDDM2496-E

Could not report deletion of the ID group (xxxxx/yyyy).

Cause

The definitions of the ID group could not be deleted.

xxxxx

ID group

yyyyy

Client name of the distribution-destination system that is requested to delete from the group

Action

Recover from the failure and then re-register the ID group from the managing server.

KDDM2497-E

An error occurred during the registering or deleting of the ID group (xxxxx).

Cause

An error occurred while reporting the addition or deletion of the definitions of ID group.

Action

See the message output immediately before this message.

KDDM2498-E

Could not find the specified transfer file in the managing server.

Cause

The managing server does not contain the transfer file.

Action

Check if the upper-level system failed. If the upper-level system is normal, recreate the job.

KDDM2499-E

An error occurred during the receiving of the transfer file.

Action

Check the connection to the upper-level system. If it is normal, check if the upper-level system failed.

KDDM2500-E

Could not send the processing results file for the transfer file.

Cause

A communication error occurred.

Action

Check the connection to the upper-level system. If it is normal, check if the upper-level system failed.

KDDM2501-I

Deleted the ID group (xxxxx/yyyyy).

Cause

The distribution-destination system is deleted from the ID group.

xxxxx

Group from which the distribution-destination system is deleted

yyyyy

Client name of the distribution-destination system that is deleted from the group

KDDM2502-E

Could not delete the ID group (xxxxx/yyyyy).

Cause

The distribution-destination system could not be deleted.

xxxxx

Group from which the distribution-destination system is attempted to delete

yyyyy

Client name of the distribution-destination system that deletion was attempted

Action

See the message output immediately before this message.

KDDM2503-E

An error occurred during the creating of the processing results file for the transfer file.

Cause

An error occurred while creating the processing results file for the transfer file sent to the managing server.

Action

See the message output immediately before this message.

KDDM2504-E

Cannot create the system structure file.

Cause

The directory for managing the system configuration file is invalid.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2505-E

Cannot read the system structure file.

Cause

An error occurred while inputting the system configuration file.

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed.

KDDM2507-E

Could not delete a terminal job for the ID group (xxxxx).

Cause

The terminal job for the ID group could not be deleted.

xxxxx

ID group

Action

See the message output immediately before this message.

KDDM2509-W

There are more disks than can be managed by the system information (xxxxx).

Cause

The xxxxx disk exceeded the number of disks (47) that the system information can manage.

KDDM2510-W

Could not calculate disk capacity (xxxxx).

Cause

The remaining space on the xxxxx disk could not be calculated.

Action

Check if `/etc/checklist` is correct.

KDDM2511-W

xxxxx is already distributed.

Cause

xxxxx has already been distributed.

KDDM2522-E

An error occurred in an exclusive lock for the user inventory file.

Cause

An error occurred during an exclusive lock for the user inventory file.

Action

See the message output immediately before this message.

KDDM2523-E

An error occurred during the sending of the user inventory file.

Cause

An error occurred while sending the user inventory file.

Action

See the message output immediately before this message.

KDDM2525-W

The distribution destination name has been changed. (*A...A* -> *B...B*).

Cause

The distribution-destination name has been changed from *A...A* to *B...B*. If *A...A* and *B...B* are the same, JP1/IT Desktop Management 2 - Manager has been reconfigured so that host IDs are used or not used for client management.

KDDM2526-E

An attempt to edit the system construction of *xxxxx* failed.

Cause

Editing of the system configuration failed due to either of the following reasons.

- Communication with the resident server failed.
- Writing of the file failed.

Action

Re-install the system. If the error occurs again, collect error information and then contact the program developer.

KDDM2527-I

The system construction information of *xxxxx* has been deleted.

Cause

The client specified for the system configuration editing job is deleted.

KDDM2528-I

Could not find the system construction information of *xxxxx*.

Cause

The client specified for the system configuration editing job does not exist.

KDDM2529-E

The search list file is invalid.

Cause

Search was not performed because the search list could not be analyzed.

Action

Correct the contents of the search list and retry.

KDDM2530-E

An attempt to create the search list file failed.

Action

See the message output immediately before this message.

KDDM2531-E

An attempt to make the search list file exclusive failed.

Action

See the message output immediately before this message.

KDDM2532-E

An attempt to create the save-related search list file failed.

Action

See the message output immediately before this message.

KDDM2533-E

An attempt to make the save-related search list file exclusive failed.

Action

See the message output immediately before this message.

KDDM2534-E

An error occurred during the processing of a regular command.

Action

See the message immediately before this message.

KDDM2535-E

An error occurred while the timestamp of a regular command was being updated.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2536-E

An error occurred while notification information was being created.

Cause

A hard disk error occurred.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM2537-E

An error occurred during the processing of the job number database.

Cause

An error occurred in the database that manages job numbers.

Action

Check for failures in the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX).

KDDM2538-W

Could not find the job number = xxxx from the job number database.

Cause

The job number xxxx could not be found from the database managing the job numbers. A possible cause is that the execution result was not notified to the correct destination because the multiserver was disabled (YES was specified for EnableMultiServer in the settings file of the client services) during job execution.

Action

If the cause of the error indicated above does not apply, contact the program developer.

KDDM2540-W

The wrong collection attribute file was received.

Cause

An invalid collection attribute file was received from the lower-level system because a power interruption occurred at the lower-level system during resource collection.

Action

From the managing server, re-execute the file-collection job on the distribution-destination system where the file-collection job execution is pending.

KDDM2542-W

The wrong file retrieval result file was received.

Cause

An invalid file search result was received from the lower-level system because a power interruption occurred at the lower-level system during software information collection.

Action

From the managing server, re-execute the *Get software information from client* job (with **Search for a file** specified on the **Options** page) for the distribution-destination system where the software inventory information has not been updated.

KDDM2543-I

A change to the system was detected.

Cause

A change to the system was detected.

KDDM2544-W

An error occurred while monitoring for changes to the system.

Cause

An error occurred in the system while monitoring for changes to the system.

Action

See the message output immediately before this message.

KDDM2545-I

The program product will now be installed. (model name = *kkk*)

Cause

Installation of the distributed Hitachi program product will now begin.

kkk: Model name of the Hitachi program product to be installed

KDDM2546-I

The program product has been installed successfully.

Cause

Installation of the distributed Hitachi program product terminated normally.

KDDM2547-E

Installation of the program product failed. (rc = *rrr*)

Cause

An error occurred during installation of the distributed Hitachi program product.

rrr: Installer's return value

Action

After checking the KDDM2545-I message, which is output before this message, for the model name, check the installer log file in the `/etc/.hitachi` directory to investigate the cause.

KDDM2548-I

Post-installation processing will now be executed. (command = *ccc*)

Cause

The post-installation processing specified by the user will now be executed.

ccc: Command line to be executed

KDDM2549-I

The file attributes of the package will be matched with the access privileges/owners of the installation destination.

Cause

The files and directories contained in the package are installed by matching their attributes to the access privileges/owners of the installation destination.

KDDM2550-E

The package cannot be distributed because it is compressed using higher level compression.

Cause

An attempt was made to deliver a package with **higher level compression** specified.

Action

Register the package by specifying **old-version-compatible compression** or by not selecting **compress package data**, and then distribute the package again.

KDDM3001-I

xxxxx was recovered to the old version.

Cause

The *xxxxx* package was recovered to the old version.

KDDM3002-E

Could not recover *xxxxx*.

Cause

The *xxxxx* package could not be recovered.

Action

See the message output immediately before this message.

KDDM3003-E

An error occurred during the acquiring of a backup.

Cause

A system error occurred.

Action

Redistribute the packages.

KDDM3004-E

An error occurred during the deleting of the backup.

Cause

A system error occurred.

Action

Delete the backup file by the `rdsbkclear` command again. If the error recurs, collect the error information and contact the program developer.

KDDM3005-I

xxxxx is saved.

Cause

Stores the xxxxx package to be installed when the system starts up or after the system shuts down.

KDDM3006-E

An error occurred during the saving of the packages being installed during system startup or system termination.

Cause

An error occurred while storing the packages to be installed when the system starts up or after the system shuts down.

Action

See the message output immediately before this message.

KDDM3007-E

The program product was specified to be installed actively, but it cannot be installed in that way.

Cause

Installation was specified for a program product that cannot be installed while the system is running.

Action

Change the installation timing, create the job and then retry.

KDDM3008-E

The program product was specified to be installed at system startup, but it cannot be installed in that way.

Cause

Installation was specified for a program product that cannot be installed when the system starts up.

Action

Change the installation timing, create the job and then retry.

KDDM3009-I

Deleting the backup of xxxxx.

Cause

Deletes the backup of the `xxxxx` package by the *delete backup file* job from the managing server.

KDDM3010-E

An error occurred during program product recovery postprocessing.

Action

Check the `/NETMRDS/rdsprm/PPINS.LOGF` file (`/var/opt/NETMDMW/rdsprm/PPINS.LOGF` file for HP-UX) to determine the cause. If you cannot find the cause, collect the `PPINS.LOGF` file and the error information and contact the program developer.

KDDM3011-E

An error occurred during the recovering of packages.

Action

If the backup file remains, retry the recovery. If the recovery is impossible by retrying the `rdsrecover` command, collect the error information and contact the program developer. If there is no backup file, redistribute the packages.

KDDM3012-W

Time is up for the external program processing for installation.

Action

Follow the procedure described in *9.2.2 Failures in a program performing user-specific processing*.

KDDM3013-E

There is not enough space in the partitions of the mounted backup directory.

Cause

The space in the partitions of the mounted backup directory (`/NETMRDS/BACKUP/` for systems other than HP-UX, `/var/opt/NETMDMW/BACKUP/` for HP-UX) is insufficient.

Action

Delete unnecessary files, then retry.

KDDM3015-E

The initialization process for program product installation generated an error.

Cause

A system error occurred.

Action

Check if the disk with the system directory (`/etc`) failed. If the disk is normal, system resources (a memory, etc.) may temporarily be insufficient. Re-execute the command.

KDDM3016-E

The prestartup program for program product installation generated an error.

Action

Check the cause of the error occurred in the prestartup program for program product installation.

KDDM3017-E

An error occurred during the executing of the prestartup program for program product installation.

Cause

A system error occurred.

Action

Check the cause of the error occurred in the prestartup program for program product installation.

KDDM3020-E

An error occurred during the copying of a resource file.

Cause

A system error occurred.

Action

Check if the disk with the destination directory of the program product failed.

KDDM3021-E

The process for copying a resource file generated a text busy error.

Cause

A text busy error occurred while the program product is running during installation.

Action

Stop the running program product, then retry.

KDDM3022-W

Cannot recover to the old version because the backup is invalid.

Action

Delete the incorrect backup and then redistribute the package.

KDDM3023-E

The startup program after program product installation generated an error.

Action

Check the cause of the error occurred in the startup program after program product installation.

KDDM3024-E

An error occurred during the executing of the startup program after program product installation.

Cause

A system error occurred.

Action

Check the cause of the error occurred in the startup program after program product installation.

KDDM3027-W

No backup of *xxxxx* exists.

Cause

The backup does not exist for the *xxxxx* package.

KDDM3028-E

The installation directory for the job file is specified incorrectly.

Cause

An installation target directory has been specified for the software. However, this is hard disk software that needs to be specified by an absolute path, so you cannot specify the installation target directory for the software.

Action

Change the installation target directory to the root (/), then retry.

KDDM3029-E

Cannot install packages of a different model.

Cause

The program products for a different model were distributed.

Action

Check the packages to be distributed or the distribution-destination, then retry.

KDDM3030-E

The ID group management file was destroyed. (ID group = *xxxxx*)

Cause

The ID group management file for the *xxxxx* ID group is corrupted.

Action

The definition of the *xxxxx* ID group is invalid. Re-define the *xxxxx* ID group.

KDDM3031-E

An error occurred in the ID group management file access. (ID group = *xxxxx*)

Cause

An error occurred while accessing the ID group management file of the *xxxxx* ID group.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM3034-E

The ID group in the job file is specified incorrectly.

Cause

The ID group for the job destination contains the following incorrect specifications:

- The name of the ID group exceeds 32 digits.
- The destination contains more than one percent sign (%).
- The ID group cannot be specified for the destination of this job.

Action

Correct the specification of the ID group, then retry.

KDDM3035-E

An error occurred during the accessing of the ID group management file.

Cause

An error occurred while accessing the ID group management file.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM3036-E

An error occurred during the processing of the ID job.

Cause

A system error occurred while processing the job with the ID group specified.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM3037-E

Cannot create the following ID job because the host name for the terminal to which it should be distributed is too long (*aaaaaaaa/bbbbbbbbbbbbbbbbbb*).

Cause

The job with the ID group specified for the destination is too long; the total of the length of *.%ID-group* of the destination plus the length of the host name of the distribution-destination system exceeds 64 digits.

aaaaaaaa: ID group

bbbbbbbbbbbbbbbb: Serial job number in managing server

Action

Change the configuration of the distribution-destination system so that the total of the length of *.%ID-group* of the destination plus the length of the host name of the distribution-destination system becomes 64 digits or less.

KDDM3041-E

Could not find ID group definition files.

Cause

There is no ID group definition file. The ID group definition files are as follows:

- For systems other than HP-UX: /NETMRDS/rdsprm/DMWIDLDCM or /NETMRDS/rdsprm/DMWIDUPM
- For HP-UX: /etc/opt/NETMDMW/rdsprm/DMWIDLDCM or /etc/opt/NETMDMW/rdsprm/DMWIDUPM

Action

Create the ID group definition file, then retry.

KDDM3042-E

The ID group definition is unchanged.

Cause

The ID group definition is not changed.

Action

- For the `rdsidexec` command:
Register the ID group definition file by the `rdsiddefine` command and then re-execute the `rdsidexec` command.
- For the `rdsiddefine` command:
Specify the command option or the ID group definition file to change the ID group definition, then retry.

KDDM3043-E

The format of the ID group definition file (xxxxx) is incorrect.

Cause

The xxxxx ID group definition file has an invalid format.

Action

Correct the contents of the ID group definition file, then retry.

KDDM3044-E

The ID group in the ID group definition file (xxxxx) is specified incorrectly.

Cause

The name of the ID group specified in the xxxxx ID group definition file contains a character other than alphanumeric, or the ID group name has more than 8 characters.

Action

Correct the specification of the ID group, then retry.

KDDM3045-I

Registered the ID group (aaaaaaaa/hhhhhhhhhh).

Cause

Registering the ID group succeeded.

aaaaaaaa: ID group

hhhhhhhhhh: Host name of the distribution-destination system that is registered in the ID group

KDDM3046-E

Could not register the ID group (*aaaaaaaa/hhhhhhhhhh*).

Cause

The causes of the ID group that cannot be registered are:

- The ID group management file is corrupted.
- A system call error occurred in the relay system while registering the ID group.
- The ID group that you attempted to register has already been defined in the relay system.
- The ID group that you attempted to register has already been defined in the client workstation or the client PC.

Action

Investigate the details of the cause by viewing the log files of the relay system.

KDDM3047-I

Deleted the ID group (*aaaaaaaa/hhhhhhhhhh*).

Cause

The local UNIX machine or the distribution-destination system is deleted from the ID group.

aaaaaaaa: Deleted ID group

hhhhhhhhhh: Host name of the distribution-destination system deleted from the ID group

KDDM3048-E

Could not delete the ID group (*aaaaaaaa/hhhhhhhhhh*).

Cause

The cause may be either of the following:

- The ID group management file is corrupted.
- A system call error occurred in the relay system while registering the ID group.

aaaaaaaa: ID group deleted

hhhhhhhhhh: Host name of the distribution-destination system deleted from the ID group

Action

Investigate the details of the cause by viewing the log files of the relay system.

KDDM3049-W

No ID group is defined.

Cause

There is no ID group defined.

KDDM3050-I

Executed the ID group distribution job creation process (*aaaaaaaa/bbbbbbbbbb*).

Cause

The job being stored in the *aaaaaaaa* ID group is created for the *bbbbbbbbb* host.

KDDM3051-E

Could not create the ID group distribution job (*aaaaaaaa/bbbbbbbbbb*).

Cause

The cause may be either of the following:

- The ID group management file is corrupted.
- A system call error occurred in the relay system while creating the job with the ID group specified.
- The upper relay system executed the job in which the Windows relay system specified the ID group.

Action

Investigate the details of the cause by viewing the `/NETMRDS/rdsprm/MAIN.LOGF (/var/opt/NETMDMW/rdsprm/MAIN.LOGF for HP-UX)` of the relay system. If this message is output after the upper relay system executed the job in which the Windows relay system specified the ID group, ignore this message.

KDDM3052-E

Could not acquire the history of the ID group additions.

Cause

The `rdsidexec` command cannot be executed because the additional history of the ID group could not be acquired.

Action

Change the ID group definition to the previous one, then retry. If the error recurs, collect the error information and contact the program developer.

KDDM3053-E

Setting by DMWIDLDCM cannot be done in the client workstation.

Cause

For the client workstation, the ID group cannot be defined by `/NETMRDS/rdsprm/DMWIDLDCM (/etc/opt/NETMDMW/rdsprm/DMWIDLDCM for HP-UX)`.

Action

Define the ID group by `/NETMRDS/rdsprm/DMWIDUPM (/etc/opt/NETMDMW/rdsprm/DMWIDUPM for HP-UX)`.

KDDM3054-E

Setting by DMWIDUPM cannot be done in a relay system directly connected to the managing server.

Cause

For the relay system directly connected to the managing server, the ID group cannot be defined by `/NETMRDS/rdsprm/DMWIDUPM (/etc/opt/NETMDMW/rdsprm/DMWIDUPM for HP-UX)`.

Action

Define the ID group by `/NETMRDS/rdsprm/DMWIDLDCM (/etc/opt/NETMDMW/rdsprm/DMWIDLDCM` for HP-UX).

KDDM3058-I

Recovering `xxxxx` to the old version.

Cause

The `xxxxx` package is recovered to the old version by the *recovery* job from the managing server.

KDDM3059-I

Deleted the ID group definition (`aaaaaaaa/hhhhhhhh`).

Cause

The definition of the ID group (`aaaaaaaa`) is deleted for the distribution-destination system (`hhhhhhh`). This message is output when you execute the command to delete an ID group. It may also be output during registration of an ID group definition file if the previously registered ID group is not coded in the file.

`aaaaaaaa`: ID group deleted

`hhhhhhh`: Distribution-destination system that deleted the ID group

KDDM3061-E

An error occurred during the creating of the ID job (`aaaaaaaa/bbbbbbbbbbbbbbb/hhhhhhhh`).

Cause

A system error occurred while creating the job with the ID group specified.

`aaaaaaaa`: ID group of the job being created

`bbbbbbbbbbbbbb`: Serial job number in managing server of the job with the ID group specified

`hhhhhhh`: Host name of the distribution-destination system in which the created job is executed

Action

Check if the disk with the directory containing the client services (such as `/NETMRDS` for systems other than HP-UX, or `/var/opt/NETMDMW` for HP-UX) failed. If the disk is normal, check if it has sufficient free space available.

KDDM3062-E

The following job's distribution-destination is specified incorrectly so it cannot be executed (`aaaaaaaa/bbbbbbbbbbbbbbb/hhhhhhhh`).

Cause

The automatically-created distribution job could not be executed since the destination of the distribution job is incorrect.

`aaaaaaaa`: ID group defined

`bbbbbbbbbbbbbb`: Serial job number in managing server

`hhhhhhh`: Host name of the distribution-destination system with the ID group defined

Action

The host name is too long. Change the configuration of the distribution-destination system so that the total of the length of *. %ID-group* of the destination plus the length of the host name of the distribution-destination system becomes 64 digits or less.

KDDM3063-E

A program error occurred during the changing of the ID job.

Cause

A system error occurred while changing the job with the ID group specified.

Action

Check if the file system failed by the syslog file. If the file system is normal, collect the error information and contact the program developer.

KDDM3064-E

An error occurred during the creating of the ID job (*aaaaaaaa/hhhhhhhh*).

Cause

A system error occurred while creating the job with the ID group specified.

aaaaaaaa: ID group

hhhhhhh: Host name of the distribution-destination system with the ID group defined

Action

Check if the file system failed by the syslog file. If the file system is normal, collect the error information and contact the program developer.

KDDM3065-I

Adding the ID group definition (*aaaaaaaa/hhhhhhhh*).

Cause

The definition of the ID group is added.

aaaaaaaa: ID group

hhhhhhh: Host name of the distribution-destination system with the ID group defined

KDDM3066-E

A program error occurred during the creating of the ID job.

Cause

A system error occurred while creating the job of the ID group.

Action

Check if the file system failed by the syslog file. If the file system is normal, collect the error information and contact the program developer.

KDDM3067-I

Created the following job (*aaaaaaaa/bbbbbbbbbbbbbbbb/hhhhhhhh*).

Cause

The *hhhhhhh* job is created to the distribution-destination system.

aaaaaaaa: ID group that created the job

bbbbbbbbbbbbbb: Serial job number in managing server

hhhhhhh: Host name of the distribution-destination system in which the created job is executed

KDDM3068-E

An error occurred during the deleting of the ID job.

Cause

A system error occurred while deleting the job with the ID group specified.

Action

Check if the disk with the directory containing the client services (such as */NETMRDS* for systems other than HP-UX, or */var/opt/NETMDMW* for HP-UX) failed.

KDDM3071-E

Because there is no contract for program product *xxxxx*, it cannot be installed.

Cause

You cannot install *xxxxx* because there is no contract for that program product.

Action

Check the program products that were to be distributed.

KDDM3072-E

The package compression method is invalid.

Cause

The information about the compression method recorded in the distribution job is incorrect.

Action

Delete the packages, re-package them and then perform distribution for them.

KDDM3073-E

A start request message is invalid.

Action

Check the settings of the destination to be connected.

KDDM3075-E

Could not start the client.

Action

System resources (a buffer area, etc.) may temporarily be insufficient. Wait for a while, then retry.

KDDM3077-E

The user of `xxxxx` is not registered.

Cause

Because the `xxxxx` user that is set at packaging is not set in the local system, the packages cannot be decompressed.

Action

Check the packages to be distributed or register the user, then retry.

KDDM3078-I

Interrupted distribution processing.

Cause

Distribution is canceled by the request from the managing server.

KDDM3079-W

Communication with the managing server is interrupted.

Cause

The managing server ordered cancellation.

Action

Restart processing from the managing server that ordered the cancellation.

KDDM3080-I

Deleted the information of user resource installation for (`xxxxx`).

Cause

The user installation history information about the `xxxxx` package is deleted.

KDDM3081-E

Could not delete the information of user resource installation for (`xxxxx`).

Cause

The user installation history information about the `xxxxx` package could not be deleted.

Action

The message immediately before this message indicates the cause.

KDDM3082-I

Restarted distribution processing.

Cause

The canceled distribution is restarted.

KDDM3083-I

`xx...xx` was selected.

Cause

The client specified installation of the packages that can be installed.

KDDM3084-I

Installation of `xx...xx` is denied.

Cause

The client rejected installation of the packages allowed for installation.

KDDM3085-W

Could not find any corresponding packages.

KDDM3086-E

Could not reference the ID group being managed in the relay system.

Cause

The ID group cannot be referenced. The causes are as follows:

- The ID group management file is corrupted.
- A system call error occurred in the relay system while referencing the ID group.

Action

Check `/NETMRDS/rdsprm/MAIN.LOGF` (`/var/opt/NETMDMW/rdsprm/MAIN.LOGF` for HP-UX) in the relay system.

KDDM3087-E

The value in the ID group is specified incorrectly.

Action

Check the specifications.

KDDM3088-E

The value in the password is specified incorrectly.

Action

Check the specifications.

KDDM3089-E

Could not register ID group (`xxxxx/yyyyy`) because the password does not match.

Cause

The ID group could not be registered because the password does not match.

xxxxx: ID group
yyyyy: Client name of the distribution-destination system

Action

Check the specifications.

KDDM3090-E

An error occurred during the converting of the password.

Action

See the message output immediately before this message.

KDDM3091-I

Executing package installation.

Cause

The packages allowed for installation were installed in the client.

KDDM3092-W

The specified ID group (xxxxx) was not registered from the managing server.

Cause

The ID group is not registered from the managing server and it cannot be defined.

xxxxx: ID group

KDDM3093-E

The upper relay system is an old version so the specified ID group cannot be registered with the -k option specified.

Action

Execute the command without the -k option, or use the ID group definition file to register the ID group.

KDDM3094-I

Application of the patch to xxxxxxxx has finished.

Cause

Patch xxxxxxxx is applied successfully.

xxxxxxx: Program product model name

KDDM3095-E

An attempt to apply the patch to xxxxxxxx has failed.

Cause

Applying patch xxxxxxxx failed.

xxxxxxx: Program product model name

Action

Check the contents of the error that are output to `/NETMRDS/rdspm/PPPATCH.LOGF` (for HP-UX: `/var/opt/NETMDMW/rdspm/PPPATCH.LOGF`) when the patch is applied.

KDDM3096-E

A system call error occurred during processing of the `xxxxxxx` patch.

Cause

A system error occurred during the processing of the patch for `xxxxxxx`.
`xxxxxxx`: Program product model name

Action

See the message output immediately before this message.

KDDM6001-E

Could not send the resource file.

Cause

An error occurred while sending the resource file.

Action

See the message output immediately before this message.

KDDM6002-E

Could not send the collection-information file.

Cause

An error occurred while sending the collection-information file.

Action

See the message output immediately before this message.

KDDM6003-E

An error occurred during the changing to the virtual file of the resource.

Cause

A system call error occurred when renaming the resource file.

Action

Check if the disk failed or if there is insufficient disk space.

KDDM6004-E

An error occurred during the acquiring of the time and date.

Cause

An error occurred in a `time` system call.

Action

Check if the settings of the system date and time are correct, then retry. If they are correct, contact the system administrator.

KDDM6005-I

Completed sending collected resources.

KDDM6006-I

Starting to send resources to temporary collection storehouse.

KDDM6009-E

Could not send the collected resources.

Action

See the message output immediately before this message to determine the cause of the error.

KDDM6010-E

Could not send the collection script file.

Cause

An error occurred while sending the collection script file.

Action

See the message output immediately before this message.

KDDM6020-I

Starting remote collection.

KDDM6024-E

Remote collection failed.

Cause

An error occurred during collection processing.

Action

See the message output immediately before this message to determine the cause of the error.

KDDM6025-E

Execution of external program processing before collection failed.

Action

Check the external program processing before collection specified in the collection-information file, then retry. If the external program processing before collection is normal, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM6026-E

Execution of external program processing after collection failed.

Action

Check the external program processing after collection specified in the collection-information file, then retry. If the external program processing after collection is normal, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM6027-E

The external program processing for collection does not exist.

Action

Correct the contents of the collection-information file, then retry.

KDDM6028-E

The attribute for external program processing for collection is invalid.

Action

Correct the attribute of the external program processing for collection specified in the collection-information file, then retry.

KDDM6029-E

Could not find the specified file for remote collection.

Action

Correct the collection-information file and the collection path file, then retry.

KDDM6030-E

The attribute for the specified file for remote collection is invalid.

Action

Check the attribute of the file specified for the collection-information file or the collection path file, then retry.

KDDM6032-E

An error occurred during the creation of the collected resources.

Action

See the message output immediately before this message.

KDDM6033-E

No collection path file exists.

Action

Correct the specifications of the collection path file in the collection-information file, then retry.

KDDM6034-E

The format of the collection path file is invalid.

Action

Correct the format of the collection path file specified in the collection-information file, then retry.

KDDM6035-E

The file attribute of a collection path file is invalid.

Cause

A file or directory other than the usual file and directory was specified.

Action

A file or directory other than the usual file and directory cannot be specified. Check the attribute of the collection path file, then retry.

KDDM6038-E

Could not find the files in the specified collection path file, or the identical files already exist.

Cause

- COPY is specified for `CollectType` in the collection-information file:
There are no packages in the collection path file, or there is more than one package.
- STANDARD is specified for `CollectType` in the collection-information file:
There are no packages in the collection path file.

Action

Specify a correct collection path file.

KDDM6039-E

Could not receive the collection path file.

Action

See the message output immediately before this message.

KDDM6042-E

Could not receive the collection script file.

Action

See the message output immediately before this message.

KDDM6043-I

Collection-information file size: xxxx KB

Cause

The system displays the size of the collection-information file. The displayed size might differ from the actual file size because the size represents the disk space used for the file in KB.

KDDM6046-E

An option is specified incorrectly. (xxxxx)

Cause

Option xxxxx specified in the command is incorrect.

Action

Check the option, then retry.

KDDM6047-E

The collection-information file contains an error. (xxxxx)

Cause

The contents of the xxxxx collection-information file specified using the command are incorrect.

Action

Check the collection-information file and then re-execute the command.

KDDM6050-E

Could not move the collection-information file.

Cause

A communication error occurred.

Action

See the message output immediately before this message.

KDDM6051-E

The format of the collection-information file is invalid.

Action

Check the coding format in the collection-information file.

KDDM6060-I

Starting to initialize the temporary collection storehouse.

KDDM6061-I

Completed initializing the temporary collection storehouse.

KDDM6069-E

Could not initialize the temporary collection storehouse.

Action

See the message output immediately before this message to determine the cause of the error.

KDDM6070-I

Completed receiving collected resources.

KDDM6071-E

Could not check the capacity of the transfer destination directory.

Cause

An error occurred while checking the amount of space the destination directory.

Action

Check if the disk failed. Also, see the message immediately before this message to determine the cause of the error.

KDDM6072-E

Could not find the collected resource file in transfer source directory.

Action

An error occurred in the lower-level system that may have prevented some of the files from being sent. Check if the lower-level system failed.

KDDM6074-E

Could not move the collected resource file.

Cause

An error occurred while moving the collected resource file.

Action

Check if the disk failed. Also, see the message immediately before this message to determine the cause of the error.

KDDM6075-E

Could not move the collected resource file to the directory for saving.

Cause

An error occurred while moving the collected resource file.

Action

Check if the disk failed. Also, see the message immediately before this message to determine the cause of the error.

KDDM6079-E

Could not receive collected resources.

Action

See the message output immediately before this message to determine the cause of the error.

KDDM6080-E

The exclusive lock on the file generated an error.

Cause

An error occurred in a system call.

Action

Check if the disk failed. Also, see the message immediately before this message, if there is one.

KDDM6081-E

Opening the file generated an error.

Cause

An error occurred in a system call.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient. Re-execute the command or the job from the managing server.

KDDM6082-E

The collection-information file does not exist.

Cause

The collection-information file does not exist. Cancel processing.

Action

Check the collection-information file.

KDDM6083-E

Could not read the file.

Cause

An error occurred while accessing the file.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient. Re-execute the command or the job from the managing server.

KDDM6084-E

Accessing the specified file generated an error.

Cause

A system call error occurred.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient. Re-execute the command or the job from the managing server.

KDDM6085-E

Could not write the file.

Cause

An error occurred while accessing the file.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient. Re-execute the command or the job from the managing server.

KDDM6088-E

A system call error occurred.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient. Re-execute the command or the job from the managing server. Also, see the message immediately before this message, if there is one.

KDDM6089-E

Could not create the result-reporting file.

Cause

A system call error occurred in the internal processing.

Action

Check if the disk failed. Also, see the message immediately before this message to determine the cause of the error.

KDDM6090-E

Only the super user can start it.

Action

Log in as a superuser, then retry.

KDDM6092-E

The user of `xxxxx` is not registered.

Cause

The `xxxxx` user that is set at registration of the collection-information file is not set in the local system. The collection script file could not be decompressed.

Action

Check the collection script file, or register the user, then retry.

KDDM6093-E

The group of `xxxxx` is not registered.

Cause

The `xxxxx` group that is set at registration of the collection-information file is not set in the local system. The collection script file could not be decompressed.

Action

Check the collection script file, or register the group and then retry.

KDDM7011-E

Only the super user can start it.

Cause

A user other than the superuser activated the command.

Action

Log in as a superuser and then execute the command.

KDDM7012-E

It cannot be started while a distribution is being executed.

Cause

Distribution is being executed.

Action

To execute distribution, wait for the distribution to complete and then execute the command.

KDDM7013-E

An option is invalid.

Cause

The following errors are found:

- An option of the entered command is incorrect.
- The type of the workstation is incorrect.

Action

Specify a correct option for the command and then execute the command.

KDDM7014-E

It cannot be started while `xxxxx` is being executed.

Cause

The `xxxxx` command is being executed.

Action

To re-execute the `xxxxx` command, wait for the command to complete and then execute the command.

KDDM7018-E

Error occurred in the program.

Cause

The operating environment of JP1/IT Desktop Management 2 is incorrect.

Action

Reinstall JP1/IT Desktop Management 2.

KDDM7019-E

Accessing the message catalog generated an error.

Action

Set the language environment, then retry. If the error recurs, restart the system. If the error still recurs after restarting the system, collect the error information and contact the program developer.

KDDM7020-E

No operating environment is set for JP1/IT Desktop Management 2.

Cause

The operating environment for the client services is not set.

Action

Create the settings file to set the operating environment.

KDDM7021-E

Not installing because the file system is invalid.

Cause

Installation was not executed since an incorrect file system (the result of the `fscklean` command is other than 0) was found when the software was installed while the system was inactive.

Action

Correct the incorrect file system and then restart the system.

KDDM7025-E

The `rdsrf` command only operates in the client.

Action

Execute the command from the client workstation.

KDDM7026-E

This command does not operate in an end workstation.

Action

Execute the command from the client workstation.

KDDM7027-E

Could not automatically execute a ID group definition when the system started up.

Cause

An error occurred while changing the ID group definition when the system starts up or while executing a job.

Action

See the message output immediately before this message in the log file to determine the cause of the error, then retry.

KDDM7028-E

A system error occurred in exclusive lock processing by the `xxxxx` command.

Cause

A file access error occurred during an exclusive lock by the `xxxxx` command.

Action

Re-execute the command. If the error recurs, collect the error information and contact the program developer.

KDDM7029-E

The exclusive lock processing by the `xxxxx` command failed. Stopping the command.

Cause

There are too many processes to be executed. A conflict occurred during an exclusive lock by the `xxxxx` command. Cancel processing without executing the command.

Action

Wait for a while, then retry.

KDDM7030-I

server (`xxxxx`) is started.

Cause

JP1/IT Desktop Management 2 - Agent is started.

KDDM7031-I

server (`xxxxx`) is stopped.

Cause

JP1/IT Desktop Management 2 - Agent is stopped.

KDDM7033-E

It is executed from relaying system.

Cause

The end workstation received a job execution request via a relay system.

Action

From the managing server, check the distribution-destination name for this system, and change the distribution-destination name so that it is not routed via a relay system.

KDDM7034-E

It is executed from distribution management system.

Cause

The client workstation received a job execution request from the managing server.

Action

From the managing server, check the distribution-destination name for this system, and change the distribution-destination name so that it is routed via a relay system.

KDDM7035-I

Processing to acquire core-related information will now start.

Cause

The core-related information began to be acquired.

KDDM7036-I

Target core file = /xxxxx/xxxx

Cause

The core-related information is acquired from /xxxxx/xxxx.

/xxxxx/xxxx: File from which the core-related information is acquired

KDDM7037-I

Processing to acquire core-related information will now finish.

Cause

The acquisition of the core-related information has ended.

KDDM7038-E

Processing to acquire core-related information will now stop because multiple core files exist in the JP1/IT Desktop Management 2 directory.

Cause

There are multiple core files in the JP1/IT Desktop Management 2 directory.

Action

Specify the desired core file and re-execute the command

KDDM7039-E

Processing to acquire core-related information will now stop because the core file is not in the JP1/IT Desktop Management 2 directory.

Cause

There is no core file in the JP1/IT Desktop Management 2 directory.

Action

Specify the desired core file and re-execute the command.

KDDM7040-E

An error occurred in an external command. (command = *xxxx*)

Cause

An error occurred in the external command that is executed to acquire core-related information.

xxxx: External command name

Action

- Check whether the user who executed the command is authorized to read the core file.
- Check whether the target file is actually a core file.

KDDM7041-E

The specified core file does not exist.

Cause

The specified core file does not exist.

Action

Check the path for the core file and then re-execute the processing.

KDDM7042-I

Return code = *x*

Cause

The system displays a return code.

x: Return code

Action

Reference the previous message.

KDDM7043-E

The user resource path for packaging another company's software has been specified as an absolute path.

Cause

The specified user resource path includes the name of a directory that contains another company's software.

Action

When you specify the user resource path, move to the directory that contains the file of another company's software, and then specify the file name.

KDDM7044-W

The same software from that company has already been installed.

Cause

The same software of another company as the one you attempted to install has already been installed.

KDDM7045-W

JP1/IT Desktop Management 2 is already running.

Cause

JP1/IT Desktop Management 2 is already running.

KDDM7046-W

'xxxxxx'(yyyyyy) was stopped.

Cause

xxxxxx was stopped due to forcible termination of installation when the system was starting or stopping.

xxxxxx: Name of the stopped process

yyyyyy: Process ID

Action

If there is a job whose execution process did not proceed on the managing server or which terminated with an error, retry the job.

KDDM7500-I

Completed installation processing when the JP1/IT Desktop Management 2 system was shut down.

Cause

Installation after the system shuts down terminated.

KDDM7501-E

Cannot start while JP1/IT Desktop Management 2 is being distributed.

Cause

JP1/IT Desktop Management 2 is being distributed.

Action

After JP1/IT Desktop Management 2 is completely distributed, execute the command.

KDDM7502-I

Starting installation processing when the JP1/IT Desktop Management 2 system is shut down.

Cause

Installation after the system shuts down is started.

KDDM7503-I

Starting installation processing when the JP1/IT Desktop Management 2 system is started up.

Cause

Installation when the system starts up is started.

KDDM7504-I

Completed installation processing when the JP1/IT Desktop Management 2 system was started up.

Cause

Installation when the system starts up is terminated.

KDDM7505-E

An error occurred during the processing of the settings file.

Action

Delete `/NETMRDS/rdsprm/NETSETFL` (`/opt/rdsprm/NETSETFL` for HP-UX), recreate the settings file (`/NETMRDS/rdsprm/RDSSETFL` for systems other than HP-UX, `/etc/opt/NETMDMW/rdsprm/RDSSETFL` for HP-UX), and then re-execute the command.

KDDM7515-I

The user information settings will now start.

Cause

Setting of the user information will now start.

KDDM7516-I

The user information settings will now end.

Cause

Setting of the user information will now end.

KDDM7517-W

An attempt to set the user information settings has failed. (item name = `xxxxx`)

Cause

Setting of the item `xxxxx` has failed.

Action

Make sure that you have not entered invalid characters or omitted any required options.

KDDM7518-E

An attempt to set the user information settings has failed.

Cause

Setting of the user information has failed.

Action

Check the command specification, and then retry.

KDDM7519-E

An error occurred during lock processing of the user inventory file.

Cause

An error occurred while the user inventory file was being locked.

Action

You cannot execute multiple commands concurrently. Wait for the currently running command to finish, and then execute another command.

KDDM7520-E

An error occurred during the sending of the user inventory file.

Cause

Sending of the user inventory file failed.

Action

Check the communication status, and then re-execute the update command.

KDDM9001-E

A TCP/IP communication error occurred.

Cause

A communication error occurred in the line.

Action

Check if the line to the destination system is disconnected. Also, see the message immediately before this message, if there is one.

KDDM9003-E

A system error occurred in the file transfer server facility.

Cause

A system error occurred during communication.

Action

Check if the upper-level system failed or if the disk failed. Also, see the message immediately before this message, if there is one.

KDDM9004-E

A processing contradiction occurred in the file transfer server facility.

Cause

A system error occurred during communication.

Action

An internal conflict occurred in the communication server. Restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM9005-E

The specified connection destination is not defined.

Action

Define a correct destination for connection, then retry.

KDDM9006-E

The sequence of processing requests to the file transfer server facility is invalid.

Cause

A system error occurred during communication.

Action

The destination system failed, or an internal conflict occurred in the communication server. Restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM9007-E

A processing request to a file transfer server facility is invalid.

Cause

A system error occurred during communication.

Action

The destination system failed, or an internal conflict occurred in the communication server. Restart the system. If the error recurs, collect the error information and contact the program developer.

KDDM9008-E

An error was detected in the low-level function.

Cause

A system error occurred during communication.

Action

See the message output immediately before this message.

KDDM9009-E

An interruption occurred.

Cause

Communication was interrupted.

Action

If the server is forcibly terminated by the command operation, etc., restart the system. Otherwise, collect the error information and contact the program developer.

KDDM9010-E

Could not find the specified file.

Cause

A system error occurred during communication.

Action

No action is required.

KDDM9011-E

The specified file is invalid.

Cause

A system error occurred during communication.

Action

An error may have occurred in a lower-level system and an incorrect result file may have been sent. Check if a lower-level system failed.

KDDM9012-S

Cannot start the file transfer server facility.

Cause

A system error occurred during communication.

Action

If the number of port for the file transfer server facility is not defined, define the port number. If it is defined, the system definition (such as the total number of files that can be opened by the system) may be exceeded. Restart the system without starting any unnecessary processes. If the error recurs, collect the error information and contact the program developer.

KDDM9013-E

The processing request for the file transfer server facility is invalid.

Cause

A system error occurred during communication.

Action

The destination system failed, or an internal conflict occurred in the communication server. Restart the system. If the error recurs, collect the error information and contact the program developer.

KDDM9014-E

Memory became insufficient during the starting up of the file transfer server facility.

Cause

Memory is insufficient for communication.

Action

Check the memory usage and increase it as required.

KDDM9015-E

Cannot reference definition information about the specified connection destination.

Cause

The definitions of the host address in the host file cannot be referenced. Alternatively, the job was executed from the Windows version of the managing server, for the UNIX version of the distribution-destination system, with **Boot the client at the job destination** specified.

Action

Check the specifications in the host file. If the job was executed from the Windows version of the managing server with **Boot the client at the job destination** specified, for a distribution-destination system on a UNIX machine, the **Boot the client at the job destination** specification has no effect. Start the machine of the distribution-destination system, and then re-execute the job.

KDDM9016-E

A processing contradiction occurred in the file transfer server facility.

Cause

A system error occurred during communication.

Action

An internal conflict occurred in the file transfer server facility. Restart the system. If the error recurs after restarting the system, collect the error information and contact the program developer.

KDDM9017-E

Cannot delete the *xxxxx* directory.

Cause

A system error occurred during communication.

Action

Check if the disk failed. If the disk is normal, system resources may temporarily be insufficient.

KDDM9018-W

Could not set up the NLS environment variables.

Action

Set the language environment, then retry. If the error recurs, collect the error information and contact the program developer.

KDDM9022-E

There are too many associations.

Action

Wait for the command being executed to complete, and then execute the next command.

KDDM9023-E

Could not find the file which must be sent.

Action

The destination system failed, or an internal conflict occurred in the communication server. Restart the system. If the error recurs, collect the error information and contact the program developer.

KDDM9024-E

Could not create the directory in the file transfer server facility.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM9025-E

Could not delete the file in the file transfer server facility.

Action

Check if the disk with the directory containing the client services (such as /NETMRDS for systems other than HP-UX, or /var/opt/NETMDMW for HP-UX) failed.

KDDM9026-E

The specified channel is being used.

Cause

The channel is used by other processing.

Action

Use another channel, or wait for the channel to be free, and then retry.

KDDM9027-E

An invalid message was received during the sending of the file.

Cause

Incorrect text was received during the file transfer with the managing server.

Action

Check whether an abnormality occurred in the connection destination system, and then try again.

KDDM9028-E

The value in attribute name specified in the host file is invalid.

Action

Correct the contents of the host file, and then retry.

KDDM9029-I

Attribute name = 'xxxxx'

Cause

The attribute name is incorrect.

Action

See the message output immediately before this message.

KDDM9030-E

Cannot start the file transfer server facility.

Cause

A system error occurred during communication.

Action

System resources (a buffer area, etc.) may temporarily be insufficient. Wait for a while, then retry.

KDDM9031-E

An error occurred in the file transfer server facility of the managing server.

Action

Determine the cause of the error from the error log message of the managing server. Correct the cause of the error, and then retry.

KDDM9032-E

The default value for netmdm was already used elsewhere.

Cause

The client services set the value because the port number of netmdm was not set in `/etc/services`. However, that value has already been used.

Action

Add the port number of netmdm in `/etc/services`.

KDDM9033-E

There is no answer from the client during the communicating with the client.

Action

Check the port number set in `/etc/services`.

KDDM9034-E

The answer from the managing server is invalid.

Cause

An incorrect response is sent from the file transfer server facility of the managing server.

Action

Check the port number set in `/etc/services`.

KDDM9035-E

There is no answer from the managing server during the communicating with the managing server.

Cause

There is no response after a period of time expired during communication with the managing server.

Action

Retry the operation.

KDDM9036-E

A connection request was denied because the MaxConnectClients was exceeded.

Action

Retry the operation.

KDDM9037-E

The xxxxx connection request was denied because the MaxConnectClients was exceeded.

Action

Retry the operation.

KDDM9038-E

No connection destination host name is set.

Cause

The request from the distribution-destination system that is not defined in the relay system is received causing the connection request to be rejected.

Action

Define the host name of the distribution-destination system that requested connection, in the relay system.

KDDM9044-W

Restarting the program because it is impossible to continue processing.

Cause

The processing of the file transfer server facility cannot be continued. Restart the program.

KDDM9045-E

The wrong result-reporting file was received.

Cause

The received result-reporting file was discarded since it contained incorrect data.

Some jobs of the managing server may have not moved to the COMPLETE or ERROR status.

Action

On the managing server, use the host name to check the job status and re-create the job. The name of the host that sent the file is indicated in the KDDM0549-E message.

KDDM9046-E

The wrong status information file was received.

Cause

The received status information file was discarded since it contained incorrect data.

Some jobs of the managing server may have not moved to the COMPLETE or ERROR status.

Action

On the managing server, use the host name to check the job status and re-create the job. The name of the host that sent the file is indicated in the KDDM0549-E message.

KDDM9047-W

An error occurred during processing of a system configuration file.

Cause

A possible cause of the error is a temporary shortage of system resources (such as free disk space).

Action

Check the free disk space of the following directories that contain client services, and then retry:

- For systems other than HP-UX, directories such as /NETMRDS
- For HP-UX, directories such as /var/opt/NETMDMW

KDDM9048-W

An invalid system configuration file was received.

Action

Retry the operation.

KDDM9049-W

An error occurred during the processing of the system information file.

Cause

A possible cause of the error is a temporary shortage of system resources (such as free disk space).

Action

Check the free disk space of the following directories that contain client services, and then retry:

- For systems other than HP-UX, directories such as /NETMRDS
- For HP-UX, directories such as /var/opt/NETMDMW

KDDM9050-W

An invalid system information file was received.

Action

Retry the operation.

KDDM9051-W

An error occurred during the processing of the registry information file.

Cause

A possible cause of the error is a temporary shortage of system resources (such as free disk space).

Action

Check the free disk space of the following directories that contain client services, and then retry:

- For systems other than HP-UX, directories such as /NETMRDS
- For HP-UX, directories such as /var/opt/NETMDMW

KDDM9052-W

An invalid registry information file was received.

Action

Retry the operation.

KDDM9053-W

An error occurred during the processing of the software information file.

Cause

A possible cause of the error is a temporary shortage of system resources (such as free disk space).

Action

Check the free disk space of the following directories that contain client services, and then retry:

- For systems other than HP-UX, directories such as /NETMRDS
- For HP-UX, directories such as /var/opt/NETMDMW

KDDM9054-W

An invalid software information file was received.

Action

Retry the operation.

KDDM9055-W

An error occurred during the processing of the software operation information file.

Cause

A temporary system resource shortage (a disk space shortage, for example) may have occurred.

Action

Check the disk space of the following directories where the client services are stored, and then re-execute the command:

- For systems other than HP-UX: /NETMRDS, etc.
- For HP-UX: /var/opt/NETMDMW, etc.

KDDM9056-W

An invalid software operation information file was received.

Cause

An invalid software operation information file was received.

Action

Re-execute the command.

10.3 Messages for generator tools

This section lists the messages for generator tools.

KDGF0003-I

Processing of generator tools has started [xxx].

Cause

Processing of generator tools has started. xxx indicates the startup program name.

KDGF0004-I

Completed the processing of generator tools [nn].

Cause

Processing of generator tools is completed. nn indicates the return code.

KDGF0005-I

Starting installation (Standard: rrr).

Cause

The standard installation starts. rrr indicates the full package ID.

KDGF0006-I

Starting installation (Linkage: rrr).

Cause

The installation that requires linkage processing starts. rrr indicates the full package ID.

KDGF0007-I

Starting installation (UAP: rrr).

Cause

UAP-based installation starts. rrr indicates the full package ID.

KDGF0009-I

Starting installation (FD: rrr)

Cause

Installation from FDs will now start. rrr indicates the full package ID.

KDGF0010-I

Completed installation (nn).

Cause

Installation is completed. *nn* indicates the return code.

KDGF0011-I

Starting the end-linked file (*ccc*).

Cause

The end-linked UAP starts. *ccc* indicates the end-linked UAP name.

KDGF0012-I

Closed the end-linked file (*nn*).

Cause

The end-linked UAP is completed. *nn* indicates the return code.

KDGF1004-S

The *-d* option is specified incorrectly.

Cause

The date specified in the startup option of the installation command for the specified date (*rdsupt*) is incorrect.

Action

Specify a correct date, and then reactivate the command.

KDGF1005-S

The *-t* option is specified incorrectly.

Cause

The time specified in the startup option of the installation command for the specified date (*rdsupt*) is incorrect.

Action

Specify a correct time, and then reactivate the command.

KDGF1006-S

The option is specified incorrectly.

Cause

The specified command option is incorrect.

Action

Specify a correct option, and then reactivate the command.

KDGF1010-S

A command for generator tools has already started.

Cause

A command for the generator tools has already started.

This message is output if the command for installation on a specified date (`rdsupt`) is started or has been started while installing packages by distribution.

Action

Wait for the processing of the generator tools being started to complete, then retry.

KDGF1012-S

The specified installation method is incorrect (*fff/mm*).

Cause

The installation method specified at distribution is incorrect.

fff: Function name

mm: Sub-return code

Action

Specify a correct installation method when creating the *distribution* job, and then retry distribution.

KDGF1013-S

An error occurred in the *cccc* command (*fff/nn/sss/mm*).

Cause

An error occurred in the *cccc* command.

fff: Function name

nn: Return code

sss: Sub-function name

mm: Sub-return code

Action

Retry distribution. If the problem recurs, check the log to determine the cause of the error. If you cannot determine the cause of the error, contact the system administrator.

KDGF1014-S

Accessing a job file generated an error (*sss/nn*).

Cause

A job file access error occurred.

sss: Sub-function name

nn: Return code

Action

Check if the disk with the directory for installation-scheduled packages failed, and then retry distribution. If the problem recurs, check the log to determine the cause of the error. If you cannot determine the cause of the error, contact the system administrator.

KDGF1015-S

Accessing an event log file generated an I/O error (*ccc/ee*).

Cause

An event log file access error occurred.

ccc: Function code

ee: Event log error code

Action

Check whether the event server of JP1/Base is running, and whether the environment settings are correct.

If there is no need to output log information for the generator tools to the event log, change the value of `EvtLogLevel` in the environment settings file to 0, to prevent the event log from being output. For details, see *5.5 Creating the settings file (environment settings file) for the generator tools* in PART 2.

KDGF1016-S

Accessing a syslog file generated an I/O error (*nn*).

Cause

A syslog file access error has occurred.

nn: Return code

Action

Check whether the `syslogd` is running. If there is no need to output log information for the generator tools to the system log, change the environment settings of generator tools (set the environment variable `SystemLogOutputLevel` to 0) to prevent the system log from being output. For details, see *5.5 Creating the settings file (environment settings file) for the generator tools* in PART 2.

KDGF1017-S

Accessing a log file generated an I/O error (*sss/nn*).

Cause

A log file access error occurred.

sss: Sub-function name

nn: Return code

Action

Check that you have the output privilege to the destination directory of the log file and that the destination disk is normal. Then retry distribution. If the problem recurs, check the log to determine the cause of the error. If you cannot determine the cause of the error, contact the system administrator.

KDGF1018-S

A log file parameter error occurred (*ppp*).

Cause

A log file parameter error occurred.

ppp: Log file output parameter

Action

Retry distribution. If the problem recurs, check the log to determine the cause of the error. If you cannot determine the cause of the error, contact the system administrator.

KDGF1019-S

Waiting time for exclusive conflict is over. Another generator tools process is executing.

Cause

A command lock error occurred.

Action

If the status of distribution jobs displays **Installation Failed**, retry distribution. To change the wait time to prevent a command lock conflict, change the environment settings of the generator tools. (Use the `CommandWait` environment variable to set the wait time to prevent a command lock conflict. For details, see *5.5 Creating the settings file (environment settings file) for the generator tools* in PART 2.

KDGF1020-I

Starting a linkage file (*ccc*).

Cause

A linkage file starts. *ccc* indicates the linkage file name.

KDGF1021-I

Starting a UAP process (*ccc*) used for installation.

Cause

A UAP used for installation starts. *ccc* indicates the name of a UAP for installation.

KDGF1022-I

Completed the processing of a linkage file (*nn*).

Cause

Processing of a linkage file is completed. *nn* indicates the return code.

KDGF1023-I

Completed the processing of a UAP used for installation (*nn*).

Cause

Processing of a UAP used for installation is completed. *nn* indicates the return code.

KDGF1024-E

The specified command was stopped (time over) (*nn: ccc*).

Cause

The *ccc* command (a linkage file, a UAP used for installation or an end-linked UAP) did not terminate when the monitoring time elapsed.

nn: Monitoring time

Action

Perform one of the following, and then retry distribution.

- Determine and correct the cause of the error.
- Set the value larger for the monitoring time, and then re-package the resources.
- Set the `GF_WatchTimer` environment variable of the generator tools to `OFF` (monitoring the UAP run time is not done).

KDGF1025-E

The specified command does not exist (*ccc*).

Cause

There is no *ccc* command (a linkage file, a UAP used for installation or an end-linked UAP).

Action

Check if the command exists or if its name is correct and take action against it. Then retry distribution.

KDGF1026-E

Could not start the specified command (*fff/n*).

Cause

An error occurred in the specified command (a linkage file, a UAP used for installation or an end-linked UAP) startup process.

fff: Function name

nn: Return code

Action

Check the error contents and check if the contents of the command are correct. Take action to correct the problem, and then retry distribution. If the error recurs or if you cannot determine the cause of the error, contact the system administrator.

KDGF1031-I

Starting to delete package of installation-date-installation (*rrr/yyy*).

Cause

Deletion of an installation-date-installation package starts.

rrr: Package ID

yyy: Job number

KDGF1032-I

Completed the delete process (*nn*).

Cause

Completed the deletion. *nn* indicates the return code.

KDGF1033-E

The environmental variable *vvv* is invalid (*ccc*).

Cause

The value of the environment variable is incorrect.

vvv: Environmental variable

ccc: Function code

Action

Correct the cause of the error, and then retry distribution. The causes may be either:

- The directory that does not exist is specified.
- A file exists in the specified directory.

KDGF1034-E

The disk capacity became insufficient.

Cause

The disk does not have enough free space for installation.

Action

Obtain enough free space for the installation, then retry.

KDGF1035-E

Failed in copy of resource (*fff*)

Cause

Failed to copy the package.

fff: Path name of the resource file (User resource path shown in a relative path format)

Action

Correct the causes of the error, and then retry distribution. The probable cause is:

- The software name, file name, or directory name registered as a package contains a space character.

Appendixes

A. File Structures in JP1/IT Desktop Management 2 - Agent

A.1 File structure of the client services

Tables A-1 and A-2 show the file structure of the client services and the workstation types for systems other than HP-UX and for HP-UX, respectively.

Table A–1: Relationship between the file structure of the client services and workstation types (for systems other than HP-UX)

File	Path	Workstation type	
		End workstation	Client workstation
Packaging-information file	The user can specify any path (using the option for the <code>rdsft</code> command or <code>rdscm</code> command options.)	O	O
User resource path files	<code>/users/home</code> , <code>/etc/hosts</code> , <code>/etc/network</code>	O	O
Special file definition files	<code>/NETMRDS/rdsprm/...#/DEVTYPE</code>	O	O
Resource file	<code>/NETMRDS/UPUPL/hd/</code>	O	O
Work area for packaging	<code>/NETMRDS/.odfd/</code>	S	S
Work file on the hard disk	<code>/NETMRDS/UPWORK/</code>	S	S
User-installed application program, external application program installed after the program product has been installed	<code>/NETMRDS/usrcom/</code>	O	O
Storage file for collection processing by a user program	The user can specify any path.	O	O
Storage file for information output during collection processing by an external program	<code>/NETMRDS/rdsprm/CF.LOGF</code>	O	O
Temporary collection storehouse	<code>/NETMRDS/RCF/RSC/</code>	S	N
User resource status file	The user can specify any path.	O	O
Settings files	<code>/NETMRDS/rdsprm/RDSSETFL</code> File name after settings are successful: <code>/NETMRDS/rdsprm/RDSSETFL.bak</code> File name after settings have failed: <code>/NETMRDS/rdsprm/RDSSETFL.err</code>	M	M
Operating-environment settings file	<code>/NETMRDS/buff/.profile</code> Sample file name: <code>/NETMRDS/buff/profile.txt</code>	O	O
ID group definition file	<code>/NETMRDS/rdsprm/DMWIDUPM</code>	N	O
Network interface definition file	<code>/NETMRDS/rdsprm/IFCONFIG</code>	O	O

File	Path	Workstation type	
		End workstation	Client workstation
Shell program for invoking commands	/etc/UAP/pwon.d/	O	O
Backup directory	/NETMRDS/BACKUP/	O	O
Log files	Information about user data, user programs and file collection: /NETMRDS/rdsprm/MAIN.LOGF Information program product distribution: /NETMRDS/rdsprm/PPINS.LOGF	S	S
File for file system error information	/NETMRDS/rdsprm/SHUTDOWNINS.LOGF	S	S
Installation log file for another company's software	/NETMRDS/rdsprm/ISVSOFT.LOGF	S	S
Installation log file for OS patches	/NETMRDS/rdsprm/OSPATCH.LOGF	S	S
Unarchive log file for OS patches	/NETMRDS/rdsprm/UNACV.LOGF	S	S
File for storing information output during application of the patch	/NETMRDS/rdsprm/PPPATCH.LOGF	S	S
Directory for installation at system startup	/NETMRDS/BOOT	S	S
Directory for installation at system shutdown	/NETMRDS/SHUTDOWN	S	S
Message catalog	/usr/lib (/usr/share for LINUX)	S	S
Program storage directory	/NETMRDSEX1	S	S

Legend:

- M: Must be created.
- O: May be optionally created.
- N: File that cannot be or is not created
- S: For system use only. You cannot modify this file.

#

This portion differs depending on the value of the LANG variable.

Table A–2: Relationship between the file structure of the client services and workstation types (for HP-UX)

File	Path	Workstation type	
		End workstation	Client workstation
Packaging-information file	The user can specify any path (using the option for the rdsft command or rdscm command).	O	O
Special file definition files	/etc/opt/NETMDMW/...#/DEVTYPE	O	O
Resource file	/var/opt/NETMDMW/UPUPL/hd/	O	O

File	Path	Workstation type	
		End workstation	Client workstation
Work area for packaging	/var/opt/NETMDMW/.odfd/	O	O
Work file on the hard disk	/var/opt/NETMDMW/UPWORK/	S	S
User-installed application program, external application program installed after the program product has been installed	/opt/NETMDMW/usrcom/	O	O
Storage file for collection processing by a user program	The user can specify any path.	O	O
Storage file for information output during collection processing by an external program	/var/opt/NETMDMW/rdsprm/CF.LOGF	O	O
Temporary collection storehouse	/var/opt/NETMDMW/RCF/RSC/	S	N
User resource status file	The user can specify any path.	O	O
Settings files	/etc/opt/NETMDMW/rdsprm/RDSSETFL File name after successful setup: /etc/opt/NETMDMW/rdsprm/RDSSETFL.bak File name after unsuccessful setup: /etc/opt/NETMDMW/rdsprm/RDSSETFL.err	M	M
Operating-environment settings file	/etc/opt/NETMDMW/buff/.profile Sample file name: /etc/opt/NETMDMW/buff/profile.txt	O	O
ID group definition file	/etc/opt/NETMDMW/rdsprm/DWIDUPM	N	O
Network interface definition file	/etc/opt/NETMDMW/rdsprm/IFCONFIG	O	O
Shell program for invoking commands	/etc/UAP/pwon.d/	O	O
Backup directory	/var/opt/NETMDMW/BACKUP/	O	O
Log files	Information about user data, user programs and file collection: /var/opt/NETMDMW/rdsprm/MAIN.LOGF Information about program product distribution: /var/opt/NETMDMW/rdsprm/PPINS.LOGF	S	S
File for file system error information	/var/opt/NETMDMW/rdsprm/SHUTDOWNINS.LOGF	S	S
Installation log file for another company's software	/var/opt/NETMDMW/rdsprm/ISVSOFT.LOGF	S	S
Installation log file for OS patches	/var/opt/NETMDMW/rdsprm/OSPATCH.LOGF	S	S
Unarchive log file for OS patches	/var/opt/NETMDMW/rdsprm/UNACV.LOGF	S	S

File	Path	Workstation type	
		End workstation	Client workstation
File for storing information output during application of the patch	/var/opt/NETMDMW/rdsprm/PPPATCH.LOGF	S	S
Directory for installation at system startup	/var/opt/NETMDMW/BOOT	S	S
Directory for installation at system shutdown	/var/opt/NETMDMW/SHUTDOWN	S	S
Program storage directory	/opt/NETMDMWEX1	S	S

Legend:

M: Must be created.

O: May be optionally created.

N: File that cannot be or is not created

S: For system use only. You cannot modify this file.

#

This portion differs depending on the value of the LANG variable.

A.2 File structure of the generator tools

Table A-3 shows the file structure of the generator tools.

Table A–3: File paths for the generator tools

File	Path	Type
Directory for generator tools' commands	/usr/bin	S
Message catalog	/usr/lib (/opt/NETMDMGF for HP-UX)	S
User generator work directory	/NETMDMGF	S
Directory for installation-scheduled packages	/NETMDMGF/HOKAN	S
Environment settings files	/NETMDMGF/profile Sample file name: /NETMDMGF/profile.sample	O
Log file for generator tools	/NETMDMGF/GF.LOGF	S
Error log for generator tools	/NETMDMGF/.dmgflog	S

Legend:

O: May be optionally created.

S: For system use only. You cannot modify this file.

B. Status Codes

This appendix explains details of status codes.

B.1 Status codes for the client services

When a client service completes processing, the result is passed to the managing server as a status code. Status codes are organized as follows:

<i>es</i>	<i>us</i>	<i>e2</i>	<i>rc</i>	<i>rs</i>
-----------	-----------	-----------	-----------	-----------

es (end status)

Set to a value indicating how much of the client service processing was completed.

us (user status)

Set to a value indicating how much of the distribution and installation processing was completed by the distributor tools. When the package is installed by the standard generator, the result is set as the end status for the client service.

e2 (end status 2)

Maintenance information for the client services.

rc (end code for external program processing for installation or collection)

Set to an end code for external program processing for installation or collection if an error occurs during the processing.

rs (recovery status)

Set to the execution result for the recovery facility.

Table B-1 lists end status codes, Table B-2 lists end status 2 codes, and Table B-3 lists recovery status codes. For user status codes, see the manuals for the managing server programs or distributor tools.

When the end status or user status indicates a distribution error, the error details are reported as a message. For details about messages, see *10.2 Messages for client services* in PART 4.

Table B-1: End status codes

Code	Meaning	Process
10	Normal termination	Initialization of the temporary collection storehouse and transfer of collected files
12	Communication error	
13	Failure to initialize temporary collection storehouse	
1F	Other error	
20	Normal termination	Collection of resource files from a distribution-destination system
21	Error at creation of a collection-information file for reporting collected resource file attributes to the managing server	
22	Error at activation or execution of external program processing before collection	
23	Error at activation or execution of external program processing after collection	
24	No such resource or collection path file	

Code	Meaning	Process
25	Resource file archiving error	Collection of resource files from a distribution-destination system
26	Invalid resource attribute	
27	Resource transfer error	
28	Software encryption error	
2F	Other error	
30	Normal termination	Resource file placed in the collection storehouse on the managing server, or in the temporary collection storehouse on a relay system
33	Communication error	
40	Normal termination of an ID group operation	ID group operation executed from the managing server
41	Failure to register an ID group	
42	Failure to delete an ID group	
43	Failure to delete an ID group entry	
44	System error	
45	Failure to change an ID group password	
4F	Other error	
50	Normal termination	
53	Invalid job	
55	Error at receipt of a collection path file or script file	
6B	Corrupted ID group management file on the relay system	Distribution to a specified ID group
70	Normal termination	Receipt of a job file at an end workstation or client workstation
73	Invalid job	
74	System error	
75	Client startup failed	
78	No such job	
7A	Mismatch with pre-requisite version	
7F	Other error	
80	Normal termination	Generator startup
82	Insufficient disk space at the UNIX machine	
83	Invalid job	
84	System error	
85	Communication error	
87	No such resource file on the managing server or relay system	
8F	Other error	
90	Normal termination	Installation processing or <i>recovery job</i> from the managing server
92	Insufficient disk space at the UNIX machine	Installation processing

Code	Meaning	Process
93	Invalid job	Installation processing
94	System error	
95	Communication error at receipt of the package file at an end workstation, or between the relay system and client workstation	
97	Package cannot be installed	
98	Error at software processing or external program processing before installation	
99	Error at software-based or UAP-based installation	
9A	Error at software processing or external program processing after installation	
9B	Package encoding error	
9C	Program to be installed is active.	
9D#	Timeout at external program processing for installation or external program processing after market software installation	
9E	Installation could not be executed because the file system is invalid.	Installation on an additional hard disk at system shutdown
9F	Other error	Installation processing
A0	Normal termination	Setup processing for a program product
AD	Error at external program processing after market software installation	
AE	Resident process failed to start.	
AF	Error in the program-product setup program	
B0	Normal termination	Storage of a package to be installed at system shutdown or startup
B4	System error	
C3	Specified package not backed up	<i>Recovery job</i> from the managing server
C4	System error during recovery processing	
CB	Error at post-recovery processing	
D3	Specified package not backed up	<i>Delete backup file job</i> from the managing server
D4	System error at backup deletion	
E0	Normal termination	Collection of package status
EF	System error during package status collection	

#

End status 2 indicates the type of processing at which the timeout occurred.

- End status 2 set to 00:
The timeout occurred at external program processing after installation or external program processing after market software installation.
- End status 2 set to 01:
The timeout occurred at external program processing before installation.

Table B–2: End status 2 codes

End status 2	Meaning
20	Detailed reports are not supported.
30	The service is not started.
60	The machine is turned off.
ff	Other status

Table B–3: Recovery status codes

Code	Meaning		
	Content	Package status	Backup
00	Recovery was not executed because installation of the new version ended normally.	New environment	No
01	Recovery was not executed due to an error at program product setup or a timeout at external program processing for installation.	Environment corrupted	Yes
80	Recovery ended abnormally (backup was not kept because 0 is set in BackupDataKeep).	Environment corrupted	No
81	Recovery ended abnormally.	Environment corrupted	Yes
90	Recovery ended normally.	Old environment	No

Legend:

New environment: The distributed package (new version) can be used.

Environment corrupted: Neither the distributed package nor the old version can be used.

Old environment: The old version of the distributed package can be used.

C. Port Numbers

This appendix describes the port numbers that JP1/IT Desktop Management 2 uses. This appendix also shows the direction in which data passes through the firewall.

C.1 Port numbers

Table C-1 lists the port numbers that JP1/IT Desktop Management 2 uses.

The listed port numbers are set at shipment.

Table C–1: Port numbers used for JP1/IT Desktop Management 2

Port number	Service name	Explanation
31021/tcp	netmdm	Managing server
31002/tcp	netmdmw	Relay system and distribution-destination system
31001/tcp	netmdmclt	Managing server, relay system, and distribution-destination system

C.2 Direction in which data passes through the firewall

Table C-2 shows the direction in which data passes through the firewall.

Table C–2: Direction in which data passes through the firewall

Port number/ protocol	Service name	Programs requiring setup	Direction in which data passes through the firewall
31021/tcp	netmdm	Managing server, relay system, distribution-destination system	<ul style="list-style-type: none">• Managing server <- Relay system• Managing server <- Distribution-destination system
31002/tcp	netmdmw	Relay system, distribution-destination system	<ul style="list-style-type: none">• Relay system <- Distribution-destination system
31001/tcp	netmdmclt	Managing server, relay system, distribution-destination system	<ul style="list-style-type: none">• Managing server -> Relay system• Managing server -> Distribution-destination system• Relay system -> Distribution-destination system

Legend:

Managing server: Indicates JP1/IT Desktop Management 2 - Manager.

Relay system: Indicates JP1/IT Desktop Management 2 - Agent (relay system).

Distribution-destination system: Indicates JP1/IT Desktop Management 2 - Agent (distribution-destination system).

->: Indicates the direction from left item to right.

<-: Indicates the direction from right item to left.

D. Processes for Monitoring JP1/IT Desktop Management 2 - Agent

This appendix describes the processes for monitoring JP1/IT Desktop Management 2 - Agent for each operating system.

D.1 Monitoring processes for systems other than HP-UX

The following indicates the process names for systems other than HP-UX.

The number within the parentheses indicates the number of processes that can be executed simultaneously.

(1) End workstation monitoring processes

The following table shows the end workstation (END is specified for `WorkstationType` of the settings file) monitoring processes.

Process name	Function
<code>rdstcpsvc(9999)</code>	Receives startup requests from TCP.
<code>rdsdaemon(9999)</code>	Monitors <code>rdsocket</code> .
<code>rdssnde(9999)#</code>	Monitors the execution results of jobs, including distribution and collection, and reports these results to the managing server.
<code>rdsregular(9999)</code>	Manages the job execution date and time.

#

For AIX: `sh /NETMRDS/COM/rdssnde`

(2) Client workstation monitoring processes

The following table shows the client workstation (CLIENT is specified for `WorkstationType` of the settings file) monitoring processes.

Process name	Function	Notes related to the value of <code>WatchTimeofOrders</code> in the settings file
<code>rdstcpsvc(9999)</code>	Receives startup requests from TCP.	If a value from 0 to 1280 is specified, this process resides. If <code>MANUAL</code> is specified, do not execute this monitoring process.
<code>rdsrfa(9999)#</code>	Connects to the relay system and checks for jobs addressed to the local system.	If a value from 0 to 1280 is specified, this process resides. If 0 or <code>MANUAL</code> is specified, do not execute this monitoring process.
<code>rdsregular(9999)</code>	Manages the job execution date and time.	Is resident regardless of the value of <code>WatchTimeofOrders</code> .

#

- The `rdsrf` command can start and stop this process.
- For AIX: `sh /NETMRDS/COM/rdsrfa -a`

D.2 Monitoring processes for HP-UX

The following indicates the process names for HP-UX.

The number enclosed in parentheses indicates the number of processes that can be executed simultaneously.

(1) End workstation monitoring processes

The following table shows the end workstation (END is specified for `WorkstationType` of the settings file) monitoring processes.

Process name	Function
<code>rdstcpsvc(9999)</code>	Receives startup requests from TCP.
<code>rdsdaemon(9999)</code>	Monitors <code>rdssocket</code> .
<code>rdsnde(9999)</code>	Monitors execution results of jobs including distribution and collection, and reports these results to the managing server.
<code>rdsregular(9999)</code>	Manages the job execution date and time.

(2) Client workstation monitoring processes

The following table shows the client workstation (CLIENT is specified for `WorkstationType` of the settings file) monitoring processes.

Process name	Function	Notes related to the value of <code>WatchTimeofOrders</code> in the settings file
<code>rdstcpsvc(9999)</code>	Receives startup requests from TCP.	If a value from 0 to 1280 is specified, this process is resident. If <code>MANUAL</code> is specified, do not execute this monitoring process.
<code>rdsrfa(9999)</code> #	Connects to the relay system and checks for jobs addressed to the local system.	If a value from 0 to 1280 is specified, this process is resident. If 0 or <code>MANUAL</code> is specified, do not execute this monitoring process.
<code>rdsregular(9999)</code>	Manages the job execution date and time.	Is resident regardless of the value of <code>WatchTimeofOrders</code> .

#

The `rdsrf` command can start and stop this process.

E. Kernel Parameter List

Depending on the operating system you need to adjust the kernel parameters to assign the required resources for executing JP1/IT Desktop Management 2 - Agent. This appendix describes the kernel parameters which require adjustment. Adjusting the kernel parameters is unnecessary for operating systems that are not described here.

E.1 For HP-UX

The following shows the required system resources for JP1/IT Desktop Management 2 - Agent for HP-UX.

System resource	Parameter	Estimate
File system	<code>nflocks</code>	120
Process	<code>nproc</code>	15

E.2 For Solaris

The following shows the required system resources for JP1/IT Desktop Management 2 - Agent for Solaris.

System resource	Parameter	Estimate
File system	<code>rlim_fd_cur</code>	120
Process	<code>maxuprc</code> or <code>max_nprocs</code>	15

E.3 For AIX

The following shows the required system resources for JP1/IT Desktop Management 2 - Agent for AIX.

System resource	Parameter	Estimate
Process	<code>maxuproc</code>	15

E.4 For Linux

The following shows the required system resources for JP1/IT Desktop Management 2 - Agent for Linux.

System resource	Parameter	Estimate
File system	<code>fs.file-max</code>	120
Process	<code>kernel.threads-max</code>	15

F. Differences with JP1/IT Desktop Management 2 for Windows

The following describes the differences in terminology between the Windows version and UNIX version. If you are using the Windows version of JP1/IT Desktop Management 2, replace the following terms as appropriate.

Terms used with UNIX	Terms used with Windows
installation [#]	installation
ID Group	ID
cabinet	cabinet
packager	packager
job	job
package distribution (software distribution)	remote installation
file collection	remote collection

#

In UNIX, the processes from installation to setup are referred to, in general, as *installation*.

G. Version Changes

G.1 Changes in 12-00

Added how to install JP1/IT Desktop Management 2 - Agent.

H. Reference Material for This Manual

H.1 Related publications

Manuals related to this manual are listed below. Refer to these manuals when necessary.

- *JP1 Version 12 Asset and Distribution Management: Getting Started* (3021-3-E11(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 Overview and System Design Guide* (3021-3-E12(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 Configuration Guide* (3021-3-E13(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 Administration Guide* (3021-3-E14(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 Distribution Function Administration Guide* (3021-3-E15(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 - Asset Console Configuration and Administration Guide* (3021-3-E16(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 - Asset Console Creating an Access Definition File Guide* (3021-3-E17(E))
- *JP1 Version 12 JP1/IT Desktop Management 2 Messages* (3021-3-E18(E))

H.2 Conventions: Abbreviations for product names

This manual uses the following abbreviations for product names:

Abbreviation		Full name or meaning	
JP1/IM - Manager		JP1/Integrated Management - Manager	
		JP1/Integrated Management 2 - Manager	
AMT		Intel(R) Active Management Technology	
Mac	Mac OS	OS X 10.10	
		OS X 10.11	
		macOS 10.12	
		macOS 10.13	
		macOS 10.14	
Oracle		Oracle8i	
		Oracle9i	
UNIX	AIX	AIX V6.1	
		AIX V7.1	
	HP-UX	HP-UX(IPF)	HP-UX 11i V3(IPF)
	Linux		Linux(R)
	Linux	Linux(x64)	Red Hat Enterprise Linux(R) Server 6 (64-bit x86_64)
Red Hat Enterprise Linux(R) Server 7			

Abbreviation			Full name or meaning	
UNIX	Linux	Linux(x64)	CentOS 6 (x64)	
			CentOS 7	
	Solaris(SPARC)		Solaris 10 (SPARC)	
			Solaris 11 (SPARC)	
Windows	Windows 7	Windows 7 Enterprise		Microsoft(R) Windows(R) 7 Enterprise
		Windows 7 Home Premium		Microsoft(R) Windows(R) 7 Home Premium
		Windows 7 Professional		Microsoft(R) Windows(R) 7 Professional
		Windows 7 Ultimate		Microsoft(R) Windows(R) 7 Ultimate
	Windows 8	Windows 8		Windows(R) 8
		Windows 8 Enterprise		Windows(R) 8 Enterprise
		Windows 8 Pro		Windows(R) 8 Pro
	Windows 8.1	Windows 8.1		Windows(R) 8.1
		Windows 8.1 Enterprise		Windows(R) 8.1 Enterprise
		Windows 8.1 Pro		Windows(R) 8.1 Pro
	Windows 10	Windows 10 Enterprise		Windows(R) Enterprise
		Windows 10 Pro		Windows(R) Pro
	Windows Server 2003	Windows Server 2003	Windows Server 2003 Enterprise	Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition
				Microsoft(R) Windows Server(R) 2003, Enterprise Edition
			Windows Server 2003 Standard	Microsoft(R) Windows Server(R) 2003 R2, Standard Edition
		Microsoft(R) Windows Server(R) 2003, Standard Edition		
		Windows Server 2003 (x64)	Windows Server 2003 Enterprise (x64)	Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
				Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
	Windows Server 2003 Standard (x64)		Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition	
	Microsoft(R) Windows Server(R) 2003, Standard x64 Edition			
Windows Server 2008	Windows Server 2008	Windows Server 2008 Datacenter	Microsoft(R) Windows Server(R) 2008 Datacenter	
			Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(R)	
		Windows Server 2008 Enterprise	Microsoft(R) Windows Server(R) 2008 Enterprise	
			Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(R)	
	Windows Server 2008 Standard	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	

Abbreviation			Full name or meaning	
Windows	Windows Server 2008	Windows Server 2008 R2		Microsoft(R) Windows Server(R) 2008 R2 Enterprise
				Microsoft(R) Windows Server(R) 2008 R2 Standard
	Windows Server 2012	Windows Server 2012	Windows Server 2012 Datacenter	Microsoft(R) Windows Server(R) 2012 Datacenter
			Windows Server 2012 Standard	Microsoft(R) Windows Server(R) 2012 Standard
		Windows Server 2012 R2		Microsoft(R) Windows Server(R) 2012 R2 Datacenter
				Microsoft(R) Windows Server(R) 2012 R2 Standard
	Windows Vista			Microsoft(R) Windows Vista(R) Business
				Microsoft(R) Windows Vista(R) Enterprise
				Microsoft(R) Windows Vista(R) Home Basic
				Microsoft(R) Windows Vista(R) Home Premium
				Microsoft(R) Windows Vista(R) Ultimate
	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

H.3 Conventions: Acronyms

Acronym	Full name or meaning
AP	Application Program
ATM	Asynchronous Transfer Mode
CD-ROM	Compact Disc - Read Only Memory
CMT	Cassette Magnetic Tape
CSMA/CD	Carrier Sense Multiple Access with Collision Detection
DAT	Digital Audio Taperecorder
DNS	Domain Name System
FD	Floppy Disk
FPD	Floptical Disk
GUI	Graphical User Interface
HD	Hard Disk
IPF	Itanium(R) Processor Family
LAN	Local Area Network
NAT	Network Address Translation
NIC	Network Interface Card

Acronym	Full name or meaning
OS	Operating System
PC	Personal Computer
PP	Program Product
RDB	Relational Database
SCSI	Small Computer System Interface
TCP/IP	Transmission Control Protocol/Internet Protocol
UAP	User Application Program
WS	Workstation

H.4 How to use this manual

- For details about the differences in terminology for JP1/IT Desktop Management 2 for Windows, see Appendix *F Differences with JP1/IT Desktop Management 2 for Windows*.
- If you are using the HP-UX version, replace the directory names used in this manual by referring to Appendix *A File Structures in JP1/IT Desktop Management 2 - Agent*.

H.5 Conventions: Fonts and symbols

This manual uses the following symbol conventions:

General font conventions

The following table explains the text formatting conventions used in this manual:

Font	Convention
Bold	<p>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, bold is used in sentences such as the following:</p> <ul style="list-style-type: none"> • From the File menu, choose Open. • Click the Cancel button. • In the Enter name entry box, type your name.
<i>Italics</i>	<p>Italics are used to indicate a placeholder for some actual text provided by the user or system. Italics are also used for emphasis. For example:</p> <ul style="list-style-type: none"> • Write the command as follows: <code>copy source-file target-file</code> • The following message appears: <code>A file was not found. (file = file-name)</code> <p>Italic characters are also used for emphasis. For example:</p> <ul style="list-style-type: none"> • Do <i>not</i> delete the configuration file.
Monospace	<p>Monospace characters indicate text that the user enters without change, or text (such as messages) output by the system. For example:</p> <ul style="list-style-type: none"> • At the prompt, enter <code>dir</code>. • Use the <code>send</code> command to send mail. • The following message is displayed: <code>The password is incorrect.</code>

Conventions in syntax explanations

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 have been omitted. 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.
<u>underline</u>	Underlined characters indicate the default value.
Δ	A triangle indicates a space character. Δ ₀ indicates zero or more spaces or tabs. Δ ₁ indicates one or more spaces or tabs.
~	The item that precedes this symbol must be coded in accordance with the rule expressed within the symbols <> or (()) following the ~ symbol.
< >	Code the item in accordance with the lexical elements enclosed in the angle brackets: numeric Numeric from 0 to 9. Unless otherwise specified, a number is decimal. alphabetic Letter in the range A to Z, or a to z. alphanumeric Letter or number. Unless otherwise specified, a number is decimal. unsigned <i>integer</i> Number. A decimal unless otherwise specified. hexadecimal Hexadecimal number (0 to 9, or A to F).
(())	Double parentheses enclose the range of specifiable values.
<< >>	Double angle brackets enclose the default assumed by the program when no value is specified.

H.6 Conventions: KB, MB, GB, and TB

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes.
- 1 MB (megabyte) is 1,024² bytes.
- 1 GB (gigabyte) is 1,024³ bytes.
- 1 TB (terabyte) is 1,024⁴ bytes.

I. Glossary

cabinet

A unit for grouping and managing resources packaged in a package storehouse on the managing server. Cabinets can be set at the managing server or at a packager.

client services (JP1/IT Desktop Management 2 - Agent)

Functions for a relay system, distribution-destination system, and packager. Normally, the client services start automatically when the machine is started, and are available as resident services.

client workstation

A UNIX distribution-destination system that is connected to the managing server (JP1/IT Desktop Management 2 - Manager) via a relay system.

collection storehouse

An area on the managing server for storing resource files collected from the distribution-destination systems.

core-related information

Core-related information is required to investigate failures. For example, the contents of core files and information about OS libraries are acquired as core-related information.

distribution-destination system

A system on which a package is to be distributed. A UNIX distribution-destination system is called an *end workstation* if it is connected directly to the managing server. A distribution-destination system connected via a relay system is known as a *client workstation*.

end workstation

A UNIX distribution-destination system that is connected directly to the managing server without being routed through a relay system.

event log (event log file)

A collection of JP1 events output by JP1/IT Desktop Management 2 - Agent.

external program processing for collection

User-specific processing that starts before or after file collection execution.

file transfer server

A process that runs on relay systems and end workstations. The file transfer server controls file transfer between the managing server and distribution-destination systems, and between each relay system and distribution-destination systems.

full package ID

A unique name within the system that identifies a package for distribution and management. A full package ID is a period-separated list of the packager type code, cabinet ID, package ID, version, and generation number.

generator

A program that installs packages distributed from the managing server. Client services of JP1/IT Desktop Management 2 - Agent provide the standard generator, and generator tools also provide a generator.

generator tools

Additional capabilities for JP1/IT Desktop Management 2 - Agent running as a distribution-destination system. These tools start automatically when a package that has a specified installation date is distributed.

ID group

An identifier for a group of distribution-destination systems. An ID group can be created from either the managing server or distribution-destination system.

ID group definition file

A file that defines the ID group to which the local UNIX machine belongs.

job

Instructions from the managing server to a distribution-destination system for executing distribution or collection.

job management file

A file in which jobs are registered for execution by the managing server. This file also manages information about the status of jobs after execution.

JP1 event

Information that is sent to JP1/Base to report any phenomenon that occurs in the system.

managing server

A system that distributes packages and manages distribution status and the status of the distribution-destination systems.

multiple LAN connections

A function of JP1/IT Desktop Management 2 for handling systems that are composed 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. JP1/IT Desktop Management 2 can be set for independent communication, separate from the system or other applications, allowing flexibility for a multiplicity of network structures and operating methods.

Hosts connected to multiple LAN may also be called multi-homed hosts or multiple Network Interface Card (NIC) hosts.

JP1/IT Desktop Management 2 supports the following multiple LAN connection environments:

- environments separated into multiple networks
- environments with duplex networks

package

Software that is registered and ready for distribution.

package attribute file

Attribute information (package ID, distribution conditions, and so on) about the packages registered on the managing server.

package ID

A name assigned to a resource when it is packaged.

package status file

A JP1/IT Desktop Management 2 - Manager file that contains information about the package installation status on each distribution-destination system.

package storehouse

An area on the managing server for storing packages.

packager

A system at which packages are registered on the managing server for distribution. JP1/IT Desktop Management 2 - Agent has this function. A relay system or distribution-destination system can also serve as a packager.

packaging

Operation to register software in a managing server.

packaging-information file

A file used for setting information about the resources to be packaged. Information written in a packaging-information file is stored in a package attribute file on the managing server.

relay system

A system positioned between the managing server and distribution-destination systems. A relay system distributes packages to the distribution-destination systems, and forwards collected resources back to the managing server. A number of relay systems can be connected in a hierarchy.

resource file

Software stored in the package storehouse and collection storehouse of the managing server.

settings file

A file used for setting the operating environment of the JP1/IT Desktop Management 2 programs.

shared package

User data or a user program that can be distributed to both UNIX and Windows distribution-destination systems.

system configuration information

Information about the network configuration of the JP1/IT Desktop Management 2 system, including host names, IP addresses, and distribution-destination names of the relay systems and distribution-destination systems. The system configuration file are automatically reported and stored in a on the managing server (JP1/IT Desktop Management 2 - Manager).

system information

Information about the hardware, such as disk space and memory capacity, at each distribution-destination system. The managing server collects system information from the distribution-destination systems, and uses the information to check the status of a distribution-destination system before distribution.

temporary collection storehouse

An area on a relay system or end workstation for temporarily keeping resource files collected from distribution-destination systems.

temporary job storehouse

An area on a relay system for temporarily storing jobs that are executed from the managing server via that relay system.

user resource status file

A file that records the status of user resources on a distribution-destination system. This file is used to report information about the resources installed locally to the managing server. The reported information is stored in a package status file on the managing server.

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 **Hitachi, Ltd.**

6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8280 Japan
