JobCenter

R13.2

<Installation Guide>

Introduction

This manual is to describe how to install and upgrade JobCenter. Note that the screens contained in this manual may differ from actual screens.

Note that this document is subject to change without prior notice.

1. How to read the JobCenter manuals

If you are installing JobCenter or upgrading it

→ Read this manual.

If you are using JobCenter for the first time

→ Read the Quick Start Guide in the order of its contents.

If you wish to understand the basic operating methods of JobCenter

→ Read the Basic Guide in the order of its contents.

If you wish to understand the construction of environments and the setting of various functions

→ Refer to the Environment Guide.

If you wish to know about other functions

→ Read the related manuals, referring to the manuals pertaining to particular functions to be used.

2. Legend

The legend used in this manual is explained below.

		Information that you should pay attention to.
		Supplementary information about a description in the text.
Note		Explanation of a note that appears in the text.
__		The underlined parts in the descriptions for the installation window for UNIX mean inputs from a keyboard.

3. Related manuals

The following are manuals related to JobCenter. They are contained in JobCenter Media.

For information on the latest manuals, refer to the download page of the JobCenter product site.

http://www.nec.co.jp/middle/WebSAM/products/JobCenter/download.html (Japanese only)

Document title	Overview
JobCenter Installation Guide	Describes how to newly install JobCenter or upgrade it.
JobCenter Quick Start Guide (Japanese only)	Describes the basic functions of JobCenter, as well as a complete set of operations, for first-time users of JobCenter.
JobCenter Basic Guide	Describes the basic functions of JobCenter, as well as how to operate it.
JobCenter Environment Guide	Describes various setting methods on the construction of environments required for using JobCenter, transferring of environment, linkage with other products, etc.
JobCenter Guide for using NQS function (Japanese only)	Describes methods of using NQS functions, the basis of JobCenter, from JobCenter.
JobCenter Guide for using operation logs and execution logs	Describes the functions for acquiring operation logs and job network execution logs from JobCenter CL/Win, as well as how to set the functions.
JobCenter Command Reference (Japanese only)	Describes JobCenter commands for performing job network entry and execution state referencing, etc. from the command line like a GUI.
JobCenter Guide for using Cluster function	Describes linkage methods for operating JobCenter in the cluster system.
JobCenter Guide for using Helper function (Japanese only)	Describes the following three functions that enable efficient operation of JobCenter using Excel: JobCenter Definition Helper (definition information maintenance), JobCenter Report Helper (business report creation), and JobCenter Analysis Helper (performance analysis).
JobCenter Guide for using SAP function (Japanese only)	Describes how to link JobCenter and SAP.
JobCenter Guide for using UCXSingle job (Japanese only)	Describes how to link JobCenter and UCXSingle.
JobCenter Guide for using WebOTX Batch Server linkage function (Japanese only)	Describes how to link JobCenter and WebOTX Batch Server.
JobCenter Guide for Using the Web Function	Describes JobCenter CL/Web that is a function to monitor jobs by using a web browser.
JobCenter Guide for using the text definition function (Japanese only)	Describes how to define a job network, schedule, calendar, custom job template by using a text file.

JobCenter Guide for upgrading the version and applying the patches in a cluster environment (Japanese only)	Describes how to upgrade the version of JobCenter and apply the patches in a cluster environment.
JobCenter R13.2 Release Notes	Provides the information specific to JobCenter R13.2.

4. Revision history

Edition	Date of revision	Item	Format	Contents of revision
1	January 17, 2014	New	-	First Edition

Table of Contents

<Installation Guide>

List of Figures

List of Tables

Chapter 1. Operating Environment of JobCenter

For information on the operating environment of JobCenter and the supported operating systems, refer to Chapter 3, "Operating Environment" in <Release Notes>.

Chapter 2. Installation

This chapter describes how to install LicenseManager, JobCenter MG/SV, and JobCenter CL/Win. To do this, follow the steps below.

Preparations for Installation	: 2.1
LicenseManager Installation	: 2.2
Codeword Registration	: 2.3
JobCenter MG/SV Installation	: 2.4
JobCenter CL/Win Installation	: 2.5

Install only the necessary packages.

Figure 2.1. Installation flow

To install any JobCenter product other than those mentioned above, refer to the installation procedure described in the manual of that product.

2.1. Preparations for Installation

Make the necessary settings before starting installation.

2.1.1. Checking Notes in Advance

■JobCenter supports only IPv4. Note that IPv6 is not supported.

■In JobCenter, user names that meet any of the following conditions cannot be used.

- "CommonJNW"

- Same as the host name or computer name.

- Longer than 15 bytes

- The first character is a one-byte numeral.

- Includes multiple-byte characters, spaces or tabs.

- Includes one of the following symbols: ! " # $ % & ' ( ) * , . / : ; < = > ? @ [\ ] ^ ` { | } ~

■Notes for UNIX

- LDAP linkage is not directly supported. However, if the LDAP server password encryption format is crypt and it is possible to access the user name by using the OS library function getpwnam or getpwent in the same way as when performing normal management by using /etc/passwd, LDAP linkage can be handled as a general user.

- Environments in which access control is specified on an individual user basis, such as HP-UX SMSE (Standard Mode Security Extensions), are not directly supported. However, if JobCenter is able to access the user name by using getpwnam or getpwent, in the same way as when performing normal management by using /etc/passwd, LDAP linkage can be handled as a general user.

  In this case, the security functions provided in the SMSE environment, such as account locking, are not supported. Therefore, the number of times password authentication failed when logging into or connecting to MG or SV using CL/Win is not counted, nor is the login failure recorded.

- The 755 access right is necessary as the installation directory permission. Therefore, do not mask the access right for which the root user's umask value is 755 at installation.

- If you are to set queue access restrictions or such on a group, using NQS settings of JobCenter, you need to use the same group name and the same gid for all nodes comprising the cluster site.

- All the names and uids of the accounts that use JobCenter must be unified with the OS function on all nodes that make up the cluster site.

  Otherwise, the user mapping might not match, making it impossible to continue job execution if the cluster package fails over.

- Operation is not guaranteed if an initialization file in the JobCenter installation directory is changed in a way that is outside the manual specification range.

- The Linux version of JobCenter does not support SELinux. The SELinux setting must be permissive or disabled. If the setting is enforcing, jobs might not be executed normally.

■Notes for Windows

- The disk area used by JobCenter (both local and cluster sites) must be formatted as NTFS (the FAT32 format cannot be used).

  Note, however, that unless the automatic creation of 8.3, "Short file name" is set to OFF, the performance of NTFS file systems drops significantly when a large number of files (10,000 or so) are created in a single folder.

  In an environment in which a large number of trackers are created in a short time or a large-scale job network is created and input, it might be necessary to disable 8.3 short file name by using the fsutil behavior command of the OS (by specifying fsutil behavior set disable8dot3 1).

- Because JobCenter is a multi-platform linkage product, a host name starting with a number cannot be used. In addition, a single-character host name is interpreted as a drive name, and installation is not performed in this case.

- The account specified as the JobCenter administrator must belong to the Administrators group on the local machine.

- If the local site and cluster site are operated at the same time, the JobCenter administrator at the local site serves as the JobCenter administrator at the cluster site. Carefully consider this before installation.

- If a local user is selected as the JobCenter administrator in the domain environment, only local users can use JobCenter. If the JobCenter administrator is a domain user, both local and domain users can use JobCenter.

- If a domain user is selected as the JobCenter administrator in a domain environment, the domain server (PDC or BDC) must be accessible via the network when a local service first starts during JobCenter setup, or when first connecting to MG/SV as a new domain user using CL/Win. If PDC or BDC is inaccessible, service activation or connection using CL/Win fails due to account authentication failure.

- An account using JobCenter belongs to the local JobCenter group. However, a local user and domain user with the same account name spelling or users in different domains but with the same account name spelling cannot belong to a JobCenter group at the same time (Only one of them can be used.) If a local user and domain user with the same account name spelling belong to a JobCenter group at the same time, JobCenter might not operate normally. (This also applies to the same account name spelling across multiple domains.)

- For a domain environment, there are restrictions on the combinations of nodes that make up a cluster site. You cannot combine a PDC and a member server together or a BDC and a member server together.

- The DNS is required in the domain environment. Set up the hosts file (or the resolv.def file installed on the JobCenter side) so that the name can be resolved even if communication with the DNS server fails and JobCenter can no longer resolve the name, thereby performing proper termination processing.

- If the network that the installation machine joins is operated in the spanning tree, the NIC links up late, making it impossible for JobCenter to confirm the licensed IP address during machine startup, which might cause automatic service startup to fail. In such a case, adjust the startup retry setting according to Section 5.4, "License Check at Startup of JobCenter" in <Environment Guide>.

- If any directories used by JobCenter are subject to on-access virus scanning, jobs might not execute successfully. Therefore, exclude directories used by JobCenter (the

installation directory and the <Documents and Settings> directory^(Note 1)) from the targets of the on-access scan.

> Note You can also narrow the directories to be excluded from the directories
> 1   subject to the on-access scan to the following files for users that are used by JobCenter, rather than the entire <Documents and Settings> directory:
>
> Documents and Settings\<USER>\NTUSER.DAT
> Documents and Settings\<USER>\ntuser.dat.LOG
>
> The above example is for Windows Server 2003 or earlier. Because implementation differs for each Windows OS, check the equivalent paths or files in each environment and exclude them from the scanning range.

- If a user profile is scanned for viruses at the same time that user profile is loaded during the execution of a JobCenter job, the NQS queue may stop, potentially halting the job execution. After the installation is complete, configure the settings related to the loading of user profiles if necessary. For details, refer to Section 12.3.3, "Specifying job execution settings" in <Environment Guide>.

> If a user command that is executed from a job requires loading a user profile, some action, such as excluding user profiles from the virus scan target, may need to be taken on the system side.

- To install or operate JobCenter, the Server service and Windows Management Instrumentation service must be operating.

  Select [Start] followed by [Run], and then execute [services.msc]. When the [Services] dialog box is displayed, make sure that the statuses of these services are "Started" and [Startup Type] is "Automatic". (These are the default settings.)

- Installing/operating JobCenter requires that in the properties of the network used by JobCenter, [File and Printer Sharing for Microsoft Networks] be set to ON. (By default, it is set to ON.)

- Operation is not guaranteed if an initialization file or registry information in the JobCenter installation directory or Windows directory is changed in a way outside the manual specification range.

- Environment variables temp and tmp

  To use JobCenter, the environment variables temp and tmp must be specified, and the specified folder must actually exist.

> In particular, because JobCenter services on the local site run on the system account, unless the locations referenced by temp and tmp are specified as shown below, user application commands might not work properly.

Create the following folder in Windows Server 2008 before installation:

```
<system drive>\Windows\system32\config\systemprofile\AppData\Local\Temp\
```

Before installation, check whether the following folder exists in Windows Server 2003. Create it if it does not.

```
<system drive>\Documents and Settings\Default User\Local Settings\Temp\
```

If creating the above folder poses a challenge, create a folder in any location not related with JobCenter, and then specify the created folder as the value of the environment variables temp and tmp in the environment variable configuration file called the envvars file.

```
Setting example
temp=<actual folder that can be temporarily used>
tmp=<actual folder that can be temporarily used>
```

For details about the envvars file, refer to Section 14.2.3.2, "For setting on JobCenter SV (envvars file)" in <Environment Guide>.

■Notes on Windows cluster environments

▪ Set up the JobCenter administrator by using the same user name on all nodes that make up the cluster site. The local administrator permissions for the relevant node are required as described in "General note" in "Windows Version" in this guide.

▪ If the local site and cluster site are operated at the same time, the JobCenter administrator at the local site serves as the JobCenter administrator at the cluster site. Take this into account before installation.

▪ In addition to the JobCenter administrator, other users must also have a unique user name and uid on all nodes that make up the cluster site.

Otherwise, the user mapping might not match, making it impossible to continue job execution if a cluster package failover occurs.

To change the uid, use [Environment Setting] in JobCenter. For details on how to change the uid, refer to Section 12.4.1, "Specifying properties of a user" in <Environment Guide>.

▪ For a domain environment, there are restrictions on the combinations of nodes that make up a cluster site.

You cannot combine a PDC and a member server together or a BDC and a member server together.

■Notes for a UNICODE environment (only Japanese environment)

Note the following when setting up JobCenter in a UNICODE environment:

▪ Be sure to select non-UNICODE (Non-Unicode Mode) for combinations of an English OS and the English version of JobCenter and a Chinese OS and the Chinese version of JobCenter. Operation is not guaranteed if installation is performed with UNICODE (Unicode Mode) selected.

▪ Character sets that can be used for input/output

Input values such as job network name, parts name, comment, and unit job script

→ The above values can be entered only within the JIS90-compatible character range.

Unit job standard output, standard error output

→ All the characters defined in JIS2004 can be output (these characters can be displayed by CL/Win).

> • Displaying JIS2004 extended characters requires that the font package that can display these characters be installed on the OS.
>
> • The following characters that JobCenter cannot handle are converted to ? when displayed.
>
>   • Characters outside the JIS90-compatible character range
>
>   • JIS2004 extended characters when the font package is not installed on the OS
>
> • Be sure to set up JobCenter in a non-UNICODE environment with the JobCenter language settings when using the SAP ERP Option function or BI Option function. These functions are not usable in a JobCenter instance set up in a UNICODE environment.
>
>   In addition, set up the environment variable SAP_CODEPAGE on the machine where JobCenter operates if the destination SAP system is the Unicode version. For details, refer to <Guide for using JobCenterSAP function> (Japanese only).

- Character codes output from jobs

  Set the character code to be used to output job results to UTF-8 for the UNIX version of JobCenter and UTF-16 for the Windows version of JobCenter. If any other character code is used for output (including a mix of character codes), there is a possibility that the characters will be corrupted.

- Event linkage

  If EVENTIF is SS (default) in event linkage setting, it cannot be used in the UNICODE environment.

> For SystemManager, some platforms support the UTF-8 text log monitoring function. In these platforms, event linkage may be enabled.
>
> For details, refer to the SystemManager manuals.

- Logs

  Note that the character codes used for the text log output, operation and execution log, and error log of the event previously explained depend on the UNIX version or Windows version.

UNIX version	Depends on character codes during setup
Windows version	Always SJIS

■Notes on connection compatibility

Depending on the JobCenter MG/SV version and the language selected during the setup, connection compatibility differs as follows.

- Connection compatibility between MG and SV

  If there is a mix of UNICODE and EUC and/or SJIS environments, all MGs and SVs that use JobCenter must be upgraded to R13.2 or later.

		R12.6.x(MG) or earlier		R12.7(MG) to R13.1.x(MG)			R13.2(MG) or later		
		EUC	SJIS	UNICODE	EUC	SJIS	UNICODE	EUC	SJIS
R12.6.x(SV) or earlier	EUC	✓	✓	-	✓	✓	-	✓	✓
	SJIS	✓	✓	-	✓	✓	-	✓	✓
R12.7(SV) to R13.1.x(SV)	UNICODE	-	-	✓	-	-	✓	-	-
	EUC	✓	✓	-	✓	✓	-	✓	✓
	SJIS	✓	✓	-	✓	✓	-	✓	✓
R13.2(SV) ~	UNICODE	-	-	✓	-	-	✓	✓	✓
	EUC	✓	✓	-	✓	✓	✓	✓	✓
	SJIS	✓	✓	-	✓	✓	✓	✓	✓

- Connection compatibility between CL/Win and MG/SV

  R13.1 and later versions do not have connection compatibility with the earlier versions. Different versions of CL/Win can reside on the same PC if they are installed in separate installation folders. Use a different version of CL/Win as appropriate for the version of the server to be connected.

		R12.6.x(MG) or earlier		R12.7(MG) to R12.10.x(MG)			R13.1(MG) or later		
		EUC	SJIS	UNICODE	EUC	SJIS	UNICODE	EUC	SJIS
CL/Win	R12.6.x or earlier	✓	✓	-	✓	✓	-	-	-
	R12.7 to R12.10.x	✓	✓	✓	✓	✓	-	-	-
	R13.1 or later	-	-	-	-	-	✓	✓	✓

⚠ Even if both environments use UNICODE, when a unit job request transferred between UNIX and Windows is displayed by specifying show long queue by using the qmgr subcommand, the path becomes garbled if the job network name or unit job name in the path displayed in the job request in the queue includes Japanese.

2.1.2. Setting Up a Network

JobCenter operates on the assumption that a TCP/IP network is correctly set up.

JobCenter determines an IP address from the official host name of the machine, and it cannot operate if the host name obtained from the IP address does not match the official host name. JobCenter even checks whether domains exist and, therefore, sets up a network to achieve an exact match.

Operating JobCenter on multiple machines requires host names and IP address data to be matched among all machines. Care must, therefore, be taken to prevent omission in the host file updates or the like. Therefore, be careful to correctly update the DNS and hosts file.

If multiple network cards are installed with the CJC option not being used, operation is carried out on the network card having the highest priority. In the UNIX environment, for example, JobCenter operates using the host name returned by the hostname command.

For details on setting up a network, refer to Chapter 2, "Building a Network Environment" in <Environment Guide>.

> In a UNIX environment, if the same host name and IP address are assigned to multiple network cards, they may be installed and initialized in some cases; however, such installation and initialization should be avoided to prevent malfunctions.

In a Windows environment, a specification in the resolv.def file might be required for correct name resolution. For details, refer to Section 2.3, "Resolving Names in Windows" in <Environment Guide>.

Note the following when setting up a network:

■Forward lookup/reverse lookup must be available for name resolution of host names.

■A name obtained by forward lookup/reverse lookup must match the official name of the host, not an alias.

■If multiple network cards are installed, a unique host name/IP address must have been assigned to each of them.

■Host name/IP address data must match between hosts linking via JobCenter.

■If a firewall exists between hosts where JobCenter is set up, you need to perform operation to make holes for network ports that JobCenter uses.

■If you set up JobCenter MG/SV on Windows XP Professional (Service Pack 2 or higher), Windows Server 2003 (SP1 or higher), or Windows Server 2008, you need to make exception settings for Windows Firewall.

Take particular care of the Windows Server 2008 environment because Windows Firewall is set to "On" by default.

For information on port numbers when making exception settings for Windows Firewall, refer to Section 2.1, "TCP Ports Used by the JobCenter" in <Environment Guide>.

■The TCP/IP port number used must not conflict with other services. For details on how to change the port number setting used in JobCenter, refer to Section 2.1, "TCP Ports Used by the JobCenter" in <Environment Guide>.

> When you connect to MG/SV using CL/Win after completing installation and setup, two machine icons, one showing the host name only and one showing the FQDN, might be displayed for the same machine in the machine list. This is because an alias name only containing the host name is automatically set for the machine recognized by the FQDN during setup or when a machine is added to the machine group.
>
> Alias names can be used to identify machines by their operational role in [Machine List] in the Manager Frame or to improve the user-friendliness of the

nmapmgr and qmgrsub commands (Note, however, that alias names are only valid within your own machine (site). They cannot be used for name resolution during communication.)

Alias names can be deleted by using the nmapmgr command (not from CL/Win) if they are not required. Refer to "Delete Name $alias" in <Command Reference> (Japanese only).

2.1.3. Assigning Machine IDs

When installed, JobCenter needs to assign machine IDs that are unique within the system. The valid range for machine IDs is from 1 to 2147483647.

Note the following when assigning machine IDs:

■If JobCenter is used in multiple machines, no machine ID may be duplicated.

For example, when unit jobs are transferred from a UNIX manager machine to multiple Windows server machines, duplication of the machine ID causes unusual operation.

Duplication is not allowed, even between a local site and a cluster site.

■First determine operating rules for preventing machine IDs from being changed after setup.

Each machine holds the machine IDs of different machines. If information on the machine IDs does not match among the machines, unexpected operation may occur.

When the machine ID of a local or cluster site is changed on each machine in the system, the job transfer destination queue might not be recognized or another malfunction might occur if some of the machines are not updated due to incomplete operating rules.

2.2. Installing LicenseManager

LicenseManager is a product for license management. JobCenter uses LicenseManager to perform license checks.

Install LicenseManager before installing JobCenter products. Decide whether this installation is necessary based on the figure below.

| Does the machine in which JobCenter is installed operate on one of the following operating systems?
Solaris (SPARC)   Linux
Windows | →NO | LicenseManager does not have to be installed.
Register only the codeword. |

↓ YES

| Is LicenseManager installed? | →NO | LicenseManager R1.7 must be installed. |

↓ YES

| Is the version of the installed LicenseManager R1.7? | →NO | Upgrading LicenseManager to R1.7 is recommended.
(The license check operation itself has backward compatibility in versions earlier than LicenseManager R1.7.) |

↓ YES

Use the installed LicenseManager.

For details on how to check whether LicenseManager has been installed and the version, refer to the description for your OS in the next and following sections.

If a version of LicenseManager earlier than R1.6 is installed, it is recommended to upgrade to the latest version (R1.6 or later) because LicenseManager has been improved as follows:

■Warning messages are no longer output to the event log (in Windows) or the syslog (in Linux or UNIX) for model numbers that do not have registered codewords when performing a license check after registering codewords and then starting JobCenter.

■A command has been added for checking how many days are left in the trial period for a specified model number.

> However, versions earlier than R1.6 can be used without problem because the license check itself has backward compatibility.

2.2.1. HP-UX (IPF) Version

LicenseManager does not need to be installed.

Register only the codeword to the .lockinfo file, as instructed in Section 2.3, "Codeword Registration".

2.2.2. Solaris (SPARC) Version

1. Required disk and memory capacity

   Installing and using LicenseManager requires the fixed disk size and memory size shown in the table below.

   Table 2.1. Fixed disk size and memory size (Solaris version)

Fixed disk size	/opt: 1 MB
	/etc: 1 MB
	/usr: 1 MB
Memory size	3 MB

2. Installing LicenseManager

   To install LicenseManager, follow the steps below.

   a. Checking LicenseManager

      i. Start up the machine and log in with the login name "root".

      ```
      login:root ↵
      ```

      ii. Before installing LicenseManager, check whether LicenseManager has already been installed.

      ```
      root> /bin/pkginfo -l NECWSLM ↵
      ```

      ■If the following appears, LicenseManager need not be installed.

         <If LicenseManager R1.7 is already installed>

         ```
          PKGINST:  NECWSLM
             NAME:  WebSAM LicenseManager
         CATEGORY:  application
             ARCH:  Solaris
          VERSION:  1.7

         --(Following text omitted)--
         ```

      ■If the text below is displayed, it is recommended to upgrade LicenseManager.

         <When LicenseManager of R1.7 or older is installed>

         ```
          PKGINST:  NECWSLM
             NAME:  WebSAM LicenseManager
         CATEGORY:  application
             ARCH:  Solaris
          VERSION:  1.6

         --(Following text omitted)--
         ```

         In the above example, 1.6 is shown for VERSION. If a value other than 1.7 is shown here, the version is old.

To upgrade LicenseManager, uninstall the old version, and then install the new one. For details on how to uninstall LicenseManager, refer to Section 4.1, "Uninstalling LicenseManager".

■If the following appears, proceed with the installation of LicenseManager.

<If the LicenseManager package has not been installed>

```
ERROR: information for "NECWSLM" was not found
```

b. Installing LicenseManager

LicenseManager comes bundled with the JobCenter media (DVD-ROM). Follow the steps below to install it.

i. Insert and mount the JobCenter media (DVD-ROM). For details on how to mount the DVD-ROM, refer to the Solaris product manuals.

ii. Execute the following command for installation.

```
root> /usr/sbin/pkgadd -d <WSLM_PRODUCT_PATH> ↵
```

<WSLM_PRODUCT_PATH> is the file path for the product. For details about the actually entered value, refer to the Release Notes (RELMEMO) in the JobCenter media.

Messages are displayed during installation, but the installation finishes successfully if no errors are displayed.

If the installation fails due to a pkgadd error, refer to the installer log file and take action according to the Solaris product manual or other documentation.

iii. Execute the following command to check the installation results.

```
root> /bin/pkginfo -l NECWSLM ↵
```

If item STATUS: appears as follows, this indicates that installation has completed normally.

```
STATUS: completely installed
```

2.2.3. Linux Version

1. Required disk and memory capacity

Installing and using LicenseManager requires the fixed disk and memory sizes shown in the table below.

Table 2.2. Fixed disk size and memory size (Linux version)

Fixed disk size	/opt: 1 MB
	/etc: 1 MB
	/usr: 1 MB
Memory size	1 MB

2. Installing LicenseManager

To install LicenseManager, follow the steps below.

a. Checking LicenseManager

   i. Start up the machine and log in with the login name "root".

```
login: root ↵
```

  ii. Before installing LicenseManager, check whether LicenseManager has already been installed.

```
root> /bin/rpm -qa NECWSLM ↵
```

■If the following appears, LicenseManager does not need to be installed.

If LicenseManager R1.7 is already installed:

```
NECWSLM-1.7-1
```

■If the text below is displayed, it is recommended to upgrade LicenseManager.

If a version of LicenseManager older than R1.7 is installed:

```
NECWSLM-1.6-1
```

> In the above example, 1.6 is shown for the version. If a value other than 1.7 is shown here, the version is old.

To upgrade LicenseManager, uninstall the old version, and then install the new one. For details on how to uninstall LicenseManager, refer to Section 4.1, "Uninstalling LicenseManager".

■If nothing appears, LicenseManager has not been installed. Proceed with the installation of LicenseManager.

b. Installing LicenseManager

LicenseManager comes bundled with the JobCenter media (DVD-ROM). Follow the steps below to install it.

   i. Insert and mount the JobCenter media (DVD-ROM). For details on how to mount the DVD-ROM, refer to the Linux product manuals.

  ii. Execute the following command to install LicenseManager.

■For IA-32 or EM64T

```
root> /bin/rpm -i <WSLM_PRODUCT_PATH> ↵
```

> <WSLM_PRODUCT_PATH> is the file path for the product. For details about the value to actually enter, refer to the Release Notes (RELMEMO) in the JobCenter media.

■If the message below appears, this indicates that installation has completed normally.

```
****** now installing ******
```

```
Installation was successful.
```

If the installation fails due to an rpm error, refer to the installer log file and take action according to the Linux product manual or other documentation.

iii. Execute the following command to check the installation results.

```
root> /bin/rpm -qa NECWSLM ↵
```

If the message below appears, this indicates that installation has completed normally.

```
NECWSLM-1.7-1
```

2.2.4. AIX Version

LicenseManager need not be installed.

Just register the codeword into the .lockinfo file in accordance with Section 2.3, "Codeword Registration".

2.2.5. Windows Version

1. Required disk and memory capacity

Installing and using LicenseManager requires the fixed disk size and memory size shown in the table below.

Table 2.3. Fixed disk size and memory size (Windows version)

Fixed disk size	2 MB
Memory size	2 MB

2. Installing LicenseManager

To install LicenseManager, follow the steps below.

a. Checking LicenseManager

i. Start up the machine, and log in as a user who has Administrator permissions.

ii. Before installing LicenseManager, check whether LicenseManager has already been installed.

■Windows XP, Windows Server 2003

Select [Start], [Settings], and then [Control Panel] to display the Control Panel. In the [Add or Remove Programs] dialog box, check that there is no entry for [WebSAM LicenseManager].

■Windows Server 2008

Select [Start], [Settings], and then [Control Panel] to display the Control Panel. In the [Programs and Features] window, make sure that the [WebSAM LicenseManager] entry is not displayed.

iii. If LicenseManager already exists, check the version as described below.

■Windows XP, Windows Server 2003

In the [Add or Remove Programs] window, click [Click here for support information] in the [WebSAM LicenseManager] entry to display the support information dialog box.

■Windows Server 2008

In the [Programs and Features] window, select the [View] menu and then [Choose Details]. Next, select the [Version] check box to display the version.

If the version is not 1.7, it is recommended to upgrade LicenseManager.

To upgrade LicenseManager, uninstall the old version, and then install the new one. For details on how to uninstall LicenseManager, refer to Section 4.1, "Uninstalling LicenseManager".

iv. If LicenseManager does not exist, proceed with the installation of LicenseManager.

v. Windows Installer 3.1 or later is required to install LicenseManager 1.6 or later. Check that Windows Installer 3.1 is already installed before installing LicenseManager.

For details on how to check the version of Windows Installer or how to obtain the installer, refer to the following Microsoft site: http://support.microsoft.com/kb/893803.

b. Installing LicenseManager

LicenseManager comes bundled with the JobCenter media (DVD-ROM). Follow the steps below to install it.

i. Copy the package file (32-bit version: setup.exe and lmsetup.msi, 64-bit version: setup.exec and lmsetup-x64.msi) to any folder on the local disk from the JobCenter media (DVD-ROM). In this example, copy it to "C:\setup.exe," and "C:\lmsetup.msi" (32-bit version) or "C:\lmsetup-x64.msi" (64-bit version).

ii. Execute the just-copied setup.exe file to start the LicenseManager installer.

iii. The screen below appears. Click the [Next] button.
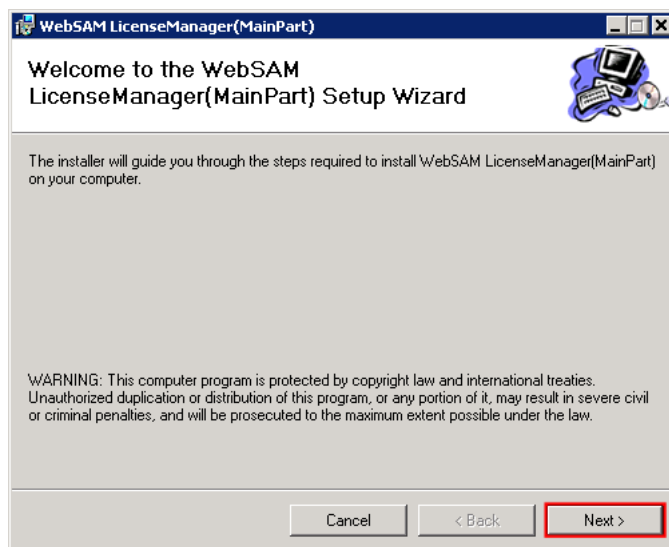
Figure 2.2. Welcome dialog box of the installation wizard

iv. The "Select Installation Folder" screen appears. Decide the folder to install, and then click the [Next] button.
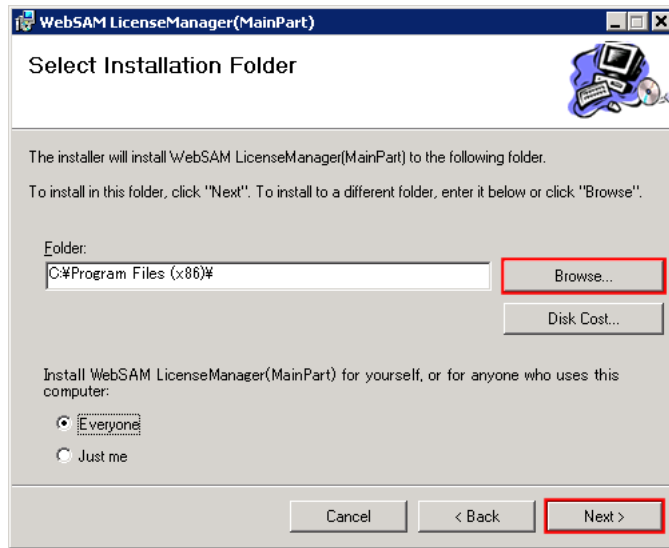
Figure 2.3. Installation folder specification dialog box

To change the installation folder, click the [Browse] button, select a folder in accordance with the instructions displayed in the dialog box, and then click the [OK] button.

v. The "Confirm Installation" screen appears. Check the settings that you have made so far. When the settings are completed, click the [Next] button.

To change any of the settings, click the [Back] button to return to the desired screen and make the settings again.
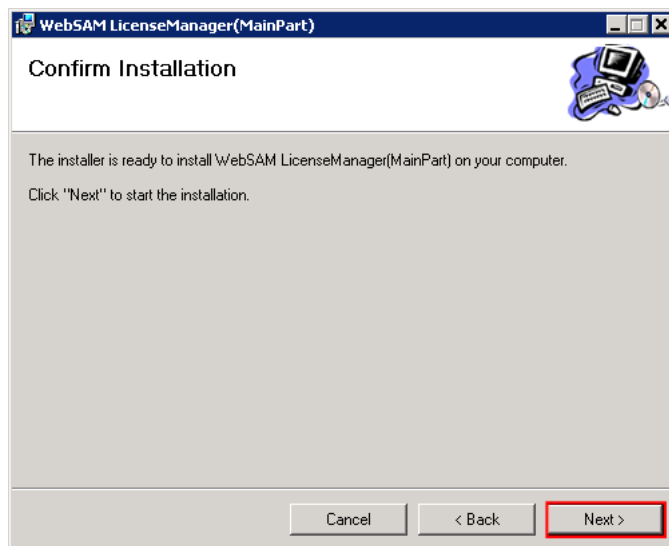
Figure 2.4. Confirmation dialog box

vi. When all necessary components have been installed, the screen below appears. Click the [Close] button.
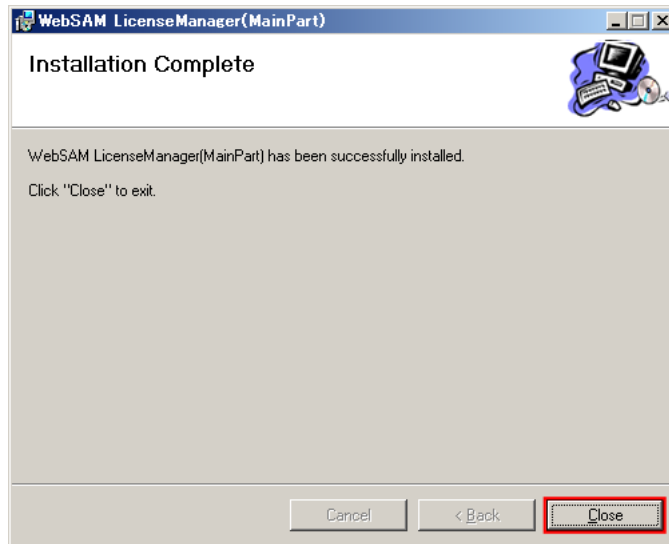
Figure 2.5. Completion dialog box

⚠️ If a message asking you to restart is displayed, be sure to restart the system before installing a JobCenter product.

The steps for installing "LicenseManager" are now completed.

Check that installation has completed normally.

vii. Select [Start] and then [Control Panel] on Windows, and then open the [Add or Remove Programs] (or [Programs and Features]) dialog box.

If an entry of "WebSAM LicenseManager" is displayed as shown below, installation has completed normally.
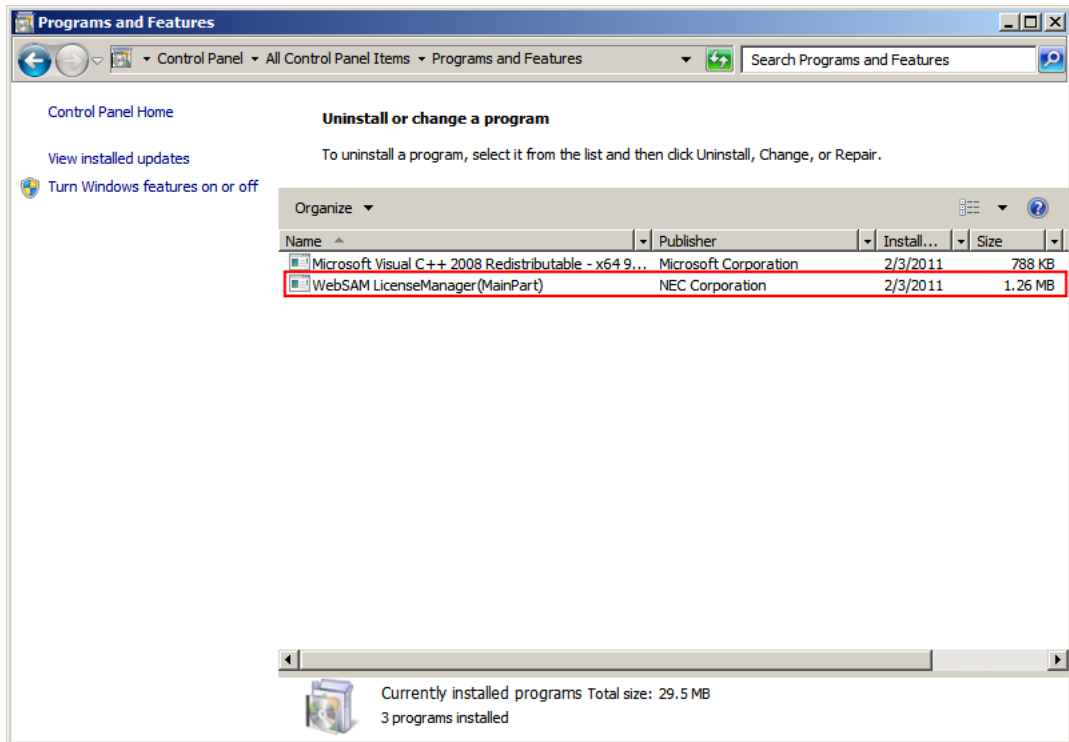
Figure 2.6. Display Example

2.3. Codeword Registration

When you have finished installing LicenseManager, register the codeword for licensing before setting up JobCenter.

2.3.1. Procedure for Registering a Codeword

1. Register a codeword in the file below. Obtain the codeword in advance by applying to the codeword center.

UNIX	/etc/opt/wsnlesd/.lockinfo
Windows	%InstallDirectory%\wsnlesd\etc\opt\wsnlesd\lockinfo

> %InstallDirectory% is the directory in which LicenseManager has been installed. By default, it is "\Program Files" in the drive in which the OS is installed.

If using a platform for which installing LicenseManager is unnecessary (HP-UX (IPF), Solaris (x64/x86), or AIX), the installation of LicenseManager is not required. Register the codeword only. Create the directory and the lockinfo file in the text format on the above path before executing the following step.

> In UNIX, create the above subdirectory if it does not exist.

In each .lockinfo file, register a codeword in the format of "<model-number> <codeword>". As shown in the example below, <model-number> and <codeword> must be separated by one or more spaces or tabs.

<Example of registration in the .lockinfo (lockinfo) file>

```
UQ4322-H0C4A1 reYrD4EyhOViab9BCPnw0RzmlG76acjKHRV9Vp%YyrOl
UQ4370-H0C1B1 u4v%daE6VNGKk2VdrS50yQwuoFQCbb0#lSUVDqv4Pi8z
UQ4343-H0C1A1 Ses3s1VedNUShcoJkYR46MjqHDTKpdj#dQXZEvtMVrxz
... .......
```

> ■Be careful to correctly transcribe 0 (zero) and O (uppercase letter O), 1 (one) and l (lowercase letter l), and other confusing characters when writing the codeword.
>
> ■Registration of a codeword applied for using a model number different from the purchased product or an IP address that is not activated on the machine is invalid.

> ■Without codeword registration, JobCenter provides 60 days trial. If the trial period expires, you cannot restart JobCenter until the codeword is registered.
>
> ■If the version of LicenseManager is R1.6 or later, the wsnlcheck command can be used to check how many days remain in the trial period. For details on how to use this command, refer to the following.

2. Checking the codeword

Use the command below to check whether the license was unlocked correctly.

■For LicenseManager R1.6 or later

- UNIX

```
root> /opt/wsnlesd/bin/wsnlcheck <model-number> ↵
```

- Windows

```
C:\> %InstallDirectory%\wsnlesd\bin\wsncheck <model-number> ↵
```

If LicenseManager is installed under "C:\Program Files" in Windows, when opening the command prompt select [Run as administrator] from the shortcut menu.

In the case of the 64-bit version of Windows (x64/EM64T/AMD64), the title above should read "For LicenseManager R1.7 or later".

If the OS is HP-UX (IPF) or AIX, the above check step is not necessary. There is no means to check the accuracy of the codeword because LicenseManager is not installed. There are no problems if JobCenter normally starts and runs.

However, be sure to create the .lockinfo file in the specified location according to the steps in the previous section and correctly make a note of the codeword in case the implementation changes in the future.

The output results as well as their meanings and actions are listed in the table below. (Here, XXXXXX-XXXXXX is the model number.)

Output result	Meaning and action
XXXXXX-XXXXXX "LICENSED" Output example: UQ4321-X0Y1Z2 "LICENSED"	The license was correctly unlocked.
No license of XXXXXX-XXXXXX Example: No license of UQ4321-X0Y1Z2	There is no license information for the specified model number. This is displayed if the codeword has not been registered and JobCenter is not installed. If this message is displayed after registering the codeword, the codeword was not correctly recognized. Check the following items: ■ Is the codeword registered in .lockfile (or lockfile) correct? ■ Does the model number registered in .lockfile (or lockfile) match the one used when applying for the codeword?

	■ Does the computer IP address match the one used when applying for the codeword?
XXXXXX-XXXXXX "TRIAL" (until YYYY/MM/DD) Output example: UQ4321-X0Y1Z2 "TRIAL" (until 2009/08/31)	The trial period is until YYYY/MM/DD. If this message is displayed after registering the codeword, the codeword was not correctly recognized. Check the following items: ■ Are the directory and file name for .lockfile (or lockfile) correct? ■ Is the model number registered in .lockfile (or lockfile) correct?
XXXXXX-XXXXXX "NO LICENSE(TRIAL)" (expired YYYY/MM/DD) Output example: UQ4321-X0Y1Z2 "NO LICENSE(TRIAL)" (expired 2009/08/31)	The trial period ended on YYYY/MM/DD.

■<For LicenseManager R1.5 or earlier>

■ UNIX

```
root> /opt/wsnlesd/bin/wsnlesd -p <model-number> ↵
```

■ Windows

```
C:\> %InstallDirectory%\wsnlesd\bin\wsnlesd -p <model-number> ↵
```

> Although this command is available in R1.6 or later, wsnlcheck, which displays more information, is recommended in R1.6.

The output results as well as their meanings and actions are listed in the table below. (Here, XXXXXX-XXXXXX is the model number.)

Output result	Meaning and action
XXXXXX-XXXXXX "" Output example: UQ4321-X0Y1Z2 ""	The license was correctly unlocked.
XXXXXX-XXXXXX "TRIAL" Output example: UQ4321-X0Y1Z2 "TRIAL"	The trial period is currently ongoing. If this message is displayed after registering the codeword, the codeword was not correctly recognized. Check the following items: ■ Is the model number registered in .lockfile (or lockfile) correct?
Error<>:License_Check() failed. rc : ?	A processing error occurred.

Output example: Error<>:License_Check() failed. rc : 3	The codeword has not been correctly registered. Check the following items: ■ rc : 3 … Is the codeword registered in .lockfile (or lockfile) correct? Make sure that 0/O, 1/l, and other confusing characters are correctly written. ■ rc : 4 … Does the model number registered in .lockfile (or lockfile) match the one used when applying for the codeword? ■ rc : 5 … Does the computer IP address match the one used when applying for the codeword? Is the LAN cable connected? ■ rc : 6 … The license has expired. Acquire a legitimate license.

2.3.2. Messages That May Appear After LicenseManager Is Installed

After LicenseManager has been installed, the messages shown below may appear in syslog (or event log for Windows).

■For UNIX:

```
<date time host-name> wsnlesd: The license of this <model-number>-* is invalidated on
 YYYY/MM/DD.
```

"<model-number>-*" indicates what precedes the hyphen ("-") in a product model number such as "UWO312-H2NAOO".

In the message, it is displayed as "UWO312-*".

■For Windows:

```
The license of this <model-number>-* is invalidated on YYYY/MM/DD.
```

The above message indicates that the product "<model-number>-*" is under a trial period, as well as the expiration date.

They are to be output for each model number of JobCenter products without codeword registration, and are not to be output if the codeword for the relevant model number "<model-number>-*" has been registered correctly.

If the above message appears after license registration, check whether the model number in the message matches the model number of the codeword registered in the .lockinfo (or lockinfo) file.

■If the above message appears for a registered model number

The codeword may not have been entered correctly. Check the registration status of the codeword again by using the wsnlesd command in accordance with Section 2.3.1, "Procedure for Registering a Codeword".

■If the model number of the registered codeword does not match any "\<model-number\>-*" of output messages

The above message can be ignored. The license lock has been unlocked by the registered codeword. This message will not appear after the expiration date mentioned in the message. (Note that there is no way to prevent the above warning message indicating expiration from being output.)

A message output example is shown below.

1. The following codeword is registered.

```
UW0312-H2NA00 reYrD4EyhOViab9BCPnw0RzmlG76acjKHRV9Vp%YyrOl
```

2. A message as shown below is output to syslog.

```
Mar 1 15:35:02 shaker wsnlesd: The license of this UQ4321-* is invalidated on
 2005/04/30.
Mar 1 15:35:02 shaker wsnlesd: The license of this UQ4322-* is invalidated on
 2005/04/30.
```

3. In this case, the output message is not related to "UW0312-*", and this message can be ignored.

For "UW0312-*", JobCenter will start without any problem because the license lock has been unlocked.

2.4. Installing JobCenter MG/SV

JobCenter MG and SV are common packages. They are referred to as "JobCenter MG/SV" in the remainder of this manual. The installation procedure is described below.

> Even if a single machine is to serve both as MG and SV, perform the installation procedure only once. The codeword must, however, be registered twice separately for JobCenter MG and JobCenter SV.

2.4.1. HP-UX Version

The following describes the procedure for installing the HP-UX version of JobCenter MG/SV.

Because the JobCenter media is in the Rock Ridge format, use the mount command as follows to mount the DVD-ROM in HP-UX.

1. Log in as a root user, and then execute the ioscan command to check the device name.

```
root> /usr/sbin/ioscan -fnu -Cdisk ↵
```

2. Insert the JobCenter media (DVD-ROM), and execute the following command.

```
root> /usr/sbin/mount -F cdfs -o rr <device-name> <mount-point> ↵
```

> Change the mount point (<mount-point>) and the device name (<device-name>) to fit your system.

3. Execute the following command for installation.

```
root> /usr/sbin/swinstall -s <HP_PRODUCT_PATH> NECJCpkg ↵
```

> <HP_PRODUCT_PATH> is the file path for the product. For details about the actually entered value, refer to the Release Notes (RELMEMO) in the JobCenter media.

4. After command execution, the installer displays a message. If no errors occur, the installer displays the following message and completes the installation normally.

```
* Execution succeeded.
```

If the installation fails due to an swinstall error, refer to the installer log file and take action according to the HP-UX product manual or other documentation.

5. If you have finished the above-mentioned steps, proceed to Chapter 3, "Setting Up the Execution Environment (UNIX Version)" .

2.4.2. Solaris Version

The following describes the procedure for installing the Solaris version of JobCenter MG/SV.

1. Insert and mount the JobCenter media (DVD-ROM). For details on how to mount the DVD-ROM, refer to the Solaris product manuals.

2. Execute the following command for installation.

```
root> /usr/sbin/pkgadd -d <SUN_PRODUCT_PATH> ↵
```

> <SUN_PRODUCT_PATH> is the file path for the product. For details about the actually entered value, refer to the Release Notes (RELMEMO) in the JobCenter media.

3. After executing the command, the system waits entry, displaying the following message to indicate that the JobCenter software package can be installed.

```
The following packages are available:
  1  NECJCpkg     JobCenter MG/SV package for Solaris
                   (Solaris(XXXX)) YYYY
Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:
```

> The above XXXX indicates the architecture (sparc or x86).
>
> Read the above YYYY as the JobCenter version.

4. To install the package(s), select "1", and then press the [Enter] key. Afterwards, install the package(s) according to installer indication.

   If the installation fails due to a pkgadd error, refer to the installer log file and take action according to the Solaris product manual or other documentation.

5. If you have finished the above-mentioned steps, proceed to Chapter 3, "Setting Up the Execution Environment (UNIX Version)" .

2.4.3. Linux Version

The following describes the procedure for installing the Linux version of JobCenter MG/SV.

> ■In JobCenter R12.7 and later, the Red Hat version package and the Miracle version package are common ones.
>
> ■For Miracle Linux, proceed to step Section 2.4.3.3, "Installing JobCenter".

2.4.3.1. Installing the "Compatibility Arch Support" Package (for EM64T Systems of RHEL4 or Earlier)

Because JobCenter is a 32-bit application, running JobCenter on an EM64T system requires that the "Compatibility Arch Support" package be installed for Red Hat in advance.

When installing the OS, select [Customize now], and then make sure that all the packages in "Compatibility Arch Support" are already installed.

2.4.3.2. Installing the 32-bit Package (for EM64T Systems of RHEL6)

Because the package for supporting compatible architecture is not provided for Red Hat Enterprise Linux 6, the i686 architecture version of the package below must be installed.

■glibc

■nss-softokn-freebl

■ncurses-libs

■pam

■audit-libs

■cracklib

■db4

■libselinux

2.4.3.3. Installing JobCenter

1. Insert and mount the JobCenter media (DVD-ROM). For details on how to mount the DVD-ROM, refer to the Linux product manuals.

2. Execute the following command for installation.

   ■For a 32-bit platform or EM64T

   ```
   root> /bin/rpm -i <LINUX_PRODUCT_PATH> ↵
   ```

   > <LINUX_PRODUCT_PATH> is the file path for the product. For details about the actually entered value, refer to the Release Notes (RELMEMO) in the JobCenter media.

   If error messages are not output after the execution of the command, the installation has been completed.

   If the installation fails due to an rpm error, refer to the installer log file and take action according to the Linux product manual or other documentation.

3. If you have finished the above-mentioned steps, proceed to Chapter 3, "Setting Up the Execution Environment (UNIX Version)" .

2.4.4. AIX Version

The following describes the procedure for installing the AIX version of JobCenter MG/SV.

> In the AIX environment, it is not automatically checked whether the same product package has been installed, so that any previously installed package may be overwritten.
>
> Be sure to check that another JobCenter MG/SV package has not been installed.

1. Insert and mount the JobCenter media (DVD-ROM). For details on how to mount the DVD-ROM, refer to the AIX product manuals.

2. Use the following command to expand the AIM version package in the media to an appropriate directory.

   ```
   root> cd <directory-to-which-to-expand-the-package>
   root> /usr/bin/tar xvf <AIX_PRODUCT_PATH> ↵
   ```

   > <AIX_PRODUCT_PATH> is the file path for the product. For details about actually entered value, refer to the Release Notes (RELMEMO) in the JobCenter media.

3. The above command develops the following two files.

```
.toc
NECJCpkg.XXXX.bff
```

> Read the above XXXX as the JobCenter version.

4. On the directory decompressed in step 3, execute the following command to install the package.

```
root> /usr/sbin/installp -a -d. NECJCpkg ↵
```

5. After command execution, the installer displays the following message if no errors occur.

```
NECJCpkg.base XXXX USR APPLY SUCCESS
```

If the installation fails due to an installp error, refer to the installer log file and take action according to the AIX product manual or other documentation.

6. Add the JobCenter termination process to the /etc/rc.shutdown file.

If the /etc/rc.shutdown file does not exist, create the file according to the following instructions.

```
touch /etc/rc.shutdown
chmod 550 /etc/rc.shutdown
chown root:system /etc/rc.shutdown
```

Add the following to the /etc/rc.shutdown file.

```
# Stop JobCenter
if [ -x /usr/lib/nqs/util/rc.nqs ]; then
    /usr/lib/nqs/util/rc.nqs stop > /dev/null 2>&1
fi
```

7. If you have finished the above-mentioned steps, proceed to Chapter 3, "Setting Up the Execution Environment (UNIX Version)" .

2.4.5. Windows Version (Normal Installation)

Normal installation procedure for Windows JobCenter MG is shown below. For the Windows version, installation and setup are performed by following a flow of sequences.

JobCenter MG and SV are provided in the same package, and adopt the same installation procedure. To install JobCenter SV, follow the installation procedure for JobCenter MG.

Before starting installation, be sure to read the following notes.

■General note

- Before installation, exit all applications in progress for smooth installation.

- As a user belonging to the local Administrators group, log in to the machine in which JobCenter has been installed.

- To set up JobCenter in the Domain environment, also log in as a user belonging to the Administrators group before performing the operation below.

- To specify a domain user as the JobCenter administrator, log into Windows as a domain user that belongs to the local Administrators group. In this case, a local user with the same account name spelling cannot belong to the JobCenter group.

- The "User Type" ("Local" or "Domain") for setup cannot be selected when JobCenter is installed on the domain controller (PDC/BDC) (The setting is fixed to "Domain".)

%InstallDirectory% represents the installation directory for JobCenter itself. (The default value is "C:\JobCenter\SV".)

■Note on environment variables

When the environment variable NQS_SITE is set, setup cannot be performed normally. Check whether NQS_SITE is specified (for example, by using a system environment variable) and, if it is, delete it before installation.

■Notes on permissions

For JobCenter to run correctly, permissions must be granted to the JobCenter administrator and to other JobCenter users.

These permissions can normally be specified by selecting [Administrative Tools] and then [Local Security Policy]. (For a domain environment user, permissions are specified by selecting [Domain Security Policy] for the domain controller and [Domain Controller Security Policy].) Permissions are normally granted without any particular problems, but they might not be granted depending on the security policy for the target system.

Specify settings so that the following permissions are assigned.

1. The permissions required by JobCenter users are as follows (these are normally assigned by the OS by default).

Permissions	Meaning
SeBatchLogonRight	Log on as batch job
SeInteractiveLogonRight	Log on locally

- In Windows Server 2008 and later, during JobCenter setup the JobCenter administrator is automatically assigned the two rights above. During setup of JobCenter in Windows Server 2003 and earlier, only SeInteractiveLogonRight is automatically assigned to the JobCenter administrator.

- If the JobCenter administrator is a domain environment user, the policies to be automatically assigned are as follows.

Machine on which JobCenter is set up	Policy
Domain controller	Domain controller security policy
Domain member server	Local security policy

2. In addition to 1., the permissions required by JobCenter administrators are as follows (these are normally assigned by the OS by default).

Permissions	Meaning
SeBackupPrivilege	Back up files and directories
SeChangeNotifyPrivilege	Scan check bypass

SeCreateGlobalPrivilege	Creation of global objects
SeDebugPrivilege	Program debugging
SeIncreaseQuotaPrivilege	Addition of memory quota for process
SeNetworkLogonRight	Access this computer from the network
SeRestorePrivilege	Restoration of files and directories
SeSecurityPrivilege	Management of monitoring and security logs
SeSystemEnvironmentPrivilege	Modification of firmware environment values
SeTakeOwnershipPrivilege	Acquisition of ownership of files and other objects

> Note that of the above, SeCreateGLobalPrivilege is not subject to checking by the setting check commands (jc_check and jc_getinfo). However, this permission is required by JobCenter administrators, so be sure to assign it.

3. In addition to 1. and 2., the permissions required by JobCenter administrators are as follows (these are automatically assigned by during JobCenter Setup).

Permissions	Meaning
SeAssignPrimaryTokenPrivilege	Replace a process level token
SeServiceLogonRight	Log on as a service
SeTcbPrivilege	Act as part of the operating system

> If the JobCenter administrator is a domain environment user, the policies to be automatically assigned are as follows.
>
> | Machine on which JobCenter is set up | Policy |
> | --- | --- |
> | Domain controller | Domain controller security policy |
> | Domain member server | Local security policy |

4. Permissions that should preferably be assigned to the Administrators group (assigned by the OS by default)

Permissions	Meaning
SeCreatePagefilePrivilege	Creation of page file
SeIncreaseBasePriorityPrivilege	Raising scheduling priority
SeLoadDriverPrivilege	Loading and unloading device drivers
SeProfileSingleProcessPrivilege	Profile of single process
SeRemoteShutdownPrivilege	Forced shutdown from remote computer
SeShutdownPrivilege	System shutdown
SeSystemProfilePrivilege	Profile of system performance
SeSystemtimePrivilege	Changing system time

> The operation of JobCenter itself will not be affected if these permissions are not assigned. However, if a command that launches from a JobCenter job requires the Administrators default permissions, not assigning these

permissions might affect the operation of JobCenter. It is therefore recommended to assign these permissions.

For the requirements for the JobCenter user in Windows, refer to "Notes for Windows" in Section 2.1.1, "Checking Notes in Advance".

■Notes on installing JobCenter in a Windows XP Professional machine

Make sure that conditions 1. and 2. are met simultaneously.

1. Log-in user must belong to the Administrators group.

2. One of the following settings must be specified.

   a. Windows XP Professional is in a "Domain Environment".

   b. The following setting is made for the user who logs in to Windows XP Professional.

      The security setting for the policy "Network access: Sharing and security model for local accounts" is "Classic - local users authenticate as themselves".

      Select [Start] followed by [Run], and then execute [secpol.msc].

      The [Local Security Settings] screen appears. From the tree in the right pane, select [Security Settings], [Local Policies], and then [Security Options] to display policies.

   c. "Deny access to this computer from the network" is not assigned to "guest" accounts.

      Select [Start] followed by [Run], and then execute [secpol.msc].

      The [Local Security Settings] screen appears. From the tree in the right pane, select [Security Settings], [Local Policies], and then [User Rights Assignment] to display policies.

■Notes to consider if JobCenter (SV/NT) R4.1 or before has been installed

If the version of JobCenter R4.1 or before has been installed, it needs to be uninstalled in advance.

1. Insert the DVD-ROM used for the installation into the CD/DVD-ROM drive.

2. Select [Start] followed by [Run].

3. Specify the following file name, and then click the [OK] button.

```
Q:\PRODUCT\WIN\JB_SV\DISK1\SVUNINST.EXE
```

In the following description, Q: is assumed to be the CD/DVD-ROM drive.

If the CD/DVD-ROM drive is assigned to a different drive, read the description accordingly.

■Notes on the MFSC (MSCS) cluster environment

For an MFSC (MSCS) cluster environment, a special procedure is necessary to uninstall the old version and then install a new one.

For details, refer to <Guide for using Cluster function> (Japanese only).

■Notes on creating the configuration file for silent installation

To use the configuration file for silent installation created in step 12 on other machines, note the following points:

- Always select [Auto] when specifying the IP address used by JobCenter in step 8.

- To avoid duplicating machine IDs, go back to step 11 every time you save the configuration file, change the machine ID, change the file name, and then save the file.

- The configuration file cannot be saved under different JobCenter administrators, passwords, or JobCenter groups on each machine on which JobCenter is installed. (Specify the user as the local user using the same account name and password on each machine or specify the domain account as the JobCenter administrator.)

Normal installation procedure is described below.

1. Insert the JobCenter media (DVD-ROM), and then select [Start] followed by [Run]. If the CD/DVD-ROM drive is assigned to a different drive, read the description accordingly.

   Specify one of the following file names, and then click the [OK] button. If the CD/DVD-ROM drive is assigned to a drive other than the Q: drive, read the description accordingly.

   ■32-bit native binary for IA-32

   ```
   Q:\PACKAGE\JB\WINDOWS\MGSV\x86\jcsetup.exe
   ```

   ■64-bit native binary for x64 (EM64T or AMD64)

   ```
   Q:\PACKAGE\JB\WINDOWS\MGSV\x64\jcsetup.exe
   ```

2. The JobCenter Setup window is displayed. Click the [Next] button.
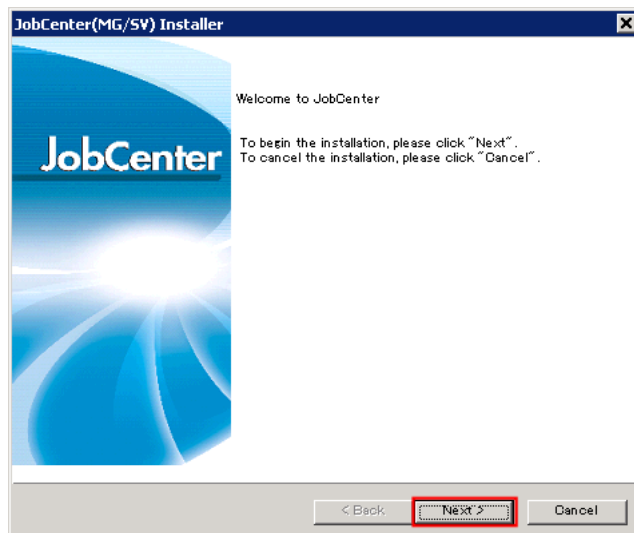

Figure 2.7. JobCenter setup window

3. The configuration file in which the settings specified during the last installation are saved can be loaded. (However, a configuration file saved in another PC cannot be used.)

   To load this file, select [Read config file created already], click the [Browse] button, and then specify the file in accordance with the displayed instructions.

If you do not want to load the file, click the [Next] button without selecting the check box.
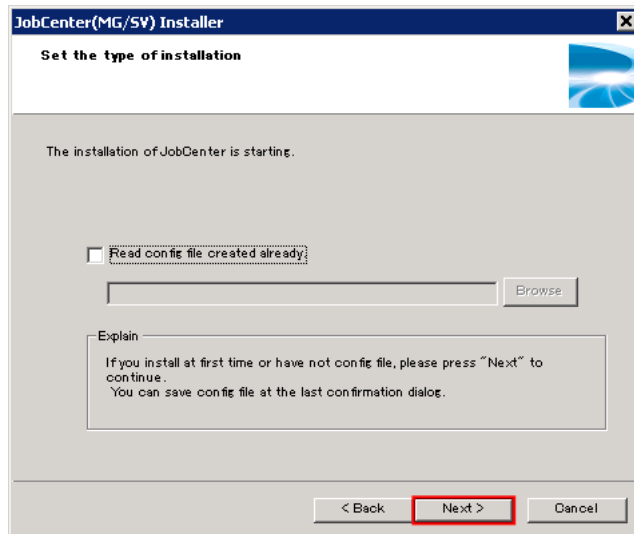
Figure 2.8. Installation type specification dialog box

This configuration file can be created using the Confirmation window in step 12.

4. Select the language used for installation (Japanese or English), and then click the [Next] button.

Figure 2.9. Installation language specification dialog box

5. Select the installation folder, and then click the [Next] button.

The default installation folder is "C:\JobCenter\SV".

To change this folder, click the [Browse] button, select a folder in accordance with the instructions displayed in the dialog box, and then click the [OK] button.
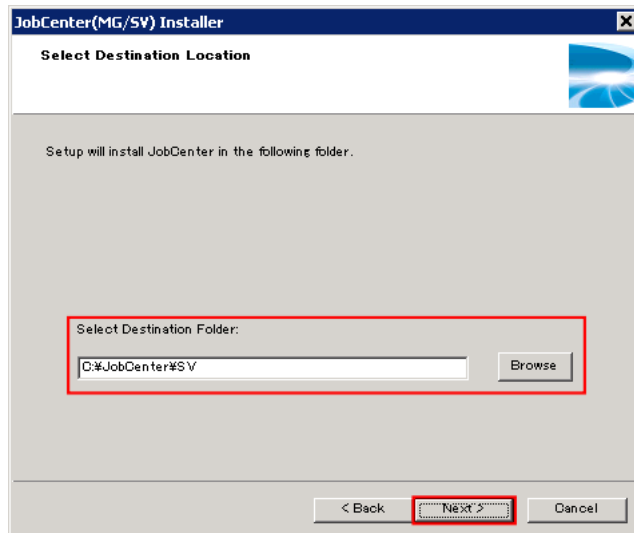
Figure 2.10. Installation folder specification dialog box

> Do not use tabs or special characters such as "%", "(", ")", "^", ";", "&", "=", and "," for the name of the installation folder.
>
> Japanese cannot be used to specify installation path.
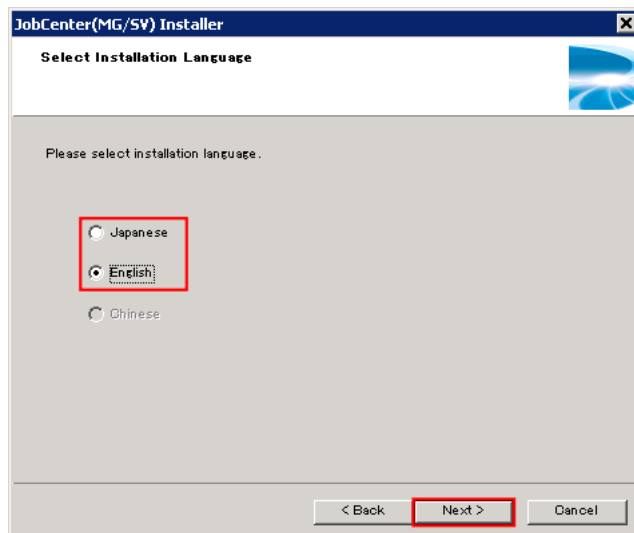
When you click the [Next] button, the dialog box below might be displayed if you specified a directory containing user-defined information for the old version or if you are reinstalling JobCenter in the same directory it is already installed in.

To inherit the defined information, click the [Yes] button.

To delete the information and then perform the installation, click the [No] button.

To change to a different directory, click the [Cancel] button, and then change the installation directory.
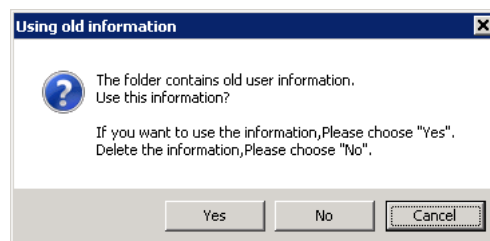
Figure 2.11. Definition information inheritance dialog box

6. Enter the program folder, and then click the [Next] button.

The default folder to which the shortcut links is "JobCenter\SV".
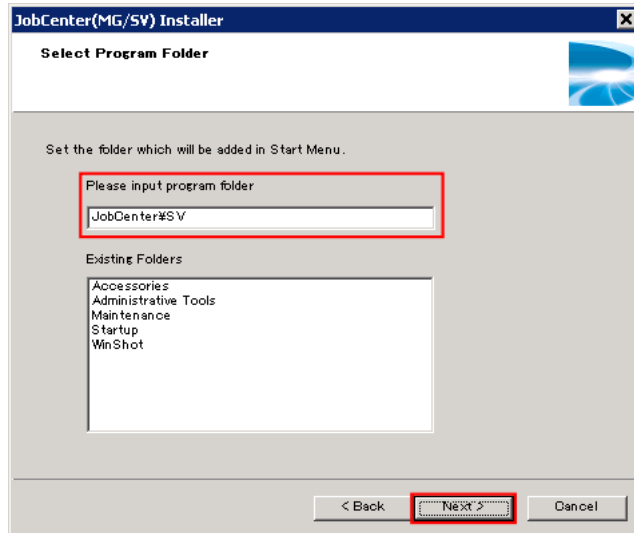
Figure 2.12. Program folder specification dialog box

⚠️ Japanese cannot be used in the program folder name.

7. Register the administrator used for JobCenter.

   Enter the administrator name, administrator password (twice), JobCenter group name, and domain name and then click the [Next] button.

   If you enter information about an account that does not exist, the account is created.

   If you enter the name of a group that does not exist, the group is created.

   If [Domain user] is selected, trusted users from a different domain can also be registered as the administrator.
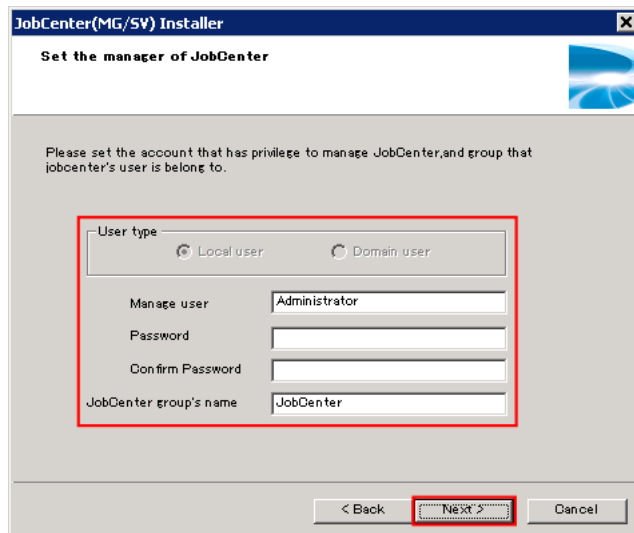
Figure 2.13. JobCenter administrator specification dialog box

■The maximum length for a user name is 15 bytes.

■To make a new user a JobCenter administrator, the user installing JobCenter on a computer (local or domain) requires permissions to add a user to the computer.

If the user does not have these permissions, processing to add a new user during installation cannot be performed, and installation fails.

■Japanese cannot be used in the JobCenter group name.

For installation in a domain environment, you can select whether the JobCenter administrator is to be registered as a local user or domain user.

If the JobCenter administrator is a local user, only local users can use JobCenter.

If the administrator is a domain user, both local users and domain users can use JobCenter.

8. Specify the IP addresses used by JobCenter, and then click the [Next] button.

   To automatically determine the addresses, select [Auto].

   If the computer has multiple IP addresses and you want to wait for specific ones, select [Manual], and then enter the IP addresses to wait for.

   You can specify up to five addresses.
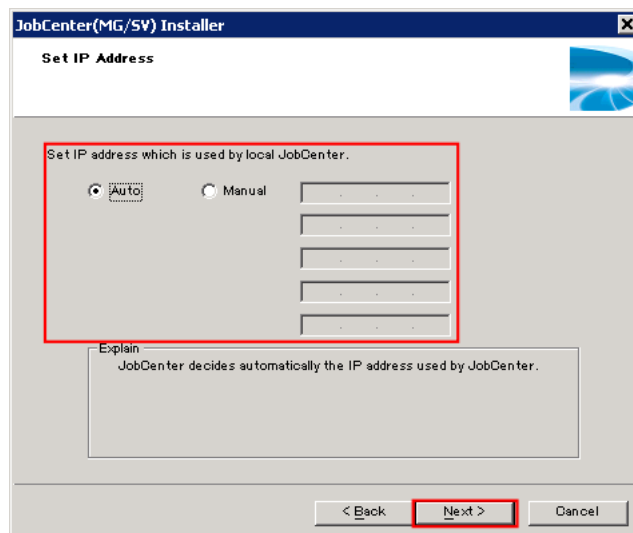
Figure 2.14. IP address specification dialog box

If a computer has multiple IP addresses and [Auto] is selected, the address determined by the OS to have the highest priority is used.

9. The result of resolving the IP address specified in the [Set IP Address] dialog box in step 8 to a name is displayed.

If there are no problems with the IP address and host name to be used, click the [Next] button.
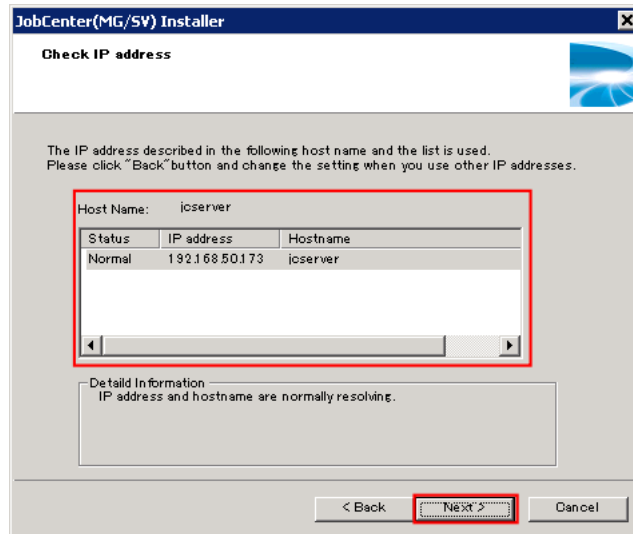
Figure 2.15. IP address confirmation dialog box

10. Specify the TCP/IP ports and Windows firewall exception setting used by JobCenter, and then click the [Next] button.

To specify that JobCenter MG/SV use TCP/IP ports other than the default, select the [custom] check box, and then specify the port numbers used by each service.

For details about the default TCP/IP ports, refer to the remark below.
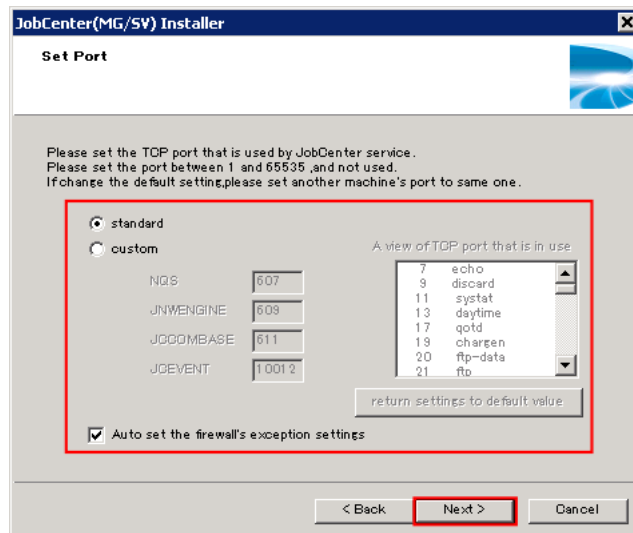
Figure 2.16. Port specification dialog box

The TCP/IP ports below are used by default.

Make sure that each TCP/IP port is unique by referring to [A view of TCP port that is in use] in the [Set Port] dialog box.

NQS : 607/tcp

> JNWENGINE : 609/tcp
> JCCOMBASE : 611/tcp
> JNWEVENT : 10012/tcp
> JCDBS : 23131/tcp

> ⚠️ Firewall exception settings apply to the properties that are active at installation.
>
> If active properties have changed following installation (for example, if the property is changed from public to domain), reapply the firewall exception settings to the changed properties.

11. Enter an NQS machine ID and select the character encoding method.

    The machine ID is used by JobCenter to uniquely identify the computer for each local and cluster site.

    Select [Unicode Mode] to use Unicode character encoding or [Non-Unicode Mode] to use different encoding.
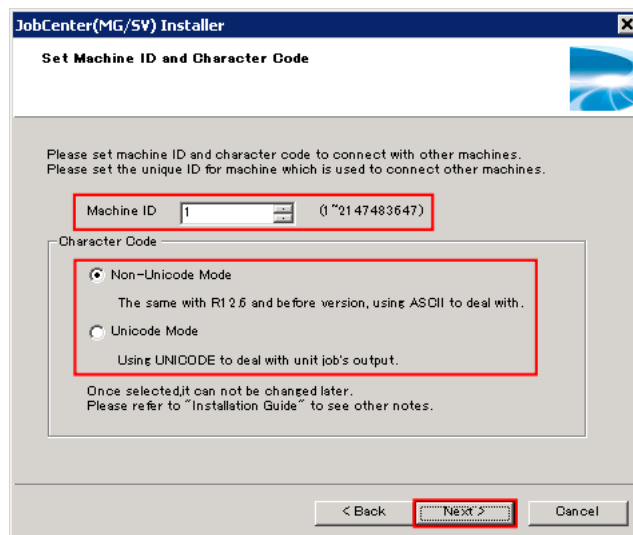
Figure 2.17. Machine ID and character code specification dialog box

> ⚠️ ■Avoid duplicating machine IDs between machines in which JobCenter is installed. By default, "1" is set.
>
> ■Once set, the character code cannot be changed later.
>
> For an explanation of notes on using [Unicode Mode], refer to Section 2.1.1, "Checking Notes in Advance".

12. Check the specified settings, and then click the [Next] button to start installation if there are no problems.

    You can save the settings by clicking the [Save] button.

    The saved file can be used for a silent installation.
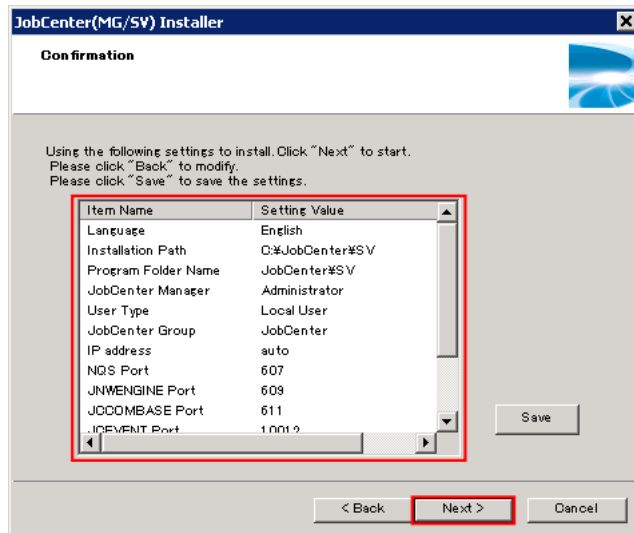
Figure 2.18. Confirmation dialog box

13. When installing JobCenter (MG/SV) is complete, the [Finish] button becomes active.
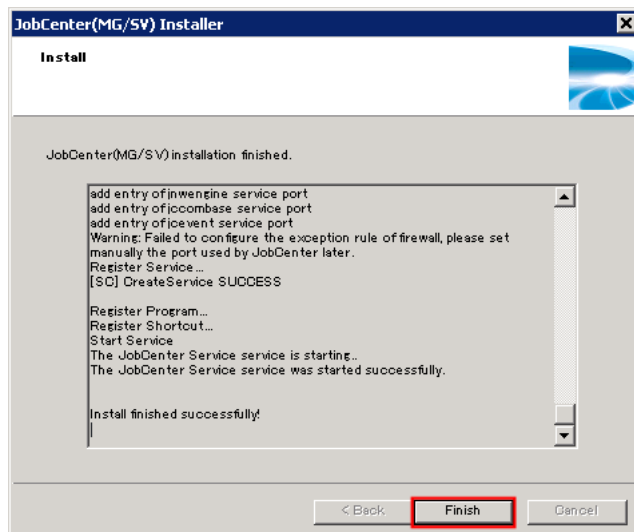
Figure 2.19. Installation execution dialog box

When you install JobCenter (MG/SV) R12.8 or later, the Microsoft Visual C++ 2008 SP1 redistributable package is automatically installed if this package is not included. It is normal for this installation to take several minutes.

Installing JobCenter (MG/SV) might fail, resulting in the display of "error:3010", during this processing. This is because the system must be restarted to install the distribution package. In such a case, restart the system, and then install JobCenter (MG/SV) again.

When installing in a domain environment, it is also normal for the addition of users to take several minutes.

When the installation finishes, the warning messages below might be displayed. Check the system in accordance with the contents of the warning.

■"The exception setting of the firewall is failed."

Make sure that the Windows firewall is enabled.

To use the firewall, enable it, and then register the port numbers used by JobCenter (specified in the "Set Port" dialog box in step 10) as exceptions.

■"Failed to configure the DLL for Cluster."

Replacing the JobCenter DLLs for the cluster software MSCS or MSFC failed.

- f MSCS or MSFC was already being used for JobCenter, refer to the upgrade procedure in <Guide for using Cluster function> (Japanese only).

- If MSCS or MSFC is being used for the first time, copy the files below to "C:\Windows\cluster".

  %InstallDirectory%\lib\JobCenterCluster.dll
  %InstallDirectory%\lib\JobCenterClusterEx.dll

- If not using MSCS and MSFC, this setting is not required.

■"Failed to set the connect with ESMPRO/ServerAgent."

To link to ESMPRO/ServerAgent, make sure that ServerAgent is correctly installed.

Next, execute the following command:

```
C:\> %InstallDirectory%\setup\amirtreg add ↵
```

If not using ESMPRO/ServerAgent, this setting is not required.

14. After installing JobCenter (MG/SV) is complete, execute the information collection command jc_getinfo to collect configuration data.

```
C:\> %InstallDirectory%\bin\check\jc_getinfo ↵
```

For details about jc_getinfo, refer to <Command Reference> (Japanese only).

Use a text editor to open the right.Info file, which is in the collected data, and then confirm that the required permissions are assigned to the JobCenter administrator (and that there is no [NG] item).

If there are [NG] items, grant the NG permissions to the administrator.

These permissions can normally be specified by selecting [Administrative Tools] and then [Local Security Policy].

(For a domain environment, permissions are specified by selecting [Domain Security Policy] for the domain controller and [Domain Controller Security Policy].)

2.4.6. Windows Version (Silent installation)

To silently install the Windows version of JobCenter MG, follow the steps below.

The notes on installation are the same as those provided in Section 2.4.5, "Windows Version (Normal Installation)".

> In a Windows Server 2008 environment, perform the installation by opening a command prompt and then selecting [Run as administrator] in the menu displayed by right clicking.

1. Create the configuration file for a silent installation.

   To create this configuration file, enter the configuration details of the machine where silent installation will be performed on an appropriate machine according to Section 2.4.5, "Windows Version (Normal Installation)".

   Next, click the [Save] button on the screen in step xii to create the configuration file for a silent installation.

   > ■Do not modify the created configuration file by using an editor or other tool.
   >
   > ■To use the created configuration file for silent installation on other machines, perform the following steps:
   >
   > - Always select [Auto] when specifying the IP address used by JobCenter in step 8 in Section 2.4.5, "Windows Version (Normal Installation)".
   >
   > - To avoid duplicating machine IDs, go back to step 11 every time you save the configuration file, change the machine ID, change the file name, and then save the file.
   >
   > - The configuration file cannot be saved under different JobCenter administrators, passwords, or JobCenter groups on each machine on which JobCenter is installed. (Specify the user as the local user using the same account name and password on each machine or specify the domain account as the JobCenter administrator.)
   >
   > ■The password of the JobCenter administrator on the machine where the silent installation will be performed must match that of the JobCenter administrator specified when creating the configuration file.
   >
   > Therefore, if you change the OS password of the JobCenter administrator on the machine where the configuration file was created or the machine where the silent installation will be performed after creating the configuration file, create the configuration file again before starting the silent installation.

2. Insert the JobCenter media (DVD-ROM), and then open a command prompt. You can open a command prompt by selecting [Start], [All Programs], and then [Accessories].

3. Enter the following command to change the current directory:

   ■For an IA-32 environment

```
C:\> Q: ↵
```

```
Q:\> cd Q:\PACKAGE\JB\WINDOWS\MGSV\x86\script ↵
```

■For an EM64T or AMD64 environment

```
C:\> Q: ↵
Q:\> cd Q:\PACKAGE\JB\WINDOWS\MGSV\x64\script ↵
```

> In the following description, Q: is assumed to be the CD/DVD-ROM drive.
>
> If the CD/DVD-ROM drive is assigned to a different drive, read the description accordingly.

4. Enter the following command to start the installation:

```
Q:\> install.bat <jcsetup.conf> ↵
```

When the installation finishes successfully, "Install finished successfully" is displayed.

> Enter the full path of the previously created configuration file for <jcsetup.conf>.

5. After completing installation, collect information as described in 14, "Information collection command" in Section 2.4.5, "Windows Version (Normal Installation)" to check whether the necessary permissions are assigned to the JobCenter administrator. Assign any permission that is not yet assigned.

2.5. Installing JobCenter CL/Win

JobCenter CL/Win (viewer) is the Windows GUI that connects JobCenter MG (manager) and JobCenter SV (server) together.

Installation and setup are performed by following a flow of sequences.

Different versions of CL/Win (such as R12.7 and R12.8) can be installed by using different installation folders.

■In order to facilitate the installation of the runtime libraries, before installing JobCenter CL/Win, be sure to terminate all active applications.

■Screen drawing may be slow in Windows Vista and later.

Refer to Q.12 [CL/Win screen drawing is slow in Windows Vista and later] Section 18.1, "Troubleshooting Q&A" in <Environment Guide>.

2.5.1. Normal Installation

■Before installation, exit all applications in progress for smooth installation.

■As a user belonging to the local Administrators group, log in to the machine in which JobCenter has been installed.

To set up JobCenter in the Domain environment, also log in as a user belonging to the Administrators group before performing the operation below.

1. Insert the JobCenter media (DVD-ROM).

   Select [Start] followed by [Run] on Windows. Specify the following file name, and then click the [OK] button.

   ```
   Q:\PACKAGE\JB\WINDOWS\CLWIN\clsetup.exe
   ```

   In the following description, Q: is assumed to be the CD/DVD-ROM drive.

   If the CD/DVD-ROM drive is assigned to a different drive, read the description accordingly.

2. The JobCenter Setup window is displayed. Click the [Next] button.
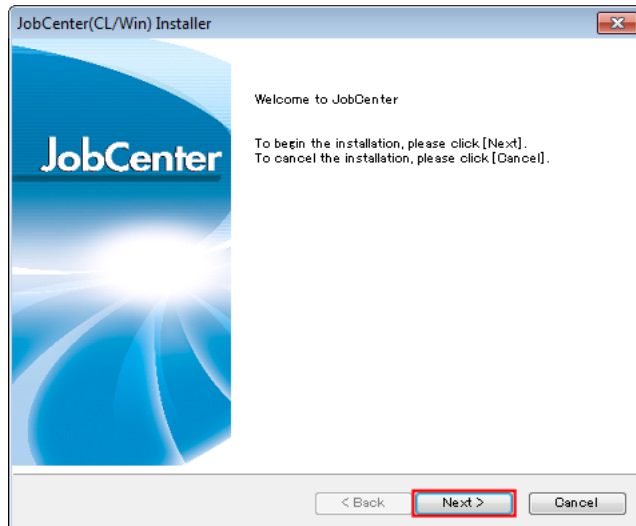
Figure 2.20. JobCenter setup window

3. Select the language used for JobCenter CL/Win (Japanese or English), and then click the [Next] button.
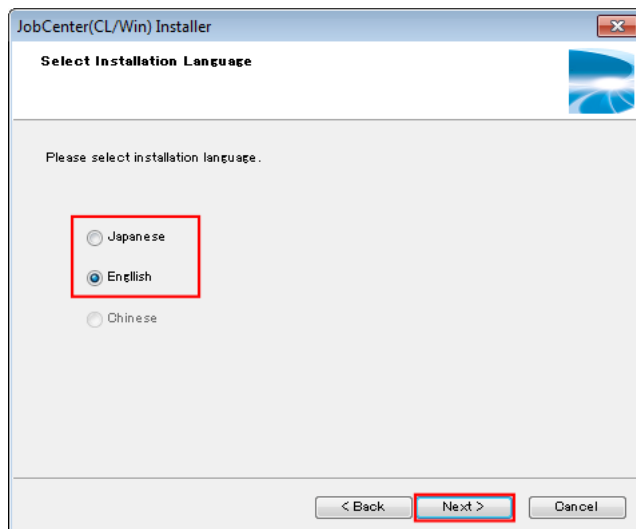
Figure 2.21. Installation language specification dialog box

4. Select the installation folder.

The default installation folder is "C:\JobCenter\CLXX.YY".

To change this folder, click the [Browse] button, select a folder in accordance with the instructions displayed in the dialog box, and then click the [OK] button.

Directly enter the path to create a new folder (such as when installing different versions of CL/Win).

After specifying the installation folder, click the [Next] button.

XX.YY represents the version number.
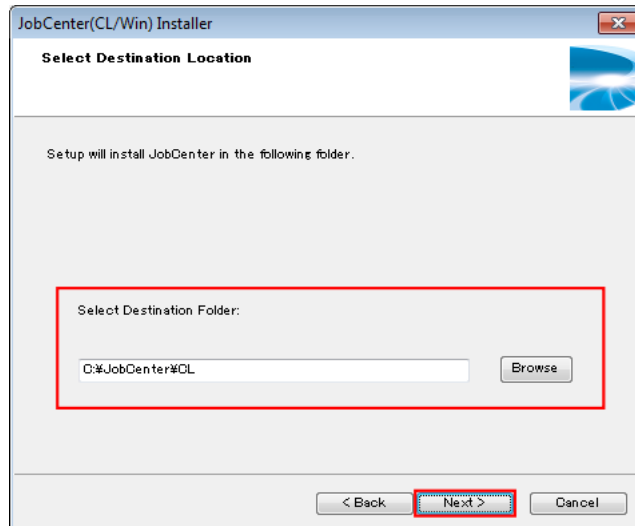
Figure 2.22. Installation folder specification dialog box

⚠️ ■Tabs and special characters such as "%", "(", ")", "^", ";", "&", "=", and ","
cannot be used for the installation folder name.

■JobCenter CL/Win cannot be installed under "C:\Program Files\" in the
following operating systems:

- Windows Vista

- Windows Server 2008

- Windows 7

5. Select the folder for storing the JobCenter CL/Win shortcut.

The default value for the folder is "JobCenter\CL XX.YY".

To change this folder, enter the name of any folder under [Select Destination Folder].

Be sure to use different shortcut folders when installing different versions of CL/Win.

After specifying the folder, click the [Next] button.

📝 XX.YY represents the version number.
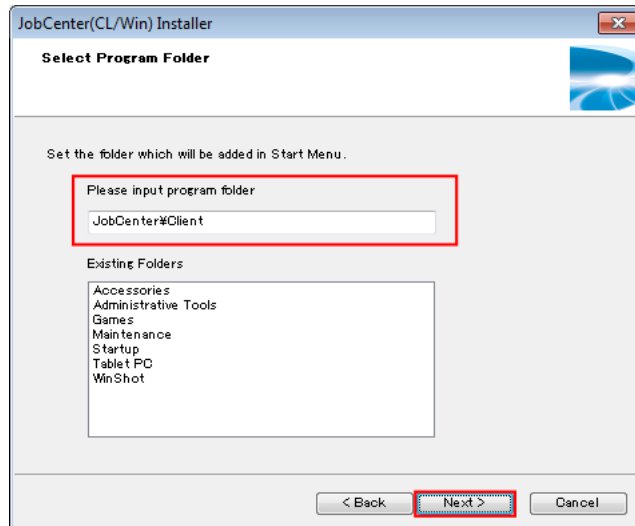
Figure 2.23. Program folder specification dialog box

6. When using JobCenter CL/Win, select one of the following modes, and then click the [Next] button.
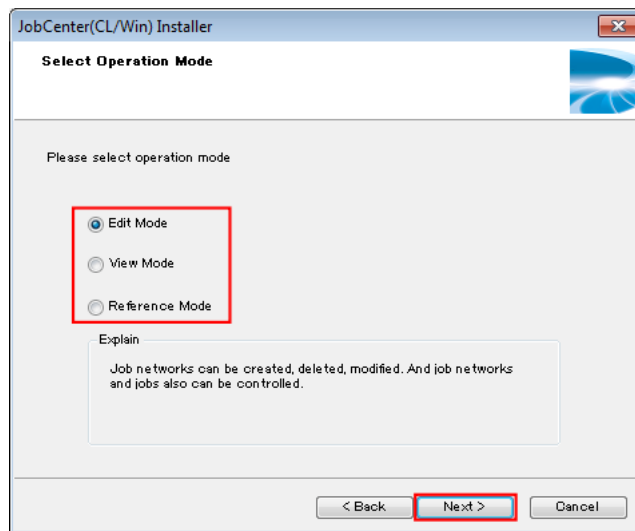
Figure 2.24. Operation mode specification dialog box

Table 2.4. Operation modes and possible operations

Operation mode	Creating, deleting, and changing job networks	Controlling job networks and jobs
Edit Mode	✓	✓
View Mode	-	✓
Reference Mode	-	-

7. Select the shortcut of the window displayed immediately after JobCenter CL/Win is started, and then click the [Next] button.
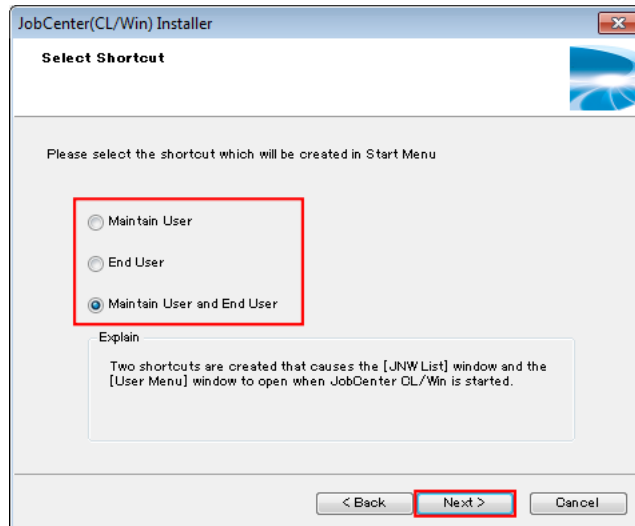
Figure 2.25. Shortcut creation specification dialog box

Table 2.5. Window to use and shortcut to create

Window to use	Shortcut to create
Maintain User (administrator)	A shortcut is created that causes the [JNW List] window to open immediately after JobCenter CL/Win is started.
End User	A shortcut is created that causes the [User Menu] window to open immediately after JobCenter CL/Win is started.
Maintain User and End User	Two shortcuts are created that causes the [JNW List] window and the [User Menu] window to open when JobCenter CL/Win is started.

8. Specify the port (JCCOMBASE) for communicating with JobCenter MG/SV.

If you do not want to change the port used by the server, select [standard] (number 611).

To change the port, select [custom], and then enter the port value.

After specifying the setting, click the [Next] button.
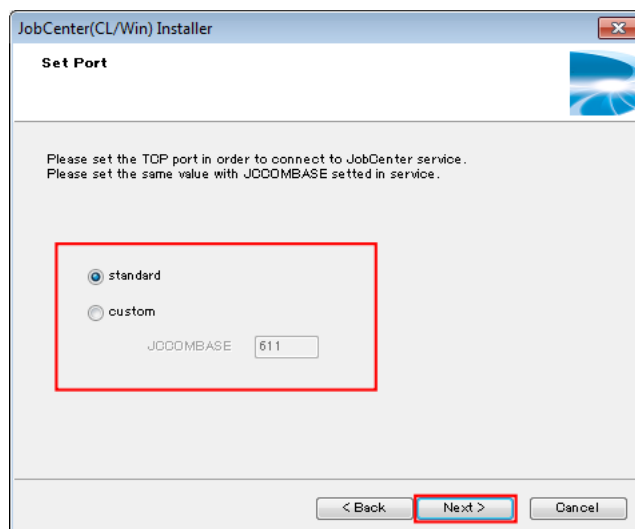
Figure 2.26. Port specification dialog box

9. Check the specified settings, and then click the [Next] button to start installation if there are no problems.

Click the [Save] button to save the settings. The saved file can be used for a silent installation.
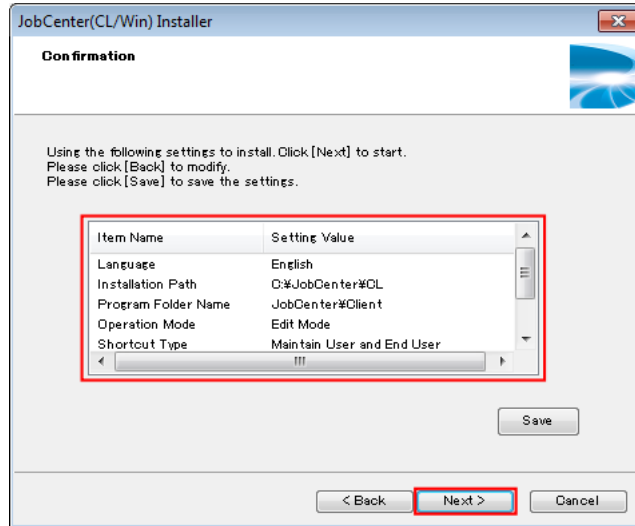
Figure 2.27. Confirmation dialog box

10. When installation of JobCenter (CL/Win) is complete, the [Finish] button becomes active. Click this button to complete setup.
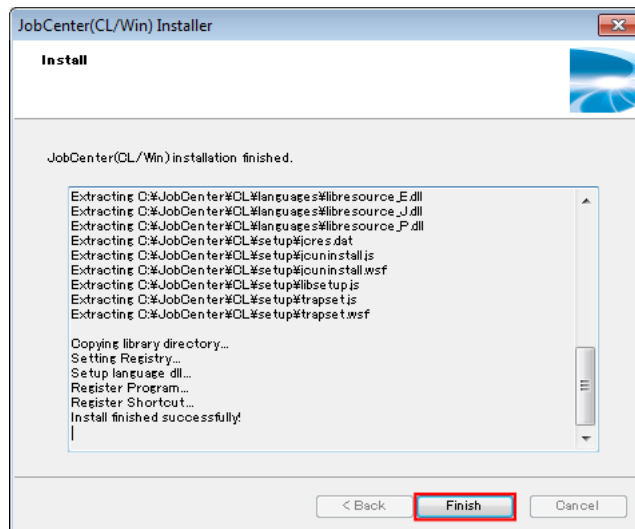
Figure 2.28. Installation completion dialog box

The following warning message might appear when installation is complete.

"jobcenter.def is not automatically copied. Manually copy this file by referring to the manual if necessary."

Follow the warning message and note the following points.

■This warning is displayed when CL/Win is installed on a machine where UXServerManager (Viewer) is installed.

■When using UXServerManager (Viewer) for monitoring, specify settings according to Section 11.2.4, "Setting Viewer Machine" in <Environment Guide>.

2.5.2. Silent Installation

To silently install JobCenter CL/Win, follow the steps below. The notes on installation are the same as those provided in Section 2.5.1, "Normal Installation".

> In a Windows Server 2008 environment, perform the installation by opening a command prompt and then selecting [Run as administrator] in the menu displayed by right clicking.

1. Create the configuration file for a silent installation.

   To create this file, enter the configuration details of the machine where the silent installation will be performed and click [Save] when performing installation in an appropriate machine, as described in step 12 "Checking the specified setting" in Section 2.4.5, "Windows Version (Normal Installation)".

   > Do not modify the created configuration file by using an editor or other tool.
   >
   > When creating a configuration file for multiple machines, set up the installation machine from the GUI and save the configuration file.

2. Insert the JobCenter media (DVD-ROM), and then open a command prompt. You can open the command prompt by selecting [Start], [All Programs], and then [Accessories].

3. Enter the following command to change the current directory:

```
C:\> Q: ↵
Q:\> cd Q:\PACKAGE\JB\WINDOWS\CLWIN\script ↵
```

   > In the following description, Q: is assumed to be the CD/DVD-ROM drive.
   >
   > If the CD/DVD-ROM drive is assigned to a different drive, read the description accordingly.

4. Enter the following command to start installation:

```
Q:\> install.bat <clsetup.conf> ↵
```

   When installation finishes successfully, "Install finished successfully" is displayed.

   > Enter the full path of the previously created configuration file for <clsetup.conf>.

Chapter 3. Setting Up the Execution Environment (UNIX Version)

Set up the JobCenter execution environment (UNIX version).

For the Windows version, setup is performed in a flow of sequences during installation.

3.1. Setting Up JobCenter

3.1.1. Executing nssetup (Setup Command)

Execute the nssetup command with root permissions.

```
root> /opt/netshep/nssetup ↵
```

When HP-UX operates in the high reliability mode, and you execute the above nssetup command before adding the JobCenter administrator user (nsumsmgr), who must be set up as described in Section 3.1.4, "Setting Up the UMS Environment", to the OS, user creation may fail, making it impossible to successfully terminate the nssetup command.

Add the nsumsmgr user by using the useradd command before executing nssetup in an environment in which HP-UX operates in the high reliability mode.

However, execute this command as shown below in Linux.

```
root> /usr/local/netshep/nssetup ↵
```

If there is a previous JobCenter spool directory due to an upgrade, etc., the message below appears. (Otherwise, nothing appears.)

```
[Warning] JobCenter spool directory(/usr/spool/nqs) is already exist.
Do you use the old spool directory? [y/n](default: n)
```

To use the existing directory, select y. (The operation is the same as that of R12.6 or earlier.)

For the upgrade procedure, refer to Chapter 5, "Version Upgrade" .

If you select n, the existing spool directory is renamed in the format below and a new setup process starts.

```
/usr/spool/nqs_YYYYMMDDhhmmss
```

After the setup is complete, check that the new environment operates normally and then delete the above directory manually.

For information on the contents of the spool directory, refer to Section 3.2.3.1, "Spool directory" in <Release Notes>.

3.1.2. Setting the Machine ID of JobCenter

Execution of the nssetup command automatically creates a directory, putting the system in waiting status for entry of the NQS machine ID. (A machine ID is a unique integer in the range from 1 to 2,147,483,647.)

```
Setting NQS machine ID.
INPUT: Machine-id of this machine (default:1)=
```

Here, enter the predetermined NQS machine ID (such as 1234).

```
INPUT: Machine-id of this machine (default:1)= 1234 ↵
```

Avoid duplicating machine IDs between machines in which JobCenter is installed. "1" is specified as the ID by default for the nssetup command.

The setup program adds the TCP port entry used by JobCenter to /etc/services at this point. If there are no entries for 607/tcp, 611/tcp, and 10012/tcp, the system shows that port numbers have been added as shown below.

```
Add entry of nqs service port to /etc/services.
Add entry of jccombase service port to /etc/services.
Add entry of jcevent service port to /etc/services.
```

■If a different application is already using the port to be used by JobCenter, edit /etc/services after setting up to change the port number to an available number, and then restart JobCenter.

Change /etc/services for all the linked JobCenter servers.

In the case of Linux in particular, the jccombase service 611/tcp conflicts with the existing npmp-gui service, so either comment out the npmp-gui service entry or change the number of the jccombase service.

■When changing the number to which the jccombase service is allocated, change the port number of the following registry key from 611 to another number as required. (Enter the corresponding setup JobCenter version for R13.x.)

Value in [HKEY_LOCAL_MACHINE] - [SOFTWARE] - [NEC] - [JobCenter (CL/Win)] - [R13.x] - [ComBasePort]

For details, refer to Section 2.1, "TCP Ports Used by the JobCenter" in <Environment Guide>.

3.1.3. Selecting the Language Environment Used by JobCenter

You can select a language for JobCenter to use that is separate from the language set up for the OS. When using this computer to start or set up a GUI or job network, only the character encoding specified here can be used.

```
Select language code for JobCenter.
0 - English
1 - EUC
2 - Shift-JIS (MS-kanji)
3 - Chinese (GB18030)
4 - JP.UTF-8
Which language code do you use in this system ? (0/[1]/2/3/4)
```

If set values for environment variable LANG have been changed in script or LANG initial value of the shell for script execution is incorrect, garbled characters may appear.

(The character code selected by default differs with the value of the environment variable LANG.)

```
Which language code do you use in this system ? (0/[1]/2/3/4) 1 ↵
```

■If you use the existing spool directory for the setup, you need to select the same language environment that is set up for the existing spool.

■There are several notes on using JP.UTF-8 (UNICODE environment). Make the necessary settings according to Section 2.1.1, "Checking Notes in Advance".

3.1.4. Setting Up the UMS Environment

The UMS environment is used to manage the JobCenter system.

In this environment, a message is displayed to ask you whether to automatically create a new nsumsmgr account for the JobCenter administrator. (The user name "nsumsmgr" is fixed and unchangeable.)

However, if the nsumsmgr account already exists, this message is skipped and not displayed.

```
Start NQS daemon.
making UMS environment..
JobCenter needs new user "nsumsmgr".
Do you want to create user "nsumsmgr" automatically ? ([y]/n)
```

■If creating an administrator use

Type y, and then press the [Enter] key to proceed with setup.

The system status is checked and the message shown below is output. (User IDs and other settings differ for each computer.)

```
Create new user "nsumsmgr" as following:
(1)USER ID : 738 (nsumsmgr)
(2)GROUP ID : 1 (other)
(3)HOME DIRECTORY : /home/nsumsmgr
SHELL : /sbin/sh
COMMENT : JobCenter manager
OK? (y/1/2/3/q) :
```

User ID, group ID, home directory, shell, and comment are given in order from above. Of them, three items can be corrected: user ID, group ID, and home directory.

Enter the number placed in parentheses at the place of correction, and then press the [Enter] key to enter correction mode. Proceed to the next step, Section 3.1.5, "Changing the Administrator User Settings".

After confirming that the current settings are correct, type y, and then press the [Enter] key to proceed to Section 3.1.6, "Setting a Password".

If, for some reason, you wish to interrupt the work, type q, and then press the [Enter] key.

If you interrupt the work, be sure to create the nsumsmgr account with the OS command, specify the password, and set up the environment with /usr/lib/nqs/gui/bin/mkumsenvsh later as described in "If not automatically setting an administrator user" below.

■If not automatically setting an administrator user

Type n, and then press the [Enter] key. Perform this step if not automatically specifying the administrator user, such as when installing the software in the NIS operation environment, specifying a login shell other than /sbin/sh, or for some other reason.

The installation ends with the following message displayed.

```
You must create new user nsumsmgr manually,
And execute "/usr/lib/nqs/gui/bin/mkumsenvsh" .
```

> ⚠️ If you do not want to specify administrator settings here, be sure to create the nsumsmgr account by using the OS command, specify the password, and execute /usr/lib/nqs/gui/bin/mkumsenvsh after installation.

3.1.5. Changing the Administrator User Settings

■Changing the user ID

```
OK? (y/1/2/3/q) :1 ↵
```

Type 1, and then press the [Enter] key. The following message is displayed, prompting you to enter the user ID.

```
Set USER ID: 500 ↵
```

Enter the user ID you want to set. The system then checks whether or not the user ID has already been used.

If the user ID has been used, the following message appears, requesting you to enter another user ID.

```
USER ID: 500 is already in use.
Set USER ID:
```

Entry of a consistent user ID returns to the following screen. (This example changes user ID from 738 to 501.)

```
Create new user "nsumsmgr" as following:
(1)USER ID : 501 (nsumsmgr)
(2)GROUP ID : 1 (other)
(3)HOME DIRECTORY : /home/nsumsmgr
SHELL : /sbin/sh
COMMENT : JobCenter manager
OK? (y/1/2/3/q) :
```

■Changing the group ID

```
OK? (y/1/2/3/q) :2 ↵
```

On the previous screen (the user ID change completion screen), type 2, and then press the [Enter] key to modify the group ID.

The following screen is displayed first.

```
OK? (y/1/2/3/q) :2
Possible GROUP ID is following:
root : 0
other : 1
bin : 2
sys : 3
.
.
.
Set GROUP ID:
```

Because you can change only the group IDs that currently exist, the system first displays a list of the group IDs currently set up and finally outputs a message requesting you to enter a group ID.

Referring to the list of group IDs, enter a correct ID.

■Changing the home directory

```
OK? (y/1/2/3/q) :3  ↵
```

On the user ID change completion screen, type 3, and then press the [Enter] key. The following message is displayed, prompting you to enter a directory.

```
Set directory:
```

Enter an appropriate directory. If you enter an existing directory, the following message appears.

```
Directory "/home/nsumsmgr" exists.
OK? (y/[n]) :
```

Type y, and then press the [Enter] key to change to the directory.

> - If an existing directory is specified for "(3) HOME DIRECTORY" in "If creating an administrator user", the user ID and group ID of the owner of all the files in the directory and the directory itself are changed to those of the administrator user.
>
> - If, on Linux and AIX machines, you change the home directory, the default home directory may be created. Check the default home directory of the system, and if an unnecessary nsumsmgr directory exists, delete it manually.

3.1.6. Setting a Password

Here, specify the password of the administrator user "nsumsmgr".

```
OK? (y/[n]) :y  ↵
```

After changing the nsumsmgr user settings, continue to the password setting by entering "y" as shown above and then pressing the return key.

When the following message appears, enter the new password.

```
Set password of "nsumsmgr"
New password: xxxxxx  ↵
```

After the end of entry, a message appears asking you to check the password again. Enter the same password.

```
Re-enter new password: xxxxxx  ↵
```

> A password must be specified for the JobCenter administrator account to operate the JobCenter system. Do not forget to specify the password.

When password setting is complete, a message appears indicating that the system has finished setting the account for user nsumsmgr.

```
Complete to create new user "nsumsmgr".
Start making ".rhosts".
Input official host name of UMS machine:
```

3.1.7. Setting Up the .rhosts File

Here, register the host name where the UMS operates in the .rhosts file (the host name of the manager (MG) in this case).

```
Input official host name of UMS machine:
```

The entered name of the host used as the MG must be a formal one. Enter a formal name, not an alias.

If your machine is the MG or you select standalone operation, specify the host name displayed by executing the hostname command on your machine.

For example, entry of hostname.domain.co.jp requests you to check as follows.

```
Host name is "hostname.domain.co.jp". OK? ([y]/n)
```

Type y, and then press the [Enter] key to proceed to the next step. Type n, and then press the [Enter] key to re-enter the host name.

Finally, additional registration of user nsumsmgr in the NetShepherd administrator list finishes setting the administrator user. The setup is complete with the following message displayed.

```
Start adding to qmgr.Complete adding to qmgr
```

3.2. Work Necessary After JobCenter Setup

■Work necessary when setting up the cluster site

After nssetup is executed, the local site is opened and the process resides on it. To set up the cluster site (by using cjcmksite), stop the local site, and then specify the local_daemon parameter in daemon.conf so that the local site is opened in the "site mode".

For details, refer to Section 2.3.4, "Stopping JobCenter (Active and Standby Servers)" in <Guide for using Cluster function> and Section 2.3.6, "Building the Site (Active and Standby Servers)" in <Guide for using Cluster function>.

■Specifying the environment variable, TZ

Specify the environment variable TZ after setting up the Linux, Solaris, or AIX version of JobCenter. For details, refer to Section 14.1.5, "Notes on the Environment Variable TZ (Linux, Solaris, and AIX Versions)" in <Environment Guide>.

■Work necessary for using JobCenter in a time zone different from Japan

When using JobCenter in a time zone different from Japan or using the multi time zone function added as of R12.8.2, make additional settings referring to Chapter 15, "Usage in a Non-Japanese Time Zone" in <Environment Guide>.

■Work necessary for linking BASECenter/SystemManager (MG)

After JobCenter(MG) is set up completely, reactivate ssEventD to register the SystemScope drop-in icon according to the following procedure.

```
root> /opt/OV/bin/ovstop ssEventD ↵
root> /opt/OV/bin/ovstart ssEventD ↵
```

Also reactivate ssEventD in the same way after the JobCenter(MG) package is removed.

■Work necessary for event linkage using BASECenter/SystemManager in AIX

If AIX is adopted for the OS of the machine in which JobCenter and BASECenter/SystemManager have been installed, JNW event transmission daemon needs to be replaced.

Follow the procedure shown below. For details, refer to Section 11.2.1, "Linkage Using BASECenter/SystemManager" in <Environment Guide>.

1. Stop the JobCenter service.

```
root> /usr/lib/nqs/nqsstop ↵
```

2. Save the files.

```
root> /usr/bin/cp -p /usr/lib/nqs/jnwcaster /usr/lib/nqs/jnwcaster.bk ↵
```

> ⚠️ To link events except for BASECenter/SystemManager, the jnwcaster file needs to be returned to the original file. Be sure to save the file.

3. Replace the files.

```
root> /usr/bin/cp -p /usr/lib/nqs/jnwcasterBASE /usr/lib/nqs/jnwcaster ↵
```

4. Start the JobCenter service.

```
root> /usr/lib/nqs/nqsstart ↵
```

■Tuning the OS kernel parameters

When generating and executing a large number of job requests in JobCenter in a short period of time, the upper limit values of various OS kernel parameters might be exceeded. (Examples include nproc, maxuprc, nfile, and ninode in HP-UX.)

Chapter 17, "System Usage Resources" in <Environment Guide> When intensively executing job requests, adjust the kernel parameters of the consumed resources, referring to the resource usage described in Chapter 17, "System Usage Resources" in <Environment Guide>.

Chapter 4. Uninstallation

This chapter describes how to uninstall LicenseManager, JobCenter MG/SV, and JobCenter CL/Win.

4.1. Uninstalling LicenseManager

4.1.1. UNIX Version

If any products are dependent on LicenseManager, remove them first.

Because JobCenter is also dependent on LicenseManager, it must be uninstalled before LicenseManager.

> ⚠️ If you uninstall LicenseManager before removing the products that are dependent on it, the operation of those products might be affected.

Log in with the login name "root".

```
login:root ↵
```

4.1.1.1. Solaris (SPARC) Version

1. Execute the following command to remove this package.

```
root> /usr/sbin/pkgrm NECWSLM ↵
```

   Confirmation messages appear several times during removal. Type "y" for them to continue the processing.

2. The following message appears when the package is successfully removed.

```
Removal of <NECWSLM> was successful.
```

3. Execute the following command for confirmation.

```
root> /bin/pkginfo NECWSLM ↵
```

4. If the following message appears, this package has been removed normally.

```
ERROR: information for "NECWSLM" was not found
```

4.1.1.2. Linux Version

1. Execute the following command to remove this package.

```
root> /bin/rpm -e NECWSLM ↵
```

2. If the following message appears, this package has been removed normally.

```
******now removing *******
Uninstallation was successful.
```

4.1.2. Windows Version

If any products are dependent on LicenseManager, remove them first.

Because JobCenter is also dependent on LicenseManager, it must be uninstalled before LicenseManager.

> ⚠️ If LicenseManager is uninstalled without deleting the dependent packages, the operation of the dependent products might be affected. Therefore, make sure that such packages have been deleted before uninstallation.

Follow the procedure below to remove a WebSAM LicenseManager(MainPart) product.

1. Start up the machine, and log in as a user who has Administrator permissions.

2. Select [Start] and then [Control Panel] on Windows, and then execute [Add or Remove Programs] (or [Programs and Features]) to display the screen below. Click the [Remove] (or [Uninstall]) button.
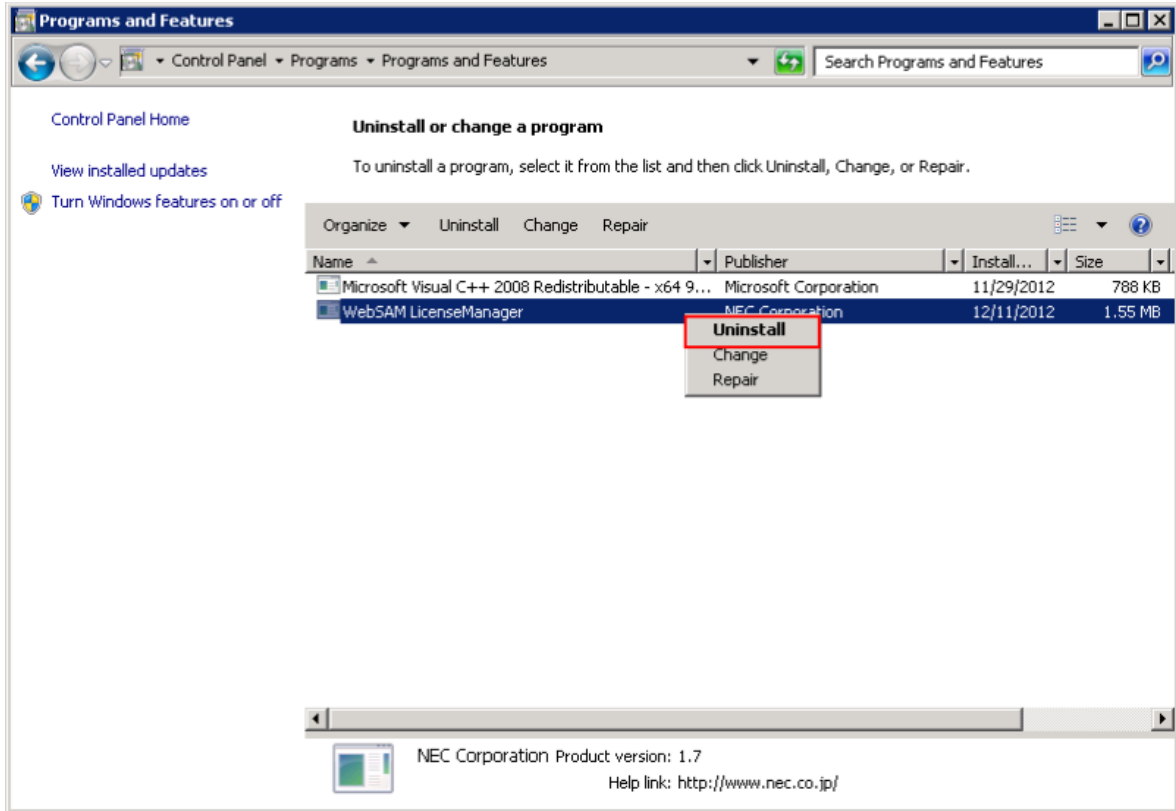

Figure 4.1. Package deletion dialog box

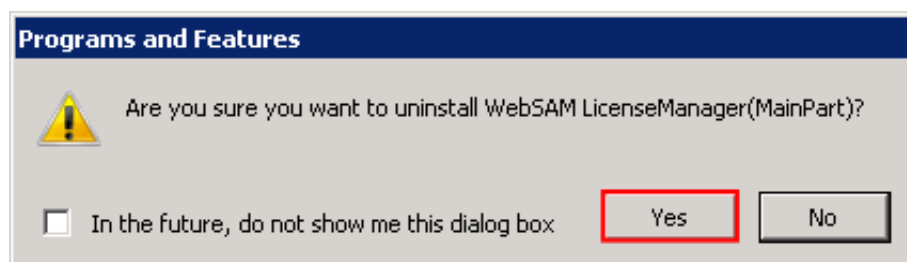3. The dialog box below appears. Click the [Yes] button to remove the application.

Figure 4.2. Package deletion confirmation dialog box

4. The [Add or Remove Programs] (or [Programs and Features]) window is displayed again. If the [WebSAM LicenseManager] entry is gone, the application has been deleted.

4.2. Uninstalling JobCenter MG and JobCenter SV

4.2.1. UNIX Version

4.2.1.1. Uninstalling the Packages

According to Table 4.1, "Package names required to be removed and remove commands for the packages for each OS", remove the packages of the old version of JobCenter.

For each OS, the packages to remove differ depending on the JobCenter type (MG or SV). Check the name of the packages that are actually installed before starting removal.

For details how to check the names of the package, refer to Section 6.1, "UNIX Version".

Table 4.1. Package names required to be removed
and remove commands for the packages for each OS

OS	Package name (12.6.x or earlier)	Package name (12.7 or later)	Remove command for package
HP-UX	NECSSJBmg (MG) NECSSJBag (SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	swremove <pkgname>
Solaris	NECSSJBmg (MG) NECSSJBag (SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	pkgrm <pkgname>
AIX	NECSSJBag (common to MG/SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	installp -u <pkgname>
Linux	NECSSJBag (common to MG/SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	rpm -e <pkgname>

■The accumulated patch package depends on the package of MG/SV itself. Therefore, when deleting a package from a system to which an accumulated patch has been applied, delete the accumulated patch package before the package of MG/SV itself.

■In HP-UX and Solaris versions before R12.7, both the MG and SV packages are installed on the MG machine. In this case, uninstall the MG package first because the MG package depends on the SV package.

4.2.1.2. Deleting Spool Area Data (Local Site)

The data in the spool area is not deleted just by uninstalling the package. This area contains all the data configured or set after the setup of JobCenter, including NQS-related data such as machine and queue settings, in addition to job network definitions and schedules, trackers, and other user data. To delete these types of data, delete the following directory:

/usr/spool/nqs

4.2.1.3. Deleting Cluster-Related Data

When deleting cluster-related data, delete the directory and symbolic link file below.

<cluster-database-path>/nqs

/usr/spool/nqs/<relocatable-IP-in-hexadecimal>

Note that, when a cluster-related database is deleted, all user-related data in the database is also deleted.

4.2.1.4. Deleting the JobCenter Termination Process from the /etc/ rc.shutdown File (Only for AIX)

If the operating system is AIX, delete the JobCenter termination process that was added to the /etc/rc.shutdown file during installation.

4.2.2. Windows Version

To perform the operations below, first log in as a user who has Administrator permissions.

%InstallDirectory% represents the installation directory for JobCenter itself. (The default value is C:\JobCenter\SV.)

4.2.2.1. Uninstalling the Packages

The uninstallation method differs depending on the version of JobCenter.

1. For JobCenter (MG/SV) R12.8 or later

   Select [Start], [Control Panel], and then [Add or Remove Programs] (or [Programs and Features]). In the displayed window, select JobCenter(MG/SV) R12.x, and then click [Change/Remove] (or [Uninstall/Change]. (R12.x represents the version of JobCenter to uninstall.)
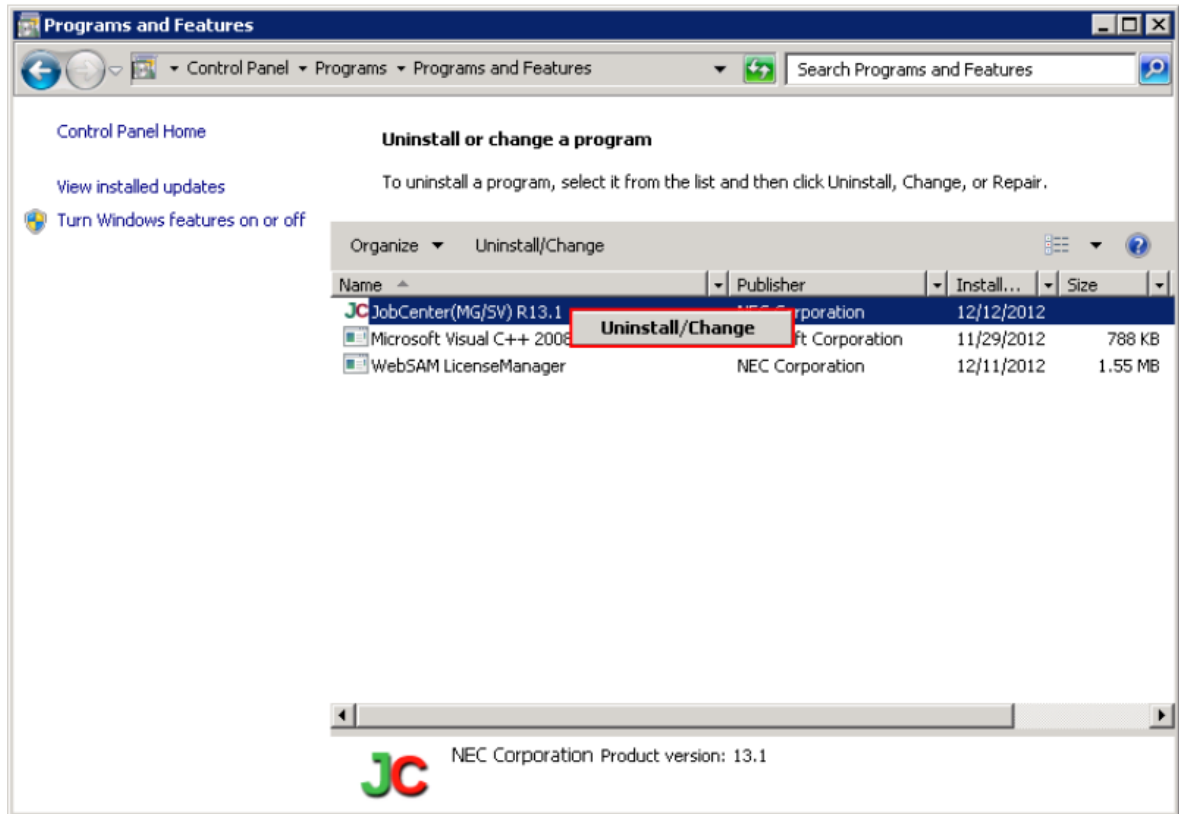
Figure 4.3. Package deletion dialog box

2. For JobCenter (SV/NT) R7.1 to R12.7

Select [Start], [All Programs], [JobCenter], [SV], and [Uninstall] on Windows to execute uninstallation.

> The package cannot be successfully uninstalled from [Add or Remove Programs] in Windows. sure to use the above [Uninstall] in JobCenter for uninstallation.

When uninstalling JobCenter SV, you may not be able to remove the [JobCenter] group from the [Start] menu.

If you do not intend to install a new version after uninstalling the current version, remove [JobCenter] from the [Start] menu.

3. For JobCenter (SV/NT) R4.1 or earlier (NetShepherd)

Execute the JobCenter package deleting command svuninst.exe, which is included in the installation media for the version of JobCenter (or NetShepherd) to uninstall.

4.2.2.2. Deleting NQS-Related Data

When deleting NQS-related data (including the user configuration file), delete the directories shown below (if these are not deleted during uninstallation).

1. For JobCenter (MG/SV) R12.8 or later

%InstallDirectory%\etc

%InstallDirectory%\spool\nmap

%InstallDirectory%\spool\new

%InstallDirectory%\spool\private

%InstallDirectory%\spool\sap

%InstallDirectory%\spool\scripts

%InstallDirectory%\spool\work

2. For JobCenter (MG/SV) R12.7 or earlier.

%InstallDirectory%\etc

%InstallDirectory%\nmap

%InstallDirectory%\spool

%InstallDirectory%\jnwexe\spool\sap.d

4.2.2.3. Deleting Setting-Related Data

When deleting user-defined configuration data, delete the directory shown below (if it is not deleted during uninstallation).

1. For JobCenter (MG/SV) R12.8 or later (including R13.1)

%InstallDirectory%\spool\conf

2. For JobCenter (MG/SV) R12.7 or earlier.

%InstallDirectory%\etc

4.2.2.4. Deleting User-Related Data

When deleting user-created data (such as a job network, schedule, or operating day calendar), delete the directories shown below. (These are not deleted during uninstallation.)

1. For JobCenter (MG/SV) R13.1 or later

%InstallDirectory%\spool\database

%InstallDirectory%\spool\lock

%InstallDirectory%\spool\calendar

%InstallDirectory%\spool\templates

%InstallDirectory%\spool\users\<user-name>

2. For JobCenter (MG/SV) R12.8 or later

%InstallDirectory%\spool\users\<user-name>

%InstallDirectory%\spool\wkcal.d

3. For JobCenter (MG/SV) R12.7 or earlier.

%InstallDirectory%\jnwexe\spool\<user-name>

%InstallDirectory%\jnwexe\spool\cmd.d.C

%InstallDirectory%\jnwexe\spool\Sample.d

%InstallDirectory%\jnwexe\spool\wkcal.d

4.2.2.5. Deleting Cluster-Related Data

When deleting cluster-related data, follow the step below.

1. For JobCenter (MG/SV) R12.8 or later (including R13.1)

   ■Right-click the desired cluster site in the [Site] list in [Environment Setting], select [Delete], and then select [Delete] in the [Delete Site] dialog box.

2. For JobCenter (MG/SV) R12.7 or earlier.

   ■Delete the directory containing the cluster database.

> Note that, when a cluster-related database is deleted, all user-related data in the database is also deleted.

4.2.2.6. Deleting Registry-Related Data

To delete registry-related data, follow the steps below.

1. Select [Start] followed by [Run] on Windows. In the Run window, enter "regedit" and then click the [OK] button. The [Registry Editor] dialog box appears.

2. In the left pane of the]Registry Editor] dialog box, right-click the following key and then select [Delete] from the shortcut menu.

   HKEY_LOCAL_MACHINE\SOFTWARE\NEC\NetShepherd/SV

4.2.2.7. Deleting the Setting of an Environment Variable

If you have used JobCenter in a cluster environment, check whether the environment variable NQS_SITE is set. If NQS_SITE is set, remove it.

> ■The message "Uninstall finished. Please reboot OS to complete uninstallation." might appear and bin and lib might not be deleted from %InstallDirectory% if, for example, a file was being used while uninstalling JobCenter. In such a case, restart the OS, and then delete them by using Explorer or another application.
>
> ■"Microsoft Visual C++ 2008 SP1 redistribution package" remains after JobCenter is uninstalled.
>
> If this package is not necessary, delete the package below by using [Add or Remove Programs]. (This example assumes Windows Server 2003.)
>
>   ▪ Microsoft Visual C++ 2008 Redistritutable - x86 9,0,30729.17

4.3. Uninstalling JobCenter CL/Win

4.3.1. Uninstalling the Packages

To perform the operations below, first log in as a user who has Administrator permissions.

Select [Start], [Control Panel], and then [Add or Remove Programs] (or [Programs and Features]). In the displayed window, select JobCenter(CL/Win), and then click [Change/Remove] (or [Uninstall/Change]).
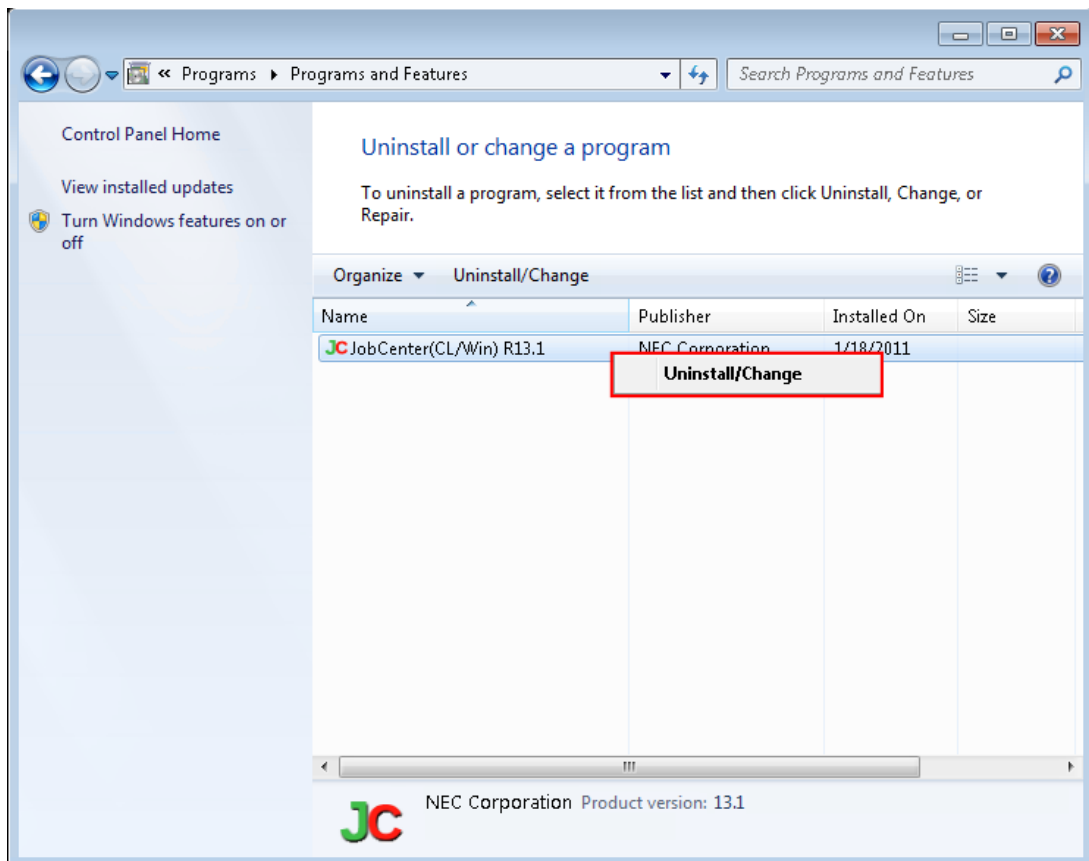
Figure 4.4. Package deletion dialog box

4.3.2. Deleting Registry-Related Data

If the registry-related data shown below still remains after CL/Win is uninstalled, delete it by performing the steps below. (This operation is not necessary if no data remains in the registry.)

1. Select [Start] followed by [Run] on Windows. In the Run dialog box, enter "regedit", and then click the [OK] button.

   The [Registry Editor] dialog box appears.

2. In the left pane of the [Registry Editor] dialog box, right-click the following keys, and then select [Delete] from the shortcut menu. (Replace R12.x with the version of the target JobCenter.)

   ■IA-32 environment

   When R12.x: HKEY_LOCAL_MACHINE\SOFTWARE\NEC\JobCenter(CL/Win)\R12.x

When R13.x: HKEY_LOCAL_MACHINE\SOFTWARE\NEC\JobCenter(CL/Win)\R13.x

■x64 environment

When R12.x: HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\NEC
\JobCenter(CL/Win)\R12.x

When R13.x: HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\NEC
\JobCenter(CL/Win)\R13.x

Chapter 5. Version Upgrade

This chapter describes how to upgrade JobCenter. For details on how to upgrade the Windows cluster environment, refer to <JobCenter Guide for upgrading the version and applying the patches in a cluster environment> (Japanese only).

5.1. UNIX Version

■During uninstallation, user-created Job Network definition data is inherited. Requests or trackers in progress are, however, not inherited.

Setting values associated with NQS, such as proprietary queue, machine information for forwarding requests, and user mapping, are all deleted. Therefore, reconfiguration is required after the installation of the new version.

To inherit settings associated with NQS, refer to Section 5.1.1, "Version Upgrade with Inheriting NQS-Related Data".

■If inherited user data contains a lot of unachieved trackers after upgrading, delete them immediately because these trackers cannot be inherited as described above.

■In R12.5 or later, there is no shared job network.

Thus, when upgrading JobCenter R12.4.x or earlier to R12.6 or later, move all job networks in the shared job network of the previous version to the job network group of an appropriate user before upgrading.

■In R12.5 or later, there is no "job network execution regulation" function. JobCenter of R12.5 or later supports an extended access authority (permission setting) function, which enables job network execution regulation as well. Because of the difference in concept, however, the settings of the conventional execution regulation function are not inherited automatically. Therefore, in order to continue execution regulation after the version upgrade, write down the existing settings in advance and set permissions after upgrading the version. This is not necessary when the job network execution regulation function is not in use before the version upgrade.

For details about permission setting, refer to Chapter 9, "User Authority (Permission)" in <Environment Guide>.

■Once upgraded, user data might no longer be compatible and not operate normally even if the system is downgraded. Before upgrading the version, back up the user data (download all definitions) using the Helper function. For information about how to download definition data, refer to Section 2.4.1, "Downloading definition information" in <Guide for using Helper function> (Japanese only).

5.1.1. Version Upgrade with Inheriting NQS-Related Data

To upgrade the version with inheriting NQS-related data, follow the steps below.

1. Stop JobCenter by using nqsstop. (Stop the cluster environment by using cjcpw -stop <site name>.)

```
root> /usr/lib/nqs/nqsstop  ↵
```

2. Take backup copies of files under the directories below.

   /usr/spool/nqs/nmap
   /usr/spool/nqs/private

3. If a common daemon configuration file is used, back up the following file.

   /usr/lib/nqs/rc/daemon.conf

> ■This file is a daemon configuration file provided only by the UNIX version of JobCenter, and common to the local sites and cluster sites. This file is deleted when JobCenter is uninstalled.
>
> ■The daemon configuration files for each site are inherited so there is no need to back them up.

4. Remove a package of the old version of JobCenter. For details on how to remove the old package, refer to Section 4.2.1.1, "Uninstalling the Packages".

5. Install the new version of JobCenter. Use nssetup to set up the execution environment.

```
root> /opt/netshep/nssetup ↵
```

   When a message asks whether to use the old spool directory, select "y" to use the old spool directory and continue the setup.

```
[Warning] JobCenter spool directory(/usr/spool/nqs) is already exist.
Do you use the old spool directory? [y/n](default: n) y↵
```

   After the setup is complete, use nqsstop to stop JobCenter.

```
root> /usr/lib/nqs/nqsstop ↵
```

6. Restore the files under /usr/spool/nqs/nmap and /usr/spool/nqs/private that you backed up in 2 above.

   Remove the files and directories below after the restoration if they exist. (Otherwise, the consistency of the NQS database is not guaranteed, which makes normal operation impossible.)

   /usr/spool/nqs/private/root/transfile

   All files under /usr/spool/nqs/private/root/control/(directories)

   All files under /usr/spool/nqs/private/root/data/(directories)

   /usr/spool/nqs/private/root/tracking

> For usr/spool/nqs/private/root/tracking, delete the entire directory.

7. Delete the tracking file with the trfdelete command. Refer to Section 3.25 "trfdelete Deleting Tracking Files" in <Command Reference> (Japanese only) for details on the trfdelete command.

8. If the common daemon configuration file was backed up in step 3 above, restore the backed up /usr/lib/nqs/daemon.conf file.

9. Activate JobCenter with nqsstart. (Start the cluster environment by using cjcpw <site name> <DB path>.)

```
root> /usr/lib/nqs/nqsstart ↵
```

10. In order to upgrade from R12.10.x or earlier to R13.x or later, you need to convert the spool area definition. Otherwise, skip this step.

To use the user definition data in R13.x, upgrade the version of the site database by using the spoolconv command. For details about the spoolconv command, refer to Section 3.22, "spoolconv" in <Command Reference> (Japanese only).

An example of upgrading the version of the site database is shown below.

```
root> /usr/lib/nqs/gui/bin/spoolconv ↵
Do you convert the spool directory for SITE [local] ?
[y/n](default: n) y↵
start convert spool directory.
    ⋮
    ⋮
    ⋮
end convert spool directory.
```

For an example of upgrading the version of the site database in a cluster environment, refer to Section 2.6.2.2, "Upgrading the Site Database (UNIX Version)" in <Guide for using Cluster function>.

■When the command is executed, the name of the site whose database is to be upgraded is displayed. Before executing the command, check that [local] is specified.

■The user definitions present before the version upgrade are not changed or deleted. After the version upgrade is complete, check whether JobCenter operates normally and, if necessary, delete the user definitions.

■If the following warning message is displayed in the setup log, the host name and event ID of the corresponding user in [Default Parameters] - [Event Reception Parts] will not be inherited. In order to cope with this, set the default parameters for each corresponding user after CL/Win is connected.

```
Warning : Convert Skip ([DefaultParameter]EventReceive user="username"
 hostname="hostname-specified-in-default-parameters" eventid="evenid-
specified-in-default-parameters")
```

11. Make sure that all the users who have been using the old version of JobCenter can establish connection and log in successfully using CL/Win.

JobCenter is now upgraded completely.

■When the local host name is changed, only data related to job network definition information can be inherited. For details on how to inherit data, refer to Chapter 13, "Environment Migration" in <Environment Guide>.

■The settings are not inherited if the system is downgraded.

■If a user does not establish connection using CL/Win after upgrading, the new version of MG/SV may not be able to recognize the user as a JobCenter user. Therefore, always check that all the users can establish connection using CL/Win.

5.1.2. Version Upgrade without Inheriting NQS-Related Data

If there is no need to inherit NQS-related data, follow the steps described in Section 5.1.1, "Version Upgrade with Inheriting NQS-Related Data", excluding steps 2, 6, and 7.

5.2. Windows Version

■During uninstallation, user-created Job Network definition data is inherited. Requests or trackers in progress are, however, not inherited.

If you upgraded the version without inheriting the NQS-related data, the setting values associated with NQS, such as proprietary queue, machine information for forwarding requests, and user mapping, are all deleted. Therefore, reconfiguration is required after the installation of the new version.

To inherit settings associated with NQS, refer to Section 5.2.1, "Version Upgrade with Inheriting NQS-Related Data".

■If inherited user data contains a lot of unachieved trackers after upgrading, delete them immediately because these trackers cannot be inherited as described above.

■In R12.5 or later, there is no shared job network.

Thus, when upgrading JobCenter R12.4.x or earlier to R12.6 or later, move all job networks in the shared job network of the previous version to the job network group of an appropriate user before upgrading.

■Special procedures are necessary to delete the previous version and install the new version in an MSFC (MSCS) cluster environment.

For details, refer to <JobCenter Guide for upgrading the version and applying the patches in a cluster environment> (Japanese only).

■If the previous version of JobCenter operates in a cluster environment, check whether the environment variable NQS_SITE was specified after uninstallation and delete it if it was.

If the environment variable NQS_SITE is specified, the new version of JobCenter cannot be correctly set up.

■Because the file paths are different in R12.8, the directories under JobCenter are rebuilt during upgrading. It is not possible to restore the previous directory structure once setup is complete. Therefore, downgrading is not supported.

Be sure to back up files before upgrading the version. For the files to back up, refer to the backup procedure guide provided by the maintenance center. (Back up the user data (download all definitions) using the Helper function.) For information about how to download definition data, refer to Section 2.4.1, "Downloading definition information" in <Guide for using Helper function> (Japanese only)

In a cluster environment, the version of the database must also be upgraded on the cluster site as well. For details, refer to the <Guide for using Cluster function>.

■From R12.8, the cjcpw file path has changed as follows:

```
%InstallDirectory%\bin\cluster\cjcpw.exe
```

If clusters were operated in versions before R12.8, it is necessary to modify the cjcpw file version upgrade path that is described in the JobCenter startup and termination scripts that are registered in the cluster software. Refer to <Guide for using Cluster function> for details on the startup and termination scripts.

■When the version is upgraded, the default port 23131/tcp is automatically selected as the port to be used by the jcdbs process newly added to R13.1. When changing the port number, check that there is no other service whose name is identical to the service name "jcdbs" of the file shown below. Before making a change, make sure that the JobCenter process is stopped.

```
%windir%\system32\drivers\etc\services
```

5.2.1. Version Upgrade with Inheriting NQS-Related Data

The upgrade method differs depending on the version of JobCenter to remove.

After the execution of upgrading, select [Start], [All Programs], [JobCenter], [SV], and then [Environment Setting], and then click the [User] button to check that in the JobCenter User Management dialog box, the password field for each user indicates "OK".

If there are any users for whom "Not Set" is indicated, reenter the user name and the password and check that the password field displays "OK".

5.2.1.1. Upgrading from R12.2 or Later

Installation by overwriting (upgrade) is possible. When upgrading, NQD related settings will be automatically inherited. Follow the steps below.

> Be sure to perform the following steps and checks before this work (upgrade).
>
> 1. Stop the JobCenter services and cluster site.
>
> 2. Make sure that no files in <JobCenterMG/SV installation directory> are being accessed.
>
> 3. Make sure that the drive where JobCenter MG/SV is installed has enough free space (more than the size used by the installed JobCenter MG/SV).

1. Insert the JobCenter media (DVD-ROM), and then select [Start] followed by [Run].

   Specify one of the following file names, and then click the [OK] button.

   ■32-bit native binary for IA-32

   ```
   Q:\PACKAGE\JB\WINDOWS\MGSV\x86\jcsetup.exe
   ```

   ■64-bit native binary for x64 (EM64T or AMD64)

   ```
   Q:\PACKAGE\JB\WINDOWS\MGSV\x64\jcsetup.exe
   ```

   > In the following description, Q: is assumed to be the CD/DVD-ROM drive.
   >
   > If the CD/DVD-ROM drive is assigned to a different drive, read the description accordingly.

2. In the [validate upgrade] dialog box, click the [Yes] button to begin the upgrade.
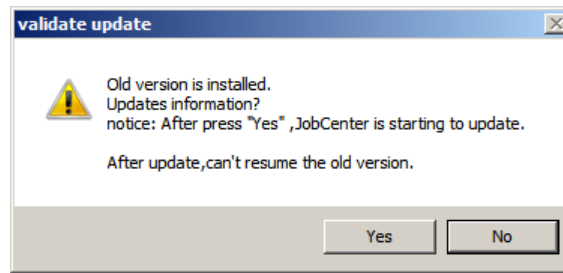

Figure 5.1. Upgrade confirmation dialog box

3. When JobCenter (MG/SV) is successfully upgraded, the [Finish] button becomes active. Click this button to complete setup.
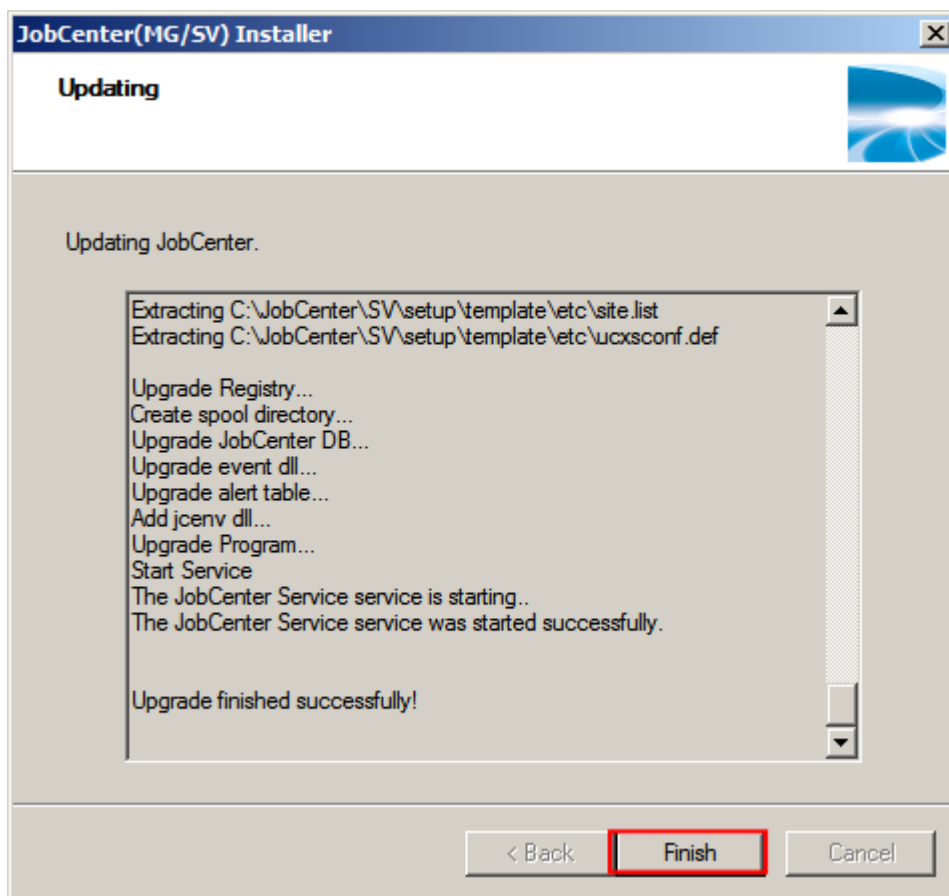

Figure 5.2. Installation completion dialog box

■If the following warning message is displayed in the setup log, the host name and event ID of the corresponding user in [Default Parameters] - [Event Reception Parts] will not be inherited. In order to cope with this, set the default parameters for each corresponding user after CL/Win is connected.

```
Warning : Convert Skip ([DefaultParameter]EventReceive user="username"
 hostname="hostname-specified-in-default-parameters" eventid="evenid-
specified-in-default-parameters")
```

After the upgrade finishes from R12.7.x or earlier, the backup directory used before the upgrade is displayed as shown below. This is due to a change of the directory structure at R12.8.

After the upgrade finishes, make sure that everything is working correctly, such as submitting a test job, and then delete this directory.
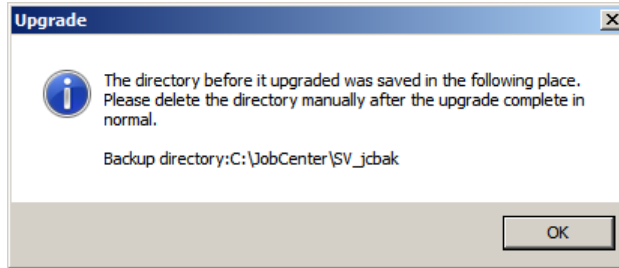

Figure 5.3. Upgrade notes dialog box

When the installation finishes, the warning messages below might be displayed. Check the system in accordance with the contents of the warning.

■"Failed to set the connect with ESMPRO/ServerAgent."

To link to ESMPRO/ServerAgent, make sure that ServerAgent is correctly installed.

Next, execute the following commands:

```
C:\> %InstallDirectory%\setup\amirtreg del ↵
C:\> %InstallDirectory%\setup\amirtreg add ↵
```

If not using ESMPRO/ServerAgent, this setting is not required.

5.2.1.2. Upgrading from R12.1.x or Earlier

When the version is upgraded from R12.1.x or earlier, the previously installed package cannot be overwritten. If you want data associated with NQS to be inherited even after upgrading, follow the steps below.

■%InstallDirectory% represents the installation directory for JobCenter itself. (The default value is "C:\JobCenter\SV".)

■The version of the site database must be upgraded in a cluster environment. For details, refer to Section 2.6.2.1, "Upgrading the Site Database (Windows Version)" in <Guide for using Cluster function>.

1. From [Services] of [Control Panel], stop services associated with JobCenter by following the order listed below. Some services might not exist depending on the version. Skip such a service and stop the next service.

Sclaunch Service

Comagent Service

jnwengine service

NetShepherd

2. Take backup copies of files under the directories listed below.

%InstallDirectory%\etc

%InstallDirectory%\nmap

%InstallDirectory%\spool\private\root

3. Remove a package of the old version of JobCenter. For details on how to remove the package, refer to Section 4.2.2.1, "Uninstalling the Packages".

4. After installing a new version of JobCenter, restart the machine.

5. After restarting a computer, stop the following JobCenter-related service from [Services] of [Control Panel].

JobCenter Service

6. Restore the backup files to the appropriate directory according to the following table:

Backed up in	Restored to
%InstallDirectory%\etc	%InstallDirectory%\etc
%InstallDirectory%\nmap	%InstallDirectory%\spool\nmap
%InstallDirectory%\spool\private\root	%InstallDirectory%\spool\private\root

7. If the following files and directories exist, remove them after restoration in the previous step. (Otherwise, consistency of the NQS database is not guaranteed, which makes normal operation impossible)

%InstallDirectory%\spool\private\root\transfile

All files under %InstallDirectory%\spool\private\root\control\(directories)

All files under %InstallDirectory%\spool\private\root\data\(directories)

%InstallDirectory%\spool\private\root\tracking

> In the above description, the word (directories) indicates all existing directories. It does not mean to "remove the directories". Delete only the files in the directories.
>
> For %InstallDirectory%\spool\private\root\tracking, delete the entire directory.

8. Delete the tracking file with the trfdelete command. Refer to Section 3.25 "trfdelete Deleting Tracking Files" in <Command Reference> (Japanese only) for details in the trfdelete command.

9. From [Services] of [Control Panel], start the following JobCenter-related service.

JobCenter Service

10. Make sure that all the users who have been using the old version of JobCenter can establish connection and log in successfully using CL/Win.

JobCenter is now upgraded completely.

> ■The settings are not inherited if the system is downgraded. Restore the settings from the previously backed up file.

■If a user does not establish connection using CL/Win after upgrading, the new version of MG/SV may not be able to recognize the user as a JobCenter user. Therefore, always check that all the users can establish connection using CL/Win.

5.2.2. Version Upgrade without Inheriting NQS-Related Data

The old version of JobCenter must be uninstalled. Follow the steps below.

1. Remove a package of the old version of JobCenter. For details on how to remove the package, refer to Section 4.2.2.1, "Uninstalling the Packages".

2. Install a new version of JobCenter.

Chapter 6. Checking the Version

To check the version of JobCenter, follow the steps in this chapter.

6.1. UNIX Version

Check the version of a UNIX product by using a command.

6.1.1. JobCenter MG/SV

Confirm the version of the package by using the commands in the following table.

Note that the package name differs between R12.7 or later and versions earlier than R12.6.x. In R12.7 or later, all the package names are common to MG/SV.

Be sure to confirm the patch package version number in a patch applied environment.

Table 6.1. Version check command of JobCenter for each OS

OS	Package name (12.6.x or earlier)	Package name (12.7 or later)	Version check command
HP-UX	NECSSJBmg (MG) NECSSJBag (SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	swlist <pkgname>
Solaris	NECSSJBmg (MG) NECSSJBag (SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	pkginfo -l <pkgname>
AIX	NECSSJBag (common to MG/SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	lslpp -L <pkgname>.base
Linux	NECSSJBag (common to MG/SV) NECSSJBpt (accumulated patch)	NECJCpkg (common to MG/SV) NECJCpt (accumulated patch)	rpm -q <pkgname>

6.2. Windows Version

Use the GUI to check the version of the Windows version of JobCenter.

6.2.1. JobCenter SV

1. Select [Start], [All Programs], [JobCenter], [SV], and then [Environment Setting] on Window to execute server configuration.

2. The [Environment Setting] dialog box appears. Select [Help] and then [About JobCenter server environment settings] to check the version information.
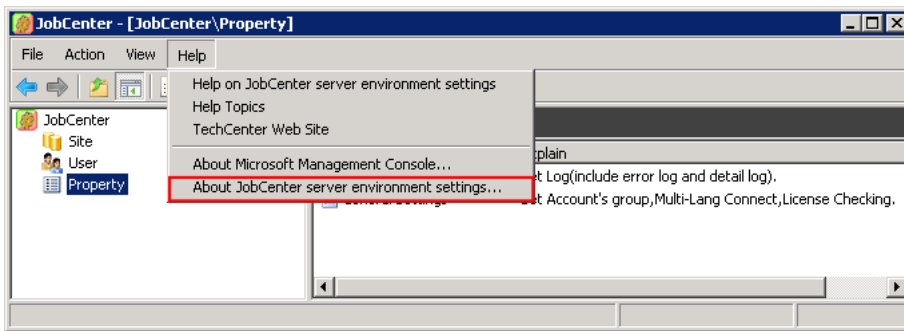

Figure 6.1. Version information selection window

6.2.2. CL/Win

1. Select [Start], [All Programs], [JobCenter], [CL XX.YY], and then [JobCenter Client XX.YY] on Windows to start JobCenter Client.

> XX.YY represents the version number.

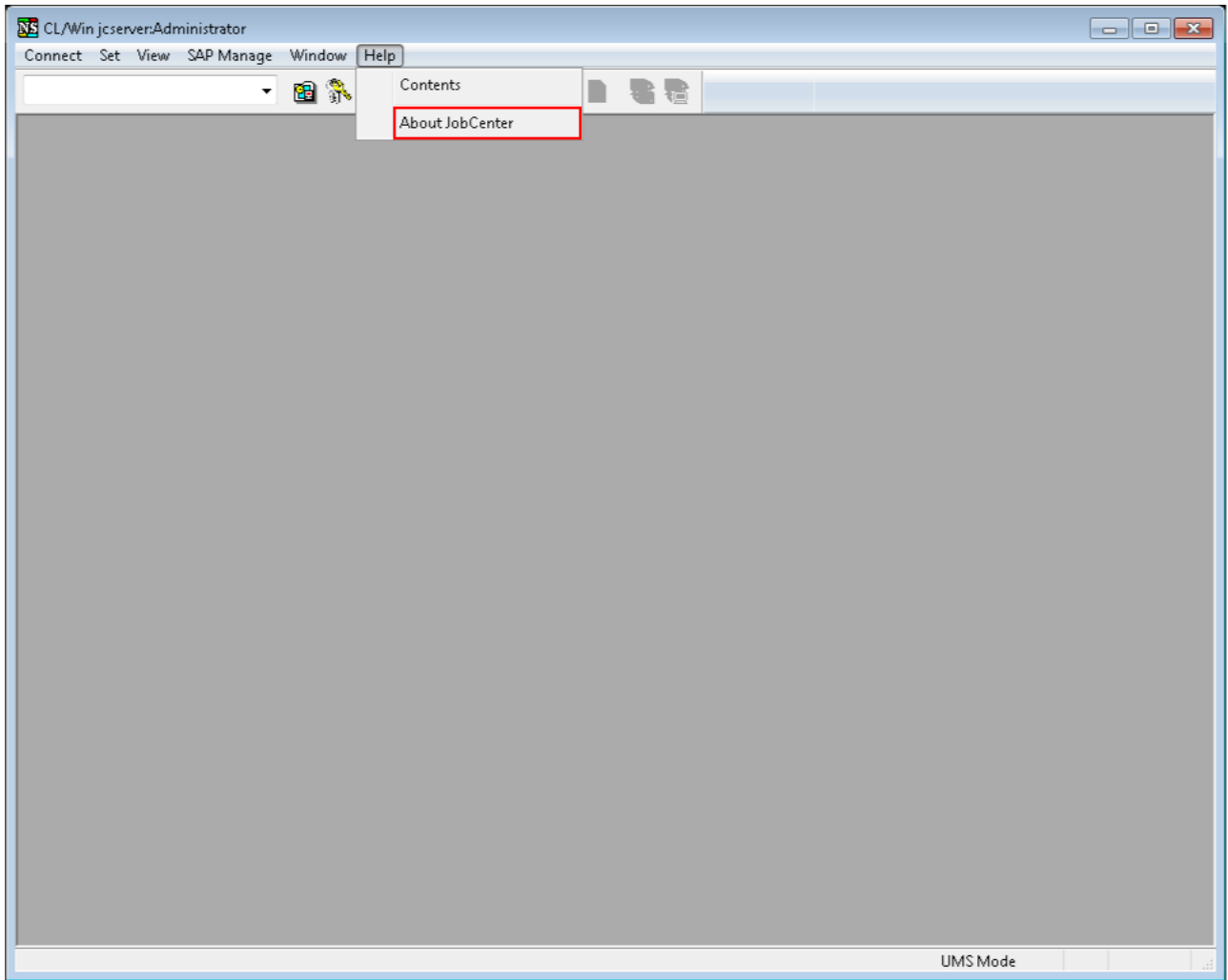2. The CL/Win window appears. From the menu bar, select [Help] and then [About JobCenter] to check the version information.

Figure 6.2. Version information selection window