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JP1 Version 13

Job Management: Getting Started (Job Scheduler)

3021-3-L41(E)

Notices

■ Relevant program products

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

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

P-2A12-3KDL JP1/Automatic Job Management System 3 - Manager version 13-00 or later

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P-CC2912-39DL JP1/Automatic Job Management System 3 - Web Console version 13-00 or later (For Windows Server 2022, Windows Server 2019, Windows Server 2016)

P-CC8412-39DL JP1/Automatic Job Management System 3 - Web Console version 13-00 or later (For Linux 7, Linux 8, Linux 9, Oracle Linux 7, Oracle Linux 8, Oracle Linux 9, SUSE Linux 12, SUSE Linux 15)

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

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P-CC8412-3NDL JP1/Automatic Job Management System 3 - Print Option Manager version 13-00 or later (For Linux 7, Linux 8, Linux 9, Oracle Linux 7, Oracle Linux 8, Oracle Linux 9, SUSE Linux 12, SUSE Linux 15)

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The above product includes the following:

P-CC8412-43DL JP1/Automatic Job Management System 3 - Agent version 13-00 or later (For Linux 7, Linux 8, Linux 9, Oracle Linux 7, Oracle Linux 8, Oracle Linux 9, SUSE Linux 12, SUSE Linux 15)

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

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

P-2A12-34DL JP1/Automatic Job Management System 3 - View version 13-00 or later

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P-CC2A12-44DL JP1/Automatic Job Management System 3 - View version 13-00 or later (For Windows Server 2022, Windows Server 2019, Windows Server 2016, Windows 11, Windows 10)

P-CC2A12-3MDL JP1/Automatic Job Management System 3 - Print Option version 13-00 or later (For Windows Server 2022, Windows Server 2019, Windows Server 2016, Windows 11, Windows 10)

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Summary of amendments

The following table lists changes in this manual (3021-3-L41(E)) and product changes related to this manual.

Changes	Location
Added "Establishing linkage with business tasks using cloud services".	*A.6*

Legend:

--: Not applicable

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

Preface

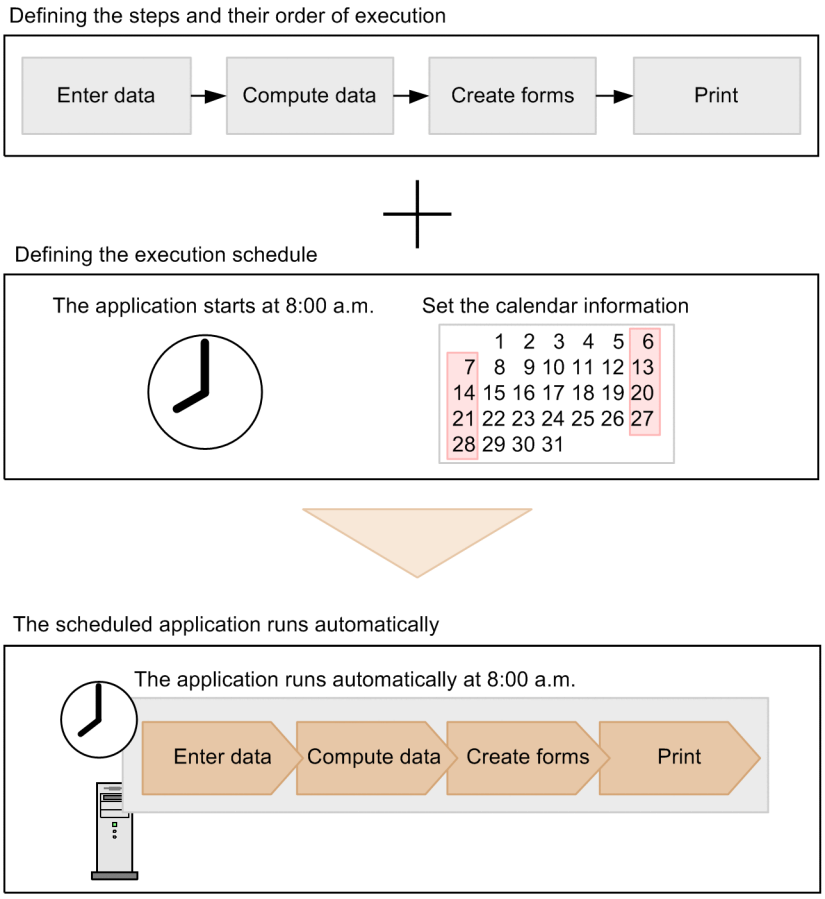
■ What you can do with JP1/Automatic Job Management System 3

Computer-based operations performed on a daily basis typically include a large number of regular and routine tasks. For example, an enterprise might need to calculate daily sales data, prepare daily reports, produce monthly accounting summaries, or issue order entry forms. Many operations are not completed in a single step but entail a number of processes performed in a set order, or might require various conditions to be met.

By automating operations of this nature, costs can be reduced and valuable human resources can be freed up for more creative work. Automation allows the system to be run reliably with just a few operators.

JP1/Automatic Job Management System 3 (simply called JP1/AJS3 hereafter) is designed to automate routine applications.

By using JP1/AJS3 to define steps in an application and their order of execution, application processing can be performed automatically. JP1/AJS3 also allows you to define the application start time in advance or define applications that start when a specific event occurs, thus allowing you to automate complicated applications.



To automate an application by using JP1/AJS3, you need to identify each step in the application, and then define the execution order and hierarchical structure of the steps. Elements (or units) that make up an application are classified into three types: job, jobnet, and job group.

Job:

The smallest unit of processing in JP1/AJS3. Processing of commands, application programs, or shell scripts can be defined as a job.

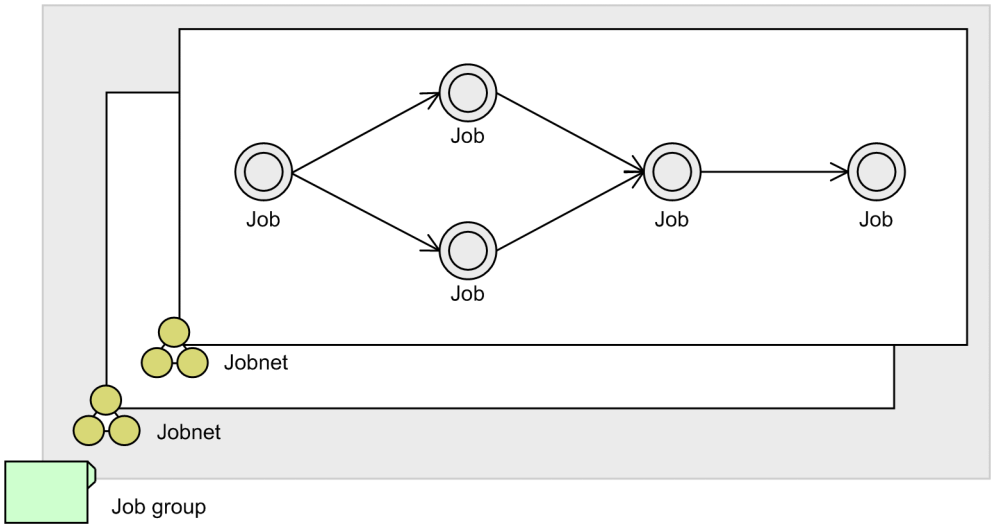
Jobnet:

A set of jobs with a defined execution order. Applications automated by JP1/AJS3 are executed in units of jobnets.

Job group:

A folder for managing jobnets collectively. A job group can be created in another job group.

The following figure illustrates the hierarchy of units defined in JP1/AJS3.



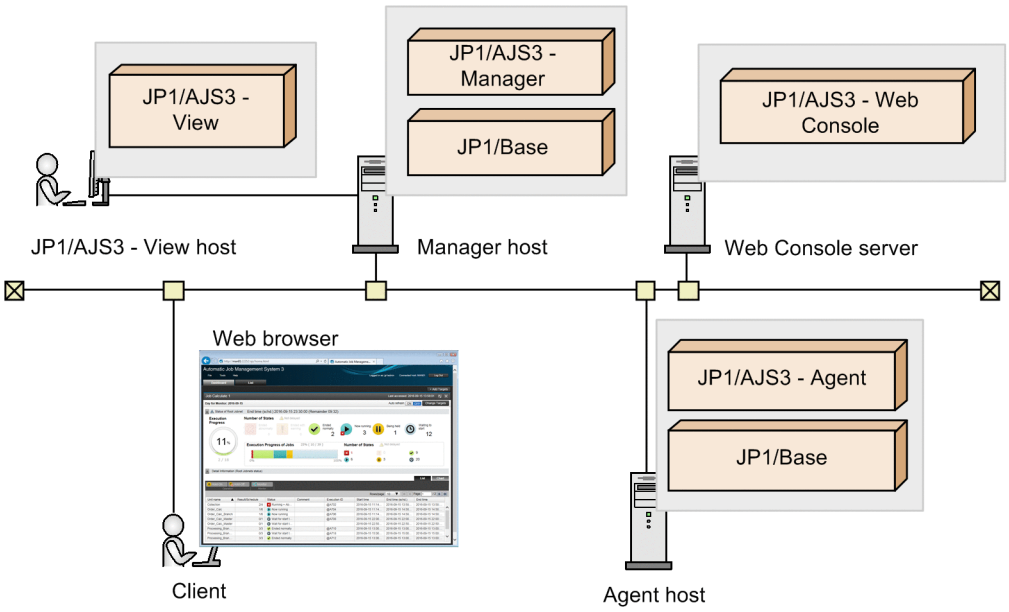
■ What is explained in this manual

This manual explains the basic methods of configuring and operating JP1/AJS3. The purpose of this manual is to help readers briefly understand the basic usage of JP1/AJS3.

This manual is intended for the following persons:

- Those who are considering installing JP1/AJS3
- Those who want a brief overview of the process, from configuration to operation of JP1/AJS3.

The explanations in this manual assume that the system configuration shown below is used. For operations using other configurations, see the relevant JP1/AJS3 manuals.



JP1/AJS3 - Manager:

A program that stores jobnet definition information and execution schedule information, and manages the execution of jobnets. This program transfers jobs to be executed to JP1/AJS3 - Agent, and then receives information about the execution status and execution results.

JP1/AJS3 - Manager (which has the agent function for job execution control) also acts as the agent that executes jobs.

JP1/AJS3 - Web Console:

A program that has the functionality of both a web server and web application server. Upon receiving a request from a client, JP1/AJS3 - Web Console communicates with JP1/AJS3 - Manager, and then sends a response to the client.

Because JP1/AJS3 - Web Console has an interface for monitoring jobnets, any computer with a web browser can be used as a client via the Web GUI. Users can also create user applications that act as clients by using the API provided by JP1/AJS3.

JP1/AJS3 - Agent:

A program that executes jobs transferred from JP1/AJS3 - Manager.

JP1/AJS3 - View:

A program for operating JP1/AJS3 by using the GUI. JP1/AJS3 - View is connected to JP1/AJS3 - Manager to define jobnets, perform operations, and check the execution status.

JP1/Base:

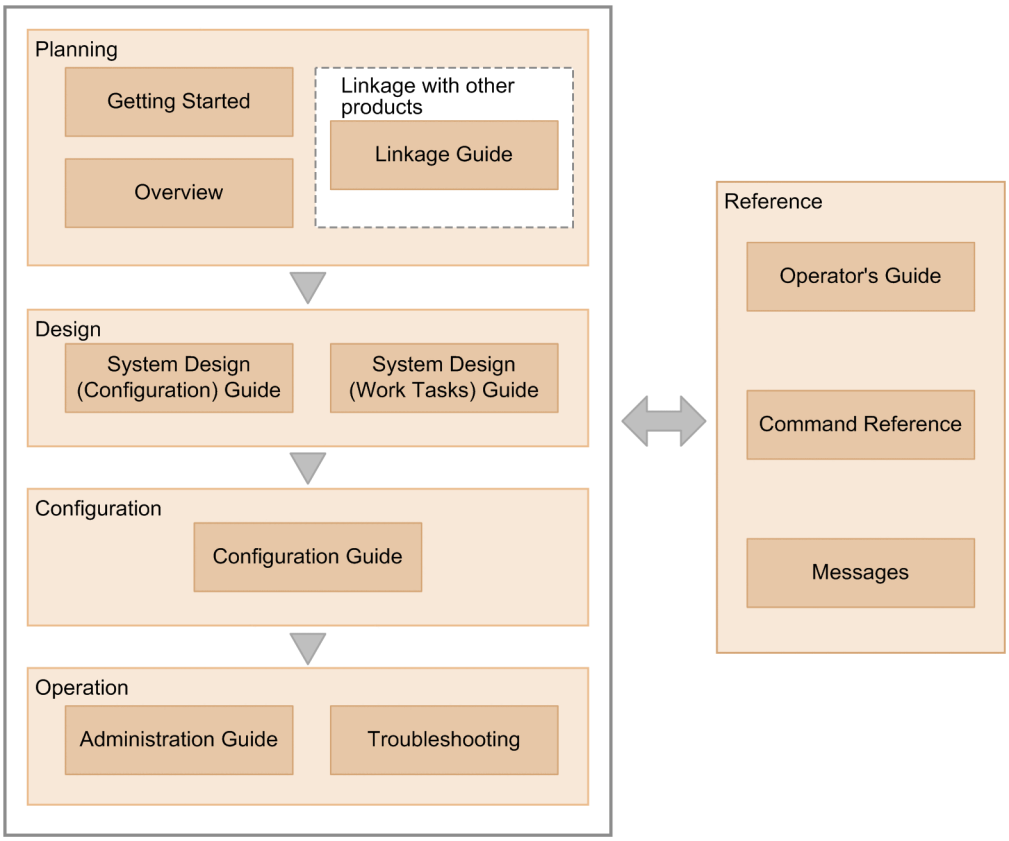
A program that manages user permissions. JP1/Base is a prerequisite product for JP1/AJS3, and must be installed on a manager host on which JP1/AJS3 - Manager is installed and an agent host on which JP1/AJS3 - Agent is installed.

■ How to read this manual

There are 11 JP1/AJS3 manuals. This manual describes the procedure for setting up a JP1/AJS3 system (in Windows or Linux) and basic operations from JP1/AJS3 - View. This manual also describes how to monitor jobnets by using the Web GUI of JP1/AJS3 - Web Console.

For explanations about the configuration methods, the parts of this manual to be referenced depend on the OSs of the manager host and the agent host. See *1. Setting Up JP1/AJS3 (in Windows)* if the OS is Windows, and *2. Setting Up JP1/AJS3 (in Linux)* if the OS is Linux.

JP1/AJS3 also provides many other functions to implement many types of environments and operations. To learn about applied functions and operations according to the JP1/AJS3 installation and operation phases, see the relevant manuals other than Getting Started based on the following figure.



To learn about functions and operations according to the purpose of the use of JP1/AJS3, see the manuals according to the following table.

Purpose	Required reading	Read as necessary
To learn about the basic usage of JP1/AJS3	• *Getting Started* (3021-3-L41(E))	• *Operator's Guide* (3021-3-L48(E))
To learn about JP1/AJS3's functionalities	• *Overview* (3021-3-L42(E))	• *Linkage Guide* (3021-3-L50(E))
To configure a system (including installation and setup) that automatically runs jobs	• *System Design (Configuration) Guide* (3021-3-L43(E)) • *Configuration Guide* (3021-3-L45(E))	• *Linkage Guide* (3021-3-L50(E))
To design work tasks that will be automated (including job definitions and schedule definitions)	• *System Design (Work Tasks) Guide* (3021-3-L44(E))	• *Operator's Guide* (3021-3-L48(E))

Purpose	Required reading	Read as necessary
To learn about monitoring and maintaining a running system	• *Administration Guide* (3021-3-L46(E))	• *Troubleshooting* (3021-3-L47(E)) • *Messages* (3021-3-L51(E))
To learn about what action you need to take for problems that occur during operation	• *Troubleshooting* (3021-3-L47(E))	• *Messages* (3021-3-L51(E))
To learn about operating JP1/AJS3	• *Operator's Guide* (3021-3-L48(E))	• *Command Reference* (3021-3-L49(E))

Note:

Getting Started in the figure and table refers to "JP1 Version 13 Job Management: Getting Started (Job Scheduler)". "JP1 Version 13 JP1/Automatic Job Management System 3" is omitted in other manual names.

Explanations of operations in each window assume that the following environments are used.

Network environments:

Environment in which network communication is possible between the manager host, Web Console server, agent host, JP1/AJS3 - View host, and client, and each host name can be resolved.

Note that in an environment that uses a firewall, set the firewall so that communication via the ports used by JP1/AJS3 can pass through the firewall. For details about the direction in which communication passes through, see the *JP1/Automatic Job Management System 3 System Design (Configuration) Guide* in *C.1 Related publications*.

Operations on the manager host, Web Console server and agent host:

Environment in which Windows Server 2022 or Linux 9.1 is used

Operations on the JP1/AJS3 - View host:

Environment in which Windows 7 is used

Operations on the client:

Windows environment in which Microsoft Edge is used, or a Linux environment in which Firefox is used

Some windows in this manual might differ from the windows of your product because of improvements made without prior notice.

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1

Setting Up JP1/AJS3 (in Windows)

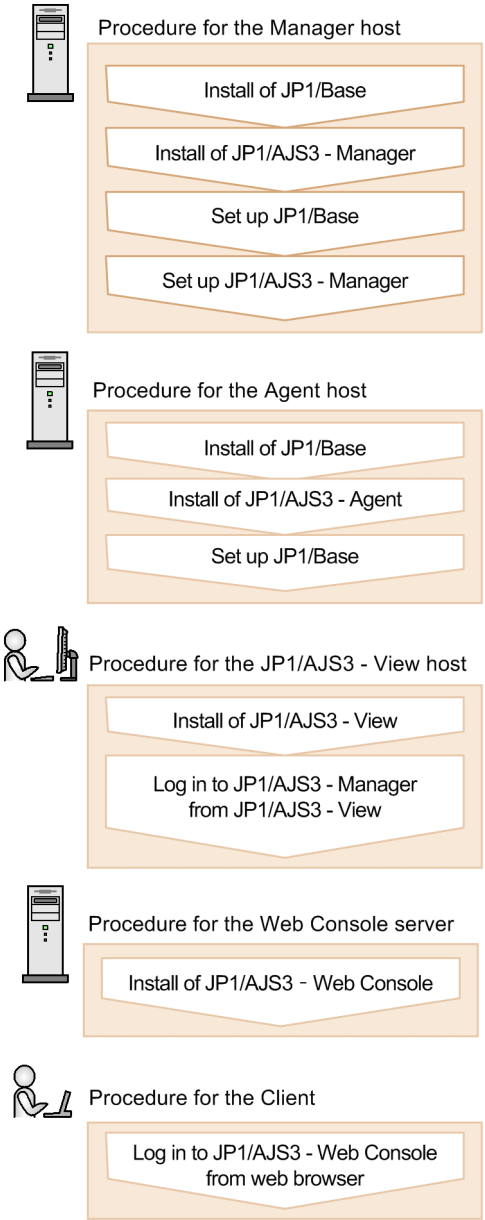
Before you can use JP1/AJS3 to automate routine or periodic tasks, set up a JP1/AJS3 system. This chapter describes how to install and set up JP1/AJS3 (Windows version).

1.1 General procedure for setting up JP1/AJS3

Install and set up JP1/AJS3 separately on a manager host, agent host, JP1/AJS3 - View host, and Web Console server.

The following figure shows the installation and setup procedures for each host.

Figure 1–1: Installation and setup procedures



Tip

- You can configure the hosts (manager host, agent host, JP1/AJS3 - View host, and Web Console server) in any order.
- If you operate the agent host, JP1/AJS3 - View host, and Web Console server with the default settings, you do not need to set up JP1/AJS3 - Agent, JP1/AJS3 - View, and JP1/AJS3 - Web Console.

Related topics

- *1.3 Installation and setup on the manager host*
- *1.4 Installation and setup on the agent host*
- *1.5 Installation and setup on a JP1/AJS3 - View host*
- *1.6 Installation and setup on the Web Console server*
- *1.7 Logging in to JP1/AJS3 - Manager from JP1/AJS3 - View*
- *1.8 Logging in to JP1/AJS3 - Web Console from web browser*

1.2 Preparation before installation

This section describes the preparations required before installing JP1/AJS3 and its prerequisite product JP1/Base.

1.2.1 Memory and disk space required for installation

For details about the amount of memory and disk space that is required for installation, see the Release Notes.

1.2.2 Prerequisite language settings for OS

The language settings for the OS of the manager host, the agent host, the JP1/AJS3 - View host, and the Web Console server must be specified as the same language as that used in JP1/AJS3.

Make sure that **United States** is specified for the area setting, and **English** is specified for the language setting via the control panel of each host. If the language settings are incorrect, characters might be garbled, and definition data might be altered.

1.2.3 Background necessary for installation

This section describes the background necessary for installing JP1/Base and JP1/AJS3.

(1) About administrator privileges

In this manual, "administrator privileges" refer to the execution privileges of the built-in administrators of local PCs.

For the users who have administrator privileges for local PCs, operations do not vary in local user, domain user, and Active Directory environments.

1.3 Installation and setup on the manager host

Install and set up JP1/Base and JP1/AJS3 - Manager to configure the manager host.

1.3.1 Installing the prerequisite product

Install JP1/Base on the manager host.

Prerequisites

- Make sure that the OS of the manager host is a prerequisite OS of JP1/Base.
- Log in to the manager host as an OS user with Administrator permissions.

Procedure

1. Terminate all JP1 programs, and all programs that use the JP1/Base event service.
2. Insert the distribution media into the drive and start the installation.
   Proceed with the installation according to the instructions of the started installer. Specify the following items during installation:
   - User information
   - Installation folder
     The default installation folder is as follows:
     system-drive`:\Program Files (x86)\HITACHI\JP1Base`
     Do not install JP1/Base under *system-drive*`:\Program Files\`. Problems might occur during operation if JP1/Base is in a `Program Files` folder that contains 64-bit modules. Do not install JP1/Base in the installation folder of any other product.
   - Automatic setup processing
     If you select the **Perform setup processing** check box, the following information is automatically specified as initial settings so that the host is ready for operation immediately after the installation is completed:

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	`*` (asterisk)
5		Granted permissions	All administrator roles
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	OS user entered in the window for entering the OS user name and password
8		Server host name	`*` (asterisk)

3. If you are prompted to restart the system, restart Windows.

Result

JP1/Base is installed on the manager host.

Postrequisites

Install JP1/AJS3 - Manager on the manager host.

Related topics

- *1.3.2 Installing JP1/AJS3 - Manager*
- *1.3.4 Setting up the prerequisite product*

1.3.2 Installing JP1/AJS3 - Manager

Install JP1/AJS3 - Manager on the manager host.

Prerequisites

- Make sure that the OS of the manager host is a prerequisite OS of JP1/AJS3 - Manager.
- Log in to the manager host as an OS user with Administrator permissions.

Procedure

1. Terminate all JP1 programs.
2. Insert the distribution media into the drive and start the installation.
   Proceed with the installation according to the instructions of the started installer. Specify the following items during installation:
   - User information
   - Installation folder
     The default installation folder is as follows:
     system-drive`:\Program Files (x86)\HITACHI\JP1AJS2`
     Do not install JP1/AJS3 - Manager under *system-drive*`:\Program Files\`. Problems might occur during operation if JP1/AJS3 - Manager is in a `Program Files` folder that contains 64-bit modules. Do not install JP1/AJS3 - Manager in the installation folder of any other product.
3. If you are prompted to restart the system, restart Windows.

Result

JP1/AJS3 - Manager is installed on the manager host.

Postrequisites

Make sure that the services are running.

Related topics

- *1.3.3 Confirming that the services are running*

1.3.3 Confirming that the services are running

Before you start the setup, make sure that the services on the manager host are running. If any service is not running, start it.

Prerequisites

Log in to the manager host as an OS user with Administrator permissions.

Procedure

1. In the Control Panel window, select **Administrative Tools** and then **Services**.
2. Make sure that the following services are running:
   - JP1/Base
   - JP1/Base Control Service
   - JP1/Base Event
   - JP1/AJS3

   If you can confirm that the services are running, this step is completed. If any service is not running, perform step 3.
3. Right-click the service you want to start, and then select **Start**.
   The selected service is started.

Result

You have confirmed that the services are running on the manager host.

Postrequisites

Set up JP1/Base on the manager host.

Related topics

- *1.3.4 Setting up the prerequisite product*

1.3.4 Setting up the prerequisite product

Register JP1 users (accounts reserved for JP1 only) in JP1/Base, and then set operation permissions for the JP1 users. Then, associate the JP1 users with OS users so that the JP1 users can access OS resources.

Setting up JP1/Base on the manager host consists of the following four steps:

Setting up an authentication server:
: An authentication server manages access permissions of JP1 users. Set up the server on which JP1/Base is installed as an authentication server.

Registering JP1 users in the authentication server:
: Register JP1 users in the authentication server.

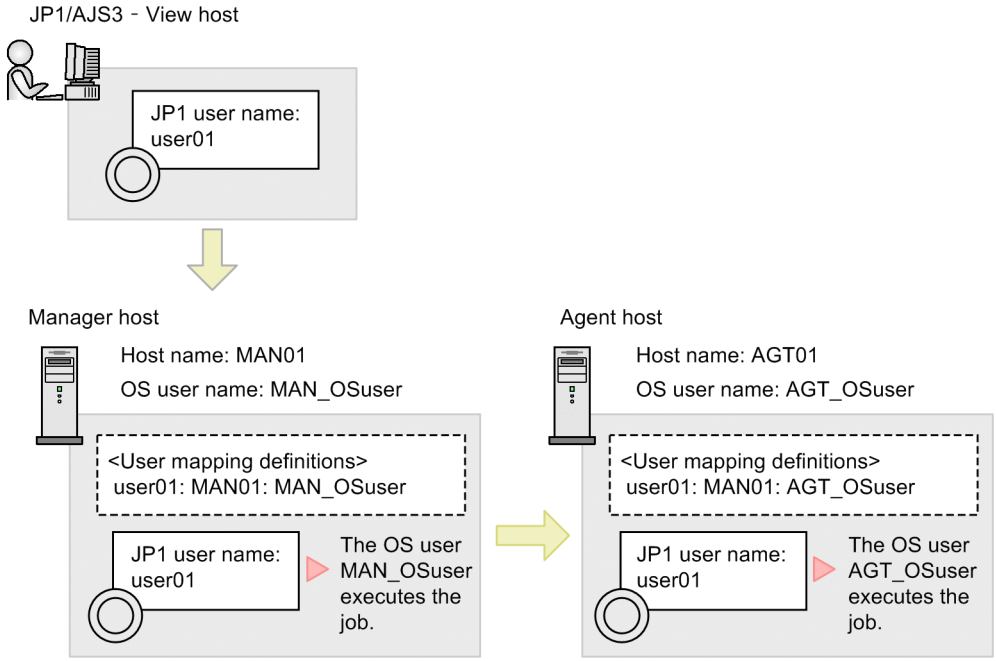
Setting operation permissions for JP1 users:
: Set permissions (JP1 permission levels) that allow JP1 users to define and execute applications.

Setting user mapping:
: User mapping is an operation to associate JP1 users with OS users on the host on which jobs are executed.

To execute a job in JP1/AJS3, a JP1 user accesses OS resources such as executable files by using permissions of an OS user associated with the JP1 user, and then performs processing. Therefore, the JP1 user must be associated with an OS user on the host on which the job is executed.

The following figure shows an overview of user mapping.

Figure 1–2: User mapping



Note:
<User mapping definitions> in the figure indicates *JP1-user-name*:*server-host-hame*:*OS-user name*.

In this figure, the job executed by the JP1 user `user01` on the JP1/AJS3 - View host is executed by the OS user `MAN_OSuser` on the manager host. If the job is transferred to the agent host, the job is executed by the OS user `AGT_OSuser` on the agent host.

Tip

If you performed the automatic setup processing when installing JP1/Base, the information shown below is automatically specified as initial settings. If you perform operations using the users in the initial settings, you do not need to set up JP1/Base.

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	* (asterisk)
5		Granted permissions	All administration permissions
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	OS user entered in the window for entering the OS user name and password

No.	Setting item		Initial settings
8	Setting user mapping	Server host name	* (asterisk)

Related topics

- *1.3.4(1) Setting up an authentication server*
- *1.3.4(2) Registering JP1 users in the authentication server*
- *1.3.4(3) Setting operation permissions for JP1 users*
- *1.3.4(4) Setting user mapping*

(1) Setting up an authentication server

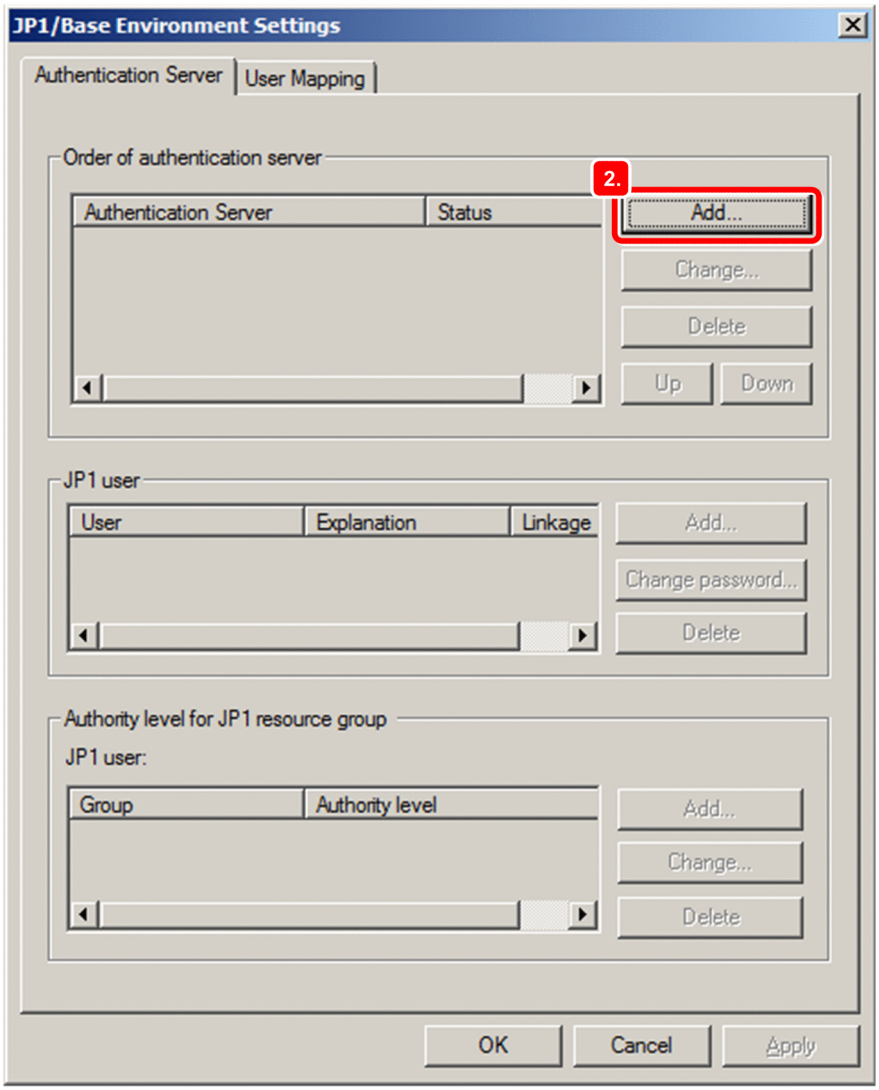
Set the name of the host used as the authentication server in JP1/Base.

Prerequisites

Log in to the manager host as an OS user with Administrator permissions.

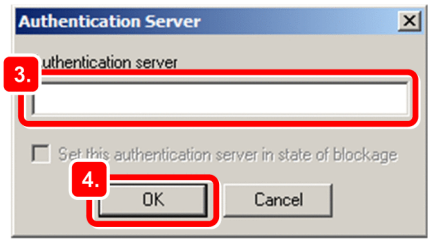
Procedure

1. From the **Start** menu of Windows, select **Programs**, **JP1_Base**, and then **setup**.
   The JP1/Base Environment Settings dialog box appears.
2. In the **Authentication Server** tab, in **Order of authentication server**, click the **Add** button.



The Authentication Server dialog box appears.

3. In **Authentication server**, enter the host name of the authentication server.



4. Click the **OK** button.

   The Authentication Server dialog box closes.

   In the JP1/Base Environment Settings dialog box, in **Order of authentication server**, the host name of the manager host appears.

5. Click the **Apply** button.

Result

The manager host is set as the authentication server.

Postrequisites

Register JP1 users in the authentication server.

Related topics

- *1.3.4(2) Registering JP1 users in the authentication server*

(2) Registering JP1 users in the authentication server

Register a JP1 user in the authentication server.

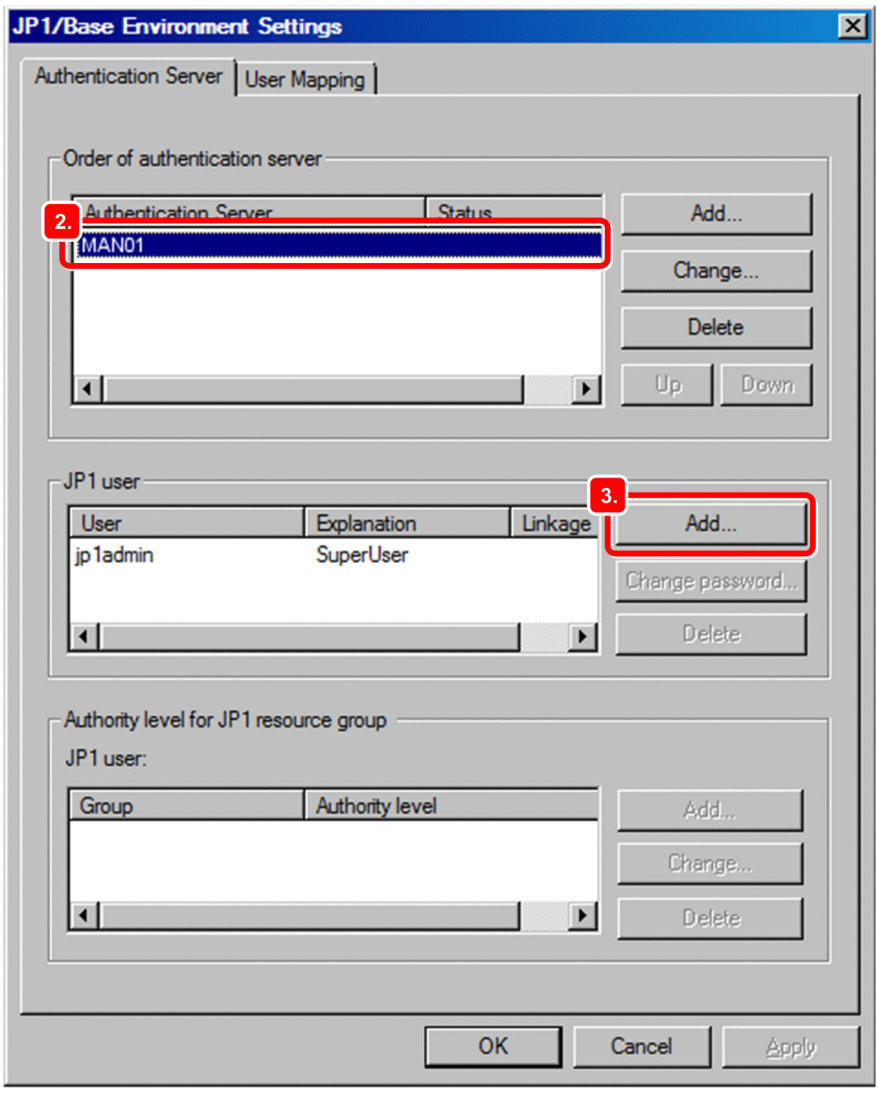
Prerequisites

Log in to the manager host as an OS user with Administrator permissions.

Procedure

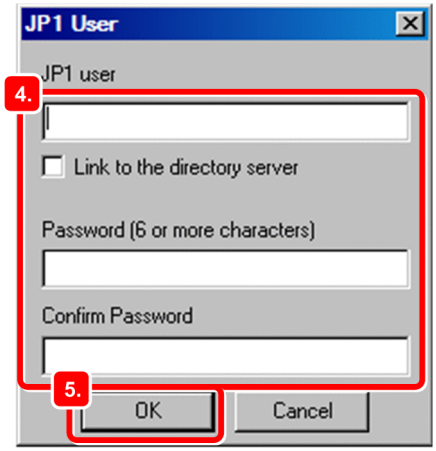
1. From the **Start** menu of Windows, select **Programs**, **JP1_Base**, and then **setup**.
   The JP1/Base Environment Settings dialog box appears.

2. In the **Authentication Server** tab, in **Order of authentication server**, select the authentication server in which you want to register a JP1 user.



3. In **JP1 user**, click the **Add** button.
   The JP1 User dialog box appears.

4. In **JP1 user**, enter the name of the JP1 user. In **Password** and **Confirm Password**, enter the password of the JP1 user.



5. Click the **OK** button.
   The JP1 User dialog box closes.
   The specified JP1 user name appears in **JP1 user** in the JP1/Base Environment Settings dialog box.

6. Click the **Apply** button.

Result

The JP1 user is registered.

Postrequisites

Set operation permissions for the JP1 user.

Related topics

- *1.3.4(3) Setting operation permissions for JP1 users*

(3) Setting operation permissions for JP1 users

Set the JP1 permission level for a JP1 user by defining the *JP1 resource group* and *JP1 permission level name* for the JP1 user.

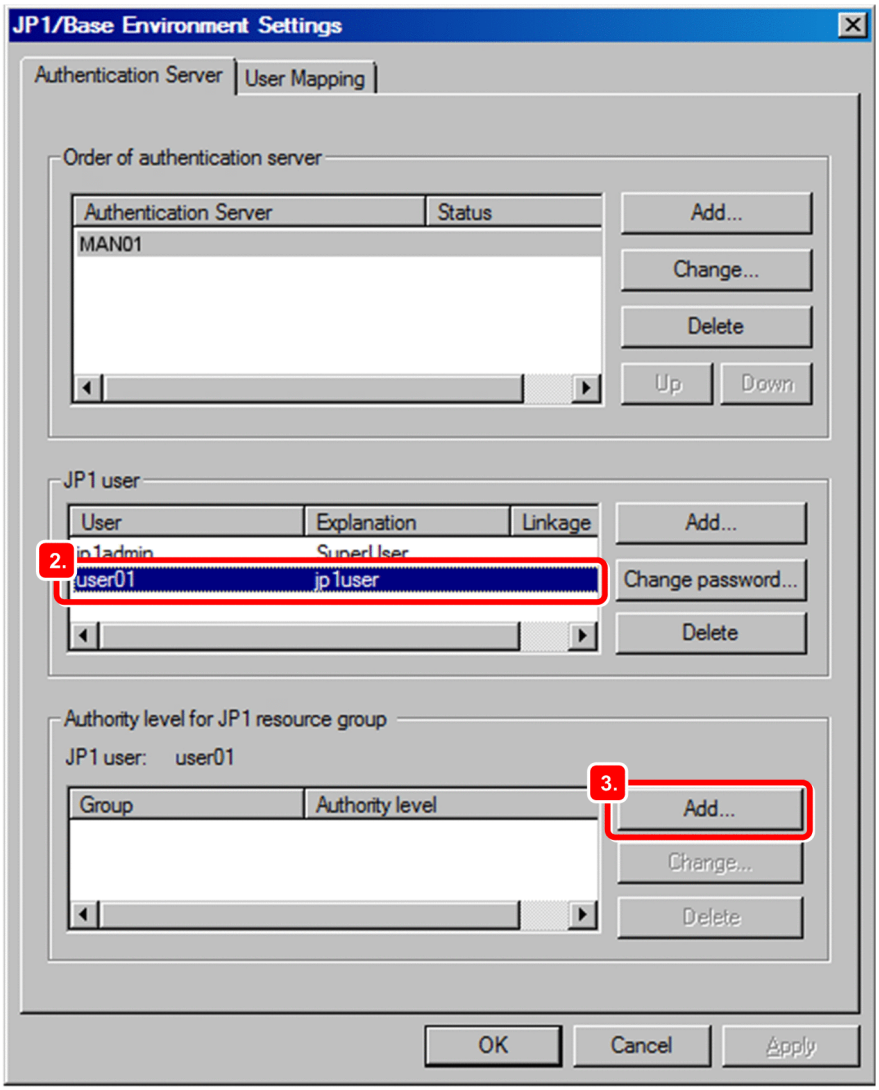
Prerequisites

Log in to the manager host as an OS user with Administrator permissions.

Procedure

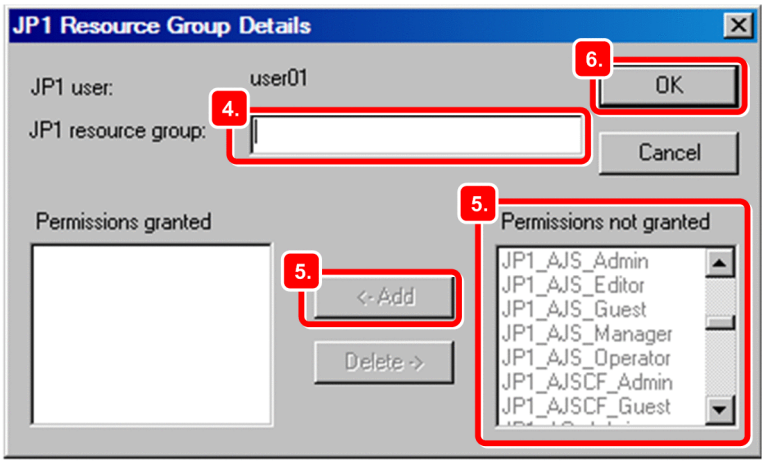
1. From the **Start** menu of Windows, select **Programs**, **JP1_Base**, and then **setup**.
   The JP1/Base Environment Settings dialog box appears.

2. In the **Authentication Server** tab, in **JP1 user**, select the JP1 user for which you want to set the JP1 permission level.



3. In **Authority level for JP1 resource group**, click the **Add** button.
   The JP1 Resource Group Details dialog box appears.

4. In **JP1 resource group**, enter the JP1 resource group name.
   JP1 resource groups are provided to manage units by group. Specify the name of the JP1 resource group to which the unit you want to operate belongs, or specify a new JP1 resource group name.



> **Tip**
>
> Specify an asterisk (*) to allow the JP1 user to access all JP1 resource groups.

5. In the **Permissions not granted** list, select the JP1 permission level name you want to set for the JP1 resource group, and then click **Add**.

   The selected JP1 permission level name is added to the **Permissions granted** list.

> **Tip**
>
> The following describes the JP1 permission level names used in JP1/AJS3:

Classification of operation permissions	JP1 permission level names	Description
Permissions relating to jobnet definition and execution	JP1_AJS_Admin	Administrator role that allows the user to change the unit owner and resource groups, and define, execute, and edit jobnets.
	JP1_AJS_Manager	This permission allows the user to define, execute, and edit jobnets.
	JP1_AJS_Editor	This permission allows the user to define and edit jobnets.
	JP1_AJS_Operator	This permission allows the user to execute and reference jobnets.
	JP1_AJS_Guest	This permission allows the user to reference jobnets.
Permissions relating to manipulation of agent management information	JP1_JPQ_Admin	Administrator role that allows the user to add, change, and delete the definitions of execution agents and execution agent groups.
	JP1_JPQ_Operator	This permission allows the user to change the job transfer restriction status for execution agents and execution agent groups.
	JP1_JPQ_User	This permission allows the user to reference the status and definitions of execution agents and execution agent groups.

6. Click the **OK** button.

   The JP1 Resource Group Details dialog box closes.

   The JP1 resource group that the JP1 user can access and the JP1 permission level for that group appears in **Authority level for JP1 resource group** in the JP1/Base Environment Settings dialog box.

7. Click the **Apply** button.

Result

The JP1 permission level is set for the JP1 user.

Postrequisites

Set user mapping.

Related topics

- *1.3.4(4) Setting user mapping*

(4) Setting user mapping

Map the JP1 user to an OS user on the manager host so that the JP1 user can access OS resources on the manager host.

Prerequisites

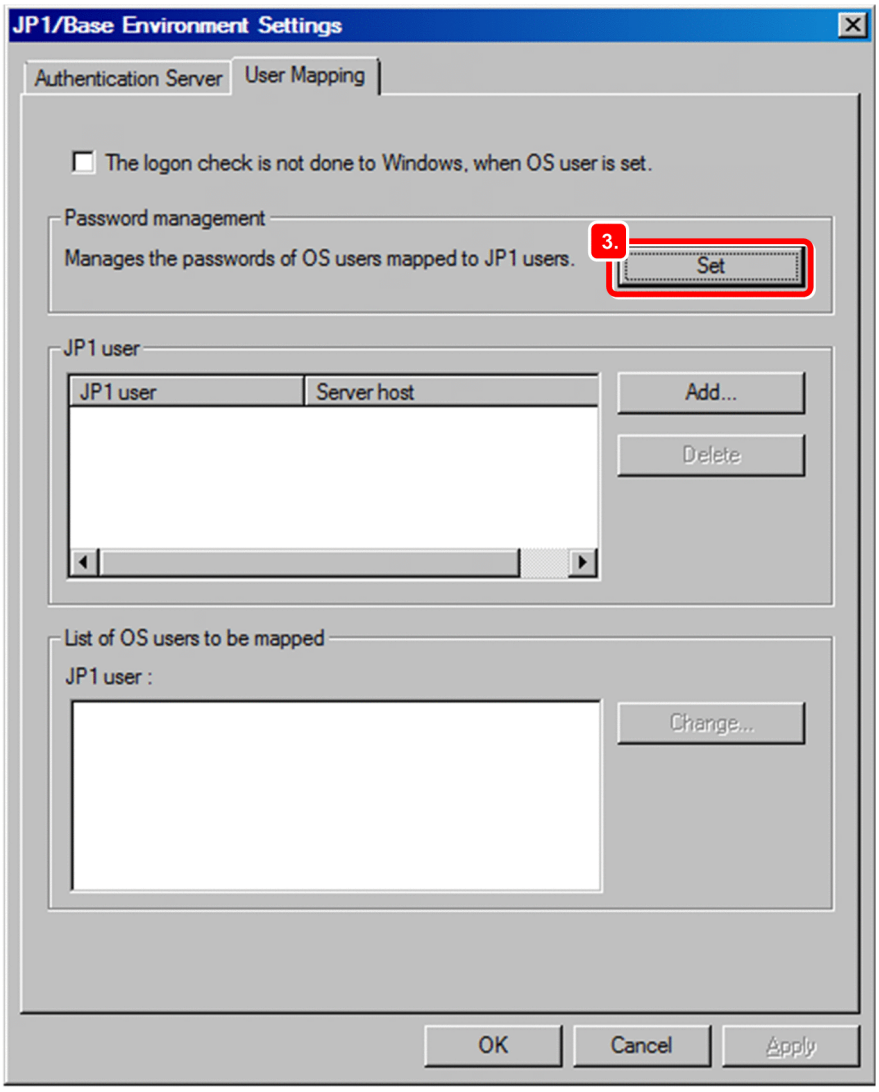
- Log in to the manager host as an OS user with Administrator permissions.
- OS users to be mapped to JP1 users must have permission to log on locally on the manager host. This permission can be set in, for example, **Local Security Policy** in **Administrative Tools** in Windows. In advance, assign local logon permission to the OS users to be mapped.

Procedure

1. From the **Start** menu of Windows, select **Programs**, **JP1_Base**, and then **setup**.
   The JP1/Base Environment Settings dialog box appears.

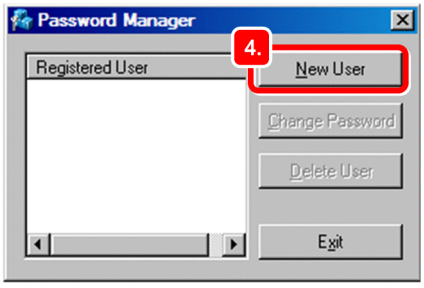
2. Click the **User Mapping** tab.
   The **User Mapping** tab appears.

3. In the **Password management**, click the **Set** button.



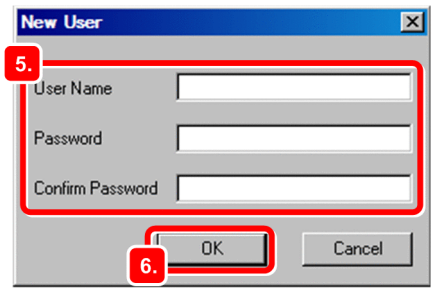
The Password Manager dialog box appears.

4. Click the **New User** button.



The New User dialog box appears.

5. In **User Name**, enter the OS user name. In **Password** and **Confirm Password**, enter the password of the OS user.



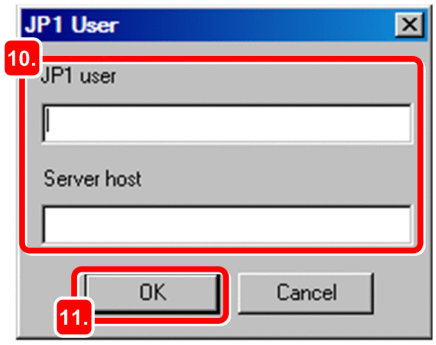
6. Click the **OK** button.
   A message dialog box indicating that the OS user has been registered appears.

7. In the message dialog box, click the **OK** button.
   The message dialog box closes. In the Password Manager dialog box, the registered OS user name appears.

8. In the Password Manager dialog box, click the **Exit** button.
   The Password Manager dialog box closes.

9. In the JP1/Base Environment Settings dialog box, in **JP1 user**, click the **Add** button.
   The JP1 User dialog box appears.

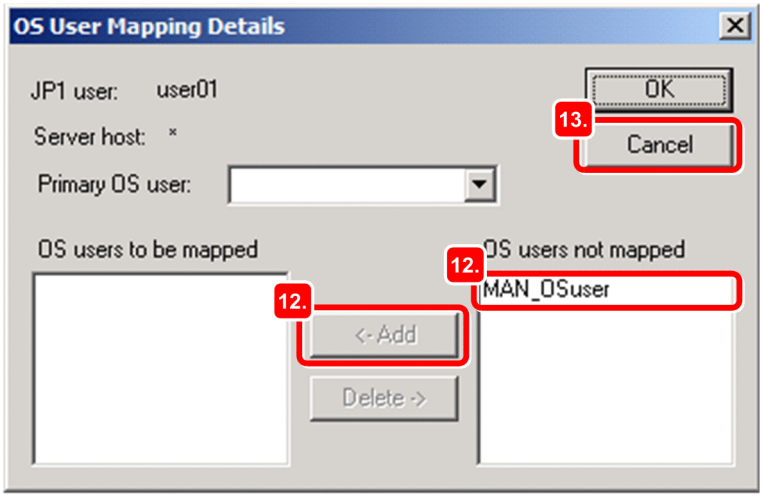
10. In **JP1 user**, enter the JP1 user name. In **Server host**, enter the name of the host from which job execution will be requested.
    For **JP1 user**, specify the JP1 user name to be mapped to the OS user. For **Server host**, specify the host that accepts job execution requests.



> **Tip**
>
> Specify an asterisk (*) in **Server host** to accept job execution requests from all hosts.

11. Click the **OK** button.
    The JP1 User dialog box closes, and then the OS User Mapping Details dialog box appears.
    The **OS users not mapped** list displays the OS user you specified in step 5.

12. In the **OS users not mapped** list, select the OS user to be mapped to the JP1 user, and then click **Add**.



    The selected OS user is added to the **OS users to be mapped** list.

13. Click the **OK** button.
    The OS User Mapping Details dialog box closes.
    The JP user is added in **JP1 user** in the JP1/Base Environment Settings dialog box. When you select this JP1 user, the mapped OS user appears in **List of OS users to be mapped**.

14. Click the **Apply** button.

Result

The JP1 user and the OS user on the manager host are mapped.

Postrequisites

Set up JP1/AJS3 - Manager on the manager host.

Related topics

- *1.3.5 Setting up JP1/AJS3 - Manager*

1.3.5 Setting up JP1/AJS3 - Manager

To execute jobs on an agent host, you must register an execution agent in JP1/AJS3 - Manager so that JP1/AJS3 - Manager can request the execution agent to execute the jobs.

Prerequisites

- Log in to the manager host as an OS user with Administrator permissions.

- Map a JP1 user having `JP1_JPQ_Admin` permission to an OS user who logs in to the manager host.
- If the name of the OS user who logs in to the manager host and the JP1 user name mapped to that OS user are different, set the JP1 user name for the environment variable `JP1_USERNAME`.

Procedure

1. Start the command prompt.

2. Execute the `ajsagtadd` command.

   The `ajsagtadd` command adds an execution agent. The following shows an example of executing the command:

   ```
   C:\>ajsagtadd -a AGT01 -c 00:00-00:00=5
   ```

   The following describes the arguments and information to be specified.

   `-a` *execution-agent-name*

   Specify the name of an execution agent you want to add.

   `-c` *time−time=maximum-number-of-concurrently-executable-jobs*

   Specify a time period and the maximum number of concurrently executable jobs to be applied to the time period. The above example specifies that a maximum of five jobs can be concurrently executed on the agent host from 0:00 to 0:00 on the following day.

3. Execute the `ajsagtshow` command.

   The `ajsagtshow` command outputs execution agent information. The following shows an example of executing the command:

   ```
   C:\>ajsagtshow -a AGT01
   ```

   The following describes the arguments and information to be specified.

   `-a` *execution-agent-name*

   Outputs information about the specified execution agent.

   When the `ajsagtshow` command is executed, the following information is displayed:

   ```
   KNAC1101-I The output of the agent manager information started.
   HOSTNAME:MAN01
   AGENT     STATUS HOST      CON-EXE  QUE  JOB EVENT DESCRIPTION
   --------- ------ --------- ------- ---- ---- ----- -----------
   AGT01     Ef     AGT01           5    0    0     0
   KNAC1102-I The output of the agent manager information ended.
   ```

Result

The execution agent is added to JP1/AJS3 - Manager.

Postrequisites

Configure the agent host.

Related topics

- *1.4 Installation and setup on the agent host*

1.4 Installation and setup on the agent host

Install and set up JP1/Base and JP1/AJS3 - Agent to configure the agent host.

1.4.1 Installing the prerequisite product

Install JP1/Base on the agent host.

Prerequisites

- Make sure that the OS of the agent host is a prerequisite OS of JP1/Base.
- Log in to the agent host as an OS user with Administrator permissions.

Procedure

1. Terminate all JP1 programs, and all programs that use the JP1/Base event service.
2. Insert the distribution media into the drive and start the installation.
   Proceed with the installation according to the instructions of the started installer. Specify the following items during installation:
   - User information
   - Installation folder
     The default installation folder is as follows:
     system-drive`:\Program Files (x86)\HITACHI\JP1Base`
     Do not install JP1/Base under *system-drive*`:\Program Files\`. Problems might occur during operation if JP1/Base is in a `Program Files` folder that contains 64-bit modules. Do not install JP1/Base in the installation folder of any other product.
   - Automatic setup processing
     If you select the **Perform setup processing** check box, the following information is automatically specified as initial settings so that the host is ready for operation immediately after the installation is completed:

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	`*` (asterisk)
5		Granted permissions	All administrator roles
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	OS user entered in the window for entering the OS user name and password
8		Server host name	`*` (asterisk)

3. If you are prompted to restart the system, restart Windows.

Result

JP1/Base is installed on the agent host.

Postrequisites

Install JP1/AJS3 - Agent on the agent host.

Related topics

- *1.4.2 Installing JP1/AJS3 - Agent*
- *1.4.4 Setting up the prerequisite product*

1.4.2 Installing JP1/AJS3 - Agent

Install JP1/AJS3 - Agent on the agent host.

Prerequisites

- Make sure that the OS of the agent host is a prerequisite OS of JP1/AJS3 - Agent.
- Log in to the agent host as an OS user with Administrator permissions.

Procedure

1. Terminate all JP1 programs.
2. Insert the distribution media into the drive and start the installation.
   Proceed with the installation according to the instructions of the started installer. Specify the following items during installation:
   - User information
   - Installation folder
     The default installation folder is as follows:
     system-drive`:\Program Files (x86)\HITACHI\JP1AJS2`
     Do not install JP1/AJS3 - Agent under *system-drive*`:\Program Files\`. Problems might occur during operation if JP1/AJS3 - Agent is in a `Program Files` folder that contains 64-bit modules. Do not install JP1/AJS3 - Agent in the installation folder of any other product.
3. If you are prompted to restart the system, restart Windows.

Result

JP1/AJS3 - Agent is installed on the agent host.

Postrequisites

Make sure that the services are running.

Related topics

- *1.4.3 Confirming that the services are running*

1.4.3 Confirming that the services are running

Before you start the setup, make sure that the services on the agent host are running. If any service is not running, start it.

Prerequisites

Log in to the agent host as an OS user with Administrator permissions.

Procedure

1. In the Control Panel window, select **Administrative Tools** and then **Services**.
2. Make sure that the following services are running:
   - JP1/Base
   - JP1/Base Control Service
   - JP1/Base Event
   - JP1/AJS3

   If you can confirm that the services are running, this step is completed. If any service is not running, perform step 3.
3. Right-click the service you want to start, and then select **Start**.
   The selected service is started.

Result

You have confirmed that the services on the agent host are running.

Postrequisites

Set up JP1/Base on the agent host.

Related topics

- *1.4.4 Setting up the prerequisite product*

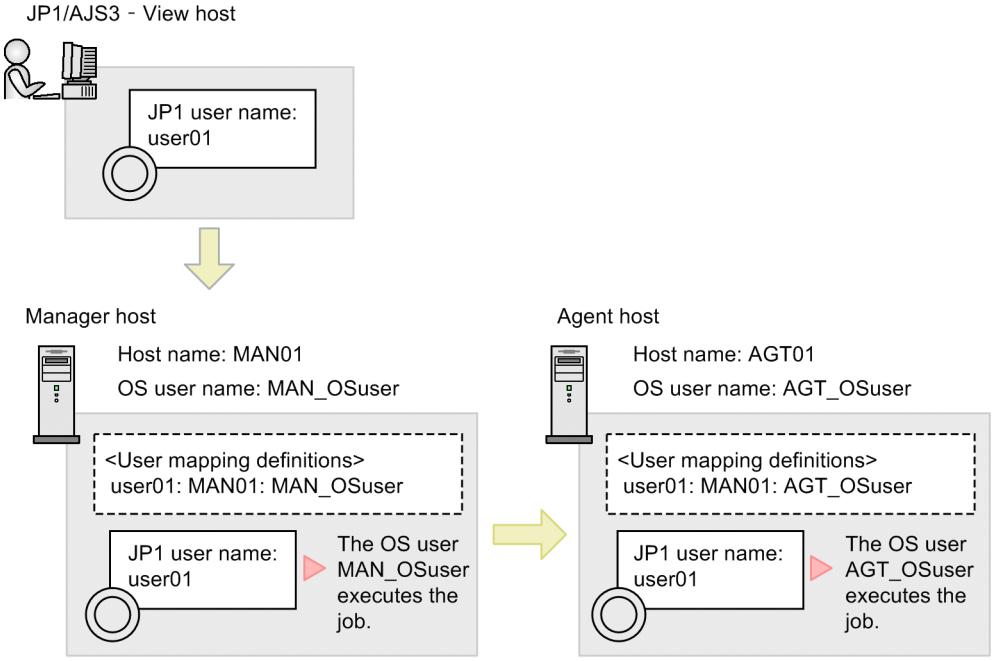
1.4.4 Setting up the prerequisite product

Associate a JP1 user registered in the manager host to an OS user on the agent host so that the JP1 user can access OS resources on the agent host.

To execute a job in JP1/AJS3, a JP1 user accesses OS resources, such as executable files, by using permissions of an OS user associated with the JP1 user, and then performs processing. Therefore, the JP1 user must be associated with an OS user on the host on which the job is to be executed. This association is called *user mapping*.

The following figure shows an overview of user mapping.

Figure 1–3: User mapping



Note:
<User mapping definitions> in the figure indicates *JP1-user-name*:*server-host-hame*:*OS-user name*.

In this figure, a job executed by the JP1 user `user01` on the JP1/AJS3 - View host is executed by the OS user `MAN_OSuser` on the manager host. If the job is transferred to the agent host, the job is executed by the OS user `AGT_OSuser` on the agent host.

Tip

If you performed the automatic setup processing when installing JP1/Base, the information shown below is automatically specified as initial settings. If you perform operations using the users in the initial settings, you do not need to set up JP1/Base.

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	* (asterisk)
5		Granted permissions	All administrator roles
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	OS user entered in the window for entering the OS user name and password
8		Server host name	* (asterisk)

Note:

Items for Nos. 1 to 5 are JP1/Base settings required on the manager host. You do not specify these items on the agent host.

Related topics

- *1.4.4(1) Setting user mapping*

(1) Setting user mapping

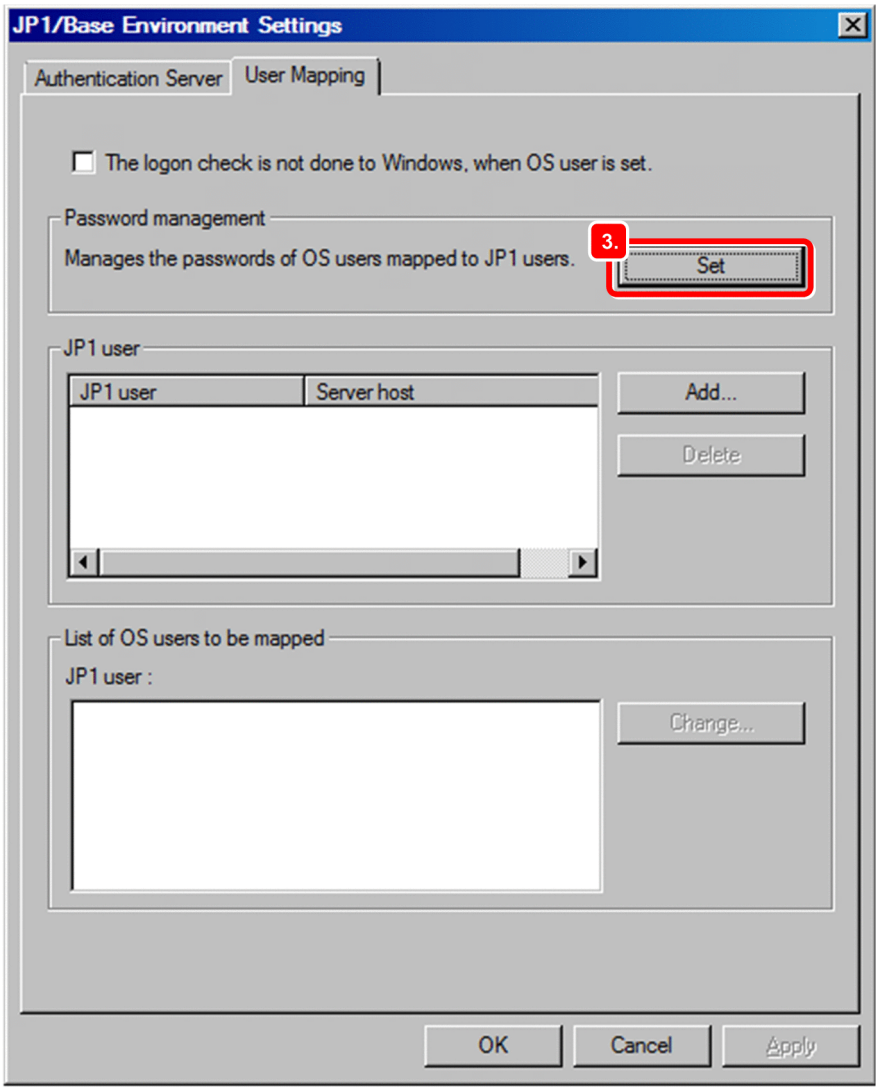
Map a JP1 user to an OS user on the agent host so that the JP1 user can access the OS resources on the agent host.

Prerequisites

- Log in to the agent host as an OS user with Administrator permissions.
- OS users to be mapped to JP1 users must have permission to log on locally on the agent host. This permission can be set in, for example, **Local Security Policy** in **Administrative Tools** in Windows. Assign local logon permission in advance to the OS users to be mapped.

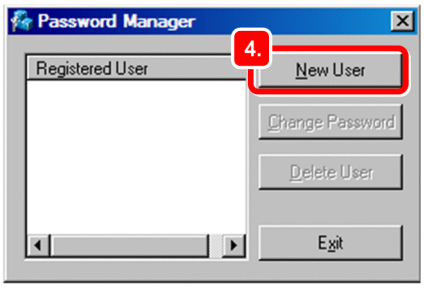
Procedure

1. From the **Start** menu of Windows, select **Programs**, **JP1_Base**, and then **setup**.
   The JP1/Base Environment Settings dialog box appears.
2. Click the **User Mapping** tab.
   The **User Mapping** tab appears.
3. In the **Password management**, click the **Set** button.



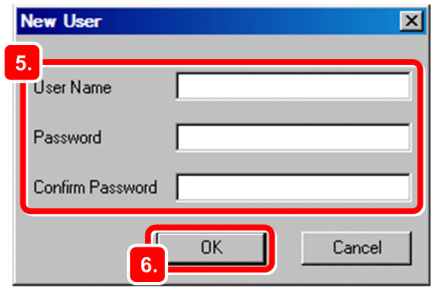
The Password Manager dialog box appears.

4. Click the **New User** button.



The New User dialog box appears.

5. In **User Name**, enter the OS user name. In **Password** and **Confirm Password**, enter the password of the OS user.



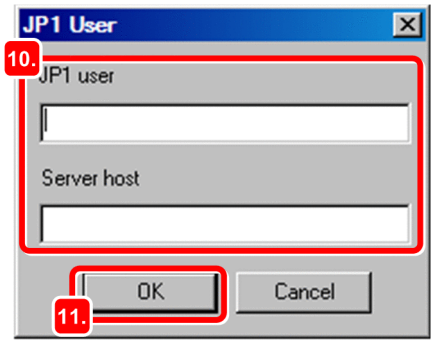
6. Click the **OK** button.
   A message dialog box indicating that the OS user has been registered appears.

7. In the message dialog box, click the **OK** button.
   The message dialog box closes. In the Password Manager dialog box, the registered OS user name appears.

8. In the Password Manager dialog box, click the **Exit** button.
   The Password Manager dialog box closes.

9. In the JP1/Base Environment Settings dialog box, in **JP1 user**, click the **Add** button.
   The JP1 User dialog box appears.

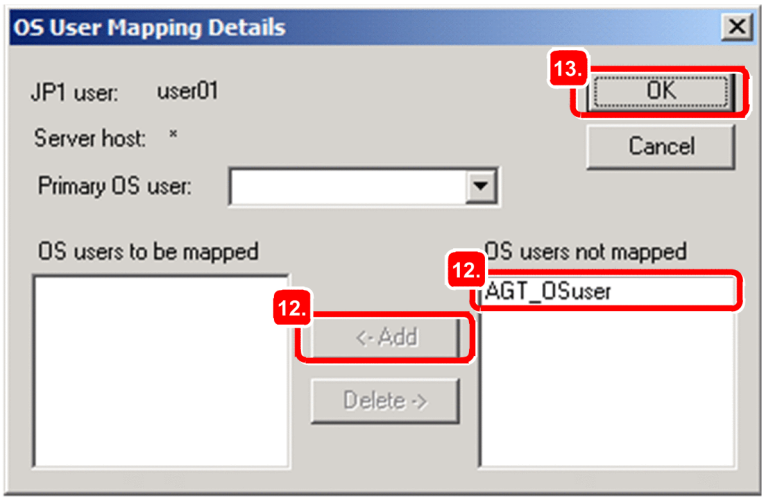
10. In **JP1 user**, enter the JP1 user name. In **Server host**, enter the name of the host from which job execution will be requested.
    For **JP1 user**, specify the JP1 user name to be mapped to the OS user. For **Server host**, specify the host that accepts job execution requests.



> **Tip**
>
> Specify an asterisk (*) in **Server host** to accept job execution requests from all hosts.

11. Click the **OK** button.
    The JP1 User dialog box closes, and then the OS User Mapping Details dialog box appears.
    The **OS users not mapped** list displays the OS user you specified in step 5.

12. In the **OS users not mapped** list, select the OS user to be mapped to the JP1 user, and then click **Add**.



The selected OS user is added to the **OS users to be mapped** list.

13. Click the **OK** button.

    The OS User Mapping Details dialog box closes.

    In the JP1/Base Environment Settings dialog box, in **JP1 user**, the JP user is added. When you select this JP1 user, the mapped OS user appears in **List of OS users to be mapped**.

14. Click the **Apply** button.

Result

The JP1 user and the OS user on the agent host are mapped.

Postrequisites

Install JP1/AJS3 - View on a JP1/AJS3 - View host, and install JP1/AJS3 - Web Console on the Web Console Server.

If you operate JP1/AJS3 - Agent with the default settings, you do not need to set up JP1/AJS3 - Agent.

Related topics

- *1.5.1 Installing JP1/AJS3 - View*
- *1.6.1 Installing JP1/AJS3 - Web Console*

1.4.5 Setting up JP1/AJS3 - Agent

If you operate JP1/AJS3 - Agent with the default settings, a special setup is not required after installation.

1.5 Installation and setup on a JP1/AJS3 - View host

Install JP1/AJS3 - View to configure the JP1/AJS3 - View host.

1.5.1 Installing JP1/AJS3 - View

Install JP1/AJS3 - View on the JP1/AJS3 - View host.

Prerequisites

- Make sure that the OS of the JP1/AJS3 - View host is a prerequisite OS of JP1/AJS3 - View.
- Log in to the JP1/AJS3 - View host as an OS user with Administrator permissions.

Procedure

1. Terminate all JP1 programs.
2. Insert the distribution media into the drive and start the installation.
   Proceed with the installation according to the instructions of the started installer. Specify the following items during installation:
   - User information
   - Installation folder
     The default installation folder is as follows:
     In an x86 environment:
     system-drive`:\Program Files\HITACHI\JP1AJS2V`
     In an x64 environment:
     system-drive`:\Program Files (x86)\HITACHI\JP1AJS2V`
     In an x64 environment, do not install JP1/AJS3 - View under *system-drive*`:\Program Files\`. Problems might occur during operation if JP1/AJS3 - View is in a `Program Files` folder that contains 64-bit modules.
     Do not install JP1/AJS3 - View in the installation folder of any other product.
3. If you are prompted to restart the system, restart Windows.

Result

JP1/AJS3 - View is installed on the JP1/AJS3 - View host.

Postrequisites

Log in to JP1/AJS3 - Manager from JP1/AJS3 - View.

If you operate JP1/AJS3 - View with the default settings, you do not need to set up JP1/AJS3 - View.

Related topics

- *1.7 Logging in to JP1/AJS3 - Manager from JP1/AJS3 - View*

1.5.2 Setting up JP1/AJS3 - View

If you operate JP1/AJS3 - View with the default settings, a special setup is not required after installation.

1.6 Installation and setup on the Web Console server

Install and set up JP1/AJS3 - Web Console to configure the Web Console server.

1.6.1 Installing JP1/AJS3 - Web Console

Install JP1/AJS3 - Web Console on the Web Console server.

Prerequisites

- Make sure that the OS of the Web Console server is a prerequisite OS of JP1/AJS3 - Web Console.
- Log in to the Web Console server as an OS user with Administrator permissions.

Procedure

1. Terminate all JP1 programs.
2. Insert the distribution media into the drive and start the installation.
   Proceed with the installation according to the instructions of the started installer. Specify the following items during installation:
   - User information
   - Installation folder
     The default installation folder is as follows:
     system-drive`:\Program Files\HITACHI\JP1AJS3WEB`
     Do not install JP1/AJS3 - Web Console in the installation folder of any other product.
3. If you are prompted to restart the system, restart Windows.

Result

JP1/AJS3 - Web Console is installed on the Web Console server.

Postrequisites

Make sure that the services are running.

Related topics

- *1.6.2 Confirming that the services are running*

1.6.2 Confirming that the services are running

Before you start the setup, make sure that the services on the Web Console server are running. If any service is not running, start it.

Prerequisites

Log in to the Web Console server as an OS user with Administrator permissions.

Procedure

1. In the Control Panel window, select **Administrative Tools** and then **Services**.
2. Make sure that the following services are running:
   - JP1/AJS3 Web Application Server
   - JP1/AJS3 HTTP Server

   If you can confirm that the services are running, this step is completed. If any service is not running, perform step 3.
3. Right-click the service you want to start, and then select **Start**.
   The selected service is started.

Result

You have confirmed that the services on the Web Console server are running.

Postrequisites

Log in to JP1/AJS3 - Web Console from web browser.

If you operate JP1/AJS3 - Web Console with the default settings, you do not need to set up JP1/AJS3 - Web Console.

Related topics

- *1.8 Logging in to JP1/AJS3 - Web Console from web browser*

1.6.3 Setting up JP1/AJS3 - Web Console

If you operate JP1/AJS3 - Web Console with the default settings, a special setup is not required after installation.

1.7 Logging in to JP1/AJS3 - Manager from JP1/AJS3 - View

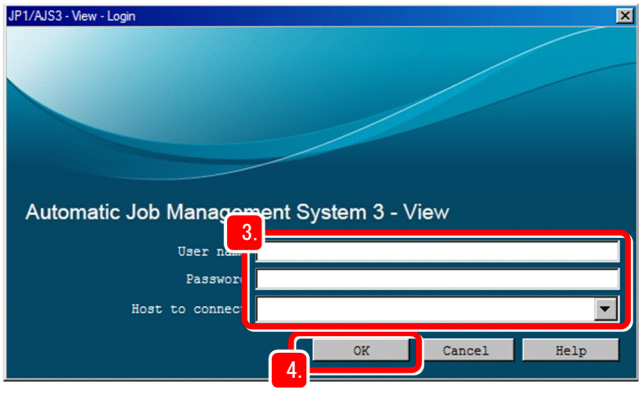
To use JP1/AJS3 - View to define and execute jobs, you must log in to JP1/AJS3 - Manager. This section describes how to use JP1/AJS3 - View to log in to JP1/AJS3 - Manager.

Procedure

1. Log in to the JP1/AJS3 - View host.

2. From the **Start** menu of Windows, select **All Programs**, **JP1_Automatic Job Management System 3 - View**, and then **Job Management System**.
   The Login window appears.

3. Enter information about the JP1 user who logs in.



   User name
   Enter the name of a JP1 user registered in the authentication server.

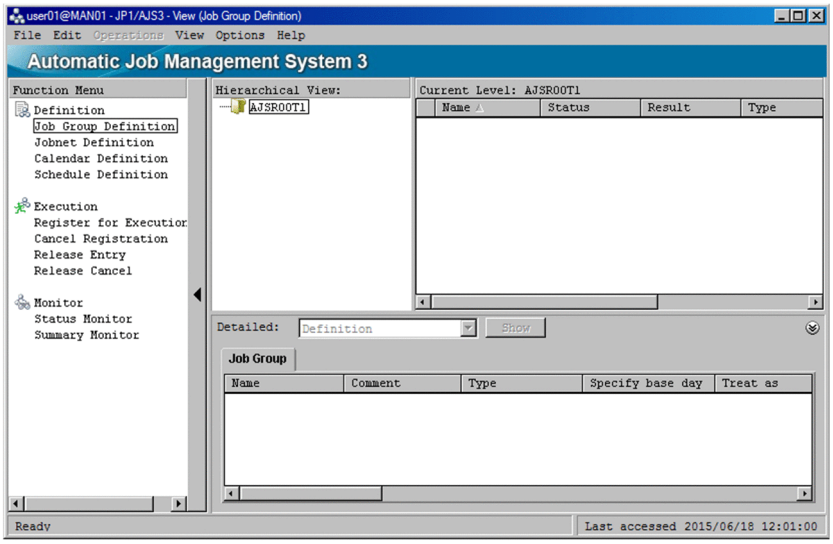
   Password
   Enter the password of a JP1 user registered in the authentication server.

   Host to connect
   Specify the name of a manager host you want to connect.

4. Click the **OK** button.

Result

The JP1/AJS3 - View window (Main window) appears.



Important

If you cannot log in, the probable reasons are as follows:

- Manager host services are not running.
  Required services might not be running on the manager host. Make sure that the services are running. If any service is not running, start it.
- User mapping is not set correctly.
  User mapping might not have been correctly set on the manager host. Set user mapping correctly.

Postrequisites

Start system operation.

Related topics

- *1.3.3 Confirming that the services are running*
- *1.3.4(4) Setting user mapping*

1.8 Logging in to JP1/AJS3 - Web Console from web browser

To monitor jobnets by using Web GUI, you must log in from a web browser to JP1/AJS3 - Web Console. This section describes how to log in from a web browser to JP1/AJS3 - Web Console.

Prerequisites

Make sure that the web browser you use satisfies the following conditions. For details about how to do so, see the documentation for the web browser.

- Active scripting or Javascript must be enabled in your web browser.
- You must enable DOM storage.

Procedure

1. In the address bar of your web browser, enter the URL of the Login screen for JP1/AJS3 - Web Console.

   ```
   http://host-name-or-IP-address-of-Web-Console-server:22252/ajs/login.html
   ```

   The Login screen appears.

2. Enter information about the JP1 user who logs in.

   User name

   Enter the name of a JP1 user registered in the authentication server.

   Password

   Enter the password of a JP1 user registered in the authentication server.

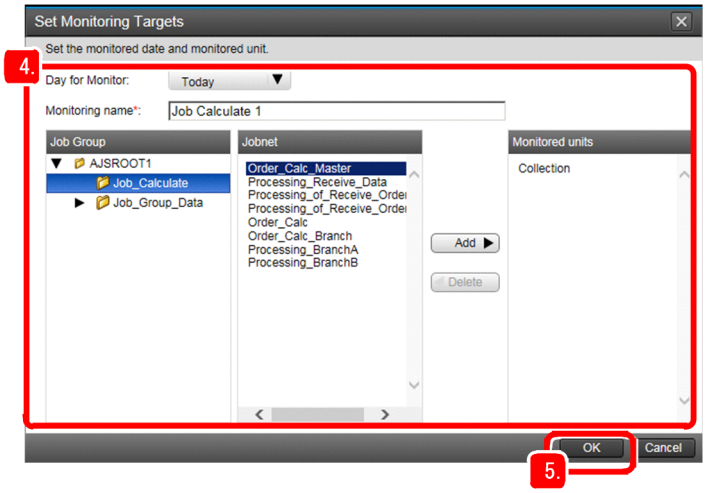
   Host to connect

   Specify the name of a manager host you want to connect.

3. Click the **OK** button.

   The Set Monitoring Targets dialog box appears.

4. In the Dashboard screen of Web GUI, set the information about the jobnet to be monitored.



Day for Monitor

Select the day to be displayed in the Dashboard screen as the monitoring-target day.

Monitoring name

Enter a monitoring name.

Monitored units

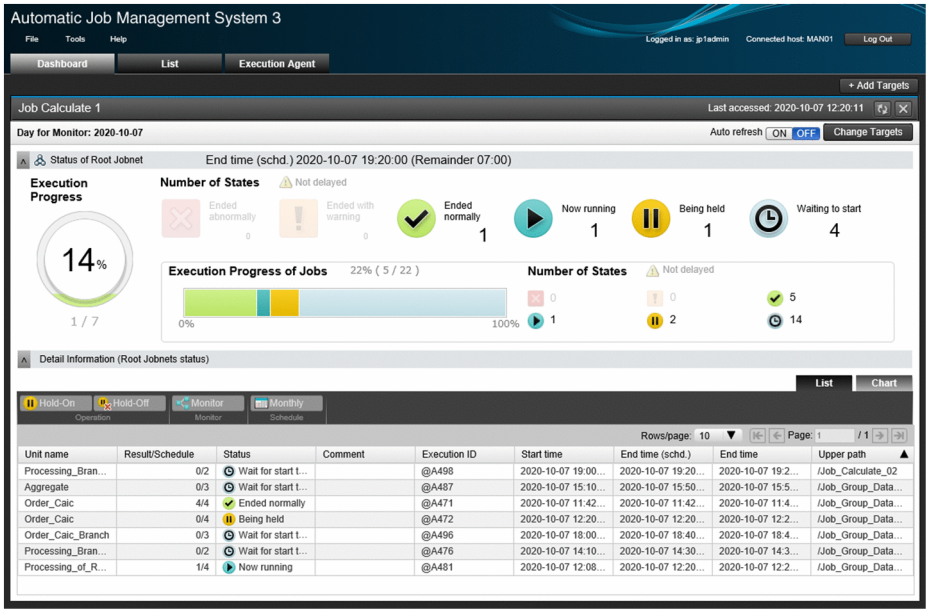
Use the **Job Group** tree and **Jobnet** list box to select the jobnet to be monitored, and then click the **Add** button to set the selected jobnet as a monitoring target.

5. Click the **OK** button.

   If you want to set the monitoring-target jobnet at a later time, click the **Cancel** button.

Result

The Dashboard screen appears.



Important

If you cannot log in, the probable reasons are as follows:

- Manager host services are not running.

  Required services might not be running on the manager host. Make sure that the services are running. If any service is not running, start it.

- User mapping is not set correctly.

  User mapping might not have been correctly set on the manager host. Set user mapping correctly.

Postrequisites

Start monitoring of the jobnet.

Related topics

- *1.3.3 Confirming that the services are running*
- *1.3.4(4) Setting user mapping*

2 Setting Up JP1/AJS3 (in Linux)

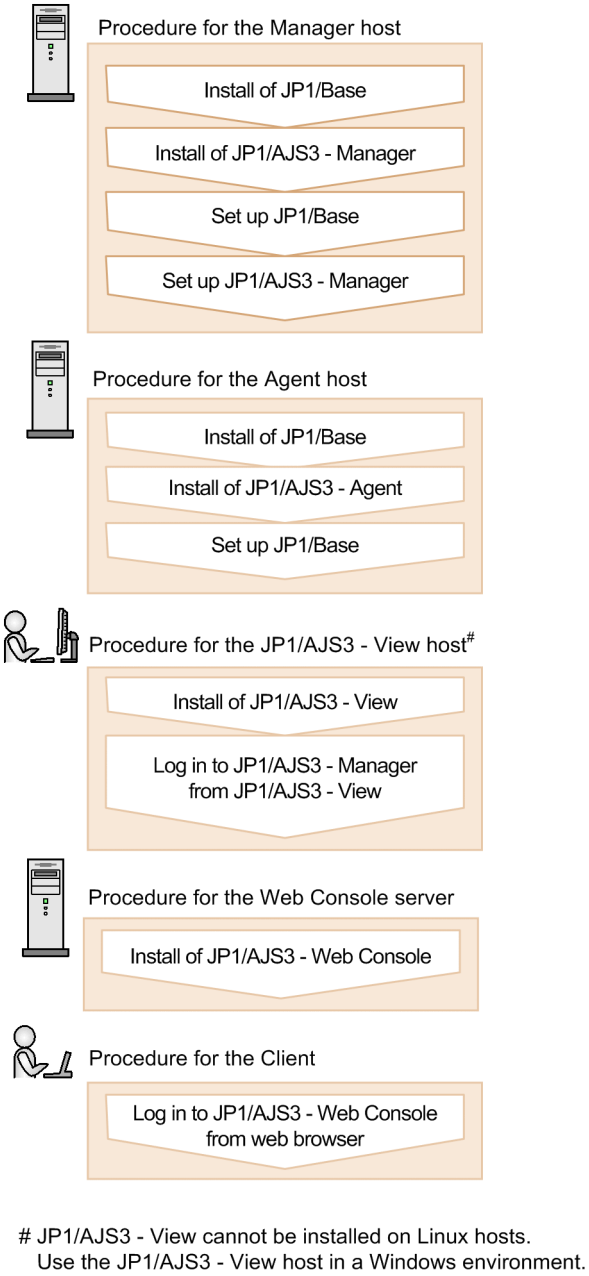
Before you can use JP1/AJS3 to automate routine or periodic tasks, set up a JP1/AJS3 system. This chapter describes how to install and set up JP1/AJS3 (Linux version).

2.1 General procedure for setting up JP1/AJS3

Install and set up JP1/AJS3 separately on a manager host, agent host, JP1/AJS3 - View host, and Web Console server.

The following figure shows the installation and setup procedures for each host.

Figure 2–1: Installation and setup procedures



Tip

- You can configure the hosts (manager host, agent host, JP1/AJS3 - View host, and Web Console server) in any order.
- If you operate the agent host, JP1/AJS3 - View host, and Web Console server with the default settings, you do not need to set up JP1/AJS3 - Agent, JP1/AJS3 - View, and JP1/AJS3 - Web Console.

Related topics

- *1.5 Installation and setup on a JP1/AJS3 - View host*
- *2.3 Installation and setup on the manager host*
- *2.4 Installation and setup on the agent host*
- *2.5 Installation and setup on the Web Console server*
- *2.6 Logging in to JP1/AJS3 - Web Console from web browser*

2.2 Preparation before installation

This section describes the preparations required before installing JP1/Base and JP1/AJS3.

2.2.1 Memory and disk space required for installation

For details about the amount of memory and disk space required for installation, see the Release Notes.

2.2.2 Prerequisite language settings for OS

The language settings for the OS of the manager host, the agent host, the JP1/AJS3 - View host, and the Web Console server must be specified as the same language as that used in JP1/AJS3.

Make sure that the value of the environment variable `LANG` is `C`. If the language settings are incorrect, characters might be garbled, and definition data might be altered.

2.3 Installation and setup on the manager host

Install and set up JP1/Base and JP1/AJS3 - Manager to configure the manager host.

2.3.1 Installing the prerequisite product

Install JP1/Base on the manager host.

Prerequisites

- Make sure that the OS of the manager host is a prerequisite OS of JP1/Base.
- Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Terminate all JP1 programs.
2. For the value of the environment variable LANG, specify the character encoding to be used when running JP1.
   The following is an example of specifying ASCII as the character encoding.
   Example: `export LANG=C`
3. Insert the distribution media into the drive.
4. Execute the following command to mount the distribution media:

   ```
   /bin/mount -t iso9660 -r device-special-file-name /mnt/dvdrom
   ```

   In the above command, */mnt/dvdrom* is specified as the mount-point directory name. However, the mount-point directory name changes according to the environment. For details about how to mount the distribution media, see the documentation for the OS.
   If the distribution media is automatically mounted, skip this step.
5. Execute the following command to install and start the Hitachi Program Product Installer:

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

   Note that you need to replace */mnt/dvdrom* with the mount-point directory name of the distribution media you use. If the distribution media is automatically mounted, replace */mnt/dvdrom* with the device special name.
   When the Hitachi Program Product Installer starts, the following initial window appears:

   ```
   L)  List Installed Software.
   I )  Install Software.
   D) Delete Software.
   Q) Quit.

   Select Procedure ===>

   +-----------------------------------------------------------------------+
    CAUTION!
    YOU SHALL INSTALL AND USE THE SOFTWARE PRODUCT LISTED IN THE
      "List Installed Software."  UNDER THE TERMS AND CONDITION OF
    THE SOFTWARE LICENSE AGREEMENT ATTACHED TO SUCH SOFTWARE PRODUCT.
   +-----------------------------------------------------------------------+
   ```

6. In the initial widow of the Hitachi Program Product Installer, enter **L** to display a list of software programs.

7. In the list of software programs, move the cursor to `JP1/Base`, and then press the space bar to select it.
8. In the Hitachi Program Product Installer window, enter **I** to start installation of JP1/Base.
   Initial setup is automatically performed so that you can use JP1/Base immediately after installation is completed.
9. After installation is completed, enter **Q** to return to the initial window.
10. Terminate the Hitachi Program Product Installer.
11. Create a JP1/Base automated startup script so that JP1/Base automatically starts when the system starts.
    Execute the command as follows:
    ```
    cd /etc/opt/jp1base
    cp -p jbs_start.model jbs_start
    ```

Result

JP1/Base is installed on the manager host. Note that for a new installation of JP1/Base, the following information is automatically set as initial settings:

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	* (asterisk)
5		Granted permissions	All administrator roles
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	OS user entered in the window for entering the OS user name and password
8		Server host name	* (asterisk)

JP1/Base now automatically starts when the system starts.

Postrequisites

Install JP1/AJS3 - Manager on the manager host.

Related topics

- *2.3.2 Installing JP1/AJS3 - Manager*
- *2.3.4 Setting up the prerequisite product*

2.3.2 Installing JP1/AJS3 - Manager

Install JP1/AJS3 - Manager on the manager host.

Prerequisites

- Make sure that the OS of the manager host is a prerequisite OS of JP1/AJS3 - Manager.

- Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Terminate all JP1 programs.

2. For the value of the environment variable LANG, specify the character encoding to be used when running JP1.
   The following is an example of specifying ASCII as the character encoding.
   Example: `export LANG=C`

3. Insert the distribution media into the drive.

4. Execute the following command to mount the distribution media:

   ```
   /bin/mount -t iso9660 -r device-special-file-name /mnt/dvdrom
   ```

   In the above command, */mnt/dvdrom* is specified as the mount-point directory name. However, the mount-point directory name changes according to the environment. For details about how to mount the distribution media, see the documentation for the OS.
   If the distribution media is automatically mounted, skip this step.

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

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

   Note that you need to replace */mnt/dvdrom* with the mount-point directory name of the distribution media you use. If the distribution media is automatically mounted, replace */mnt/dvdrom* with the device special name.
   When the Hitachi Program Product Installer starts, the following initial window appears:

   ```
   L)  List Installed Software.
   I )  Install Software.
   D) Delete Software.
   Q) Quit.

   Select Procedure ===>

   +-----------------------------------------------------------------------+
    CAUTION!
    YOU SHALL INSTALL AND USE THE SOFTWARE PRODUCT LISTED IN THE
     “List Installed Software.” UNDER THE TERMS AND CONDITION OF
    THE SOFTWARE LICENSE AGREEMENT ATTACHED TO SUCH SOFTWARE PRODUCT.
   +-----------------------------------------------------------------------+
   ```

6. In the initial widow of the Hitachi Program Product Installer, enter **L** to display a list of software programs.

7. In the list of software programs, move the cursor to `JP1/AJS3 - Manager`, and then press the space bar to select it.

8. In the Hitachi Program Product Installer window, enter **I** to start installation of JP1/AJS3 - Manager.

9. After installation is completed, enter **Q** to return to the initial window.

10. Terminate the Hitachi Program Product Installer.

11. Specify the JP1/AJS3 - Manager automated startup script so that JP1/AJS3 - Manager automatically starts when the system starts.
    Use a text editor such as vi to open the `/etc/opt/jp1ajs2/jajs_start` file, and then delete `: #` at the beginning of the line indicating `/opt/jp1ajs2/bin/jajs_spmd`.

Before the change

```
: # /opt/jp1ajs2/bin/jajs_spmd >/dev/null 2>/dev/null
```

After the change

```
/opt/jp1ajs2/bin/jajs_spmd >/dev/null 2>/dev/null
```

Result

JP1/AJS3 - Manager is installed on the manager host.

JP1/AJS3 - Manager now automatically starts when the system starts.

Postrequisites

Make sure that the services are running.

Related topics

- *2.3.3 Confirming that the services are running*

2.3.3 Confirming that the services are running

Before you start the setup, make sure that the services on the manager host are running. If any service is not running, start it.

Prerequisites

Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Make sure that JP1/Base and JP1/AJS3 are running.
   To make sure that JP1/Base is running, execute the `jbs_spmd_status` and `jevstat` commands and check the operation status of the JP1/Base process.
   To make sure that JP1/AJS3 is running, execute the `jajs_spmd_status` command and check the operation status of the JP1/AJS3 process.
   If you can confirm that both products are running, this step is completed. If either product is not running, perform step 2 or 3.

2. Execute the `/etc/opt/jp1base/jbs_start` script.
   JP1/Base starts.

3. Execute the `jajs_start` command.
   JP1/AJS3 starts.

Result

You have confirmed that the services are running on the manager host.

Postrequisites

Set up JP1/Base on the manager host.

Related topics

- *2.3.4 Setting up the prerequisite product*

2.3.4 Setting up the prerequisite product

Register JP1 users (accounts reserved for JP1 only) in JP1/Base, and then set operation permissions for the JP1 users. Then, associate the JP1 users with OS users so that the JP1 users can access OS resources.

Setting up JP1/Base on the manager host consists of the following four steps:

Setting up an authentication server:

An authentication server manages access permissions of JP1 users. Set up the server on which JP1/Base is installed as an authentication server.

Registering JP1 users in the authentication server:

Register JP1 users in the authentication server.

Setting operation permissions for JP1 users:

Set permissions (JP1 permission levels) that allow JP1 users to define and execute applications.

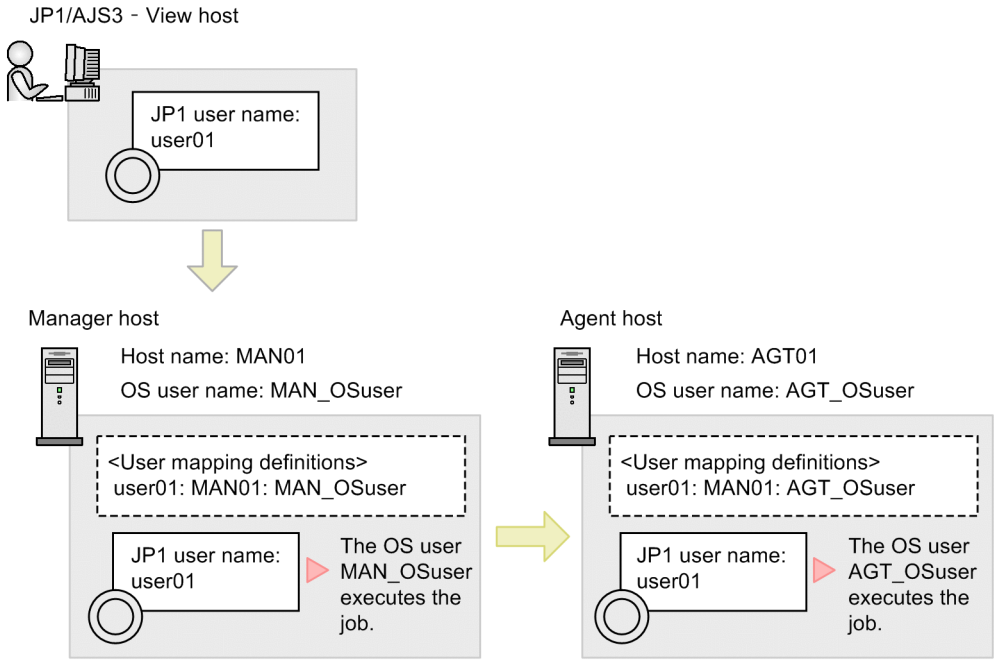
Setting user mapping:

User mapping is an operation to associate JP1 users with OS users on the host on which jobs are executed.

To execute a job in JP1/AJS3, a JP1 user accesses OS resources such as executable files by using permissions of an OS user associated with the JP1 user, and then performs processing. Therefore, the JP1 user must be associated with an OS user on the host on which the job is executed.

The following figure shows an overview of user mapping.

Figure 2–2: User mapping



Note:

<User mapping definitions> in the figure indicates *JP1-user-name*:*server-host-hame*:*OS-user name*.

In this figure, the job executed by the JP1 user `user01` on the JP1/AJS3 - View host is executed by the OS user `MAN_OSuser` on the manager host. If the job is transferred to the agent host, the job is executed by the OS user `AGT_OSuser` on the agent host.

Tip

Note that for a new installation of JP1/Base, the following information is automatically set as initial settings. If you perform operations using the users in the initial settings, you do not need to set up JP1/Base.

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	* (asterisk)
5		Granted permissions	All administration permissions
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	root
8		Server host name	* (asterisk)

Related topics

- *2.3.4(1) Setting up an authentication server*
- *2.3.4(2) Registering JP1 users in the authentication server*
- *2.3.4(3) Setting operation permissions for JP1 users*
- *2.3.4(4) Setting user mapping*

(1) Setting up an authentication server

Set the name of the host used as the authentication server in JP1/Base.

This procedure is not required if you set the local host as the authentication server.

Prerequisites

Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Execute the command as follows:

```
jbssetusrsrv host-name-of-the-authentication-server
```

Result

The manager host is set as the authentication server.

Postrequisites

Register JP1 users in the authentication server.

Related topics

- *2.3.4(2) Registering JP1 users in the authentication server*

(2) Registering JP1 users in the authentication server

Register a JP1 user in the authentication server.

Prerequisites

Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Execute the command as follows:

```
jbsadduser JP1-user-name
```

2. Enter the password of the JP1 user according to the instruction.

Result

The JP1 user is registered.

Postrequisites

Set operation permissions for the JP1 user.

Related topics

- *2.3.4(3) Setting operation permissions for JP1 users*

(3) Setting operation permissions for JP1 users

Set the JP1 permission level for a JP1 user by defining the *JP1 resource group* and *JP1 permission level name* for the JP1 user.

Prerequisites

Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Use a text editor such as vi to open the following file (user permission level file):

```
/etc/opt/jp1base/conf/user_acl/JP1_UserLevel
```

   The following definition is specified in the file by default:

```
jp1admin:*=JP1_AJS_Admin,JP1_Console_Admin,JP1_JPQ_Admin
```

2. Set a JP1 resource group and JP1 permission level.
   Edit the user permission level file to set a JP1 permission level.
   The following shows the coding format of the user permission level file:

```
JP1-user-name:JP1-resource-group-mame=JP1-permission-level-name:JP1-resour
ce-group-name=JP1-permission-level-name ...
```

To assign the administrator role for the JP1 resource group * to the JP1 user user01, specify as follows:

```
user01:*=JP1_AJS_Admin,JP1_JPQ_Admin
```

3. Save and close the file.

4. Execute the jbsaclreload command.

Result

The JP1 permission level is set for the JP1 user.

Postrequisites

Set user mapping.

Related topics

- *2.3.4(4) Setting user mapping*
- *2.3.4(5) Coding format of the user permission level file*

(4) Setting user mapping

Map the JP1 user to an OS user on the manager host so that the JP1 user can access OS resources on the manager host.

Prerequisites

Log in to the manager host as an OS user with superuser privileges.

Procedure

1. Use a text editor such as vi to open the following file (user permission level file):

```
/etc/opt/jp1base/conf/user_acl/jp1BsUmap.conf
```

2. Set user mapping.
   Edit the user mapping definition file to set user mapping.
   The following shows the coding format of the user mapping definition file:

```
JP1-user-name:host-name-from-which-to-accept-job-execution-requests:OS-use
r-name
```

   To map the JP1 user user01 to the OS user MAN_OSuser on the manager host, specify as follows:

```
user01:*:MAN_OSuser
```

3. Close and save the file.

4. Execute the jbsmkumap command.

Result

The JP1 user and the OS user on the manager host are mapped.

Postrequisites

Set up JP1/AJS3 - Manager on the manager host.

Related topics

- *2.3.4(6) Coding format of the user mapping definition file*
- *2.3.5 Setting up JP1/AJS3 - Manager*

(5) Coding format of the user permission level file

You can set JP1 permission levels by editing the user permission level file.

The following describes the coding format of the user permission level file.

File path

```
/etc/opt/jp1base/conf/user_acl/JP1_UserLevel
```

Format

```
JP1-user-name:JP1-resource-group-name=JP1-permission-level-name:JP1-resource
-group-name=JP1-permission-level-name...
```

- The following definition is specified in the file by default:

  ```
  jp1admin:*=JP1_AJS_Admin,JP1_Console_Admin,JP1_JPQ_Admin
  ```

- You can manage units by group by using the provided JP1 resource groups. Specify the name of the JP1 resource group to which the unit you want to operate belongs, or specify a new JP1 resource group name. To define permissions for multiple resource groups, use a colon (`:`) to separate entries.
- To define multiple JP1 permission levels, use a comma (`,`) to separate them.
- To insert a comment, enter a semicolon (`;`) at the beginning of the line. The text up to a linefeed is handled as a comment.

Tip

The following describes the JP1 permission level names used in JP1/AJS3:

Classification of operation permissions	JP1 permission level names	Description
Permissions relating to jobnet definition and execution	JP1_AJS_Admin	Administrator role that allows the user to change the unit owner and resource groups, and define, execute, and edit jobnets.
	JP1_AJS_Manager	This permission allows the user to define, execute, and edit jobnets.
	JP1_AJS_Editor	This permission allows the user to define and edit jobnets.
	JP1_AJS_Operator	This permission allows the user to execute and reference jobnets.
	JP1_AJS_Guest	This permission allows the user to reference jobnets.

Classification of operation permissions	JP1 permission level names	Description
Permissions relating to manipulation of agent management information	JP1_JPQ_Admin	Administrator role that allows the user to add, change, and delete the definitions of execution agents and execution agent groups.
	JP1_JPQ_Operator	This permission allows the user to change the job transfer restriction status for execution agents and execution agent groups.
	JP1_JPQ_User	This permission allows the user to reference the status and definitions of execution agents and execution agent groups.

Tip

Specify an asterisk (`*`) for *JP1-resource-group-name* to allow the JP1 user to access all JP1 resource groups.

Example

The following shows an example of setting JP1 permission levels for the JP1 users `user01` and `user02`:

- The JP1 user `user01` has `JP1_AJS_Operator` and `JP1_JPQ_Operator` (execution and reference permissions) for the JP1 resource groups `unit01` and `unit02`.
- The JP1 user `user02` has `JP1_AJS_Admin` and `JP1_JPQ_Admin` (administrator roles) for the JP1 resource group `*`.
- Permissions assigned to `jp1admin` by default are retained as they are.

File editing example

```
jp1admin:*=JP1_AJS_Admin,JP1_Console_Admin,JP1_JPQ_Admin
user01:unit01=JP1_AJS_Operator,JP1_JPQ_Operator:unit02=JP1_AJS_Operator,JP
1_JPQ_Operator
user02:*=JP1_AJS_Admin,JP1_JPQ_Admin
```

Related topics

- *2.3.4(3) Setting operation permissions for JP1 users*

(6) Coding format of the user mapping definition file

You can set user mapping by editing the user mapping definition file and then executing the `jbsmkumap` command.

The following describes the coding format of the user mapping definition file.

File path

```
/etc/opt/jp1base/conf/user_acl/jp1BsUmap.conf
```

Format

```
JP1-user-name:host-name-from-which-to-accept-job-execution-requests:OS-user-
name
```

- For *JP1-user-name* and *OS-user-name*, specify the users to be mapped.
- For *host-name-from-which-to-accept-job-execution-requests*, specify the host that accepts job execution requests.

> **Tip**
>
> Specify an asterisk (`*`) for *host-name-from-which-to-accept-job-execution-requests* to accept job execution requests from all hosts.

Example

The following shows an example of setting user mapping for the JP1 users `user01` and `user02`.

- Jobs defined in JP1/AJS3 - View by the JP1 user `user01` are executed on the manager host `MAN01`.
- Jobs defined in JP1/AJS3 - View by the JP1 user `user02` are executed on unspecific manager hosts.
- All manager hosts use the OS user name `MAN_OSuser` to execute jobs.

File editing example

```
user01:MAN01:MAN_OSuser
user02:*:MAN_OSuser
```

Related topics

- *2.3.4(4) Setting user mapping*

2.3.5 Setting up JP1/AJS3 - Manager

To execute jobs on an agent host, you must register an execution agent in JP1/AJS3 - Manager so that JP1/AJS3 - Manager can request the execution agent to execute the jobs.

Prerequisites

- Log in to the manager host as a superuser, or use the `su` command to change the user to a superuser.
- Map a JP1 user having `JP1_JPQ_Admin` permission to an OS user who logs in to the manager host.
- If the name of the OS user who logs in to the manager host and the JP1 user name mapped to that OS user are different, set the JP1 user name for the environment variable `JP1_USERNAME`.

Procedure

1. Execute the `ajsagtadd` command.

   The `ajsagtadd` command adds an execution agent. The following shows an example of executing the command:

   ```
   ajsagtadd -a AGT01 -c 00:00-00:00=5
   ```

   The following describes the arguments and information to be specified.

   `-a` *execution-agent-name*

   Specify the name of an execution agent you want to add.

`-c` *time-time=maximum-number-of-concurrently-executable-jobs*

Specify a time period and the maximum number of concurrently executable jobs to be applied to the time period. The above example specifies that a maximum of five jobs can be concurrently executed on the agent host from 0:00 to 0:00 on the following day.

2. Execute the `ajsagtshow` command.

   The `ajsagtshow` command outputs execution agent information. The following shows an example of executing the command:

```
ajsagtshow -a AGT01
```

   The following describes the arguments and information to be specified.

   `-a` *execution-agent-name*

   Outputs information about the specified execution agent.

   When the `ajsagtshow` command is executed, the following information is displayed:

```
KNAC1101-I The output of the agent manager information started.
HOSTNAME:MAN01
AGENT     STATUS HOST      CON-EXE  QUE  JOB EVENT DESCRIPTION
--------- ------ --------- ------- ---- ---- ----- -----------
AGT01     Ef     AGT01           5    0    0     0
KNAC1102-I The output of the agent manager information ended.
```

Result

The execution agent is added to JP1/AJS3 - Manager.

Postrequisites

Configure the agent host.

Related topics

- *2.4 Installation and setup on the agent host*

2.4 Installation and setup on the agent host

Install and set up JP1/Base and JP1/AJS3 - Agent to configure the agent host.

2.4.1 Installing the prerequisite product

Install JP1/Base on the agent host.

Prerequisites

- Make sure that the OS of the agent host is a prerequisite OS of JP1/Base.
- Log in to the agent host as an OS user with superuser privileges.

Procedure

1. Terminate all JP1 programs.
2. For the value of the environment variable LANG, specify the character encoding to be used when running JP1.
   The following is an example of specifying ASCII as the character encoding.
   Example: `export LANG=C`
3. Insert the distribution media into the drive.
4. Execute the following command to mount the distribution media:

   ```
   /bin/mount -t iso9660 -r device-special-file-name /mnt/dvdrom
   ```

   In the above command, */mnt/dvdrom* is specified as the mount-point directory name. However, the mount-point directory name changes according to the environment. For details about how to mount the distribution media, see the documentation for the OS.
   If the distribution media is automatically mounted, skip this step.
5. Execute the following command to install and start the Hitachi Program Product Installer:

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

   Note that you need to replace */mnt/dvdrom* with the mount-point directory name of the distribution media you use. If the distribution media is automatically mounted, replace */mnt/dvdrom* with the device special name.
   When the Hitachi Program Product Installer starts, the following initial window appears:

   ```
   L)  List Installed Software.
   I )  Install Software.
   D) Delete Software.
   Q) Quit.

   Select Procedure ===>

   +-----------------------------------------------------------------------+
    CAUTION!
    YOU SHALL INSTALL AND USE THE SOFTWARE PRODUCT LISTED IN THE
      "List Installed Software."  UNDER THE TERMS AND CONDITION OF
    THE SOFTWARE LICENSE AGREEMENT ATTACHED TO SUCH SOFTWARE PRODUCT.
   +-----------------------------------------------------------------------+
   ```

6. In the initial widow of the Hitachi Program Product Installer, enter **L** to display a list of software programs.

7. In the list of software programs, move the cursor to `JP1/Base`, and then press the space bar to select it.

8. In the Hitachi Program Product Installer window, enter **I** to start installation of JP1/Base.
   Initial setup is automatically performed so that you can use JP1/Base immediately after installation is completed.

9. After installation is completed, enter **Q** to return to the initial window.

10. Terminate the Hitachi Program Product Installer.

11. Create a JP1/Base automated startup script so that JP1/Base automatically starts when the system starts.
    Execute the command as follows:

```
cd /etc/opt/jp1base
cp -p jbs_start.model jbs_start
```

Result

JP1/Base is installed on the agent host. Note that for a new installation of JP1/Base, the following information is automatically set as initial settings:

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	* (asterisk)
5		Granted permissions	All administrator roles
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	root
8		Server host name	* (asterisk)

JP1/Base now automatically starts when the system starts.

Postrequisites

Install JP1/AJS3 - Agent on the agent host.

Related topics

- *2.4.2 Installing JP1/AJS3 - Agent*
- *2.4.4 Setting up the prerequisite product*

2.4.2 Installing JP1/AJS3 - Agent

Install JP1/AJS3 - Agent on the agent host.

Prerequisites

- Make sure that the OS of the agent host is a prerequisite OS of JP1/AJS3 - Agent.
- Log in to the agent host as an OS user with superuser privileges.

Procedure

1. Terminate all JP1 programs.

2. For the value of the environment variable LANG, specify the character encoding to be used when running JP1.
   The following is an example of specifying ASCII as the character encoding.
   Example: `export LANG=C`

3. Insert the distribution media into the drive.

4. Execute the following command to mount the distribution media:

   ```
   /bin/mount -t iso9660 -r device-special-file-name /mnt/dvdrom
   ```

   In the above command, */mnt/dvdrom* is specified as the mount-point directory name. However, the mount-point directory name changes according to the environment. For details about how to mount the distribution media, see the documentation for the OS.
   If the distribution media is automatically mounted, skip this step.

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

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

   Note that you need to replace */mnt/dvdrom* with the mount-point directory name of the distribution media you use. If the distribution media is automatically mounted, replace */mnt/dvdrom* with the device special name.
   When the Hitachi Program Product Installer starts, the following initial window appears:

   ```
   L)  List Installed Software.
   I )  Install Software.
   D) Delete Software.
   Q) Quit.

   Select Procedure ===>

   +-----------------------------------------------------------------------+
    CAUTION!
    YOU SHALL INSTALL AND USE THE SOFTWARE PRODUCT LISTED IN THE
     "List Installed Software."  UNDER THE TERMS AND CONDITION OF
    THE SOFTWARE LICENSE AGREEMENT ATTACHED TO SUCH SOFTWARE PRODUCT.
   +-----------------------------------------------------------------------+
   ```

6. In the initial widow of the Hitachi Program Product Installer, enter **L** to display a list of software programs.

7. In the list of software programs, move the cursor to `JP1/AJS3 - Agent`, and then press the space bar to select it.

8. In the Hitachi Program Product Installer window, enter **I** to start installation of JP1/AJS3 - Agent.

9. After installation is completed, enter **Q** to return to the initial window.

10. Terminate the Hitachi Program Product Installer.

11. Specify the JP1/AJS3 - Agent automated startup script so that JP1/AJS3 - Agent automatically starts when the system starts.
    Use a text editor such as vi to open the `/etc/opt/jp1ajs2/jajs_start` file, and then delete `: #` at the beginning of the line indicating `/opt/jp1ajs2/bin/jajs_spmd`.
    Before the change

    ```
    : # /opt/jp1ajs2/bin/jajs_spmd >/dev/null 2>/dev/null
    ```

After the change

```
/opt/jp1ajs2/bin/jajs_spmd >/dev/null 2>/dev/null
```

Result

JP1/AJS3 - Agent is installed on the agent host.

JP1/AJS3 - Agent now automatically starts when the system starts.

Postrequisites

Make sure that the services are running.

Related topics

- *2.4.3 Confirming that the services are running*

2.4.3 Confirming that the services are running

Before you start the setup, make sure that the services on the agent host are running. If any service is not running, start it.

Prerequisites

Log in to the agent host as an OS user with superuser privileges.

Procedure

1. Make sure that JP1/Base and JP1/AJS3 are running.

   To make sure that JP1/Base is running, execute the `jbs_spmd_status` and `jevstat` commands and check the operation status of the JP1/Base process.

   To make sure that JP1/AJS3 is running, execute the `jajs_spmd_status` command and check the operation status of the JP1/AJS3 process.

   If you can confirm that both products are running, this step is completed. If either product is not running, perform step 2 or 3.

2. Execute the `/etc/opt/jp1base/jbs_start` script.

   JP1/Base starts.

3. Execute the `jajs_start` command.

   JP1/AJS3 starts.

Result

You have confirmed that the services on the agent host are running.

Postrequisites

Set up JP1/Base on the agent host.

Related topics

- *2.4.4 Setting up the prerequisite product*

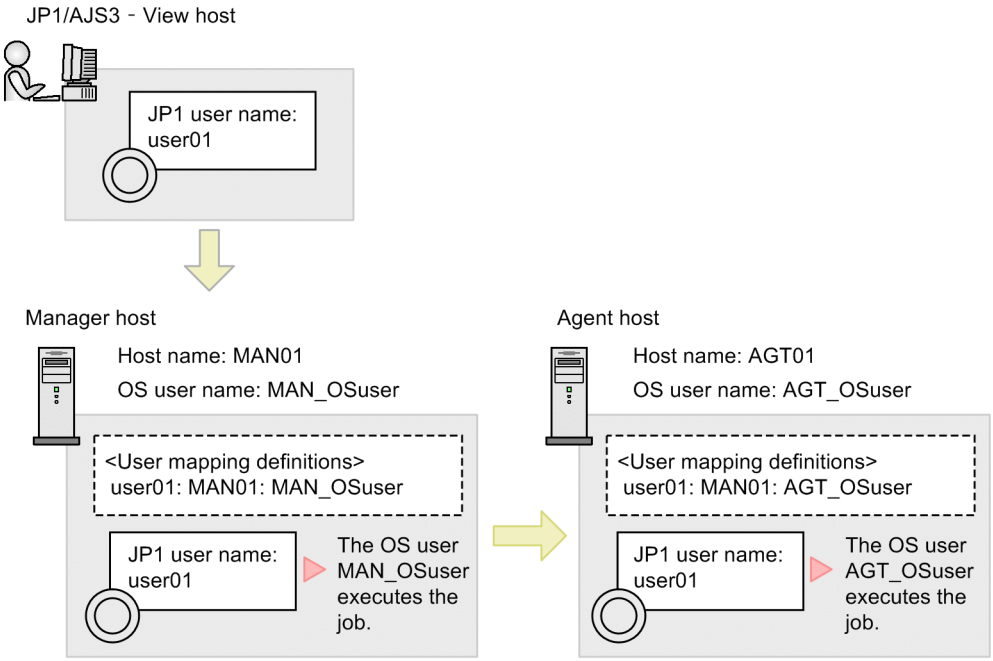
2.4.4 Setting up the prerequisite product

Associate a JP1 user registered in the manager host to an OS user on the agent host so that the JP1 user can access OS resources on the agent host.

To execute a job in JP1/AJS3, a JP1 user accesses OS resources, such as executable files, by using permissions of an OS user associated with the JP1 user, and then performs processing. Therefore, the JP1 user must be associated with an OS user on the host on which the job is to be executed. This association is called *user mapping*.

The following figure shows an overview of user mapping.

Figure 2–3: User mapping



Note:
<User mapping definitions> in the figure indicates *JP1-user-name*:*server-host-hame*:*OS-user name*.

In this figure, a job executed by the JP1 user `user01` on the JP1/AJS3 - View host is executed by the OS user `MAN_OSuser` on the manager host. If the job is transferred to the agent host, the job is executed by the OS user `AGT_OSuser` on the agent host.

Tip

Note that for a new installation of JP1/Base, the following information is automatically set as initial settings. If you perform operations using the users in the initial settings, you do not need to set up JP1/Base.

No.	Setting item		Initial settings
1	Setting up an authentication server	Authentication server name	Local host name
2	Registering JP1 users in the authentication server	JP1 user name	`jp1admin`
3		Password	`jp1admin`
4	Setting JP1 user operating permissions	JP1 resource group	* (asterisk)

No.	Setting item		Initial settings
5	Setting JP1 user operating permissions	Granted permissions	All administrator roles
6	Setting user mapping	JP1 user name to be mapped	`jp1admin`
7		OS user to be mapped	OS user entered in the window for entering the OS user name and password
8		Server host name	* (asterisk)

Note:

Items for Nos. 1 to 5 are JP1/Base settings required on the manager host. You do not specify these items on the agent host.

Related topics

- *2.4.4(1) Setting user mapping*

(1) Setting user mapping

Map a JP1 user to an OS user on the agent host so that the JP1 user can access the OS resources on the agent host.

Prerequisites

Log in to the agent host as an OS user with superuser privileges.

Procedure

1. Use a text editor such as vi to create a new text file.
   The created file will be used as the user mapping definition file for the agent host. You can use any file name.

2. Set user mapping.
   Edit the user mapping definition file to set user mapping.
   The following shows the coding format of the user mapping definition file:

   ```
   JP1-user-name:host-name-from-which-to-accept-job-execution-requests:OS-use
   r-name
   ```

   To map the JP1 user `user01` to the OS user `AGT_OSuser` on the agent host, specify as follows:

   ```
   user01:*:AGT_OSuser
   ```

3. Save and close the file.

4. Execute the following command.

   ```
   jbsmkumap -f user-mapping-definition-file-path
   ```

Result

The JP1 user and the OS user on the agent host are mapped.

Postrequisites

Install JP1/AJS3 - View on a JP1/AJS3 - View host, and install JP1/AJS3 - Web Console on the Web Console Server. Note that you cannot install JP1/AJS3 - View on a Linux host. Install JP1/AJS3 - View on a Windows host.

If you operate JP1/AJS3 - Agent with the default settings, you do not need to set up JP1/AJS3 - Agent.

Related topics

- *1.5 Installation and setup on a JP1/AJS3 - View host*
- *2.4.4(2) Coding format of the user mapping definition file*
- *2.5.1 Installing JP1/AJS3 - Web Console*

(2) Coding format of the user mapping definition file

You can set user mapping by editing the user mapping definition file and then executing the `jbsmkumap` command.

The following describes the coding format of the user mapping definition file.

File path

You can create the user mapping definition file for the agent host at any location.

Format

```
JP1-user-name:host-name-from-which-to-accept-job-execution-requests:OS-user-name
```

- For *JP1-user-name* and *OS-user-name*, specify the users to be mapped.
- For *host-name-from-which-to-accept-job-execution-requests*, specify the host that accepts job execution requests.

> **Tip**
>
> Specify an asterisk (`*`) for *host-name-from-which-to-accept-job-execution-requests* to accept job execution requests from all hosts.

Example

The following shows an example of setting user mapping for the JP1 users `user01` and `user02`.

- An agent host executes jobs requested from the JP1 user `user01` on the manager host `MAN01`.
- An agent host executes jobs requested from the JP1 user `user02` regardless of the manager host.
- All agent hosts use the OS user name `AGT_OSuser` to execute jobs.

File editing example

```
user01:MAN01:AGT_OSuser
user02:*:AGT_OSuser
```

2.4.5 Setting up JP1/AJS3 - Agent

If you operate JP1/AJS3 - Agent with the default settings, a special setup is not required after installation.

2.5 Installation and setup on the Web Console server

Install and set up JP1/AJS3 - Web Console to configure the Web Console server.

2.5.1 Installing JP1/AJS3 - Web Console

Install JP1/AJS3 - Web Console on the Web Console server.

Prerequisites

- Make sure that the OS of the Web Console server is a prerequisite OS of JP1/AJS3 - Web Console.
- Log in to the agent host as an OS user with superuser privileges.

Procedure

1. Terminate all JP1 programs.

2. For the value of the environment variable LANG, specify the character encoding to be used when running JP1.
   The following is an example of specifying ASCII as the character encoding.
   Example: `export LANG=C`

3. Insert the distribution media into the drive.

4. Execute the following command to mount the distribution media:

   ```
   /bin/mount -t iso9660 -r device-special-file-name /mnt/dvdrom
   ```

   In the above command, */mnt/dvdrom* is specified as the mount-point directory name. However, the mount-point directory name changes according to the environment. For details about how to mount the distribution media, see the documentation for the OS.
   If the distribution media is automatically mounted, skip this step.

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

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

   Note that you need to replace */mnt/dvdrom* with the mount-point directory name of the distribution media you use. If the distribution media is automatically mounted, replace */mnt/dvdrom* with the device special name.
   When the Hitachi Program Product Installer starts, the following initial window appears:

   ```
   L)  List Installed Software.
   I )  Install Software.
   D) Delete Software.
   Q) Quit.

   Select Procedure ===>

   +-----------------------------------------------------------------------+
    CAUTION!
    YOU SHALL INSTALL AND USE THE SOFTWARE PRODUCT LISTED IN THE
      "List Installed Software."  UNDER THE TERMS AND CONDITION OF
    THE SOFTWARE LICENSE AGREEMENT ATTACHED TO SUCH SOFTWARE PRODUCT.
   +-----------------------------------------------------------------------+
   ```

6. In the initial widow of the Hitachi Program Product Installer, enter **L** to display a list of software programs.

7. In the list of software programs, move the cursor to `JP1/AJS3 - Web Console`, and then press the space bar to select it.

8. In the Hitachi Program Product Installer window, enter **I** to start installation of JP1/AJS3 - Web Console.

9. After installation is completed, enter **Q** to return to the initial window.

10. Terminate the Hitachi Program Product Installer.

11. Specify the JP1/AJS3 - Web Console automated startup script so that JP1/AJS3 - Web Console automatically starts when the system starts.

    Use a text editor such as vi to open the `/etc/rc.d/init.d/jp1ajs3web` file, and then delete `: #` at the beginning of the line indicating `/etc/opt/jp1ajs3web/jajs_web`.

    Before the change

    ```
    : # /etc/opt/jp1ajs3web/jajs_web
    ```

    After the change

    ```
    /etc/opt/jp1ajs3web/jajs_web
    ```

Result

JP1/AJS3 - Web Console is installed on the Web Console server.

JP1/AJS3 - Web Console now automatically starts when the system starts.

Postrequisites

Make sure that the services are running.

Related topics

- *2.5.2 Confirming that the services are running*

2.5.2 Confirming that the services are running

Before you start the setup, make sure that the services on the Web Console server are running. If any service is not running, start it.

Prerequisites

Log in to the Web Console server as an OS user with superuser privileges.

Procedure

1. Make sure that JP1/AJS3 - Web Console is running.

   To make sure that JP1/AJS3 - Web Console is running, execute the `ps` command and check the operation status of the JP1/AJS3 - Web Console process.

   - JP1/AJS3 HTTP Server
     `/opt/jp1ajs3web/uCPSB/httpsd/sbin/httpsd`
   - JP1/AJS3 Web Application Server
     `/opt/jp1ajs3web/uCPSB/CC/server/bin/cjstartsv ajs3web`

If you can confirm that both products are running, this step is completed. If either product is not running, perform step 2.

2. Execute the `jajs_web` command.

   JP1/AJS3 - Web Console starts.

Result

You have confirmed that the services on the Web Console server are running.

Postrequisites

Log in to JP1/AJS3 - Web Console from web browser.

If you operate JP1/AJS3 - Web Console with the default settings, you do not need to set up JP1/AJS3 - Web Console.

Related topics

- *2.6 Logging in to JP1/AJS3 - Web Console from web browser*

2.5.3 Setting up JP1/AJS3 - Web Console

If you operate JP1/AJS3 - Web Console with the default settings, a special setup is not required after installation.

2.6 Logging in to JP1/AJS3 - Web Console from web browser

To monitor jobnets by using Web GUI, you must log in from a web browser to JP1/AJS3 - Web Console. This section describes how to log in from a web browser to JP1/AJS3 - Web Console.

Prerequisites

Make sure that the web browser you use satisfies the following conditions. For details about how to do so, see the documentation for the web browser.

- Active scripting or Javascript must be enabled in your web browser.

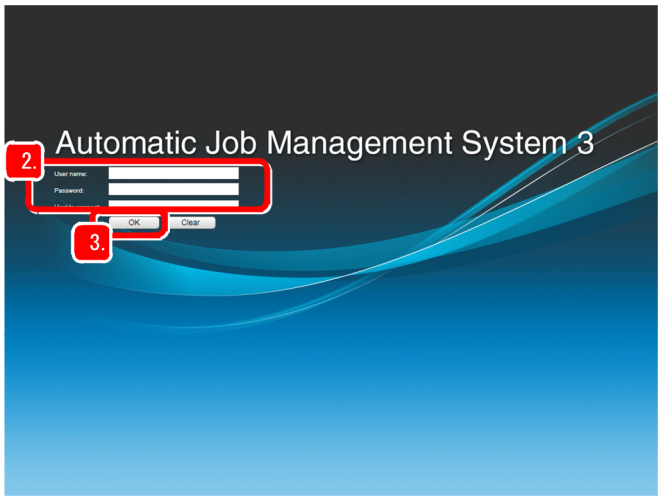
Procedure

1. In the address bar of your web browser, enter the URL of the Login screen for JP1/AJS3 - Web Console.

   ```
   http://host-name-or-IP-address-of-Web-Console-server:22252/ajs/login.html
   ```

   The Login screen appears.

2. Enter information about the JP1 user who logs in.

   User name

   Enter the name of a JP1 user registered in the authentication server.

   Password

   Enter the password of a JP1 user registered in the authentication server.

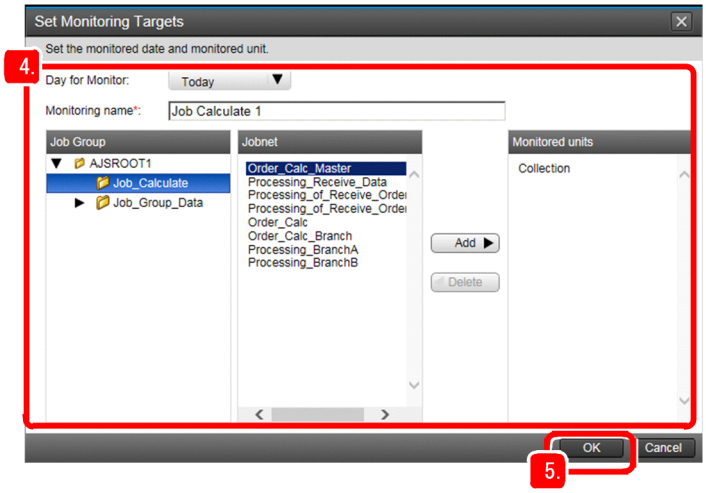
   Host to connect

   Specify the name of a manager host you want to connect.

3. Click the **OK** button.

   The Set Monitoring Targets dialog box appears.

4. In the Dashboard screen of Web GUI, set the information about the jobnet to be monitored.



Day for Monitor

Select the day to be displayed in the Dashboard screen as the monitoring-target day.

Monitoring name

Enter a monitoring name.

Monitored units

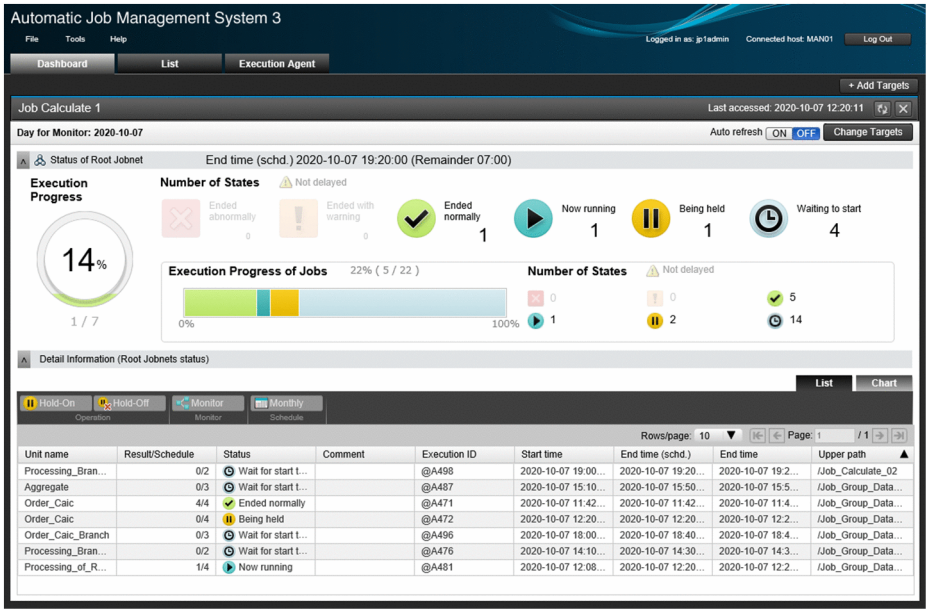
Use the **Job Group** tree and **Jobnet** list box to select the jobnet to be monitored, and then click the **Add** button to set the selected jobnet as a monitoring target.

5. Click the **OK** button.

   If you want to set the monitoring-target jobnet at a later time, click the **Cancel** button.

Result

The Dashboard screen appears.



Important

If you cannot log in, the probable reasons are as follows:

- Manager host services are not running.

  Required services might not be running on the manager host. Make sure that the services are running. If any service is not running, start it.

- User mapping is not set correctly.

  User mapping might not have been correctly set on the manager host. Set user mapping correctly.

Postrequisites

Start monitoring of the jobnet.

Related topics

- *2.3.3 Confirming that the services are running*
- *2.3.4(4) Setting user mapping*

3 Before Operating Applications

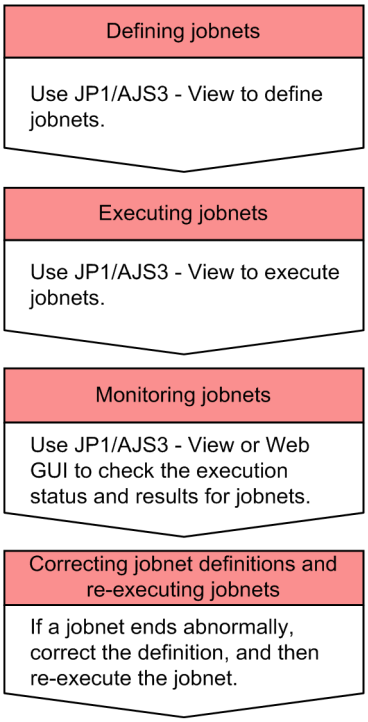
After you finish the configuration of JP1/AJS3, you can use JP1/AJS3 to automate the applications.

This chapter provides an overview of defining, executing, and monitoring a jobnet by using JP1/AJS3 - View. This chapter also describes the basic configuration of the JP1/AJS3 - View main window, and the Dashboard and List screens of the Web GUI.

3.1 Procedure to define, execute, and monitor jobnets

The following describes the procedure to define, execute, and monitor jobnets by using JP1/AJS3 - View.

Figure 3–1: Procedure to define, execute, and monitor jobnets



Related topics

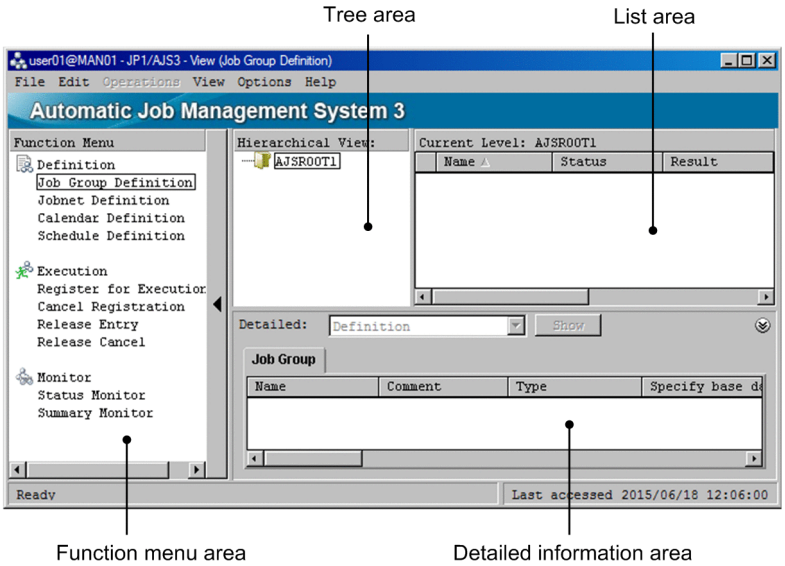
- *3.2 Basic configuration of the JP1/AJS3 - View main window*
- *3.3 Basic configuration of the Dashboard and the List screen of the Web GUI*
- *4. Defining Jobnets*
- *5. Executing Jobnets*
- *6. Monitoring Jobnets*
- *7. Correcting Jobnet Definitions and Re-Executing Jobnets*

3.2 Basic configuration of the JP1/AJS3 - View main window

To define, execute, and monitor jobnets by using JP1/AJS3 - View, you need to display windows and dialog boxes appropriate for the purpose of operation, from the JP1/AJS3 - View window (Main window).

The following shows the JP1/AJS3 - View window (Main window).

Figure 3–2: JP1/AJS3 - View window (Main window)



The following describes each area of the JP1/AJS3 - View window (Main window).

Function menu area

The function menus allow you to filter the items displayed in the list area, detailed information area, and operation menu according to the desired operation.

For example, if you select **Cancel Registration**, only the jobnets registered for execution are displayed in the list area so that only cancel registration can be performed. At this time, operation menus not relating to cancel registration are inactive, thus preventing incorrect operation.

Tree area

The tree area displays the job group defined for JP1/AJS3 - Manager in hierarchical format. When you select a unit in the tree area, the units immediately below the selected unit appear in the list area.

List area

The list area displays a list of units (job groups or jobnets) immediately below the job group selected in the tree area.

Detailed information area

The detailed information area displays the details, such as definitions and execution information, about the units selected in the list area. The displayed information varies depending on the selected function menus.

To display details, select a unit in the list area and then click the **Show** button. If you want to display the information for another unit, select a different unit in the list area and then click the **Show** button again.

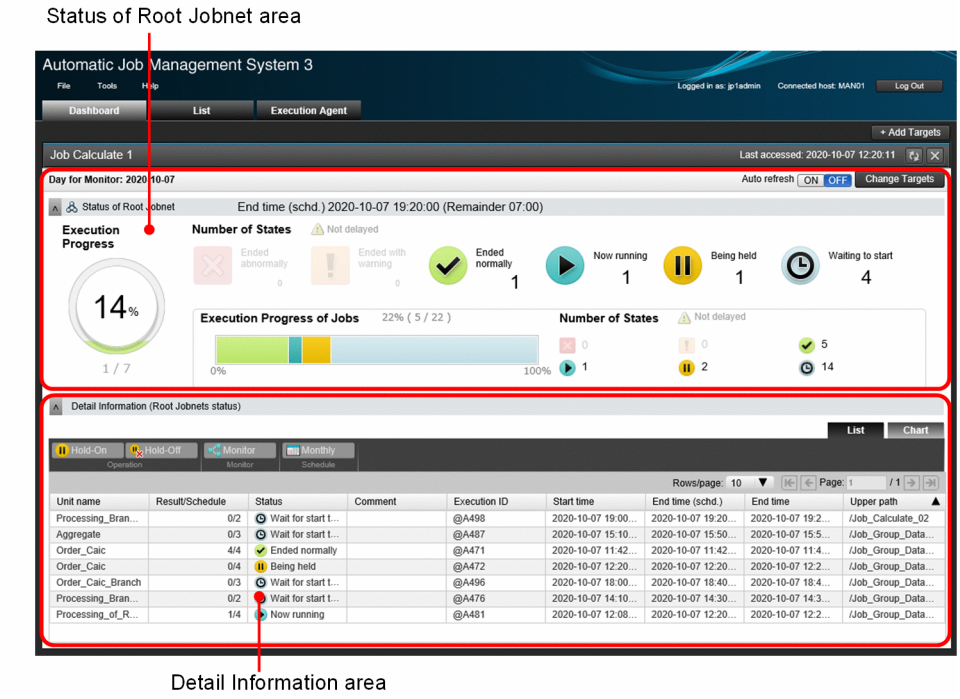
3.3 Basic configuration of the Dashboard and the List screen of the Web GUI

To monitor a jobnet by using the Web GUI, use the Dashboard and List screens. Either screen can be selected from its tab at the top.

Configuration of the Dashboard screen

In the Dashboard screen, the progress of a selected jobnet and the number of units in each state can be monitored for a specific date.

Figure 3–3: Dashboard screen



Status of Root Jobnet area

In this area, you can view information such as the execution progress of monitored jobnets and the number of jobnets that are in a particular state.

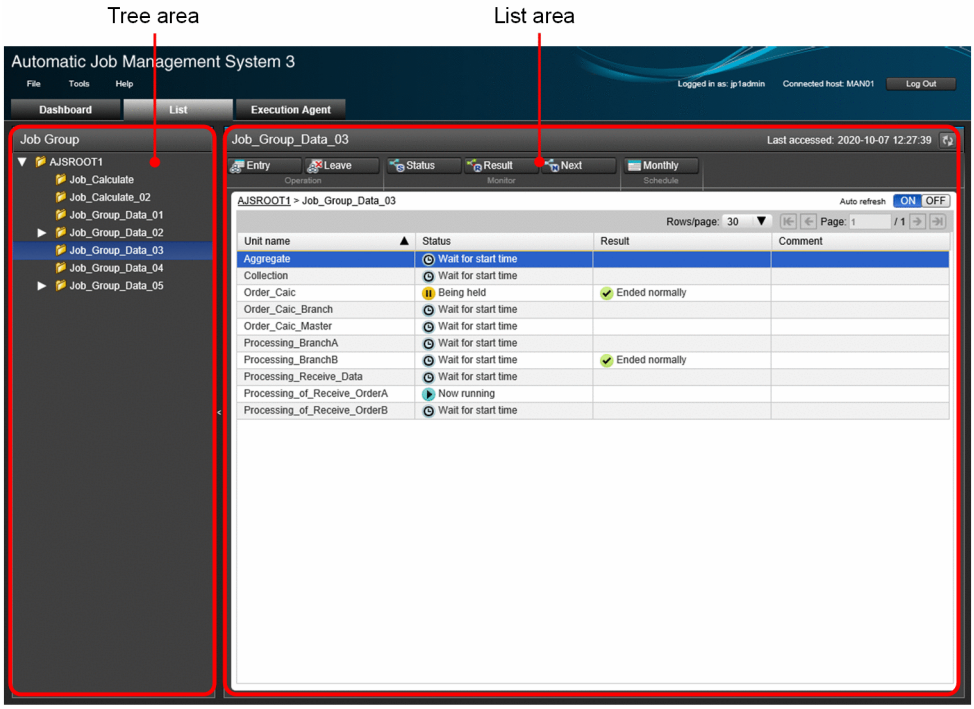
Detail Information area

In this area, you can view the execution status of monitored jobnets.

Configuration of the List screen

In the List screen, the status of a defined jobnet can be checked.

Figure 3–4: List screen



Tree area

The job groups defined in JP1/AJS3 - Manager are displayed hierarchically. When you select a job group in the tree area, the jobnets under the selected job group appear in the list area.

List area

This area displays the jobnets under the job group selected in the tree area.

4 Defining Jobnets

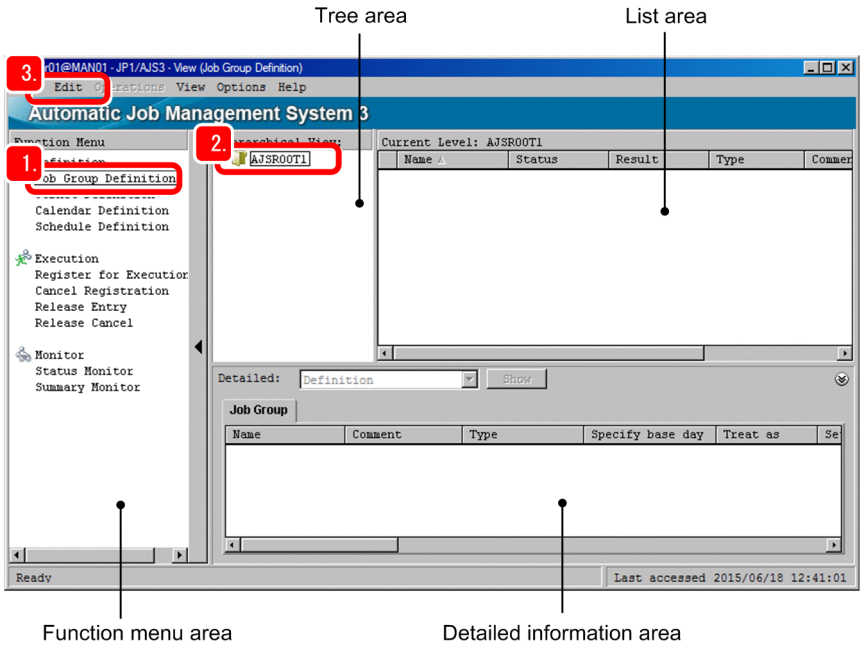
When the configuration of JP1/AJS3 is completed, you can define jobs, jobnets, and job groups, and set execution schedules. This chapter describes how to define units and how to set an operation schedule of jobnets.

4.1 Defining a job group

Define a job group.

Procedure

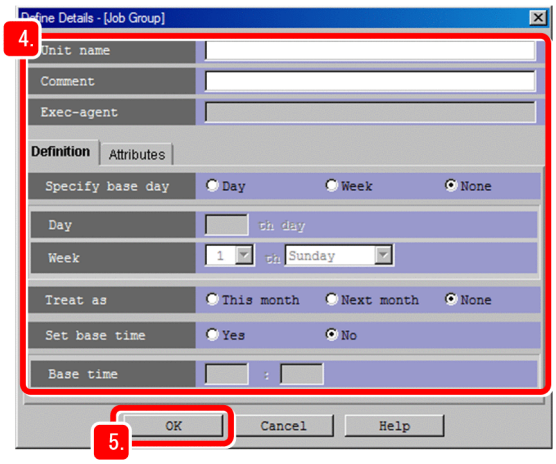
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Job Group Definition**.



2. In the tree area, select the job group.

3. Select **Edit**, **New**, and then **Job Group**.
   The Define Details - [Job Group] dialog box appears.

4. Define details about the job group.



The following describes the major setting items:

No.	Setting item	Description
1	**Unit name**	Specify the name of the job group.
2	**Comment**	Enter any comment.

5. Click the **OK** button.

   The Define Details - [Job Group] dialog box closes, and then the job group you have defined appears in the list area of the JP1/AJS3 - View window (Main window).

Result

The job group is defined.

Postrequisites

Define a jobnet in the job group.

Related topics

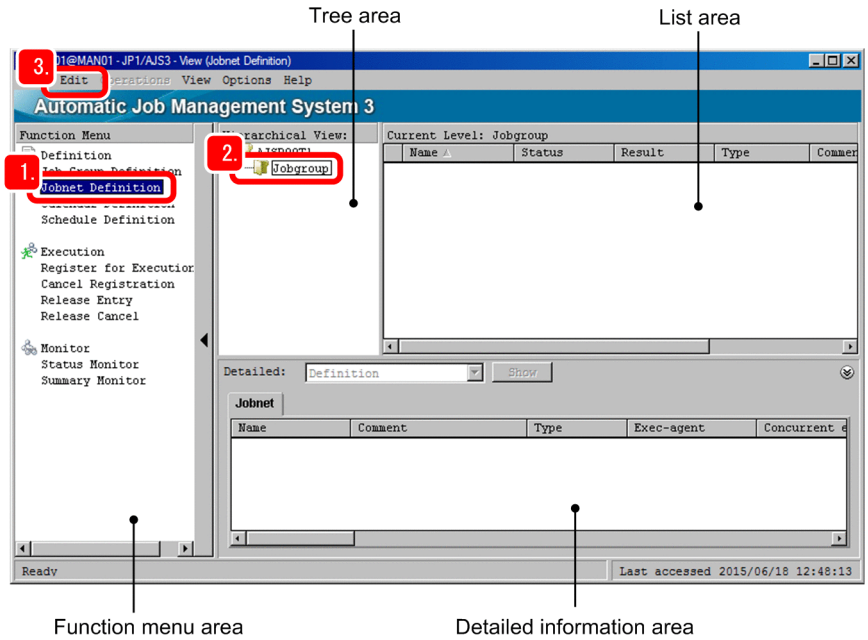
- *4.2 Defining a jobnet*

4.2 Defining a jobnet

Define a jobnet in a job group.

Procedure

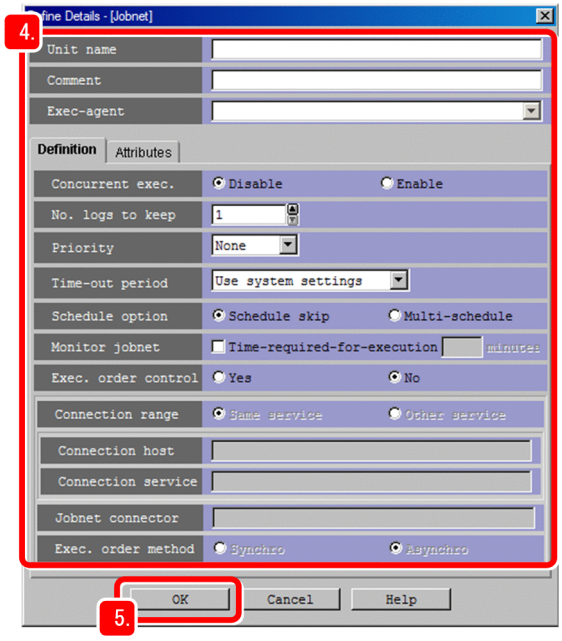
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Jobnet Definition**.



2. In the tree area, select the job group.

3. Select **Edit**, **New**, and then **Jobnet**.
   The Define Details - [Jobnet] dialog box appears.

4. Define details about the jobnet.



The following describes the major setting items:

No.	Setting item	Description
1	**Unit name**	Specify the name of the jobnet.
2	**Comment**	Enter any comment.
3	**Exec-agent**	Specify the name of an execution agent that executes the jobnet.

> **Tip**
>
> If you specify **Exec-agent** in the detailed definition of the jobnet, jobs in that jobnet will be executed by the specified execution agent even if an execution agent is not specified for the jobs.

5. Click the **OK** button.
   The Define Details - [Jobnet] dialog box closes, and then the jobnet you have defined appears in the list area of the JP1/AJS3 - View window (Main window).

Result

The jobnet is defined.

Postrequisites

Define jobs in the jobnet.

Related topics

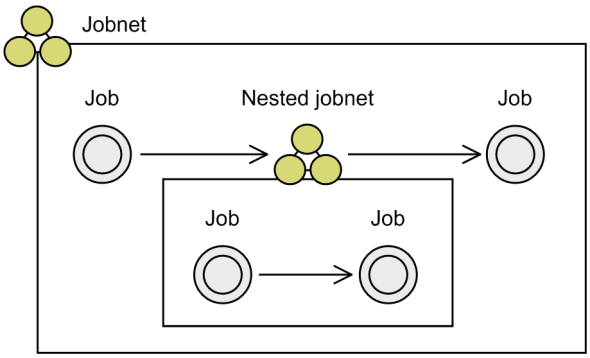
- *4.3 Defining jobs*

4.3 Defining jobs

Define jobs and a nested jobnet in a jobnet, and then define two jobs in the nested jobnet. Then, specify the execution order of these units.

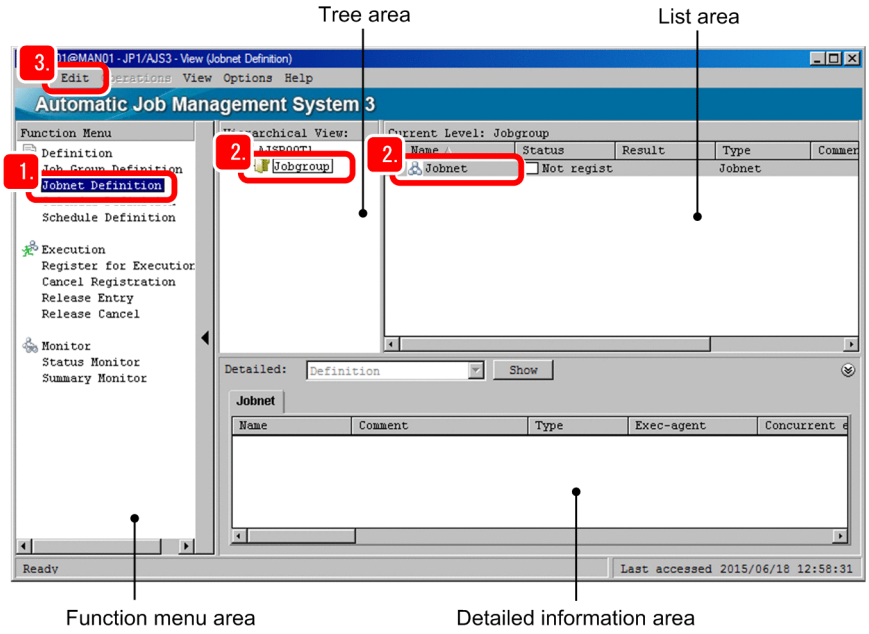
Prerequisites

- Define a jobnet.
- You will define units in the following configuration. A jobnet defined in a jobnet is called a nested jobnet.



Procedure

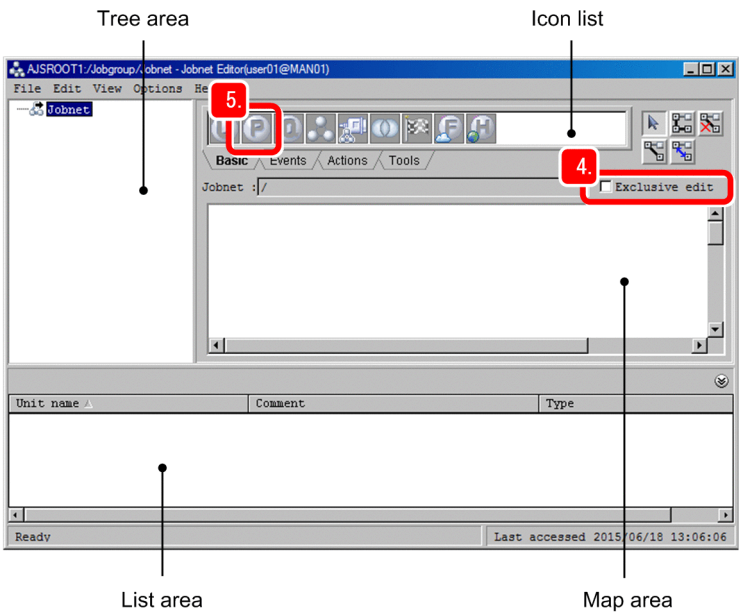
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Jobnet Definition**.



2. In the tree area, select the job group. In the list area, select the jobnet.

3. Select **Edit** and then **Edit**.
   The Jobnet Editor window appears.

4. Select Exclusive edit.
   Selecting the **Exclusive edit** check box prevents multiple users from editing the same jobnet concurrently.

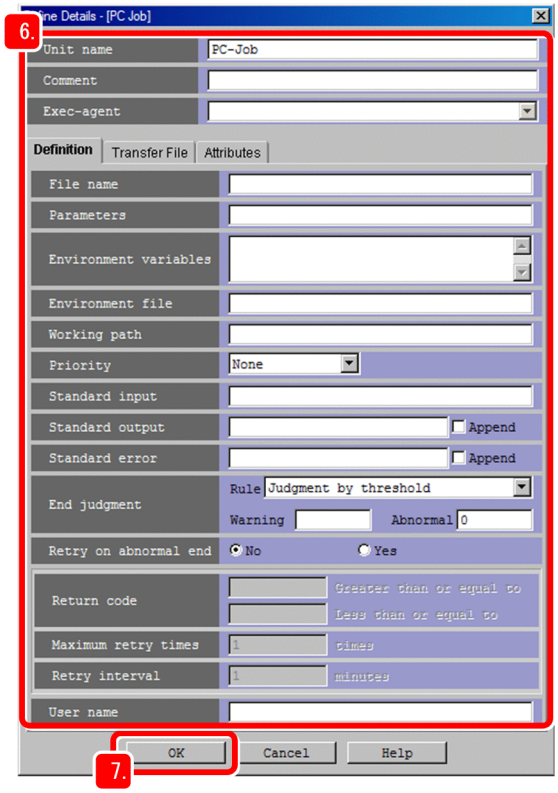


5. In the icon list, in the **Basic** tab, drag a job icon to the map area.

   If the OS of the job execution host is Windows, drag the (PC job) icon. If the OS of the job execution host is Linux, drag the (UNIX job) icon. This step assumes that you drag the PC job icon.

   When the PC job icon is dropped in the map area, the Define Details - [PC Job] dialog box appears.

6. Define details about the job.



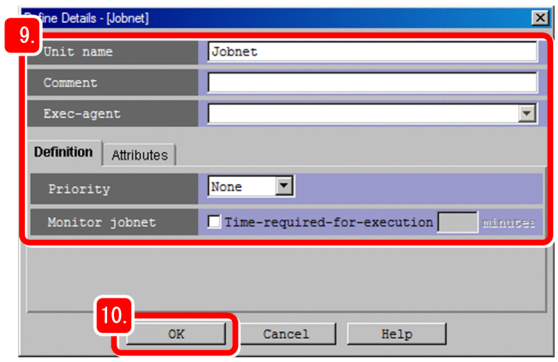
   The following describes the major setting items:

No.	Setting item	Description
1	**Unit name**	Specify the name of the job.
2	**Comment**	Enter any comment.
3	**Exec-agent**	Specify the name of an execution agent that executes the job. If this item is left blank, the job will be executed by the execution agent specified in the detailed definition of the upper-level jobnet.
4	**File name**	Specify the name of the file to be executed as a job.
5	**Parameters**	Specify the arguments and parameters for the file specified in **File name**.

7. Click the **OK** button.
   The Define Details - [PC Job] dialog box closes.
   Next, define a nested jobnet.

8. In the icon list, in the **Basic** tab, drag the jobnet icon to the map area.
   When the (jobnet) icon is dropped in the map area, the Define Details - [Jobnet] dialog box appears.

9. Define details about the nested jobnet.

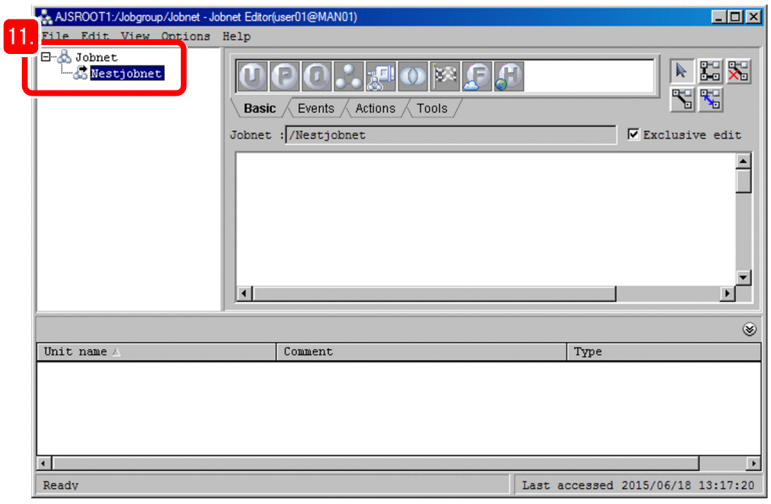


   The following describes the major setting items:

No.	Setting item	Description
1	**Unit name**	Specify the name of the nested jobnet.
2	**Comment**	Enter any comment.
3	**Exec-agent**	Specify the name of an execution agent that executes the nested jobnets. If this item is left blank, the nested jobnets will be executed by the execution agent specified in the detailed definition of the upper-level jobnet.

10. Click the **OK** button.
    The Define Details - [Jobnet] dialog box closes.
    Next, define two jobs in the nested jobnet.

11. In the tree area, click + to expand the jobnet node, and then select the nested jobnet.



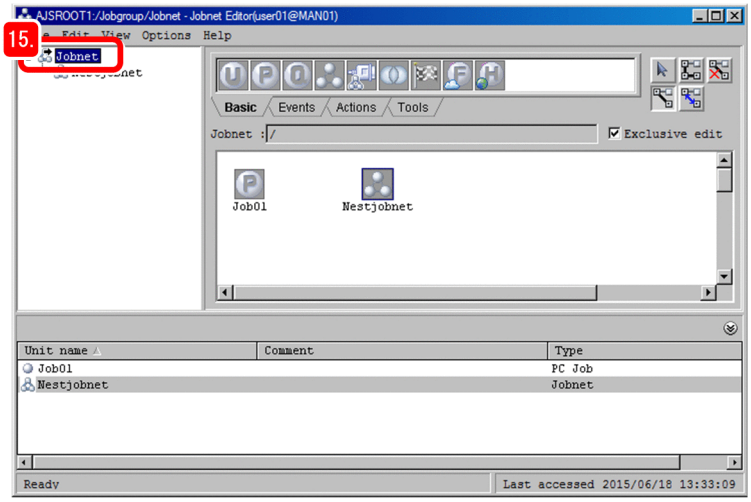
The map area displays the contents of the nested jobnet.

12. Define jobs.
    Define two jobs in the nested jobnet. The method used to define jobs is the same as for steps 5 to 7.
    Next, define the execution order of the jobs.

13. Click the (Make Relations) button.

14. Click the icon of the job to be executed first, and then click the icon of the job to be executed next.
    This operation is called *association*.
    When you associate the icons, an arrow is drawn from the job to be executed first to the job to be executed next.
    Next, define another job in the upper-level jobnet, and then associate the job with the nested jobnet.

15. In the tree area, select the upper-level jobnet.



The icon that is not associated appears in the map area.

16. Define a job.
    Define another job by dragging the PC job icon to the map area. The method used to define jobs is the same as for steps 5 to 7.

17. Associate the job with the nested jobnet.

Click the (Make Consecutive Relations) button, and then consecutively click the job, the nested jobnet, and then the other job to associate them.

> **Tip**
>
> If you set an incorrect association, you can delete the relation line by clicking the (Break Relation) button, and then clicking the relation line you want to delete.

18. Click a blank area in the map area to terminate the association.
    Clicking the blank area in the map area terminates the association that uses the Make Consecutive Relations button.

19. Select **File** and then **Close**.
    The Jobnet Editor window closes.

Result

The jobs and the nested jobnet are defined in the jobnet.

Postrequisites

Define the operation schedule of a jobnet.

Related topics

- *4.4 Defining operation schedules*
- *4.4.1 Defining calendar information for a job group*

4.4 Defining operation schedules

You can define the operation schedule of a jobnet to execute the jobnet only on holidays and specify the date and time to start execution of the jobnet.

Operation schedules you can define are classified into the following two types:

- Calendar information

  Information about open days and closed days for jobnet execution. An open day is a day on which jobnets are executed. A closed day is a day on which jobnets are not executed.

  Because the same open days and closed days often apply to multiple processes, calendar information is defined for a job group. The calendar information determines the days on which jobnets in the job group can be and cannot be executed.

- Schedule rule

  Information such as the start time and processing cycle for a jobnet.

  Because the start time and execution interval often vary depending on the application, schedule rules are set for jobnets.

4.4.1 Defining calendar information for a job group

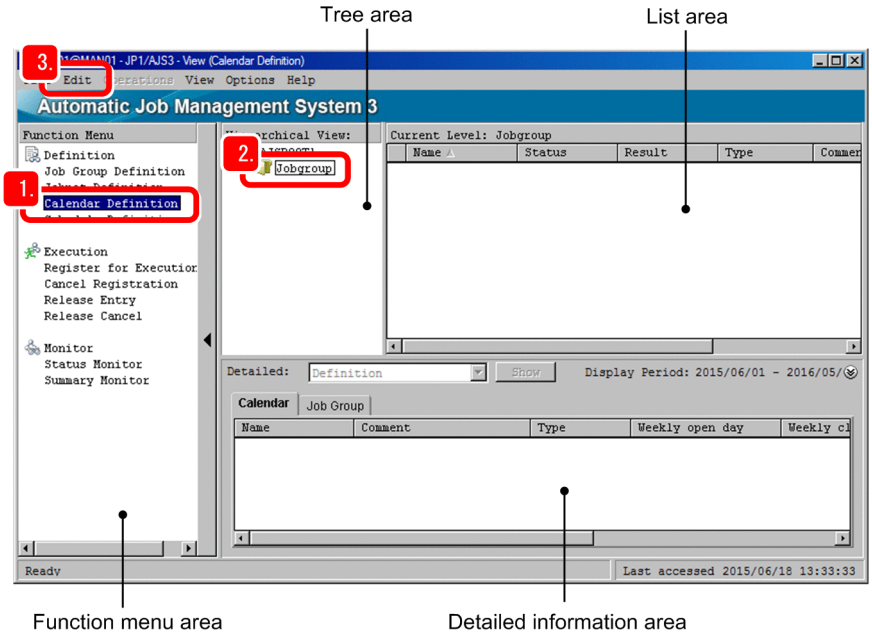
Define calendar information including the open days (weekdays) and closed days (holidays and national holidays) for a job group. The following describes how to set the information for a year.

Prerequisites

Define a job group.

Procedure

1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Calendar Definition**.

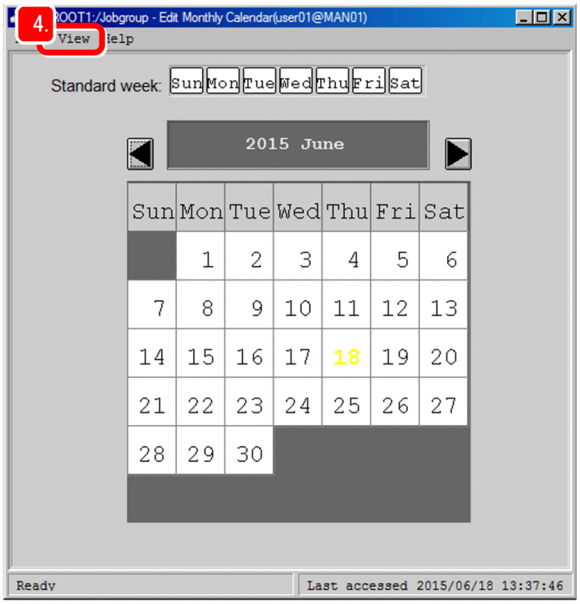


2. In the tree area, select the job group.

3. Select **Edit** and then **Calendar**.

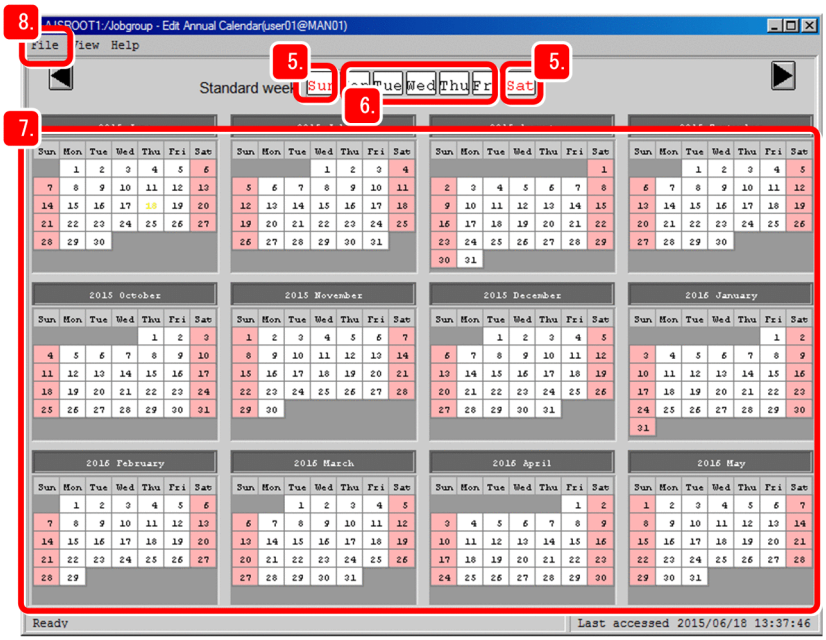
   The Edit Monthly Calendar window showing the calendar of the current month appears.

4. Select **View** and then **Edit Annual Calendar**.



   The Edit Annual Calendar window appears.

5. For **Standard week**, click **Sun** and then **Sat**.



   All Sundays and Saturdays become light red, and the closed days are set.

> **Tip**
>
> Each time you click a day of the week for **Standard week**, the color of that day changes to *light red*, *light blue*, and then *white*. Light blue indicates an open day, and white indicates that nothing is set.

6. For **Standard week**, double-click each day, from **Mon** to **Fri**.

   All weekdays (Mondays to Fridays) become light blue, and the open days are set.

7. Click a calendar date you want to define as a closed day in addition to Saturdays and Sundays.
   The clicked calendar date becomes red, and the closed day is set.

8. Select **File** and then **Close**.
   A message asking whether you want to save the information appears.

9. Click the **Yes** button.
   The calendar information is set, and then you are returned to the JP1/AJS3 - View window (Main window).

Result

The calendar information is set for the job group.

Postrequisites

Define schedule rules for a jobnet.

Related topics

- *4.4.2 Defining schedule rules for a jobnet*

4.4.2 Defining schedule rules for a jobnet

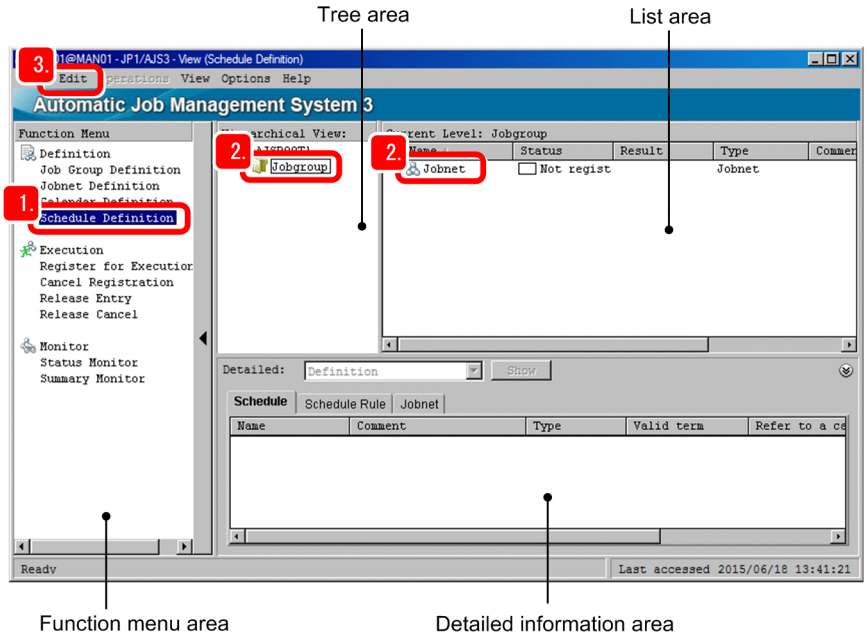
Define schedule rules for a jobnet to set the start date and processing cycle for the jobnet.

Prerequisites

Define a jobnet.

Procedure

1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Schedule Definition**.

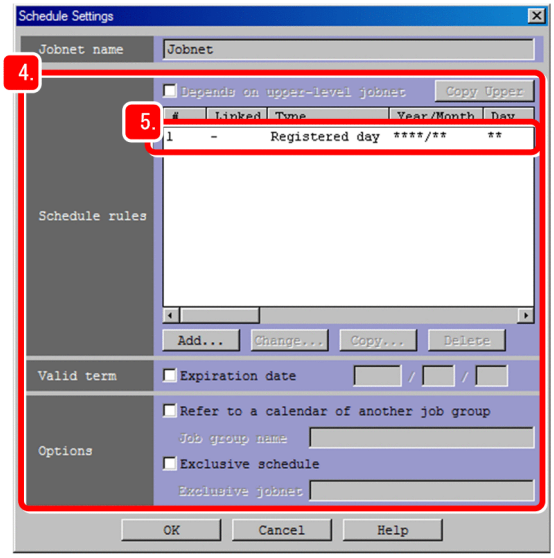


2. In the tree area, select the job group. In the list area, select the jobnet.

3. Select **Edit** and then **Schedule**.

The Schedule Settings dialog box appears.

4. Set the schedule information.

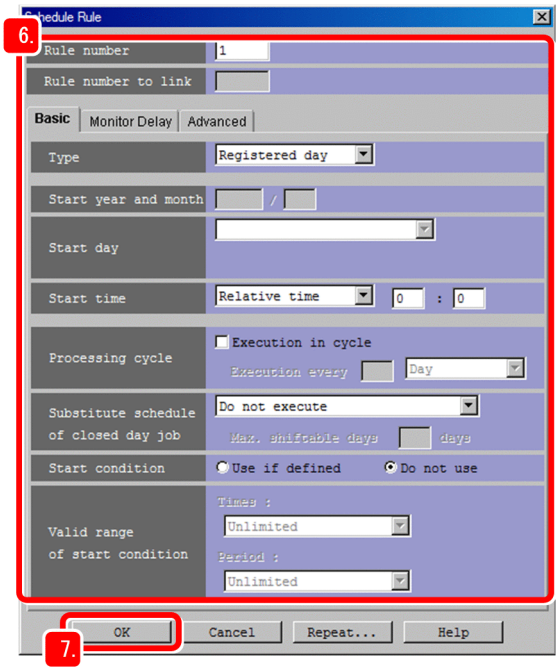


The following describes the major setting items:

No.	Setting item	Description
1	**Schedule rules**	Add, delete, or change the schedule rule. Multiple schedule rules can be registered.
2	**Valid term**	Specify the valid term for the schedule rule.

5. In **Schedule rules**, click the line for **#1**.
   The Schedule Rule dialog box appears.

6. Define the schedule rule.



The following describes the major setting items:

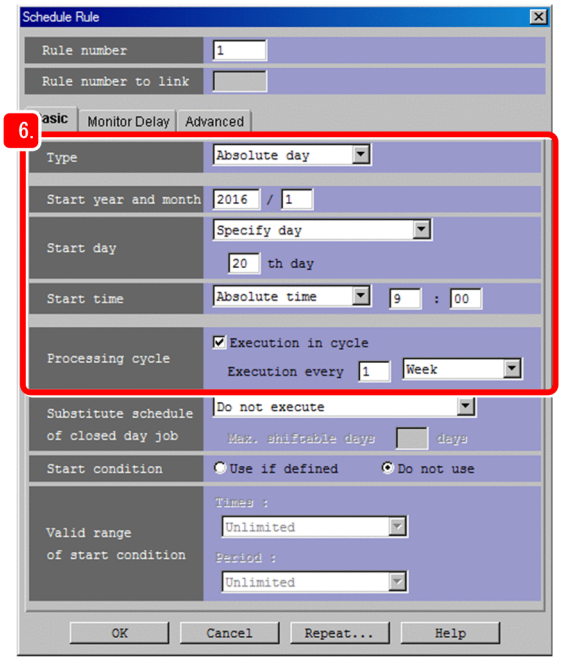
No.	Setting item	Description
1	**Type**	Select the type of the jobnet start date from the following: • **Registered day** The start date is the date on which the jobnet is registered for execution. • **Absolute day** The start date is the date specified by a calendar date (months begin with the 1st day). • **Relative day** Calculate the start date by counting the specified number of days from the base day#. • **Open day** Calculate the start date by counting the specified number of open days from the base day#. • **Closed day** Calculate the start date by counting the specified number of closed days from the base day#.
2	**Start year and month**	Set the year and month when jobnet execution starts.
3	**Start day**	Select a designation method of the start date from the following: • **Specify day** Specify the start date by a date. • **Specify end of month** Specify the start date by the number of days before the end of the month. • **Specify day of the week** Specify the start date by a day of the week.
4	**Start time**	Select the start time from the following: • **Absolute time** Absolute time is the actual time (system time). Specify the start time by the time on a clock. • **Relative time** Calculate the start time by counting the specified period of time from the base time#.
5	**Processing cycle**	Specify this item if you execute the jobnet on a regular basis.

#:

The start day of a month is called the base date, and the start time of a day is called the base time. The base day defaults to the 1st day of the month, and the base time defaults to 00:00. However, these values can be changed to fit the operation.

For example, if you want to start the execution of the jobnet at 9:00 on January 20, 2016, and execute the jobnet once a week at 9:00 on the same day of the week, specify as follows:

No.	Setting item	Value
1	**Type**	Specify **Absolute day**.
2	**Start year and month**	Specify **2016/1**.
3	**Start day**	Specify **Specify day** and **20th day**.
4	**Start time**	Specify **Absolute time** and **09:00**.
5	**Processing cycle**	Select **Execution in cycle**, and then specify **Execution every 1 Week**.



7. Click the **OK** button.
   The Schedule Rule dialog box closes.

8. In the Schedule Settings dialog box, click the **OK** button.
   The Schedule Settings dialog box closes.

Result

The schedule rule is set for the jobnet.

Postrequisites

Execute the jobnet.

Related topics

- *5.1 Executing a jobnet*

5 Executing Jobnets

After you have defined details about jobs and jobnets and their operation schedules, you can execute jobnets. This chapter describes how to register jobnets for execution.

5.1 Executing a jobnet

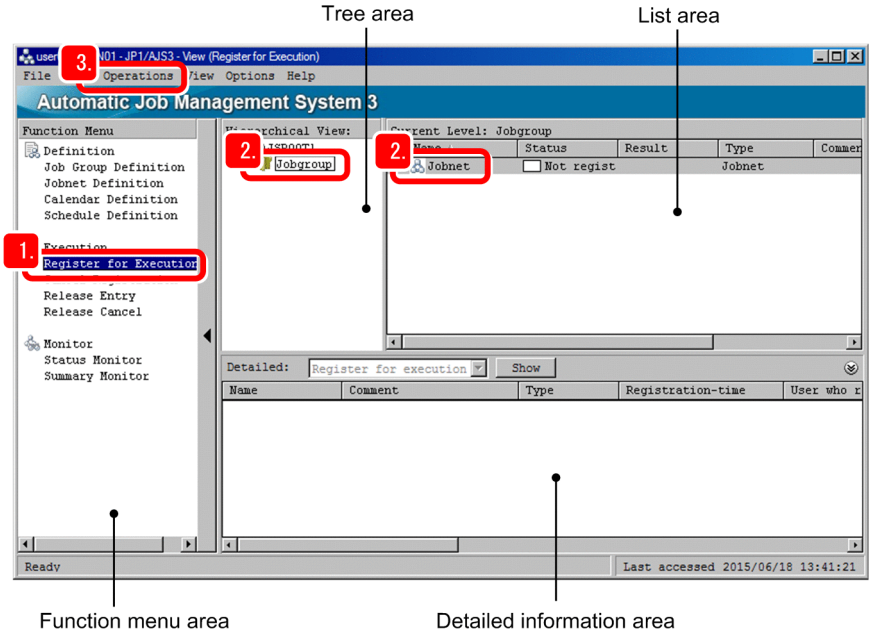
Execute a defined jobnet.

Prerequisites

Define a jobnet.

Procedure

1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Register for Execution**.

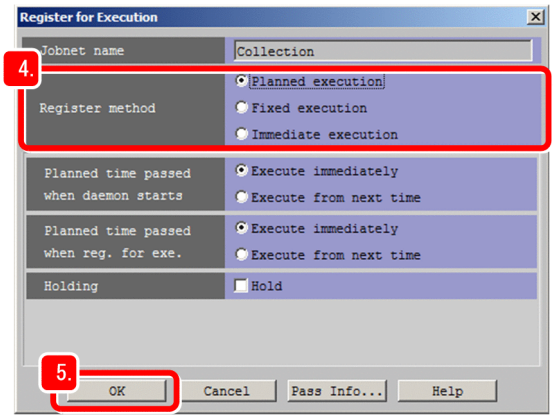


2. In the tree area, select the job group. In the list area, select the jobnet.

3. Select **Operations**, and then **Register for Execution**.
   The Register for Execution dialog box appears.

4. In **Register method**, select the execution registration method.
   The three types of methods for registering jobnets for execution are shown below. Select the method appropriate for the operation.

   - Planned execution
     The jobnet is executed according to the defined schedule. If you change the calendar or schedule after the jobnet is registered for execution, the schedule is immediately defined again so that the jobnet is executed based on the new schedule.
   - Fixed execution
     The jobnet is executed according to the execution date and time calculated in advance based on the defined schedule.
     Even if you change the calendar or schedule after the jobnet is registered for execution, the execution plan is not changed. Changes in the calendar and schedule will take effect after the next jobnet is registered for fixed execution.
   - Immediate execution
     The jobnet is executed as soon as it is registered for execution. Calendars and schedules are invalidated, and execution starts for each execution registration.



5. Click the **OK** button.
   The Register for Execution dialog box closes.

Result

The jobnet is registered for execution.

For planned execution or fixed execution, jobnet execution starts according to the defined operation schedule. For immediate registration, jobnet execution starts immediately.

Postrequisites

Check the execution status of the job and jobnet.

If the operation schedule is set for the jobnet, you can monitor the execution status of the jobnet on a daily or monthly basis.

Related topics

- *6.1 Checking jobnet execution results*
- *6.2 Checking job execution results*
- *6.3 Monitoring the execution status of jobs and jobnets on a daily basis*
- *6.4 Monitoring the execution status of jobs and jobnets on a monthly basis*
- *6.5 Checking jobnet execution results from a Web browser (via the Web GUI)*

6 Monitoring Jobnets

After executing jobnets, monitor the execution status to make sure that the jobnets are executed normally. This chapter describes how to check the execution results of jobs and jobnets. This chapter also describes how to monitor jobnets on a daily or monthly basis to make sure that they are executed according to the operation schedule.

6.1 Checking jobnet execution results

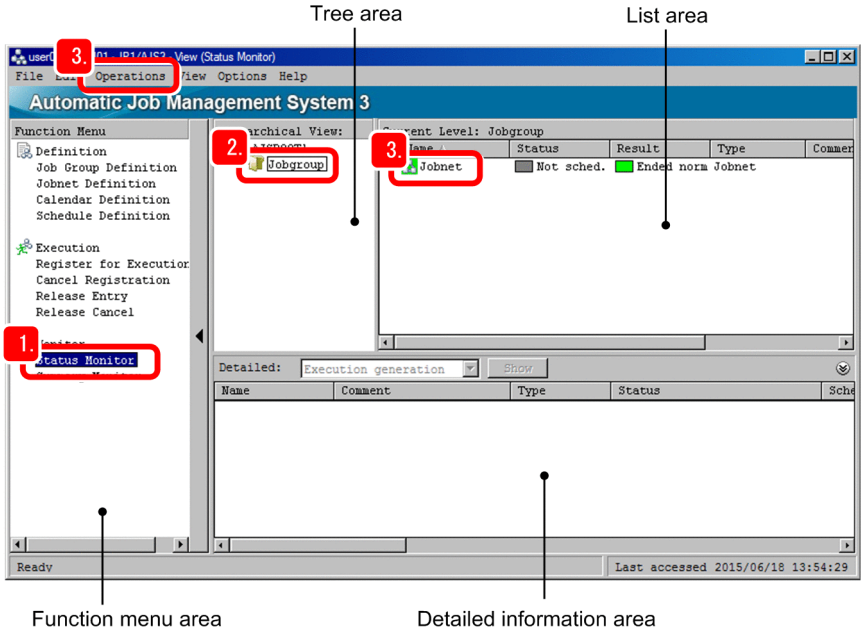
Check the execution results of a jobnet.

Prerequisites

The following explanation assumes that the execution of the jobnet has been completed.

Procedure

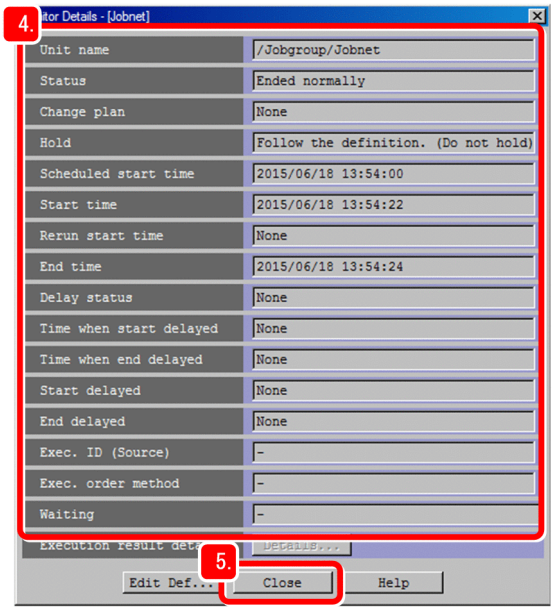
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Status Monitor**.



2. In the tree area, select the job group.
   The list area displays the execution results of the jobnet in the job group.
   If the jobnet is still being executed, wait a while, and then select **View**, and then **Refresh**.

3. Select the jobnet in the list area, and select **View**, **Detailed Information**, and then **Result**.
   The Monitor Details - [Jobnet] dialog box appears.

4. Checks detailed information about the execution results of the jobnet.



5. Click the **Close** button.
   The Monitor Details - [Jobnet] dialog box closes.

Result

You were able to check the execution results of the jobnet.

Postrequisites

If necessary, check the execution results of a job.

Related topics

- *6.2 Checking job execution results*

6.2 Checking job execution results

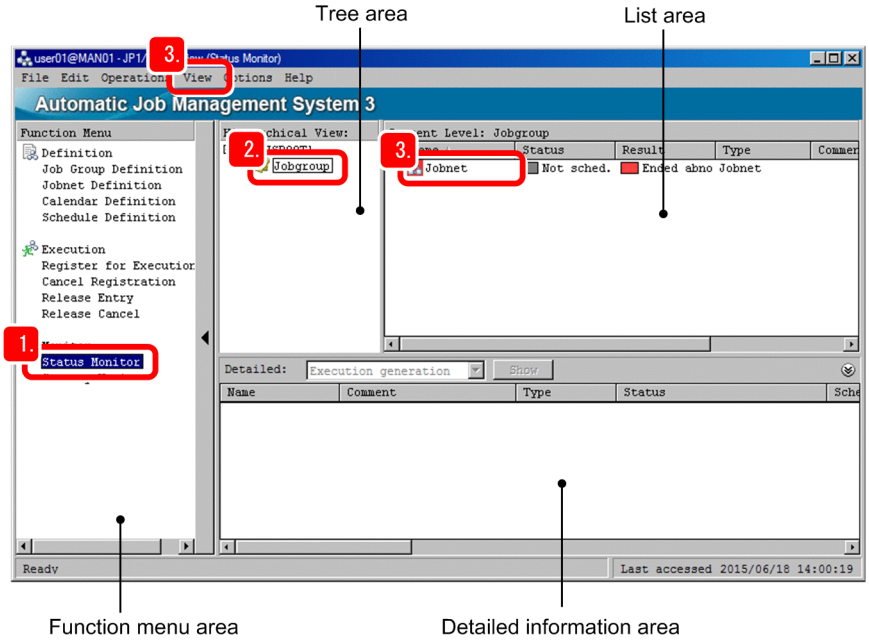
Check the execution results of a job.

Prerequisites

The following explanation assumes that the jobnet ended abnormally.

Procedure

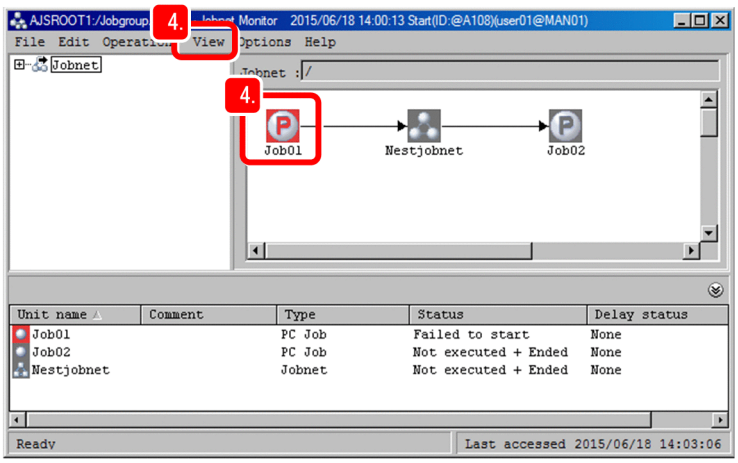
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Status Monitor**.



2. In the tree area, select the job group.
   The list area displays the execution results of the jobnet in the job group.
   If the jobnet is still being executed, wait a while, and then select **View**, and then **Refresh**.

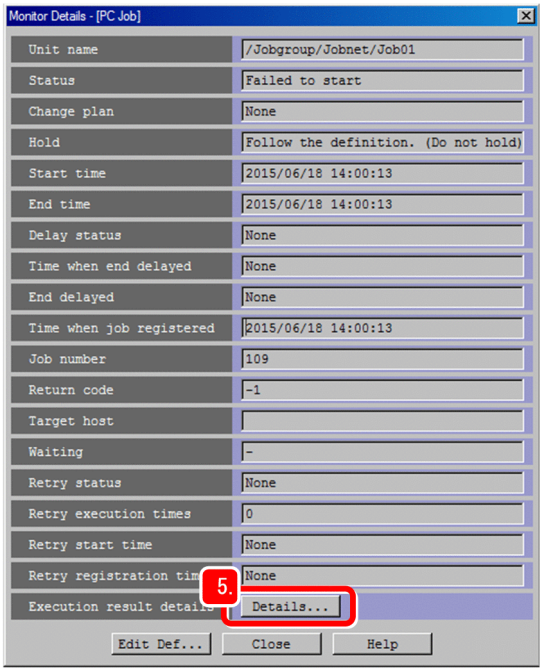
3. Select a jobnet that ended abnormally in the tree area, and select **View**, **Jobnet Monitor**, and then **Result**.
   The Jobnet Monitor window appears.

4. Select the icon of the job that ended abnormally, and then select **View** and then **Detailed Information**.



The Monitor Details - [PC Job] dialog box appears, and you can check details about the job execution results.

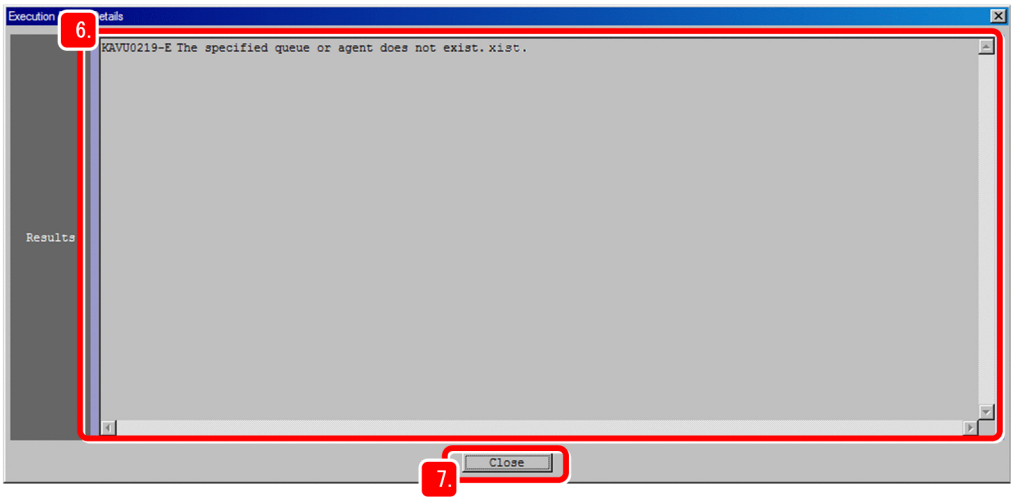
5. In the **Execution result details**, click the **Details** button.



The Execution Result Details dialog box appears.

> **Tip**
>
> If the job ended normally, you cannot click **Details** for **Execution result details**.

6. Checks the cause of the abnormal end of the job.



7. Click the **Close** button.
   The Execution Result Details dialog box closes.

8. In the Monitor Details - [PC Job] dialog box, click the **Close** button.
   The Monitor Details - [PC Job] dialog box closes.

Result

It was confirmed that the job ended abnormally. In addition, the cause was also confirmed.

Postrequisites

Correct the detailed definition of the job to remove the cause of the abnormal termination, and then re-execute the jobnet.

Related topics

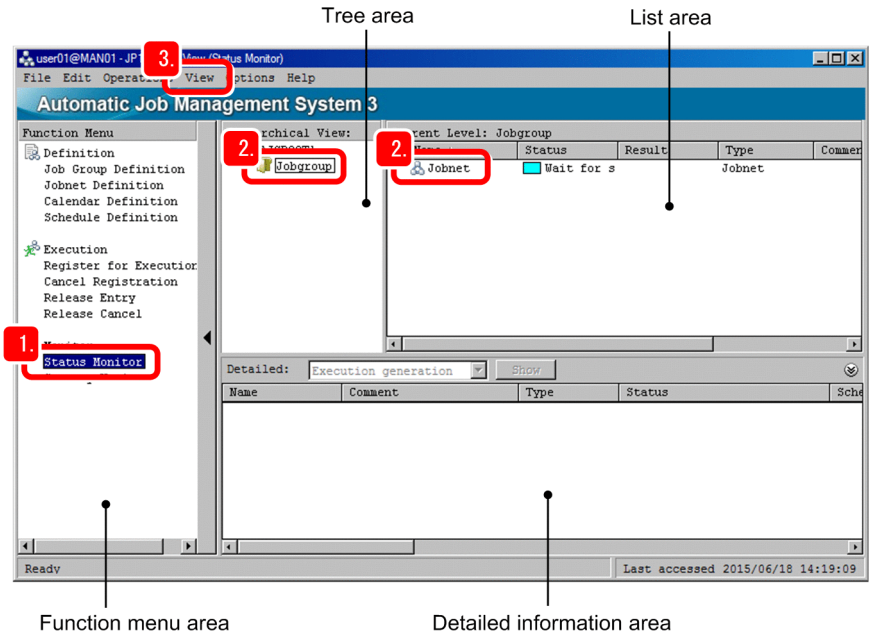
- *7.1 Correcting the detailed definition of a jobnet*

6.3 Monitoring the execution status of jobs and jobnets on a daily basis

If the operation schedule is set for jobnets, you can monitor the execution status of jobs and jobnets on a daily basis.

Procedure

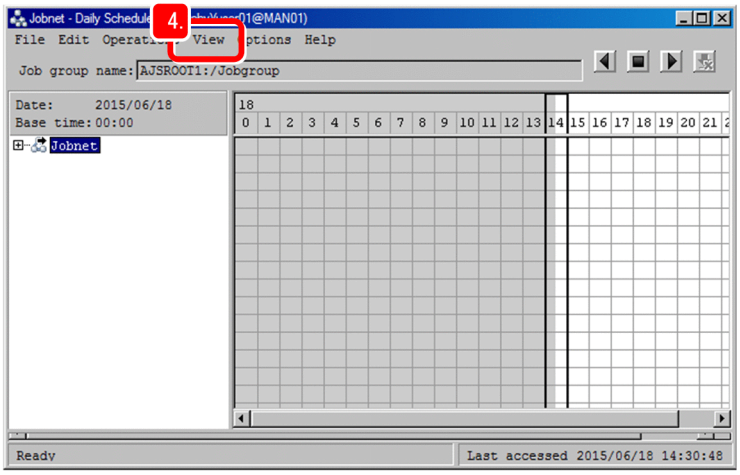
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Status Monitor**.



2. In the tree area, select the job group. In the list area, select the jobnet.

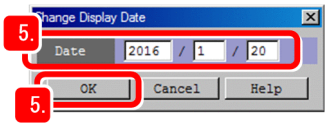
3. Select **View**, **Daily Schedule**, and then **Hierarchy**.
   The Daily Schedule (Hierarchy) window appears.
   If the scheduled execution date is not the current day, nothing is displayed in the Daily Schedule (Hierarchy) window.

4. Select **View**, **Change Display Date**, and then **Specify Day** to check the execution schedule of the jobnet.



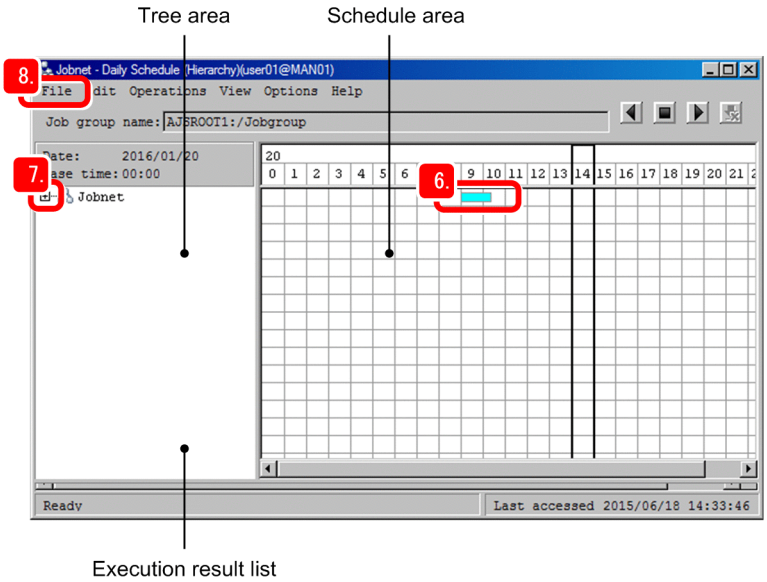
   The Change Display Date dialog box appears.

5. In **Date**, specify the next scheduled execution date, and then click **OK**.



The Change Display Date dialog box closes.

6. In the schedule area of the Daily Schedule (Hierarchy) window, check the execution status of a jobnet.



The cell color helps you check the execution status of the jobnet. For example, green indicates *Now running*, light green indicates *Ended normally*, sky blue indicates *Waiting to execute*, and light red indicates *Ended abnormally*.

Clicking a cell displays the unit name, start time, end time, and current status of the jobnet on the execution result list. However, if the jobnet was registered for planned execution and then executed, clicking a date cell later than the next execution schedule does not display anything in the execution result list.

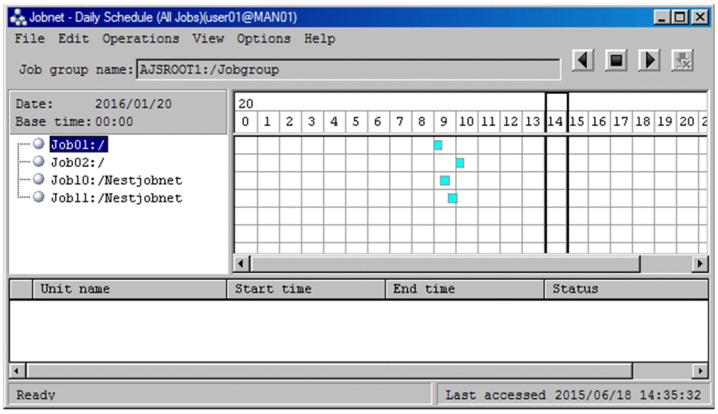
7. To check the execution result of the units in the jobnet, click the plus sign (+), and then click the units in the jobnet.

The execution schedules of the units in the jobnet are displayed in the schedule area. Click the plus sign (+) of the nested jobnet to check the execution schedules of lower-level units.

Tip

To view the daily schedule, you can display the status of the jobnets and jobs in hierarchical structure (as shown in this example), or display the statuses of all jobs. To display the statuses of all jobs, in the JP1/AJS3 - View window (Main window), select **View**, **Daily Schedule**, and then **All Jobs** to display the Daily Schedule (All Jobs) window.

Figure 6–1: Daily Schedule (All Jobs) window



8. Select **File**, and then **Close**.
   The Daily Schedule (Hierarchy) window closes.

Result

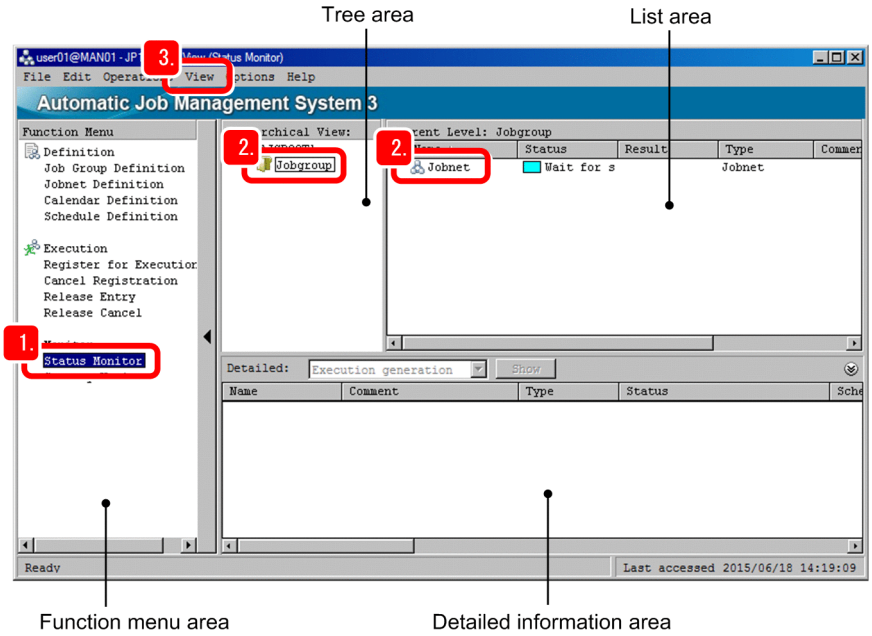
The execution status, start time, and end time of the jobs and the jobnets were confirmed on a daily basis.

6.4 Monitoring the execution status of jobs and jobnets on a monthly basis

If the operation schedule is set for jobnets, you can monitor the execution status of jobs and jobnets on a monthly basis.

Procedure

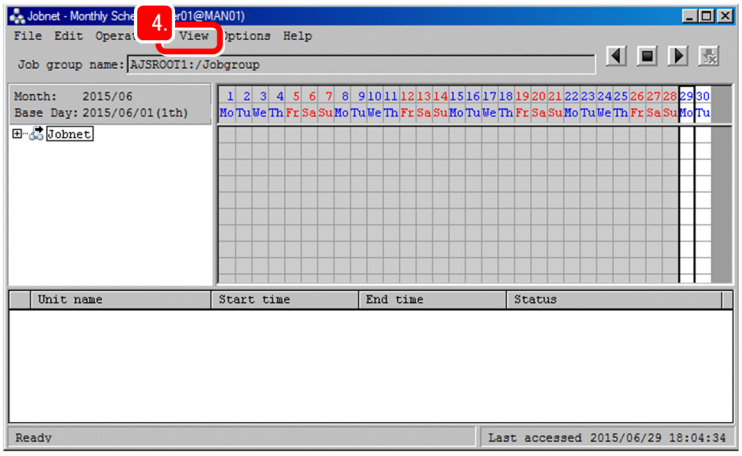
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Status Monitor**.



2. In the tree area, select the job group. In the list area, select the jobnet.

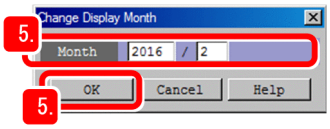
3. Select **View**, and then **Monthly Schedule**.
   The Monthly Schedule window appears.
   If the scheduled execution date is not in the current month, nothing is displayed in the Monthly Schedule window.

4. Select **View**, **Change Display Month**, and then **Specify Month** to check the execution schedule of the jobnet.



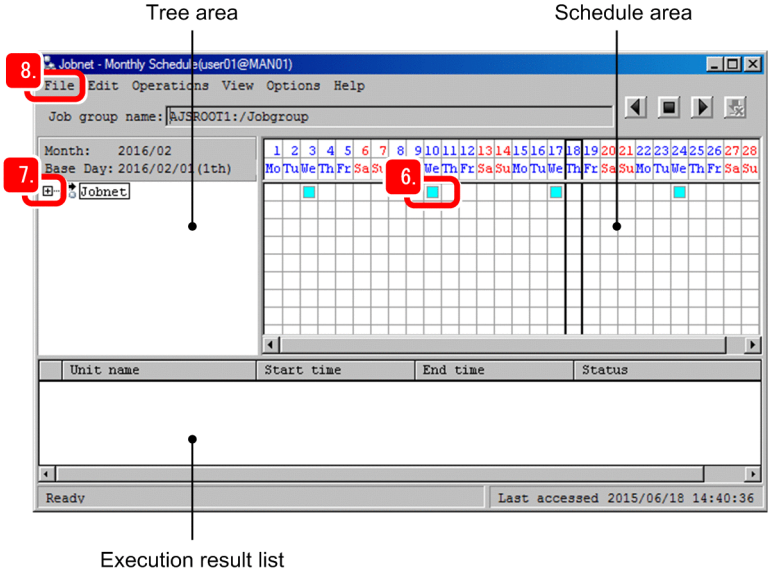
   The Change Display Month dialog box appears.

5. In **Month**, specify the scheduled execution-start month, and then click **OK**.



The Change Display Month dialog box closes.

6. In the schedule area of the Monthly Schedule window, check the execution status of a jobnet.



The cell color helps you check the execution status of the jobnet. For example, green indicates *Now running*, light green indicates *Ended normally*, sky blue indicates *Waiting to execute*, and light red indicates *Ended abnormally*.

Clicking a cell displays the unit name, start time, end time, and current status of the jobnet on the execution result list. However, if the jobnet was registered for planned execution and then executed, clicking a date cell later than the next execution schedule does not display anything in the execution result list.

7. To check the execution result of the units in the jobnet, click the plus sign (+), and then click the units in the jobnet.

   The execution schedules of the units in the jobnet are displayed in the schedule area. Click the plus sign (+) of the nested jobnet to check the execution schedules of lower-level units.

8. Select **File**, and then **Close**.

   The Monthly Schedule window closes.

Result

The execution status, start time, and end time of the jobs and the jobnets were confirmed on a monthly basis.

6.5 Checking jobnet execution results from a Web browser (via the Web GUI)

Check the execution results of a jobnet from a Web browser (via the Web GUI).

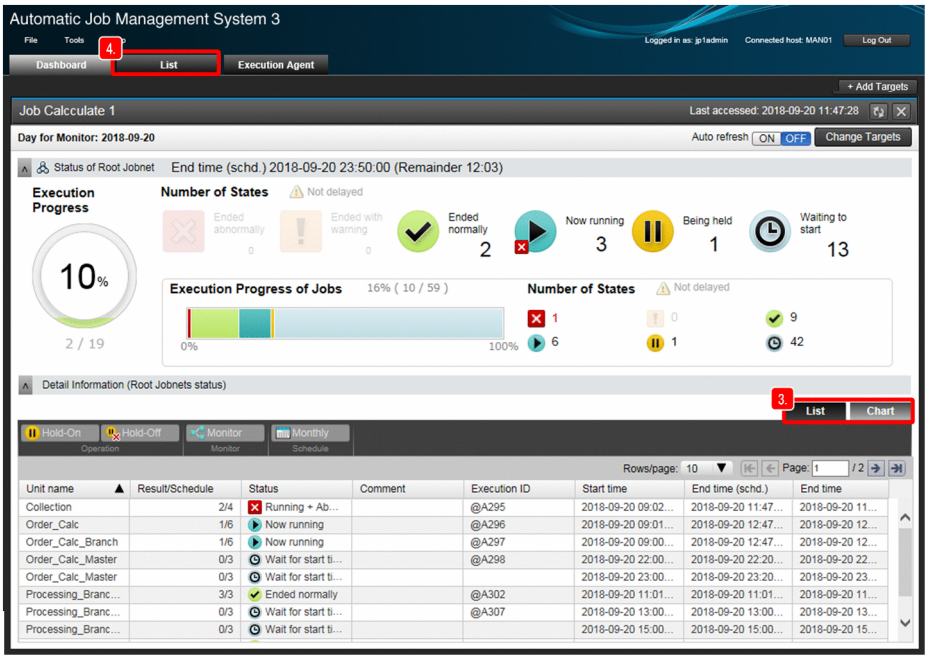
Prerequisites

Use the Set Monitoring Targets dialog box to register the date on which to monitor a jobnet in the Dashboard screen and the jobnet to be monitored.

Procedure

1. Log in to JP1/AJS3 - Web Console.
   The Dashboard screen appears.

2. In the Dashboard screen, check the progress of the monitored root jobnet and the number of units in each state.



   With the Dashboard screen, you can check the execution status and progress of the monitored root jobnet and each subordinate unit on a specific date. Because you can specify *Today* or *Previous Day*, this screen is useful when you want to monitor a jobnet on particular dates.

3. Check the execution status of the jobnet in the **List** and **Chart** tabs.
   The information that you can check from these tabs is as follows:

   List tab

   You can check the status and start time of each monitored jobnet in list format.

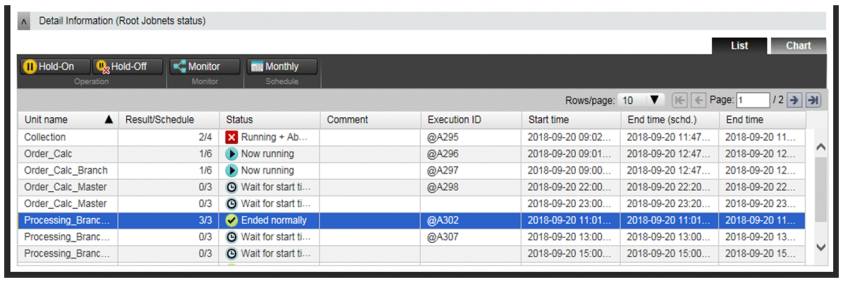
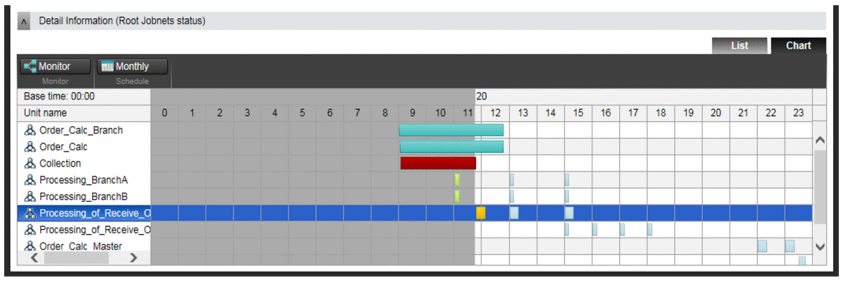


Chart tab

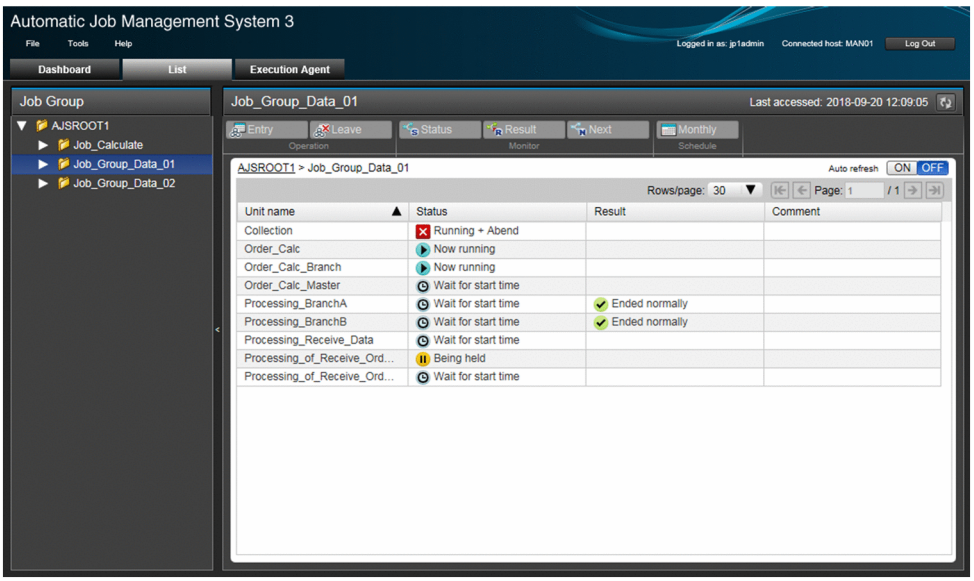
You can check the execution schedule of each monitored jobnet on a specific date.



4. To check the execution status of jobnets that are not registered as monitoring targets, click the **List** tab at the top of the Dashboard screen.

   The List screen appears.

5. In the tree area of the List screen, select a job group, and then check the status of each jobnet in the list area.



The List screen can display a list of jobnets that have already been defined in a specific job group. This screen is useful when you want to monitor all jobnets centrally.

Result

You were able to check the progress of a monitored root jobnet, the number of units in each state, and the status of each job in the jobnet. You were also able to check the execution status of jobnets that have not been registered as monitoring targets.

Related topics

- *1.8 Logging in to JP1/AJS3 - Web Console from web browser* (in Windows)
- *2.6 Logging in to JP1/AJS3 - Web Console from web browser* (in Linux)

7 Correcting Jobnet Definitions and Re-Executing Jobnets

If a job or jobnet ends abnormally or if you want to change the detailed definition, you can correct the definition and then re-execute the job or jobnet. This chapter describes how to correct the definition of a jobnet and then re-execute the jobnet.

7.1 Correcting the detailed definition of a jobnet

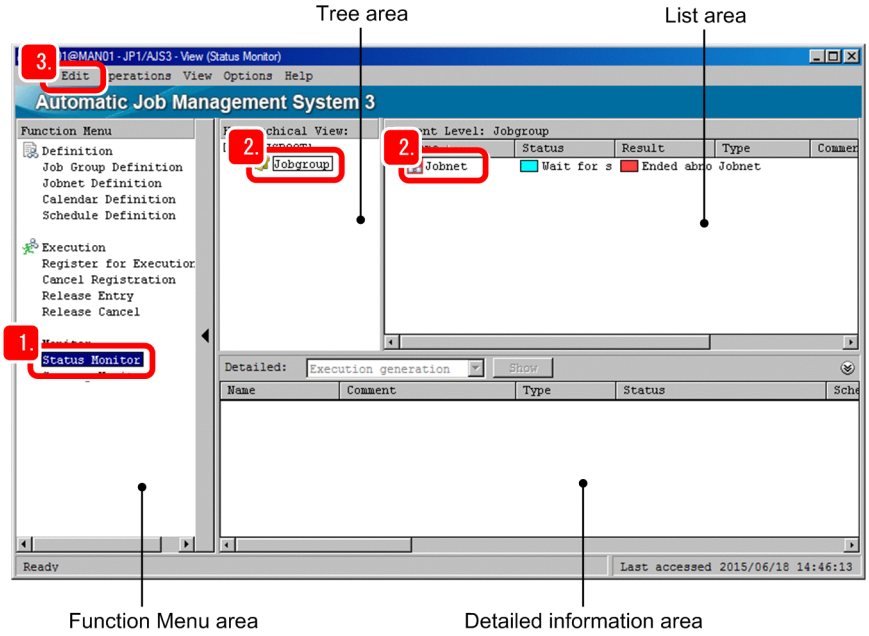
Correct the detailed definition of a jobnet registered for execution.

Prerequisites

The following explanation assumes that the execution of the jobnet has been completed.

Procedure

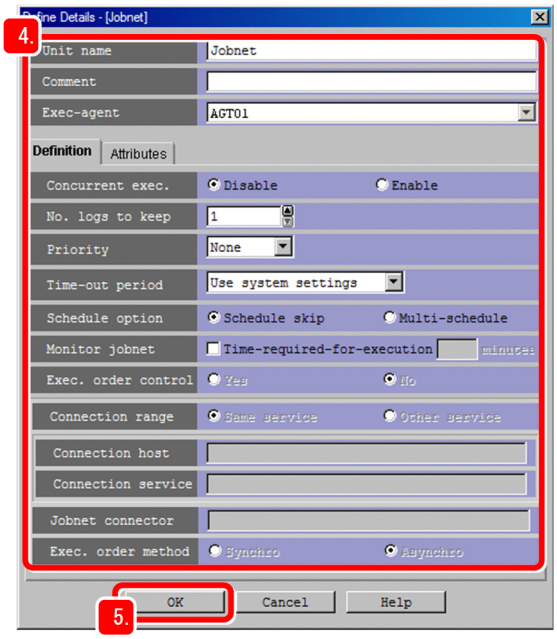
1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Status Monitor**.



2. In the tree area, select the job group. In the list area, select the jobnet.

3. Select **Edit**, and then **Properties**.
   The Define Details - [Jobnet] dialog box appears.

4. Correct the detailed definition.



> **Important**
>
> You cannot correct information in **Unit name** by using the method described here. To correct the unit name, you need to cancel the execution registration of the jobnet.

5. Click the **OK** button.
   The Define Details - [Jobnet] dialog box closes.

Result

You were able to correct the detailed definition of the jobnet.

Postrequisites

Re-execute the jobnet of which you corrected the detailed definition.

Related topics

- *7.2 Re-executing a jobnet*

7.2 Re-executing a jobnet

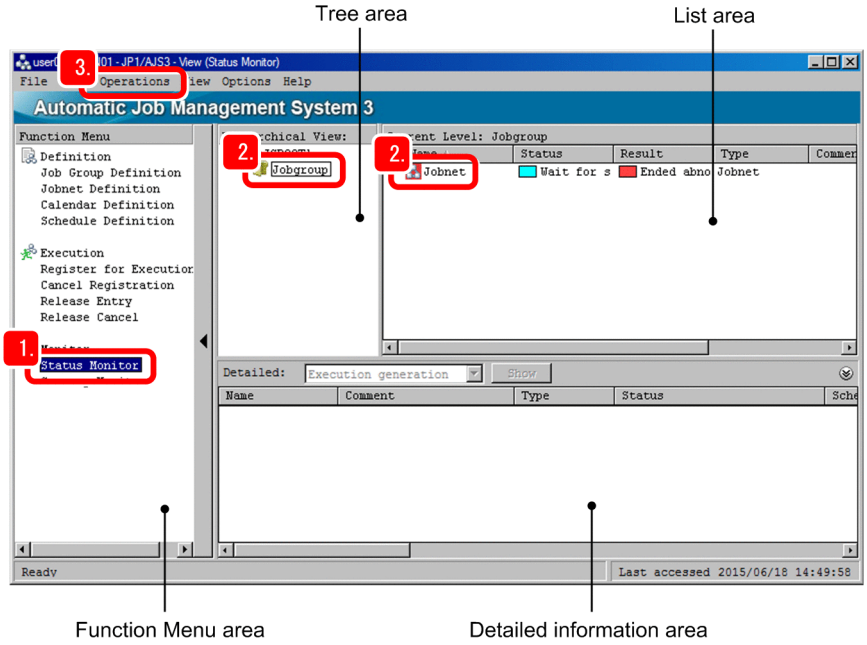
You can re-execute jobnets whose execution has been completed, such as a jobnet whose detailed definition is corrected.

Prerequisites

The following explanation assumes that the execution of the jobnet has been ended abnormally.

Procedure

1. In the JP1/AJS3 - View window (Main window), in function menu area, select **Status Monitor**.



2. In the tree area, select the job group. In the list area, select the jobnet.

   To help you understand the next step, the following describes the **Status** and **Result** columns in the JP1/AJS3 - View window (Main window).

   Status

   Displays the current status of the jobnet.

   If the jobnet is executed according to a predefined schedule (planned execution) and has a subsequent execution schedule, a status for which the next execution is being waited for, such as **Wait for start time**, is displayed. If the jobnet is executed immediately, **Not sched. to exe.** is displayed because no next execution schedule exists.

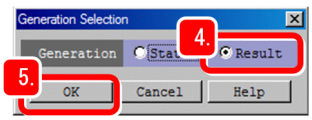
   Result

   Displays the execution results of the last executed jobnet.

3. Select **Operations**, and then **Rerun**.

   The Generation Selection dialog box appears.

4. Select **Result**.

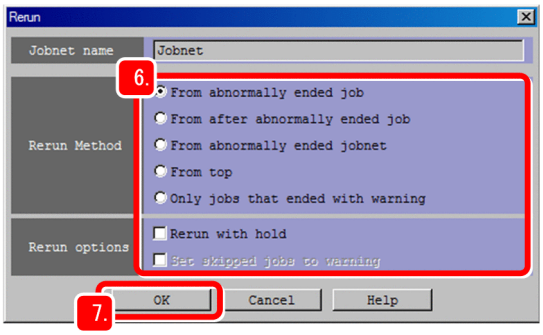


   In the above dialog box, **Status** and **Result** indicate **Status** and **Result** columns in the list area in the JP1/AJS3 - View window (Main window).

Select **Status** to re-register the jobnet that will be executed in planned execution.
Select **Result** to re-execute the last executed jobnet.
Because you need to re-execute the last executed jobnet, select **Result**.

5. Click the **OK** button.
   The Rerun dialog box appears.

6. In **Rerun method**, select the unit from which to re-execute the jobnet.



7. Click the **OK** button.
   The Rerun dialog box closes, and then the jobnet is re-executed.

8. Wait a while, and then select **View**, and then **Refresh**.
   The list area in the JP1/AJS3 - View window (Main window) displays the re-execution results.

Result

The operation was restored by re-executing the jobnet that ended abnormally.

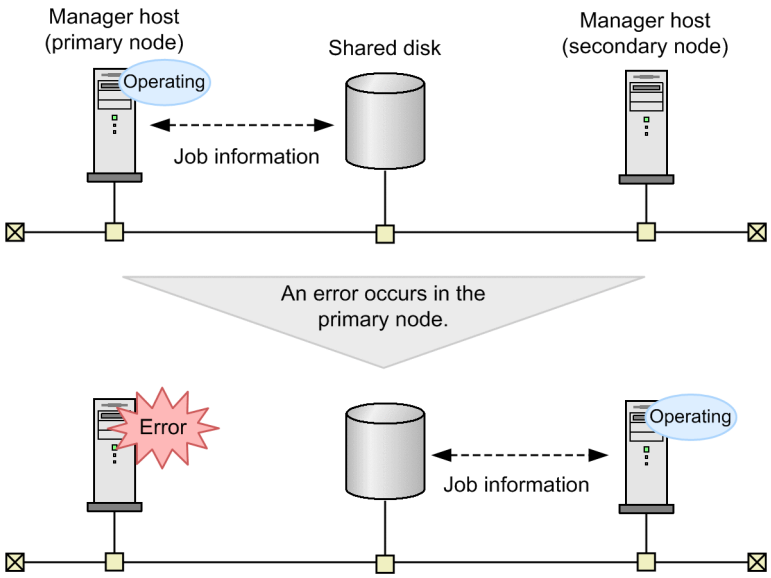
Appendixes

A. Advanced Use

This appendix outlines the functions for more efficient use of JP1/AJS3. For details, see the other manuals of JP1/AJS3. For details, see the manuals about JP1/AJS3 in *C.1 Related publications*.

A.1 Using a cluster system to improve system availability

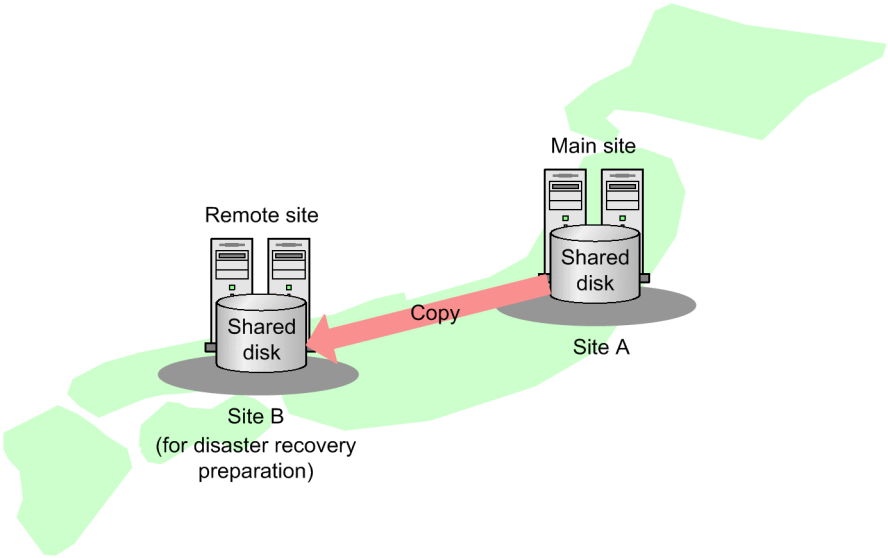
Multiple server systems linked to operate as one system is called a *cluster system*. If an error occurs in the currently operating server, another standby server inherits applications and continues processing without interruption. Operating JP1/AJS3 in a cluster system prevents applications from being interrupted by server errors, thus improving availability of the application system.



A.2 Using the disaster recovery function for large-scale disaster management

Disaster recovery refers to measures that are taken for unexpected events such as system shutdown caused by a large-scale disaster.

Normally, JP1/AJS3 information stored in the shared disk is copied to the shared disk of the system provided at a remote site. In the case of an emergency, such as a disaster, operation is switched over to the system on the remote site, and the applications are resumed there. Using the disaster recovery function prevents applications from being interrupted by a disaster, thus improving availability of the application system.

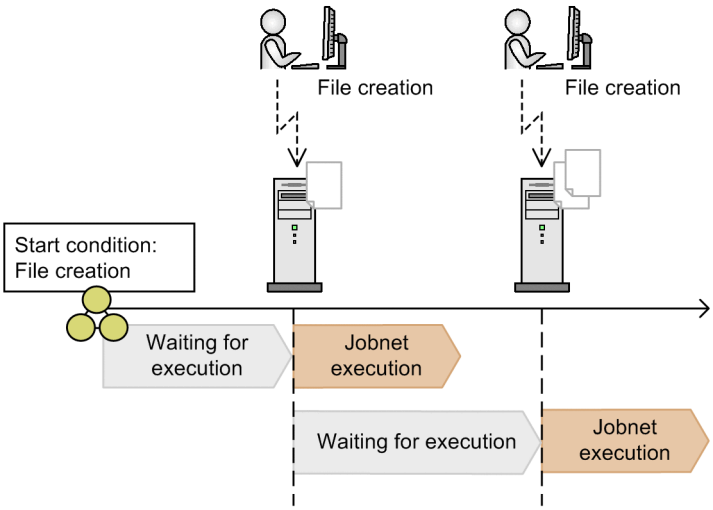


Use the disk copy and mirroring functionality in the hardware to copy data between shared disks. This is not a function of JP1/AJS3.

A.3 Executing jobnets triggered by the occurrence of a specific event

In addition to executing a jobnet at the specified execution start time, you can execute a jobnet when a specific condition is met. You can specify this condition by using an event job (a JP1/AJS3 job) or start condition.

By using an event job or start condition, you can specify many types of conditions, such as creation, update, or deletion of a file, occurrence of a Windows event, and expiration of time. For example, you can define a process that starts a jobnet when file creation is detected, and a process that performs recovery ten minutes after an application ends abnormally.



A.4 Outputting jobnet schedule information and definition information in a desired format (JP1/AJS3 - Print Option)

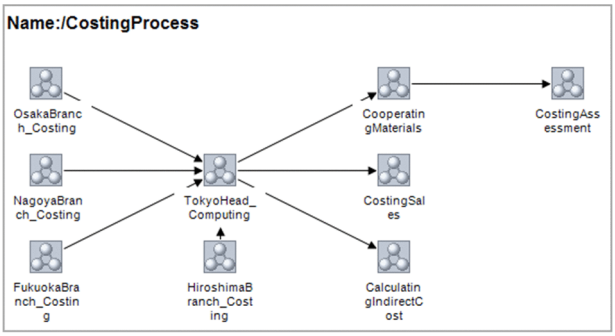
JP1/AJS3 - Print Option, which is a JP1/AJS3 component, allows you to output jobnet schedule information, definition information, and execution schedule and result information as a form. You can also customize the output contents and format according to your purpose.

This function is effective if you want to check jobnet information in a document when, for example, you create an operation report for applications or check the results of correcting many jobnets.

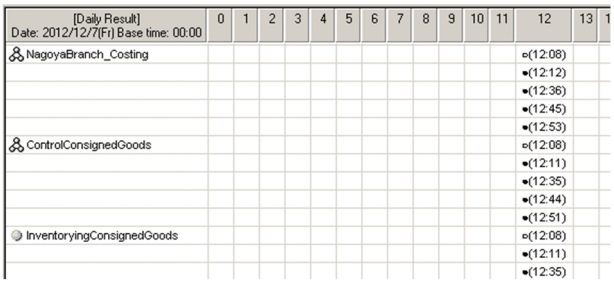
Output of unit definition information in a list format

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

Output of relation-line information for units in a map format



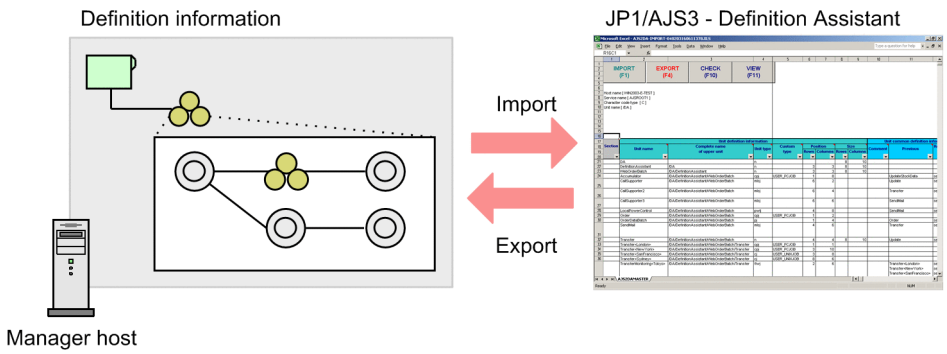
Output of schedule and execution result information for units in a daily format



A.5 Using Excel to edit unit definitions in a batch (JP1/AJS3 - Definition Assistant)

JP1/AJS3 - Definition Assistant# is an Excel template for editing schedule information and detailed definition information for units. JP1/AJS3 - Definition Assistant allows you to import and edit unit definition information registered in JP1/AJS3 to an Excel template, and register (export) the edited definition information to JP1/AJS3 as a batch.

You can edit information by using Excel commands such as copy, paste, search, and replace. This enables efficient development and operation. This function is effective if a large number of unit definitions are required in cases such as server migration or upgrading.



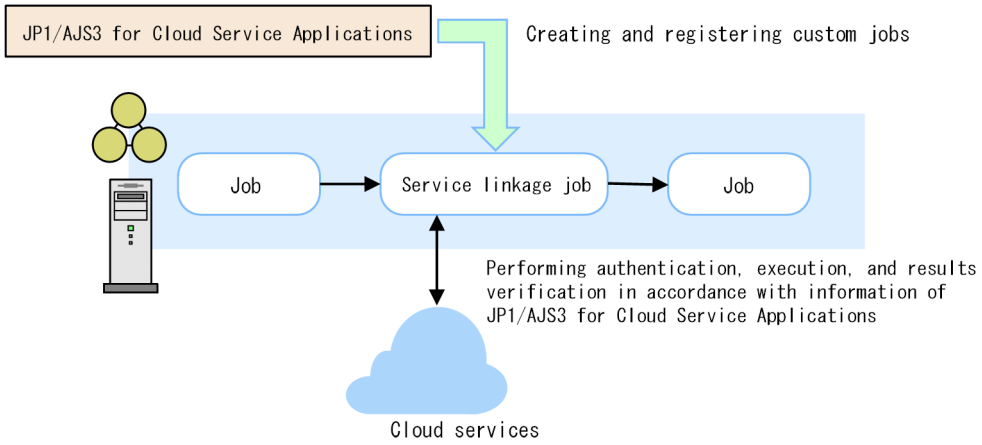
#: JP1/AJS3 - Definition Assistant is an optional program for JP1/AJS3.

A.6 Establishing linkage with business tasks using cloud service (JP1/AJS3 for Cloud Service Applications)

JP1/AJS3 for Cloud Service Applications# facilitates linkage between JP1/AJS3 and cloud services.

JP1/AJS3 for Cloud Service Applications consolidates and manages authentication information, execution information, and all the other information necessary to establish linkage with cloud services. By using this management information, you can create a custom job that performs a series of processes consisting of authentication, execution, and results verification, and then incorporate the custom job into a job flow in JP1/AJS3.

JP1/AJS3 can be used to centrally manage existing core business tasks and other business tasks that have been transferred to and are controlled by cloud systems.



#: JP1/AJS3 for Cloud Service Applications is an option product for JP1/AJS3.

B. Changes in each version

Here are the changes in each version.

B.1 Changes in 13-00

Added "Establishing linkage with business tasks using cloud services".

C. Reference Material for This Manual

This appendix provides reference material for readers of this manual.

C.1 Related publications

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

About JP1/AJS3:

- *JP1 Version 13 JP1/Automatic Job Management System 3 Overview* (3021-3-L42(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 System Design (Configuration) Guide* (3021-3-L43(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 System Design (Work Tasks) Guide* (3021-3-L44(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Configuration Guide* (3021-3-L45(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Administration Guide* (3021-3-L46(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Troubleshooting* (3021-3-L47(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Operator's Guide* (3021-3-L48(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Command Reference* (3021-3-L49(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Linkage Guide* (3021-3-L50(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 Messages* (3021-3-L51(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 - Print Option* (3021-3-L52(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 - Definition Assistant* (3021-3-L53(E))
- *JP1 Version 13 JP1/Automatic Job Management System 3 for Cloud Service Applications* (3021-3-L61(E))

About JP1:

- *JP1 Version 13 JP1/Base User's Guide* (3021-3-L09(E))
- *JP1 Version 13 JP1/Base Messages* (3021-3-L10(E))
- *JP1 Version 13 JP1/Base Function Reference* (3021-3-L11(E))

C.2 Abbreviations for Microsoft product names

This manual uses the following abbreviations for Microsoft product names.

Abbreviation	Full name or meaning
Edge	Microsoft(R) Edge
Excel	Microsoft(R) Excel
	Microsoft(R) Office Excel
Exchange Server	Microsoft(R) Exchange 2000 Enterprise Server
	Microsoft(R) Exchange 2000 Server
	Microsoft(R) Exchange Server

Abbreviation		Full name or meaning
Microsoft SQL Server		Microsoft(R) SQL Server
		Microsoft(R) SQL Server Enterprise Edition
MSMQ		Microsoft(R) Message Queue Server
Outlook	Outlook 2016	Microsoft(R) Office Outlook(R) 2016
	Outlook 2019	Microsoft(R) Office Outlook(R) 2019
	Outlook 2021	Microsoft(R) Office Outlook(R) 2021
Outlook Express		Microsoft(R) Outlook(R) Express
Windows 10		Windows(R) 10 Enterprise
		Windows(R) 10 Pro
Windows 11		Windows(R) 11 Enterprise
		Windows(R) 11 Pro
Windows Server 2016		Microsoft(R) Windows Server(R) 2016 Datacenter
		Microsoft(R) Windows Server(R) 2016 Standard
Windows Server 2019		Microsoft(R) Windows Server(R) 2019 Datacenter
		Microsoft(R) Windows Server(R) 2019 Standard
Windows Server 2022		Microsoft(R) Windows Server(R) 2022 Datacenter
		Microsoft(R) Windows Server(R) 2022 Standard

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

C.3 Conventions: Abbreviations for product names

This manual uses the following abbreviations for Hitachi and non-Hitachi products:

Abbreviation		Full name
JP1/AJS3	JP1/AJS3 - Manager	JP1/Automatic Job Management System 3 - Manager
	JP1/AJS3 - Agent	JP1/Automatic Job Management System 3 - Agent
	JP1/AJS3 - View	JP1/Automatic Job Management System 3 - View
JP1/AJS3 - Web Console		JP1/Automatic Job Management System 3 - Web Console
JP1/AJS3 - Print Option	JP1/AJS3 - Print Option Manager	JP1/Automatic Job Management System 3 - Print Option Manager

Abbreviation		Full name
JP1/AJS3 - Print Option	JP1/AJS3 - Print Option	JP1/Automatic Job Management System 3 - Print Option
JP1/AJS3 - Definition Assistant		JP1/Automatic Job Management System 3 - Definition Assistant
JP1/AJS3 for Cloud Service Applications		JP1/Automatic Job Management System 3 for Cloud Service Applications
AIX		AIX V7.2
		AIX V7.3
Firefox		Mozilla(R) Firefox(R)
Linux	Linux 7	Red Hat Enterprise Linux(R) Server 7
	Linux 8	Red Hat Enterprise Linux(R) Server 8
	Linux 9	Red Hat Enterprise Linux(R) Server 9
	Oracle Linux 7	Oracle Linux(R) Operating System 7
	Oracle Linux 8	Oracle Linux(R) Operating System 8
	Oracle Linux 9	Oracle Linux(R) Operating System 9
	SUSE Linux 12	SUSE Linux(R) Enterprise Server 12
	SUSE Linux 15	SUSE Linux(R) Enterprise Server 15

UNIX is sometimes used generically, referring to AIX and Linux.

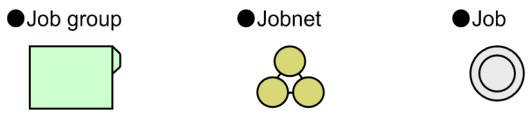
C.4 Conventions: Acronyms

This manual uses the following acronyms:

Acronym	Meaning
GUI	Graphical User Interface
IPF	Itanium(R) Processor Family
OS	Operating System

C.5 Conventions: Diagrams

This manual uses the following conventions in diagrams:



C.6 Conventions: Fonts and symbols

The following table explains the text formatting conventions used in this manual:

Text formatting	Convention
Bold	Bold characters indicate text in a window, other than the window title. Such text includes menus, menu options, buttons, radio box options, or explanatory labels. For example: • From the **File** menu, choose **Open**. • Click the **Cancel** button. • In the **Enter name** entry box, type your name.
Italic	Italic characters indicate a placeholder for some actual text to be provided by the user or system. For example: • Write the command as follows: `copy` *source-file target-file* • The following message appears: `A file was not found. (file =` *file-name*`)` Italic characters are also used for emphasis. For example: • Do *not* delete the configuration file.
`Monospace`	Monospace characters indicate text that the user enters without change, or text (such as messages) output by the system. For example: • At the prompt, enter `dir`. • Use the `send` command to send mail. • The following message is displayed: `The password is incorrect.`

The following table explains the symbols used in this manual:

Symbol	Convention
`|`	In syntax explanations, a vertical bar separates multiple items, and has the meaning of OR. For example: `A|B|C` means A, or B, or C.
`{ }`	In syntax explanations, curly brackets indicate that only one of the enclosed items is to be selected. For example: `{A|B|C}` means only one of A, or B, or C.
`[ ]`	In syntax explanations, square brackets indicate that the enclosed item or items are optional. For example: `[A]` means that you can specify `A` or nothing. `[B|C]` means that you can specify `B`, or `C`, or nothing.
`...`	In coding, an ellipsis (...) indicates that one or more lines of coding have been omitted. In syntax explanations, an ellipsis indicates that the immediately preceding item can be repeated as many times as necessary. For example: `A, B, B, ...` means that, after you specify `A, B,` you can specify B as many times as necessary.

C.7 Conventions: Units (such as KB, MB, GB, and TB)

This manual uses the following conventions:

- 1 KB (kilobyte) is 1,024 bytes.
- 1 MB (megabyte) is $1{,}024^2$ bytes.

- 1 GB (gigabyte) is $1{,}024^3$ bytes.
- 1 TB (terabyte) is $1{,}024^4$ bytes.

C.8 Conventions: Version numbers

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

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

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

C.9 Online manual

JP1/AJS3 - View comes with an online manual that you can read in browsers.

In JP1/AJS3 - View, you can view the manual by choosing **Help** and then **Contents**. You can also press the **F1** key to view the manual contents. Your Web browser must be associated with a file that has the extension `htm`; otherwise, the online manual will not be displayed correctly. If this happens, associate the `htm` file with the Web browser.

Cautionary note

Depending on the OS settings, the online manual might appear in the active window of the browser when you launch the manual from the **Start** menu.

C.10 Regular expressions available in JP1/AJS3

Regular expressions can be used in some items in dialog boxes and commands. For details about regular expressions in Windows, see the *JP1/Base User's Guide*. For details about regular expressions in UNIX, see your UNIX documentation.

The regular expressions that you can use when executing an event job on a Windows host depend on the JP1/Base settings. For details on setting regular expressions for event job execution, see the explanation about extending the available regular expressions in the *JP1/Base User's Guide*.

Searching may take a long time if you often use the regular expression `.*` (which means match any character or characters). In long messages, use `.*` only where necessary. In UNIX, you can use `[^ ]*` (repeat characters other than space characters) instead of `.*` when you want to find a match other than space characters. Using `[^ ]*` reduces the search time.

C.11 About the 3rd level and 4th level Kanji characters added in JIS 2004 (JIS X 0213:2004)

JP1/AJS3 cannot use the 3rd level and 4th level Kanji characters added in JIS 2004. If these characters are used, operation might not be performed correctly.

D. Glossary

abnormal end

A jobnet ends abnormally if one of the processes defined in the jobnet fails to execute properly. The jobnet is interrupted at that point and subsequent processes are not executed.

A job ends abnormally if it fails to execute properly. The process is interrupted at that point.

agent host

A host that executes jobs on request from a manager host. JP1/AJS3 - Agent must be installed on the agent host, or since JP1/AJS3 - Manager also provides JP1/AJS3 - Agent functionality, JP1/AJS3 - Manager might be installed on the agent host.

The agent host executes the job on receipt of a job request from the manager host. At completion of the job, the agent host receives the execution result (return value) of the executable file and forwards it to the manager host.

calendar information

Information about open days and closed days for jobnet execution. You can define calendar information separately for each job group. The calendar information specifies the days on which jobnets in the job group can and cannot be executed. (When the processing cycle falls on a closed day, the jobnet can be executed on another day if a substitute schedule is defined.)

For open days, you can specify the base day, base month, and base time.

closed day

A day on which jobnets are not executed. However, if Execute without shift is specified, the jobnet will be executed on that closed day.

Daily Schedule window

A window that displays each day's execution schedules, execution status, and execution results.

fixed execution registration

A method of registering a jobnet so that it starts and runs at a predetermined date and time calculated by the system from schedule definitions.

immediate execution registration

A method for starting and processing a jobnet immediately after registering it for execution.

job

A group of commands, shell scripts, or Windows executable files.

job group

A folder for classifying and managing jobnets.

jobnet

A set of jobs associated in execution order. When a jobnet is executed, the jobs in the jobnet are automatically executed in their predetermined order.

Jobnet Editor window

A window in which you can create new jobnets or edit existing jobnets.

Jobnet Monitor window

A window that displays the execution status or detailed execution results of jobnets or jobs. You can manipulate jobnets or jobs in this window.

JP1 permission level

A name that indicates the operations that a JP1 user is allowed to perform on management targets (resources) defined in JP1/AJS3, including applications and events. Use JP1/Base to define JP1 permission levels.

JP1 resource group

A name given to a specific JP1/AJS3 unit for controlling access by JP1 users to that unit.

JP1 user

A user designation for using JP1/AJS3 or JP1/IM - Manager. Each JP1 user is registered in the authentication server, which controls the user's access to management targets (resources).

JP1/Base

JP1/Base is a prerequisite program for JP1/IM and JP1/AJS3. When a system that uses JP1/IM and JP1/AJS3 is installed, operation permissions (JP1 permission levels) can be set for JP1 users.

manager host

The manager host creates jobnet execution schedules from the defined schedule information. At jobnet run time, the manager host starts the executable files defined as jobs, forwards the job definitions to an agent host, and requests the agent host to execute the jobs. When execution completes, the execution result is received by the agent host and the database is updated. Based on the updated information, the manager host executes a succeeding job or schedules the next execution of the jobnet.

maximum number of concurrently executable jobs

The maximum number of jobs that can be executed concurrently.

Monthly Schedule window

A window that displays each month's execution schedules and execution results.

nested jobnet

A jobnet defined within another jobnet.

normal end

A normal end of a jobnet occurs when all the processes defined in the jobnet have executed correctly and the jobnet has completed.

A normal end of a job occurs when the job has executed correctly.

open day

A day when jobnets run.

planned execution registration

A method of registering a jobnet so that it starts and executes according to schedule definitions.

schedule rule

Jobnet information such as execution start time and processing cycle. Up to 144 schedule rules can be defined for a single jobnet.

unit

A generic term for any job network element.

Web GUI

An interface that uses a web browser to monitor units that are defined on the manager host. Web GUI connects to the Web Console server via a network such as the Internet. With Web GUI, you can monitor the execution status and result of jobnets, and execute and operate jobnets.

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