

Fujitsu Software Systemwalker Operation Manager V17.0.1

User's Guide - Master Schedule Management

UNIX/Windows(R)

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Preface

Purpose of This Document

This document describes the Master Schedule Management function of Systemwalker Operation Manager.

Intended Readers

This document is intended for those who are to operate and manage the system using the Master Schedule Management function of Systemwalker Operation Manager.

Conventions Used in This Document

For descriptions and abbreviations of specific articles, refer to the "[C.1 Abbreviations and Generic Terms Used](#)".

Trademarks

For information about registered trademarks, refer to the "[C.2 Trademarks](#)".

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Chapter 1 Overview

This chapter provides an overview of the Systemwalker Operation Manager Master Schedule Management function.

1.1 What is the Master Schedule Management Function?

The Master Schedule Management function is a function to manage and operate the job net schedule information on the process date basis. This function also allows distribution of the schedule information to two or more servers for processing.

The Master Schedule Management function enables the following operations:

- You can modify the definition information without revising the master information since the schedule information can be managed based on the process date.

When changing the schedule information only on a specific date that a non-routine job occurs, you can previously set the schedule information for that process date. You do not need to do troublesome works, such as restoring the original settings after an operation.

- You can economize the resources required for schedule management operations by managing the process dates, resulting in improved execution performance for the schedule.

To create the schedule information for each process date, the Master Schedule Management function extracts only the data required for a specific process date from the master information. Therefore, if the schedule information is created for each process date, in cases where there is a large volume of job nets that are executed only once a month, it becomes possible to minimize the schedule information for each day. This in turn minimizes the resources required for schedule management operations, which leads to improved execution performance for the schedule.

- You can reduce server load in the schedule processing since the schedule information can be distributed to multiple servers. [UNIX version]
- You can register the master information in advance by specifying the actual date of processing.

When the definition information of a job net or job is changed during an operation, you can carry out a systematic operation for changing.

- You can control the schedule on the subject date when a job net was carried over to the next process date.

If, for instance, a job was not completed during the previous day, you can operate flexibly waiting for the previous day job to complete or allowing an operator to intervene for processing.

This section itemizes the kind of operations available from the Master Schedule Management function for explanation.

- Daily schedule management
- Daily schedule distribution [UNIX]
- Operation Change
- Carried Over Job Net
- Monitoring and operating the schedule



Note

Jobs not suited to the Master Schedule Management function

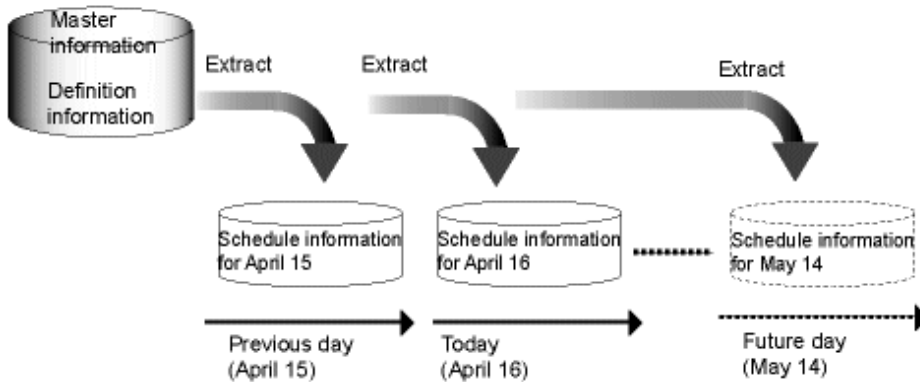
The Master Schedule Management function enables you to manage operation change by year for jobs whose schedule changes daily. Therefore, it is not suitable for schedules that are operated only a few times a year or for non-routine jobs that are not changed, for example. To operate these types of schedules and jobs, use the normal schedule instead.

If you use the Master Schedule Management function to manage these types of job, you must carefully check the setting of **Store schedule information for** in the Master Schedule Management function. Refer to "[3.1.2.4 Storing Schedule Information](#)" for details.

1.1.1 Daily Schedule Management

You can manage the schedule information based on process date.

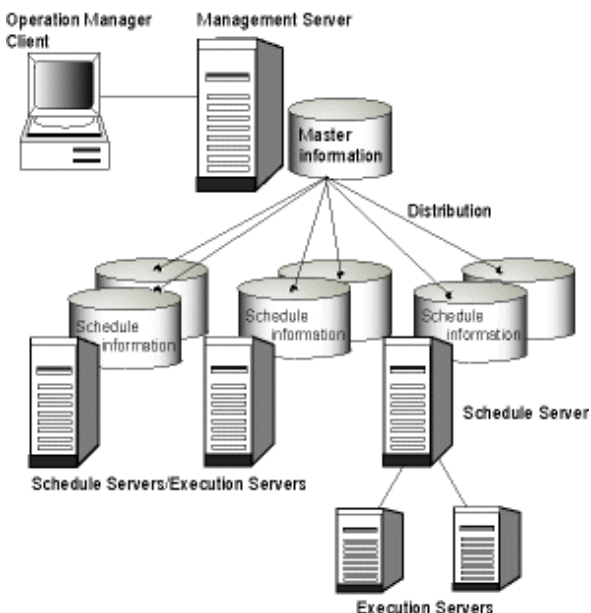
You can manage job net definition information and schedule information registered to a project as the "master information" by enabling the Master Schedule Management function and selecting the master settings for the project. Schedule information is extracted on every process date based on the master information. A job net is executed according to the schedule information extracted on the process date basis.



The normal schedule is the practice of managing the definition information and schedule information on a single database, without extracting the schedule information for every process date, as opposed to daily schedule management. It is the conventional operation system of Systemwalker Operation Manager.

1.1.2 Daily Schedule Distribution

The master information management server can distribute the schedule information to the schedule server (up to five of them are provided for the subsystem) on the process date basis. The load of schedule processing can be shared across the multiple servers.



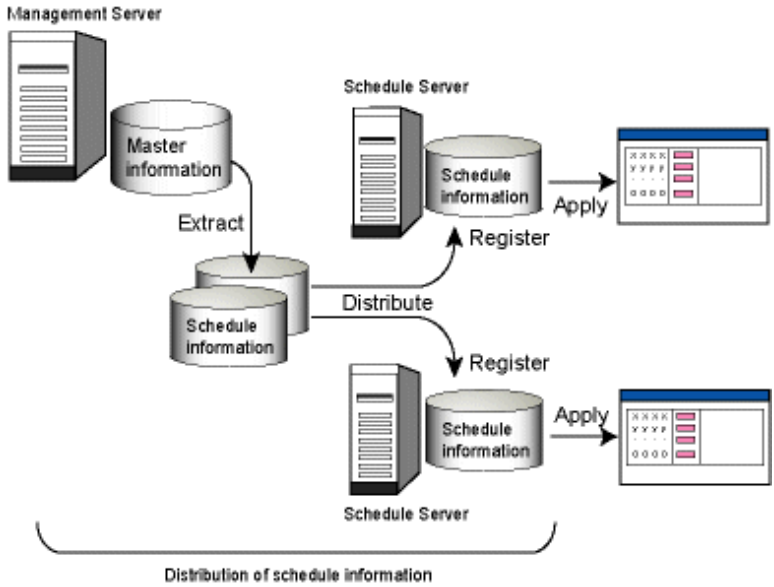
This function can also decentralize the schedule load by dividing scheduler servers into execution servers.



Schedule Distribution

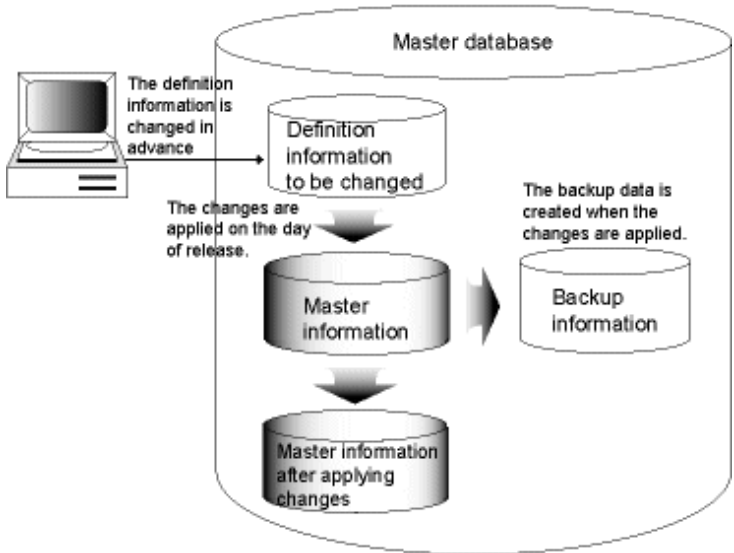
The operation of the Master Schedule Management function ranging from extracting the schedule information from the master information based on process date from the management server up to distributing and registering it to the schedule servers is called "Schedule Distribution". The time period during which extraction, distribution and registration of schedule information is continued by the Master Schedule Management function, is called the "During schedule distribution."

After "Schedule Distribution", the schedule information is applied enabling the job net or group to be operated.



1.1.3 Operation Change

When necessity of substantial modifications is anticipated for a job or job net information, you can register beforehand the definition of the job net or job after the modification to the project. The master information will be replaced with the modified one as the specified process date (release day) arrives. And extraction, distribution and application of the schedule information for the subject date are done based on the new master information.



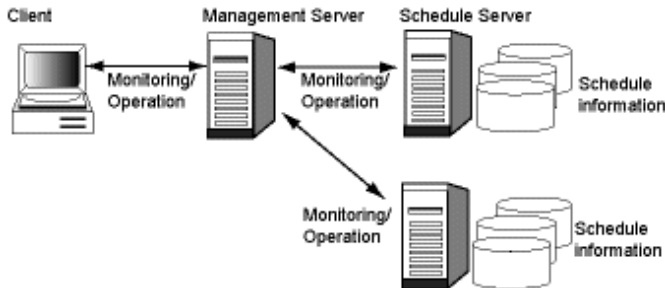
1.1.4 Carried Over Job Net

The Master Schedule Management function manages a job net carried over to the next process date as a carried over job net. A carried over job net has the information of which process date it originally belonged and in what states it was

carried over, allowing you to specify in advance, as an instruction, the operation to be implemented as the day change time arrived.

1.1.5 Monitoring and Operating the Schedule

You can monitor and operate status of the daily schedule management or a carried over job net from the window.



Monitoring and operating the schedule

You can monitor statuses of the following schedules:

- Schedule distribution status for each subsystem
- Schedule distribution status for each schedule server

You can perform the following schedule operations:

- Future schedule
- Rescheduling
- Canceling the schedule information
- Starting a schedule

Monitoring and operating the carried over job nets

You can monitor the following conditions for a carried over job net:

- Job net status
- Job net handling status
- Job net instruction

You can perform the following operations for a carried over job net:

- Operations for a job net
- Operations responding to the "handle manually" instruction

1.2 Operation Mode of Master Schedule Management Function

This section explains the following two operation modes of the Master Schedule Management function.

- Operation mode under single server

Use for controlling a future schedule or carried over job net that does not require a heavy work.

- Operation mode under multiple servers [UNIX version]

Use when you want to centrally control the definition information currently shared by the respective destination or when you want to distribute the load of a single server to multiple servers in processing massive amount of schedule data.

1.2.1 Operation Mode under Single Server

The operation mode under single server is used to operate a management server that manages master information and a schedule server where the daily schedule is distributed to.

The following explains the operation mode involving a single server in two separate cases.

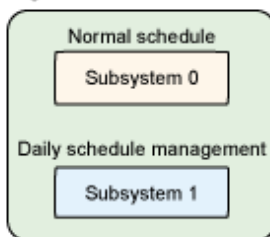
- When separating the normal schedule from the daily schedule management
- When operating the daily schedule management in a single subsystem

When separating the normal schedule from the daily schedule management

In this case, a single server is used when separating the normal schedule from the daily schedule management.

This mode is employed when a single server is enough for handling the schedule. It is turned on, for example, when Subsystem 0 is used for executing the jobs that can be completed during the process date and Subsystem 1 is used processing the jobs that tend to be carried over to the next process date.

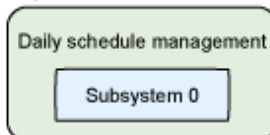
Management server/Schedule server



Operating the daily schedule management in a single subsystem

In this case, a single server is used only for the daily schedule management. This mode is used when a single server is enough for handling the schedule and most of the jobs are to be carried over to the next process date.

Management server/Schedule server



1.2.2 Operation Mode under Multiple Servers [UNIX version]

The operating mode is used to operate the management servers that manage the master information and the schedule servers that schedule a job based on the distributed schedule information. Each server creates multiple subsystems as needed by the operation mode of a specified job.

In this mode, a management server distributes the schedule information to a subsystem having the same number as that of the management server.

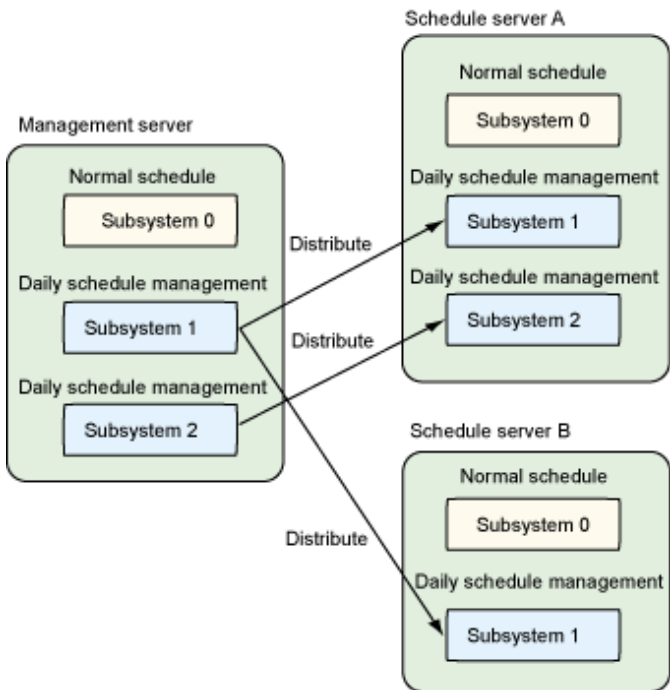
The following explains the multi-subsystems-involved operation mode taking the cases below as examples.

- When separating the normal schedule from the daily schedule management
- When distributing the daily schedule management to multiple schedule servers
- When adding a subsystem in test mode

When separating the normal schedule from the daily schedule management

In this example, Subsystem 0 is used for the normal schedule and Subsystems 1 and 2 are used for the daily schedule management. Subsystem 1 distributes the schedule information to Scheduler Servers A and B. While Subsystem 2 distributes the schedule information to Schedule Server A only.

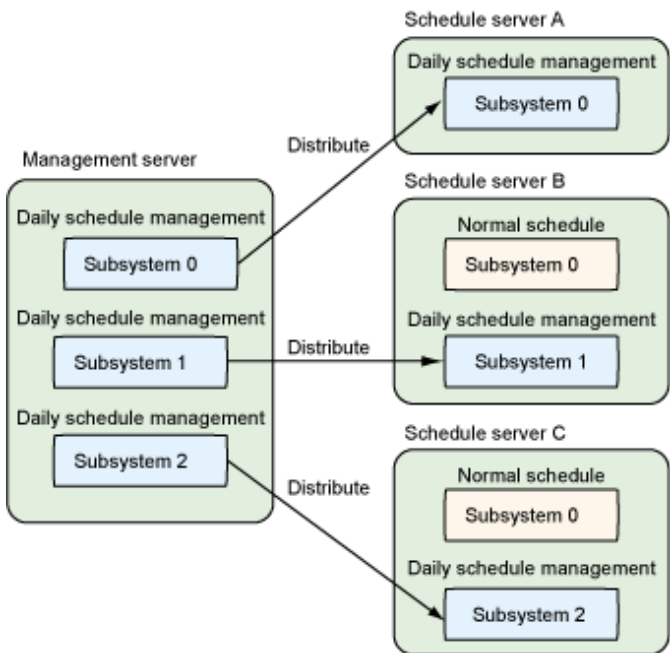
In this operation mode, subsystem 0 executes different small-scale applications closed under servers, subsystem 1 executes applications under all servers, and subsystem 2 executes an application only under a specific server.



When distributing the daily schedule management to multiple schedule servers

In this case, all the subsystems are used for the daily schedule management and the job of respective systems is distributed to multiple schedule servers.

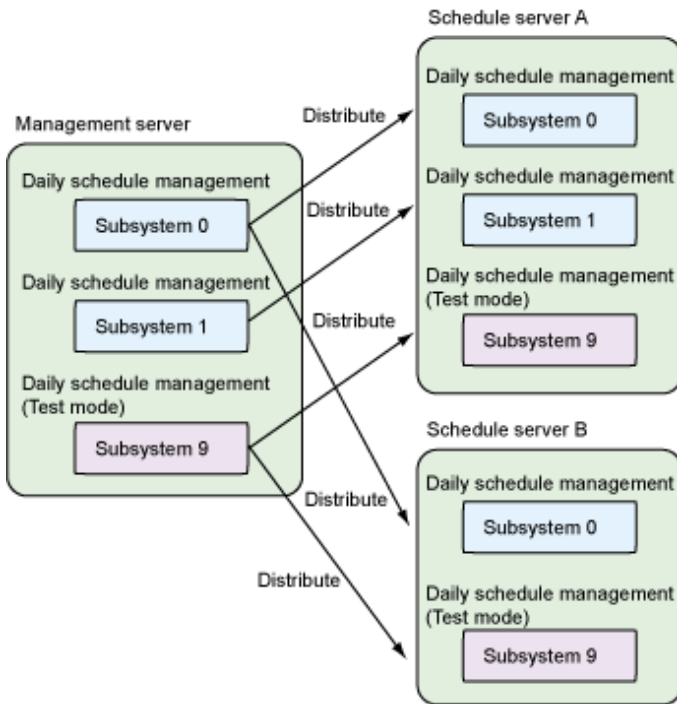
This mode is operated when reducing the burden of respective scheduler servers by distributing the workload resulting from processing of massive amount of schedules data among them.



When adding a subsystem in test mode

It is an example of creating a subsystem in the test mode by setting Subsystems 0 and 1 to the daily schedule management operation. You can set a virtual time in the test mode by synchronizing the management server to the schedule server.

This mode is operated when: Subsystem 0 is used for the jobs to be executed by every server, Subsystem 1 is used for the jobs to be executed by a specific server, and Subsystem 9 is used for testing the operation on Subsystem 0 in the virtual time.

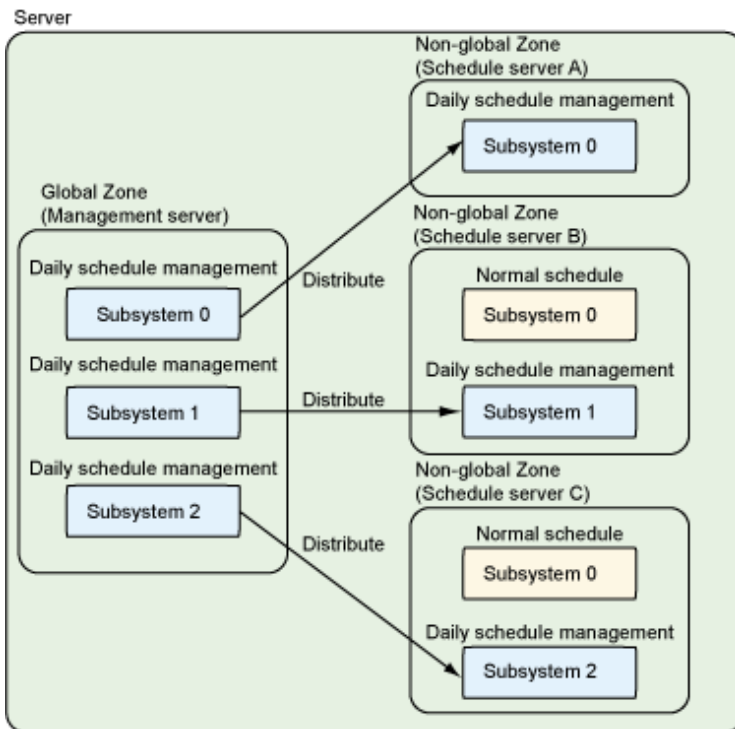


Note

Only one management server can distribute schedule information to subsystems of respective schedule servers. However, schedule information cannot be distributed from multiple management servers to the same subsystem in the same schedule server.

When distributing the daily schedule management to multiple zones [Solaris]

The Zone functions supported are used to store the definition information in the Global Zone and to distribute the schedule information to the Non-Global Zone. In this case, all the subsystems are used for the daily schedule management and the job of respective systems is distributed to multiple Non-Global Zones. You can specify the logical IP address assigned to the Non-Global Zone when adding a schedule server and you can set the Non-Global Zone as a schedule server.



1.3 Application Mode

The following explains the operation mode to use when applying the daily schedule management to the operation.

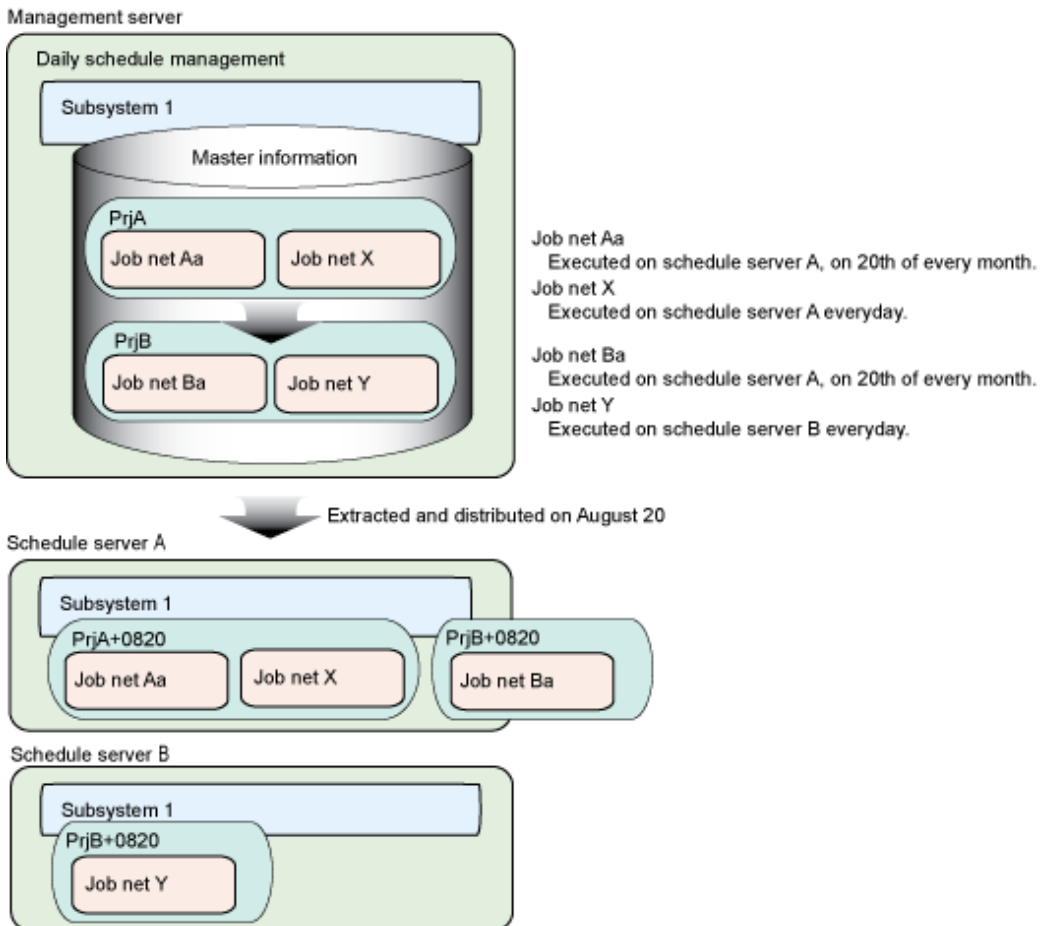
- Mode for providing a schedule server for each job net [UNIX version]
- Mode of linking a job net by a message event based on the process date

1.3.1 Mode for Providing a Schedule Server for each Job Net [UNIX version]

Daily schedule management is realized by setting the projects created with the Systemwalker Operation Manager function as the "master setting" and by creating projects with the date information for each process date. A job net can therefore be executed on the specified schedule server by defining the host to which schedule information is to be distributed.

Example)

In this example, schedule server A is specified to process a job net to be executed on the 20th every month in each project. For the job net to be executed everyday, an execution server used varied on a project basis.



1.3.2 Mode of Linking a Job Net by a Message Event Based on the Process Date

The daily schedule management can notify a message event to a job net on an intended process date by using the command which generates the message event based on the intended date. It enables for linking with a job net based on process date.

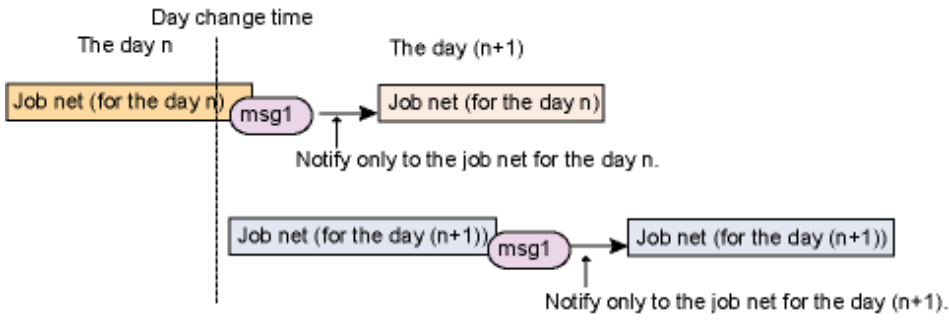
When generating a message event as a job in a job net:

When the command which generates a message event on an intended process date is registered, the message event can be enabled to the schedule information on the following process dates:

- Schedule information on the job nets whose process date is the same as the one for the job net in which the command has been registered
- Schedule information on the job nets whose process date is the next day of the one for the job net in which the command has been registered

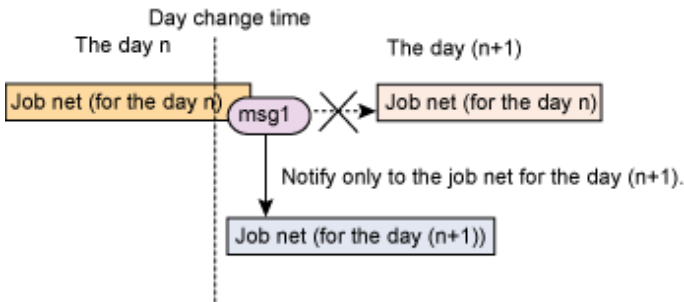
Enabling a message event to the schedule information on the same process date

Specifying an option, a message event can be enabled to the job nets whose process date is the same as the one for the registered job net.



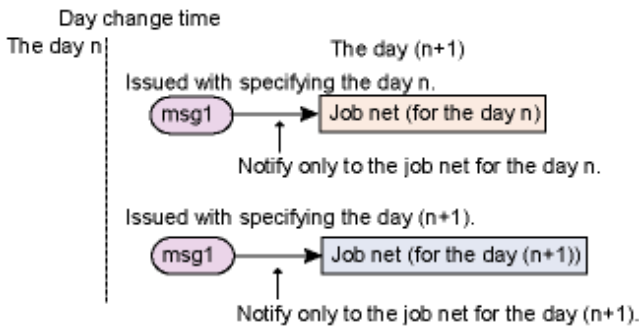
Enabling a message event to the schedule information on the next process date

Specifying an option, a message event can be enabled to the job nets whose process date is the next day of the one for the registered job net.



When generating a message event on a specified process date

You can generate a message event on an intended process date by specifying the date in the message event command. The message event is enabled for the job net of the specified process date.



Chapter 2 Environment Definition

This chapter explains how to define the operating environment for using the Master Schedule Management function.

2.1 Outline of Environment Definition

This section explains how to define an environment for using the Systemwalker Operation Manager Master Schedule Management function.

The Master Schedule Management function is not enabled as Systemwalker Operation Manager is installed. To enable the Master Schedule Management function, you must execute the stemenvset environment setup command from the server.

On the client of Systemwalker Operation Manager, the Master Schedule Management function menu appears immediately after Systemwalker Operation Manager is installed. However, an error message appears if you connect to a server on which the Master Schedule Management function is not enabled from the **Master Schedule Management Environment Setup [Login]** window or the **Master Schedule Management [Login]** window. An error message also appears if you connect to a server running a Standard Edition (SE) of Systemwalker Operation Manager.

Point

- When using the Master Schedule Management function, you must decide beforehand which server is to be used as the management server and which one is to be used as the schedule server. [UNIX version]
- Schedule information can be distributed by up to five schedule servers, excluding the self-server. Each schedule server receives schedule information only from a single management server. [UNIX version]
- There are restraints in combinations of the management server and schedule server depending on the differences in the OS, code systems and versions. For more information, see "[A.2 Supportable Range in Management Server-Schedule Server Connection](#)."
- To operate the Master Schedule Management function in multiple subsystems, set up the subsystem environment in advance. For details on how to set up the system environment, see "Definition of Multi-Subsystem Operations" in the *Systemwalker Operation Manager Installation Guide*.
- When using the Extended User Management function, be sure to use the same function-related settings on the management server as well as every schedule server used. [UNIX version]

The procedure for defining the subsystem environment is as follows:

1. Set up the Master Schedule Management Function

In all servers that use the Master Schedule Management function, set up the Master Schedule Management function using the stemenvset environment setup command to enable the function.

For details, see "[2.2 Set up and Release the Master Schedule Management Function](#)".

2. Set a Mode of Schedule

The following explains the schedule's mode setup procedures.

From the **Master Schedule Management Environment Setup** dialog box connected to the management server, implement the following setup procedures for each subsystem:

1. Specify a subsystem and then select one of the following modes:
 - Daily schedule management
 - Daily schedule management (Test mode)
 - Normal schedule

When using the Master Schedule Management function, "Daily schedule management" or "Daily schedule management (Test mode)" must be selected on one or more subsystems.

The default value of the mode is conventional in Systemwalker Operation Manager operating method, which is "Normal Schedule". In "Normal schedule," you do not need to specify the following contents.

2. When "Daily schedule management (including the Test mode)" is selected and schedule information to be distributed to a server other than the self-server, you must specify the destination schedule server. [UNIX version]

The Schedule Distribution function can be distributed up to five servers excluding the self-server. Each schedule server can receive schedule information only from a single management server. [UNIX version]

When distributing schedule information only to the self-server, above setting is not necessary.

3. When "Daily schedule management (Test mode)" is selected, you must specify a virtual time.

For more information on the settings, see ["2.3 Set a Mode of Schedule"](#).

3. Define an environment

Environment setup is done both on the management server and the schedule server.

Setting up environment for the management server

Set the environment from the **Master Schedule Management Environment Setup** dialog box connected to the management server.

1. Implement the following settings for each subsystem:
 - Distribution setting [UNIX version]
 - Schedule setting
 - Notification setting

You don't have select new settings if the default values are used.

For more information, see ["2.4.1 Define Management Server Environment."](#)

Setting up environment for the schedule server [UNIX version]

Implement the setup from the **Master Schedule Management Environment Setup** dialog box connected to the schedule server.

1. Implement the following settings for each subsystem:
 - Schedule setting
 - Notification setting

You don't have to select new settings if the default values are used.

For more information, see ["2.4.2 Define Schedule Server Environment \[UNIX version\]."](#)

2.1.1 Defining the hosts file

This section describes how to define a host in the hosts file.

Overview

Define all IP addresses used for the management server and the schedule server in the "hosts" file of the machine using the Systemwalker Operation Manager client functions.

If the management server or the schedule server runs in an IPv4/IPv6 dual stack, define both the IPv4 address and IPv6 address for the same host name. Use the IP address defined in the "hosts" file to check if a connection can be established between the machine using the client functions and the management server or the schedule server.

If using client functions to specify the management server or the schedule server, define by using the host name rather than the IP address. [UNIX version]

Definition method

Use an editor such as Notepad to edit the "hosts" file in the <system root>\system32\drivers\etc directory or in the /etc directory.



/etc/hosts settings (Linux version/Solaris version)

In Red Hat-based Linux and Solaris 11 or later, "127.0.0.1" is configured as the default IP address for the host name of localhost in /etc/hosts. If a Systemwalker Operation Manager client or multi-server monitoring clients are connected, it may not be possible to correctly monitor a server with this setting. It may also take longer than expected to execute network jobs.

Therefore, the IP address for the host name of localhost configured in the /etc/hosts file during installation must be an address that can be connected from the client.

An example of /etc/hosts file settings is shown below:

[Before]

```
127.0.0.1 <host name> localhost
```

[After]

```
127.0.0.1 localhost  
xxx.xxx.xxx.xxx <host name>
```

Note: xxx.xxx.xxx.xxx is the IP address for <host name> (localhost).

2.2 Set up and Release the Master Schedule Management Function

This section explains how to set up and release the Master Schedule Management function according to the following topics.

- Setting up the Master Schedule Management function
- Indicating whether or not the Master Schedule Management function is enabled
- Canceling the Master Schedule Management function

The Master Schedule Management function is set up and released with the stemenvset environment setup command. For details on the command, see "stemenvset.sh Environment Setup Command" in the *Systemwalker Operation Manager Reference Guide*.



- There are restraints in combinations of the management server and the schedule server depending on the differences in OS, code systems and versions. Make sure that your combination of the management server and schedule server is appropriate by referring to "[A.2 Supportable Range in Management Server-Schedule Server Connection](#)".
- When using the Extended User Management function, be sure to use the same function-related settings on the management server as well as every schedule server used. [UNIX version]

Setting up the Master Schedule Management function

The following explains the procedures for setting up the Master Schedule Management function environment and enabling the function.

[Windows version]

1. On the server for enabling the Master Scheduling Management function, execute the **stemenvset** environment configuration command with the system administrator (user belonging to the Administrators group) privilege.

```
Systemwalker installation directory\mpwalker.jm\bin\stemenvset -set
```

2. The environment of the Master Schedule Management function is set up, and the message below appears.

```
MpStem: INFO: Configured the Schedule Distribution environment
```

[UNIX version]

1. Using the system administrator (super user) privileges, execute the **stemenvset** environment setup command on every management server and schedule servers on which the Master Schedule Management function is to be enabled.

```
# /opt/FJSVstem/bin/stemenvset.sh -set
```

2. The following message appears:

```
Configures the environment to enable Schedule Distribution.
Specify Management Server, if the server centrally manages the
definition information.
Specify Schedule Server, if the server manages schedules.
Specify Management Server to run Schedule Distribution on single
server.
1 : Management Server
2 : Schedule Server
9 : End
Specify the number. > 1
```

Select "1" for the management server and "2" for the schedule server and then press the **Return** key. When using a single server for operation, select **Management Server**. When canceling the setup environment, select "9" to terminate the command.

3. When "1" or "2" is selected, the environment of the Master Schedule Management function is set up, and the message below appears.

```
MpStem: INFO: Configured the Schedule Distribution environment
```

Indicating whether or not the Master Schedule Management function is enabled

Execute the stemenvset environment setup command without options to confirm whether the environment of the Master Schedule Management function is enabled.

[Windows version]

```
Systemwalker installation directory\mpwalker.jm\bin\stemenvset
```

[UNIX version]

```
# /opt/FJSVstem/bin/stemenvset.sh
```

The following message appears:

- When the Master Schedule Management environment is configured on the management server:

```
MpStem: INFO: Schedule Distribution environment is configured on
Management Server.
```

- When the Master Schedule Management environment is configured on the schedule server:

```
MpStem: INFO: Schedule Distribution environment is configured on  
Schedule Server.
```

- When the Master Schedule Management environment is not configured:

```
MpStem: INFO: Schedule Distribution environment is not constructed.
```

Canceling the Master Schedule Management function

The following explains the procedures for canceling the environment of the Master Schedule Management function and disabling the function.

1. Select a subsystem for the daily schedule management on the **Master Schedule Management Environment Setup** dialog box connected to the management server.
2. When a schedule server is specified for a subsystem, you can cancel the function in the **Remove Schedule Server** dialog box which is displayed by clicking **Remove** on Schedule Server.
3. Change the subsystem for the daily schedule management to that for the normal schedule.

Repeat steps 1 to 3 to restore every subsystem for the daily schedule management to that for the normal schedule.

For details on the procedure above, see "[2.3.3 Change to Normal Schedule.](#)"

4. Using the system administrator (user belonging to the Administrators group or super user) privilege, which is capable of canceling the Master Schedule Management function, log in the management server and schedule servers, and then execute the u option-specified **stemenvset** environment setup command.

[Windows version]

```
Systemwalker installation directory\mpwalker.jm\bin\stemenvset -u
```

[UNIX version]

```
# /opt/FJSVstem/bin/stemenvset.sh -u
```

5. The following message appears:

```
Delete the Schedule Distribution environment  
The environment configured for Schedule Distribution will be  
deleted.  
Are you sure you want to proceed? (y or n)
```

When continuing the environment release operation, select "**y**" and then press the Return key. When canceling the environment release operation, select "**n**" to terminate the command.

6. For the management server, the following message appears:

```
Do you want to cancel master setting? (y or n)
```

Since the master settings of the project have already been released, you can select "**n**" and then press the Return key (Note).

Note)

Select "**y**" to release the master settings collectively only when you have executed **stemenvset** environment setup command without changing "Daily schedule management/Daily schedule management (Test mode)" to "Normal schedule".

When a Project's master setting is canceled, it is targeted for scheduling the next time the Jobscheduler service daemon starts or when the date changes.

7. When the environment of the Master Schedule Management function is normally released, the message below appears:

MpStem: INFO: Deleted the Schedule Distribution environment.



Notes on releasing the Master Schedule Management function

- You cannot release the Master Schedule Management function as long as distribution of a schedule is continued (schedule information's extraction, distribution or registration).
 - As the Master Schedule Management function is released, all the schedule status-related information is deleted except the job net schedule information.
-

2.3 Set a Mode of Schedule

This subsection explains the schedule's mode settings.

The mode setup is allowed only to that who is administrator (user belonging to the Administrators group, super user or Operation Manager user having the administrator privilege). If a user ID having no administrative authority is specified on the **Master Schedule Management Environment Setup [Login]** window, an error message is displayed.

Overview

Setting of a schedule's mode is done from the following windows connected to the management server for each subsystem.

- **Master Schedule Management Environment Setup** dialog box
- **Add Schedule Server dialog box** [UNIX version]
- **Remove Schedule Server** dialog box [UNIX version]
- **Modify Schedule Server** dialog box [UNIX version]

For details about set items on each window, see the *Systemwalker Operation Manager Online Help*.

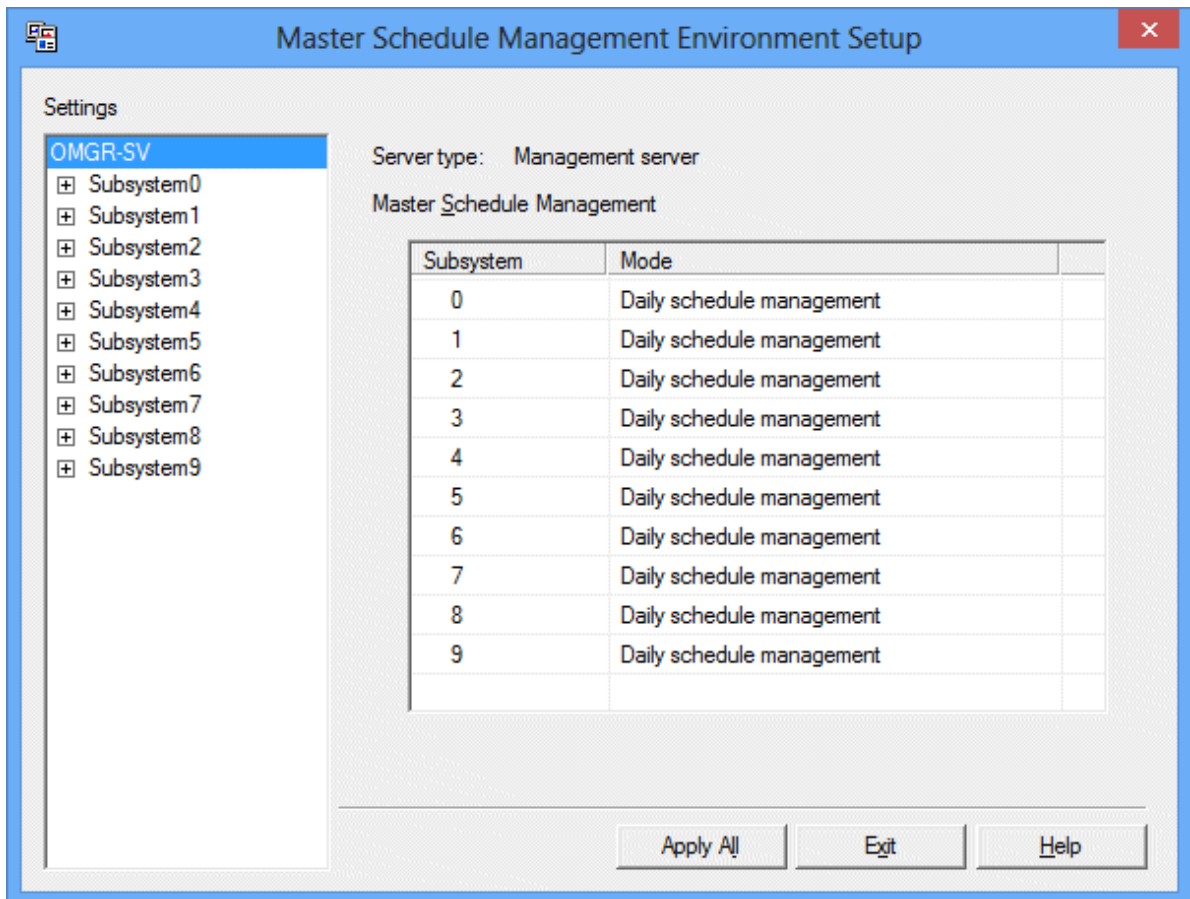
2.3.1 Setup of Daily Schedule Management

The following explains the procedures for setting the daily schedule management.

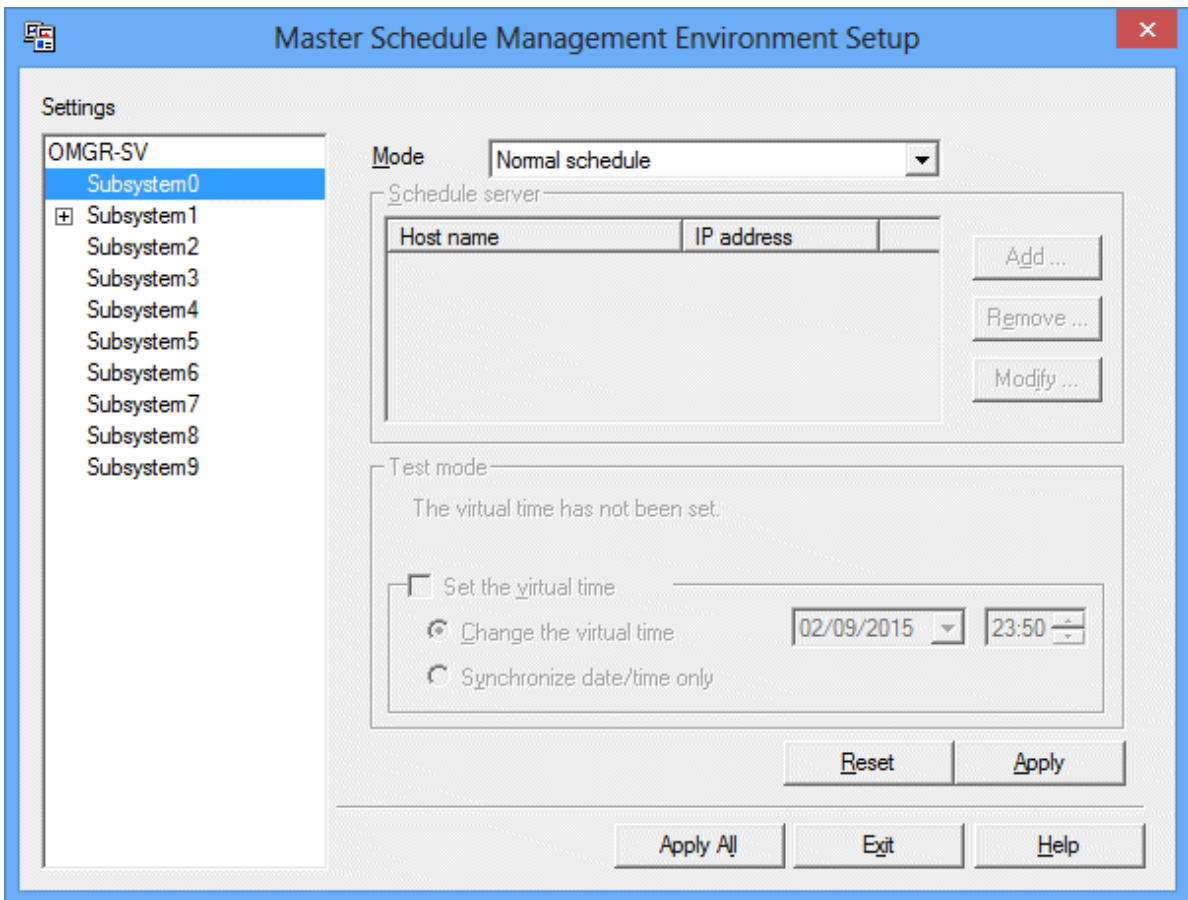
Operation procedure

1. Confirm whether the following environment is set up to execute the daily schedule management.
 - Confirm whether the subsystem environment for executing the daily schedule management is configured in the management server that executes it. When distributing schedule information to another server, confirm whether the subsystem with the same number as of the management server is configured in the schedule server. If it is not configured, set up a multi-subsystem environment, referring to "Definition of Multi-Subsystem Operations" in the *Systemwalker Operation Manager Installation Guide*.
 - When distributing schedule information to another server, confirm whether the Master Schedule Management function is enabled in all schedule servers to which schedule information is to be distributed. When the function is not enabled, set up and enable the Master Schedule Management function referring to "[2.2 Set up and Release the Master Schedule Management Function](#)". [UNIX version]
 - Confirm whether the Systemwalker Operation Manager infrastructure is started in the management server and all schedule servers to which schedule information is to be distributed. Start the Systemwalker Operation Manager infrastructure if it is not already running.

- When distributing schedule information to another server, set the same day change time for the management server and all distribution destination schedule servers.
2. Select **Start >> Systemwalker Operation Manager >> Master Schedule Management Environment Setup**.
The **Master Schedule Management Environment Setup [Login]** window appears.
 3. Set the information of the connected-to server as needed and then click **Login**. At this point, specify the connected-to server as the server that has been configured as a management server with **stemenvset environment setup** command.
The **Master Schedule Management Environment Setup** dialog box appears.
When the daily schedule management is already set, the specified mode appears.

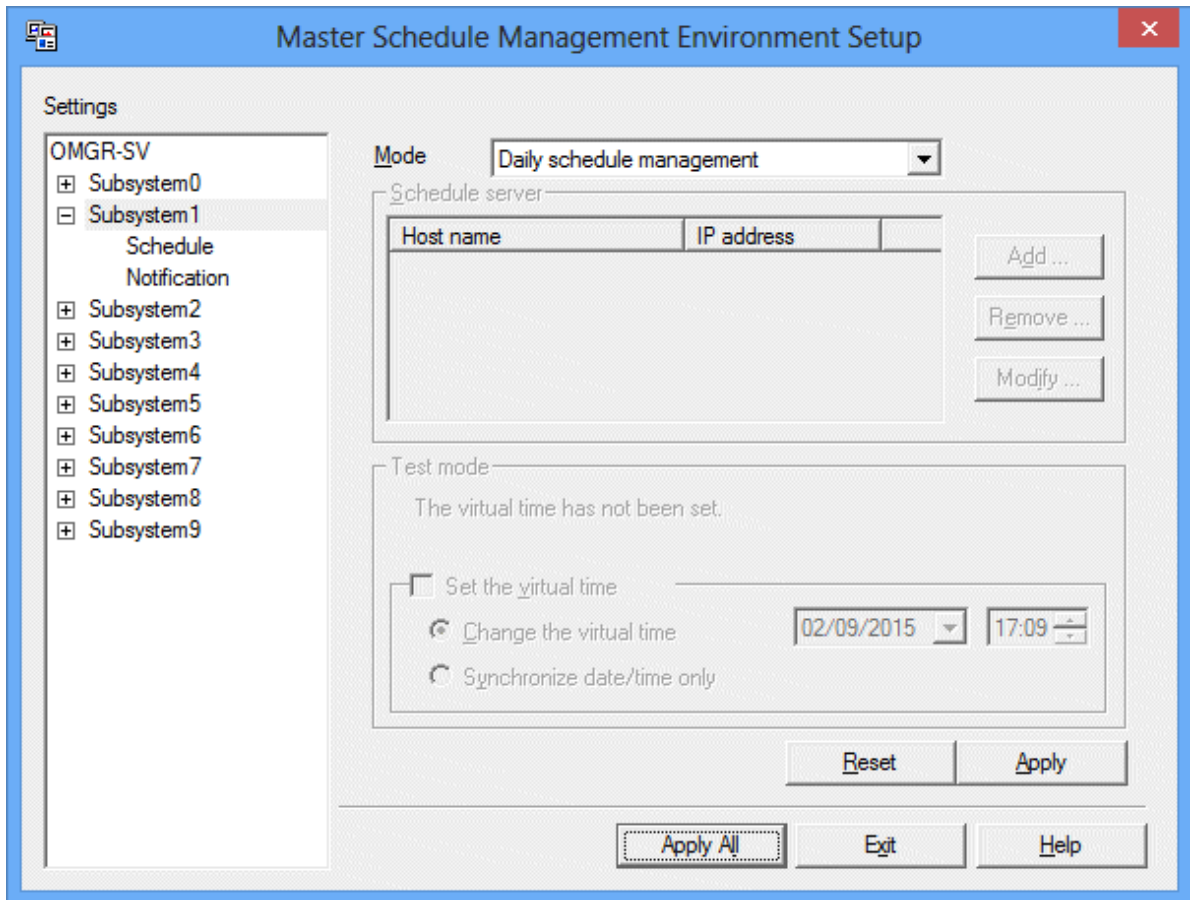


4. In **Settings**, select a subsystem to be set to the daily schedule management.
The screen is switched to the one used for setting a subsystem.



5. From **Mode**, select the "Daily schedule management".
Schedule server is switched for the setup. [UNIX version]

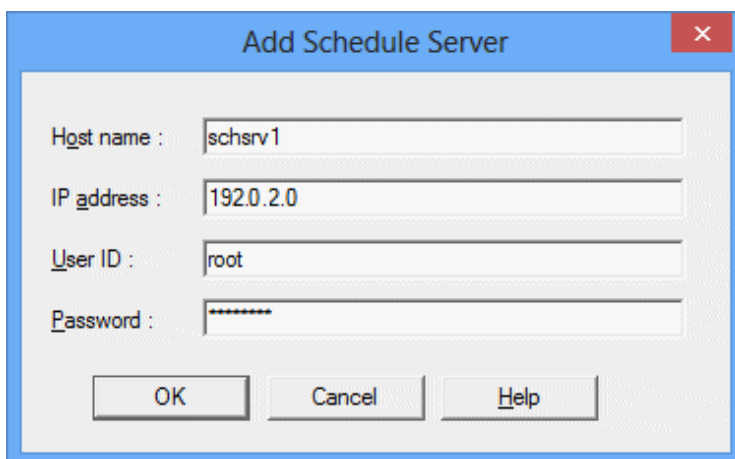
Schedule server cannot be set here so the **Add**, **Remove** and **Modify** buttons are grayed out. Go to step 7. [Windows version]



6. [UNIX version] When distributing schedule information to a schedule server other than the self-server, click the **Add** button in **Schedule server**. (The operation in step 6 is not required with the Windows version.)

This setting is not necessary when only the self-server is used. If no schedule server is registered, schedule information is distributed to the self-server.

The **Add Schedule Server** dialog box appears.



Specify the following information about the schedule server destined and then click **OK**.

Host name/IP address:

Specify the host name and IP address of the schedule server destined. It is not allowed to omit the host name. You can omit IP address if you want.

User ID/password:

Specify the ID and password of the user who is administrator (superuser or the Operation Manager user) on the schedule server. By default, the user ID and password to be used as the connection to the management server are displayed. Modify them as needed.

As the setting is ended successfully, the screen returns to the **Master Schedule Management Environment Setup** dialog box. If the setting fails, an error message appears. See "[When failed in adding a schedule server \[UNIX version\]](#)" to remove cause of the error and rerun the job.

Note

If the schedule server has already been registered in a different management server, the following message will be displayed:

The host is already in use as the schedule server of the server ([IP address]). Are you sure you want to add it?

If this happens, take the following action to suit your purpose:

Changing the management server

Use the following procedure to change the schedule server to the management server on which you are now configuring the settings.

1. Cancel registration of the schedule server by selecting **No** in response to the message.
2. Confirm the management server on which the schedule server to be registered has been configured, and remove the schedule server settings.
3. Register the schedule server in the management server where the schedule server is to be configured this time.

Changing the IP address of the management server

Select **Yes** in response to the message.

Select **Yes** only if the IP address of the management server was changed.

7. Click the **Apply** button to store and enable the settings done on this subsystem.

Clicking the **Apply** button displays the restart confirmation message for each server on which the Jobscheduler service or daemon is to be restarted.

If you select **Yes**, the Jobscheduler and Job execution control service/daemon restart. The settings are validated after the Jobscheduler has been restarted. When the Jobscheduler is restarted from this dialog, schedule is not distributed.

After changing the mode or adding a schedule server, you must click **Apply** or click **Reset** to restore the setting done prior to the change. Otherwise you won't be able to proceed to the setting of another tab.

8. In **Settings**, specify **Distribution >> Schedule >> Notification**, and define schedule distribution operations for each subsystem. For more information, see "[2.4 Define an Environment.](#)"
9. After all settings are made, click **Apply All** to save the settings.
10. Click **Exit** to close the **Master Schedule Management Environment Setup** dialog box. If you don't save the settings by clicking the **Apply** or **Apply All**, a message "The settings you have done can be modified. Do you want to apply all?" appears. Answer to it by selecting Yes, No, or Cancel. If **No** is selected, all the defined settings is deleted.

Note

- When a subsystem running a normal schedule is allocated to the daily schedule management, all Projects registered in the subsystem under the management server are defined in the master setting, and the schedule is disabled after the change of date takes effect or the jobscheduler service or daemon restarts.
- If you modify the following information, the Jobscheduler and Job execution control service/daemon restart. In this case, however, Schedule Distribution won't occur.
 - Change of mode (all the management server and schedule servers are restarted)
 - When a schedule server is added (the added schedule server will be restarted)
- When a schedule server is added to change the operating mode from Master Schedule Management under a single server to Master Schedule Management under multiple servers, the system cannot recover schedules in which the distribution state is "Abended" (i.e. unable to start the schedule). Recover such schedules before adding a schedule server. [UNIX version]

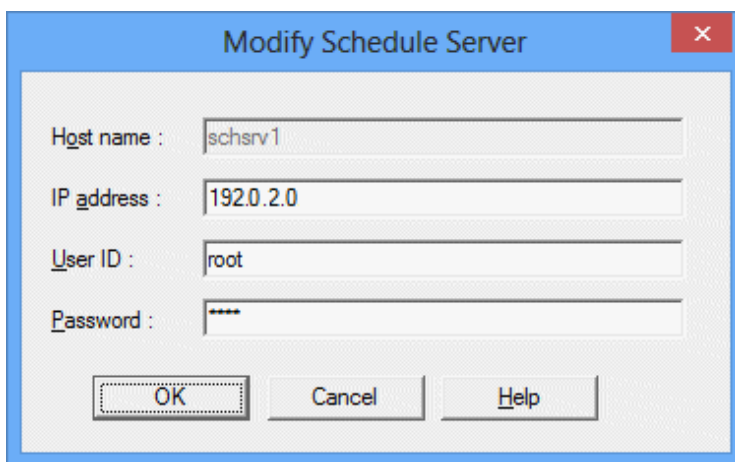
When reconfiguring a schedule server [UNIX version]

When an added schedule server is reconfigured, you need to reconfigure a subsystem for a schedule server from the management server.

Follow the procedures below when reconfiguring a schedule server.

1. Click the **Modify** button in **Schedule Server**.

The **Modify Schedule Server** dialog box appears.



2. When you want to change the IP address, set a desired address. If not, click **OK**.

When your setting is acceptable, the screen returns to the **Master Schedule Management Environment Setup** dialog box.

3. Click **Apply** to reconfigure the schedule server environment.

When failed in adding a schedule server [UNIX version]

When you failed in adding a schedule server from the **Add Schedule Server** window, the followings should be suspected as the potential causes:

- The Master Schedule Management function is not enabled on the specified schedule server.

Enable the Master Schedule Management function on the schedule server referencing "[2.2 Set up and Release the Master Schedule Management Function](#)".

- The specified schedule server environment is configured as a Management Server.
Cancel the above management server setting once and then enable the Master Schedule Management function again on the subject schedule server. See "[2.2 Set up and Release the Master Schedule Management Function](#)" for the procedures.
- The number assigned to the subsystem of the schedule server is not identical with that of the management server.
Create the subsystem environment having the same number as that of the management server, referring to Defining of Multi-subsystem Operation of the *Systemwalker Operation Manager Installation Guide*.
- The schedule server concerned is already registered as a schedule server of another management server.
Check other management servers to reconfirm the currently specified configuration of the management servers and schedule servers.
- The same host name is already defined for the schedule server.
Confirm the host name used for the schedule server.
- The same IP address is already defined for the schedule server.
Confirm whether the subject schedule server's IP address is correct.
- The host name is absent (when the IP address is omitted)
Confirm whether the host name is correct. When the IP address is omitted, the system sets the IP address by implementing the name resolution from the client. Thus entry of an invalid host name is prohibited. When the IP address is already specified, the host name functions only as a label name.
- "localhost" is specified as the host name.
"localhost" cannot use because it is reserved as the host name of the management server.
- The user ID or password is invalid.
Confirm whether the user ID or password for the host is correct, and also whether it has administrator's privileges.
- Version of the schedule server is earlier than that of the management server.
Check the schedule server's version. You cannot add a schedule server when its version is earlier than that of the management server.
- OS of the schedule server is not identical with that of the management server.
Be sure to use the same OS for both the management server and schedule server. You cannot configure the schedule server when a different OS is used between the management server and schedule server.

2.3.2 Setting the Daily Schedule Management (Test mode)

The following describes the procedures for setting the daily schedule management (test mode).

Operation procedure

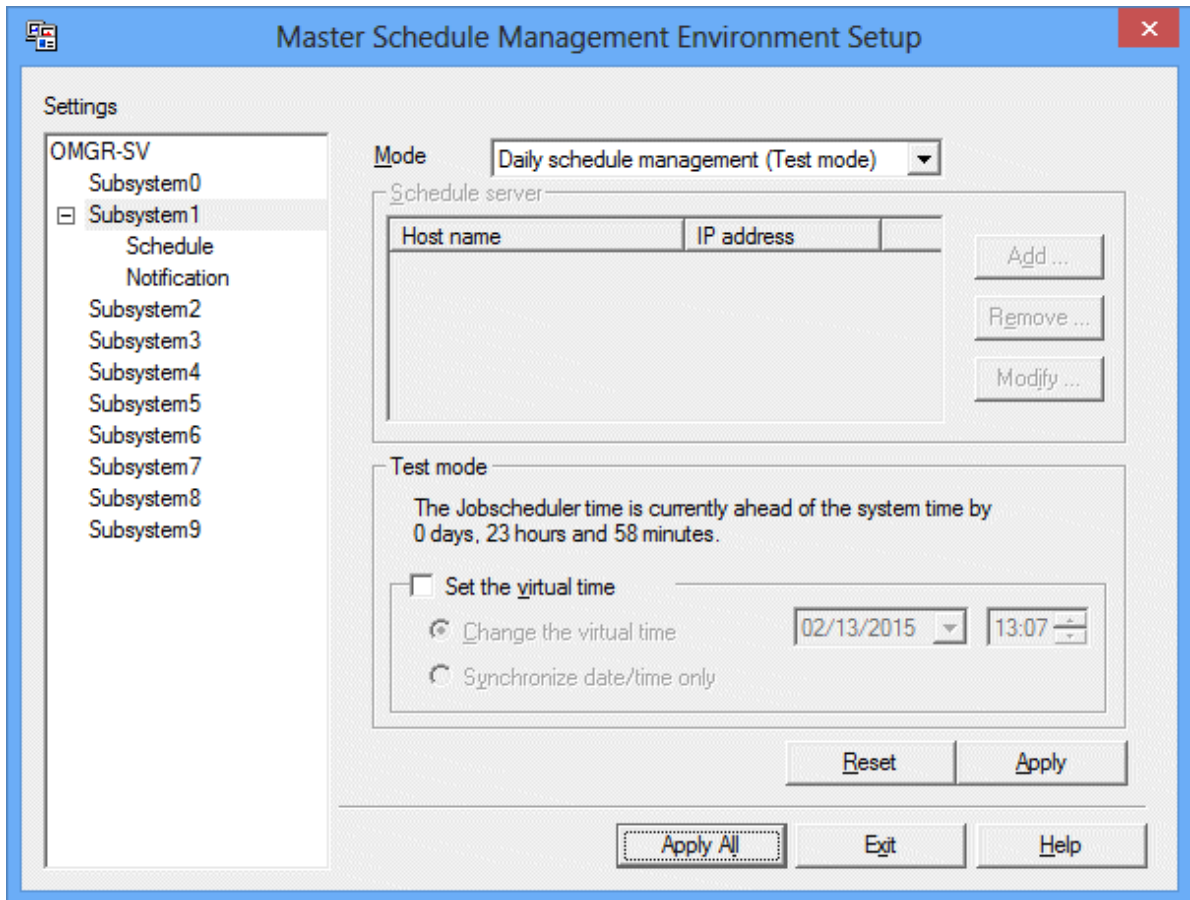
Steps 1 to 3 below are the same steps as that used for setting a subsystem for the daily schedule management. For more information, see "[2.3.1 Setup of Daily Schedule Management](#)."

1. Confirm whether the following environment is set up to execute the daily schedule management (test mode).
2. Select **Start >> Systemwalker Operation Manager >> Master Schedule Management Environment**.
The **Master Schedule Management Environment Setup [Login]** window appears. Set information of the connected-to server as needed, and then click **Login**. The connected-to server must be the one that has previously been configured as a management server with the **stemenvset environment setup** command.
3. In **Settings**, select a subsystem to be set to the daily schedule management (test mode).
The screen changes to a window for setting a subsystem.

- From Mode, select "Daily schedule management (Test mode)".

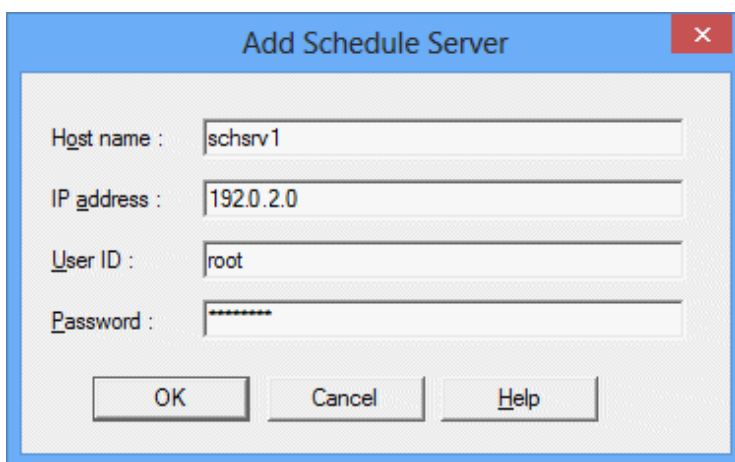
The screen allows to set **Schedule server** and **Test mode**. [UNIX version]

The screen allows to set **Test mode**. **Schedule server** cannot be set here so the **Add**, **Remove** and **Modify** buttons are grayed out. Go to step 6. [Windows version]



- [UNIX version] When performing concurrent operations for a virtual time in a schedule server other than the self-server, click the **Add** button in **Schedule Server**. (The operation in step 5 is not required with the Windows version.)

The **Add Schedule Server** dialog box appears.



Specify the following information about the schedule server to be run in the test mode and then click **OK**.

Host name/IP address:

Specify the host name and IP address of the schedule server destined. You cannot omit the host name. IP address can be omitted if you want.

User ID/Password:

Specify the ID and password of the user who is administrator (super user or the Operation Manager user) on the schedule server. By default, the user ID and password used for the connection to the management server are displayed. Modify them as needed.

When the setting is correct, the screen returns to the **Master Schedule Management Environment Setup** dialog box. If you fail in the setting, an error message appears. Referring to "[When failed in adding a schedule server \[UNIX version\]](#)" in "[2.3.1 Setup of Daily Schedule Management](#)", remove the cause of the error and retry.

Be sure to add beforehand all the schedule servers to be run synchronously.

6. Implement Set Virtual Time from Test Mode. Apply a checkmark to Set the Virtual Time checkbox.
 - Select **Change the Virtual Time** to set a virtual time or modify it.
 - To synchronize with other schedule servers using the currently specified virtual time, select **Synchronize date/time only**. [UNIX version]
 - The **Synchronize date/time only** button is grayed out and cannot be selected. [Windows version]
7. Click the **Apply** button to save and validate the specified contents of the subsystem.

Clicking the **Apply** button displays the restart confirmation message for each server on which the Jobscheduler service or daemon is to be restarted.

If you select **Yes**, the Jobscheduler and Job execution control service/daemon restart. The specified settings are validated after the Jobscheduler has been restarted. When the Jobscheduler is restarted from this dialog, the schedule is not distributed.

When you have changed the mode, added a schedule server, selected to use the virtual time, be sure to click the **Apply** or **Reset** button to restore the state before the settings. Otherwise you won't be able to proceed to setting of another tab.
8. In **Settings**, specify **Distribution >> Schedule >> Notification**, and define schedule distribution operations for each subsystem. For more information, see "[2.4 Define an Environment](#)."
9. After all settings are completed, click **Apply All** to save them.
10. Click **Exit** to close the **Master Schedule Management Environment Setup** dialog box. If you don't save the settings by clicking the Apply or All Apply, a message "Your settings can be modified. Do you want to apply all?" appears. Answer to it by selecting one Yes, No, or Cancel. If **No** is selected, all the defined settings are deleted.

Note

- Do not change the virtual time on the **Systemwalker Operation Manager Environment Setup** dialog box while the daily schedule management is being used. If the virtual time used during daily schedule distribution is not identical among the servers, an error message "The virtual time among the schedule servers is not synchronized (Server name)" appears, and distribution of the schedule fails.
- When a subsystem running a normal schedule is allocated to the daily schedule management (test mode), all Projects registered in the subsystem under the management server are defined in the master setting, Suppression of the schedule processing, however, occurs only when the day change time comes or the Jobscheduler service or daemon is restarted.
- If you modify the following information, the Jobscheduler and Job execution control service/daemon restart. In this case, however, the distribution of the schedule won't occur.
 - Change of mode (all the management server and schedule servers are restarted)
 - When a schedule server is added (the added schedule server will be restarted)
 - When the virtual time is changed (all the management servers and schedule servers are restarted)

- When synchronization of the virtual time alone is executed (every scheduler server is restarted)

2.3.3 Change to Normal Schedule

The following explains the procedure changing a subsystem currently used for the daily schedule management or the daily schedule management (test mode) to the one for the normal schedule.

Operation procedure

Steps 1 to 3 below are the same as that used for setting a subsystem for the daily schedule management. For more information, see "[2.3.1 Setup of Daily Schedule Management](#)."

1. Select **Start >> Systemwalker Operation Manager >> Master Schedule Management Environment Setup**.

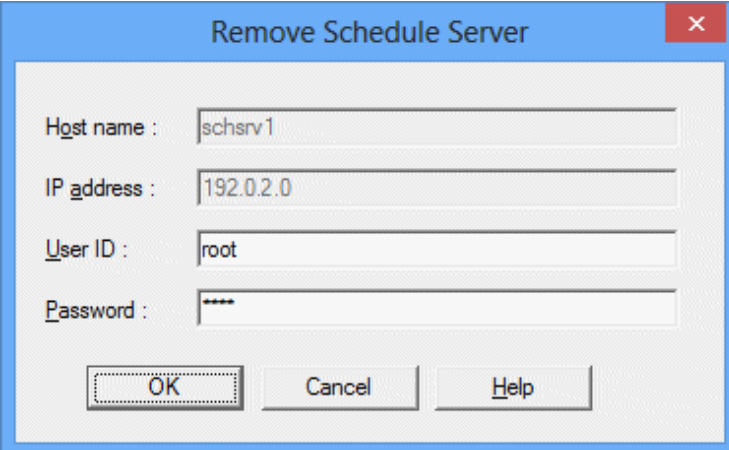
The **Master Schedule Management Environment Setup [Login]** window appears. Set the information of the connected-to server as needed, and then click **Login**. The connected-to server must be the one that has previously been configured as a management server with **stemenvset** environment setup command.

2. From **Settings**, select a subsystem to be returned to use for the normal schedule.

The screen changes to a window for setting a subsystem.

3. When the schedule server is present, cancel its settings. Select the schedule server and then click the Remove button of the Schedule Server.

The **Remove Schedule Server** dialog box appears.



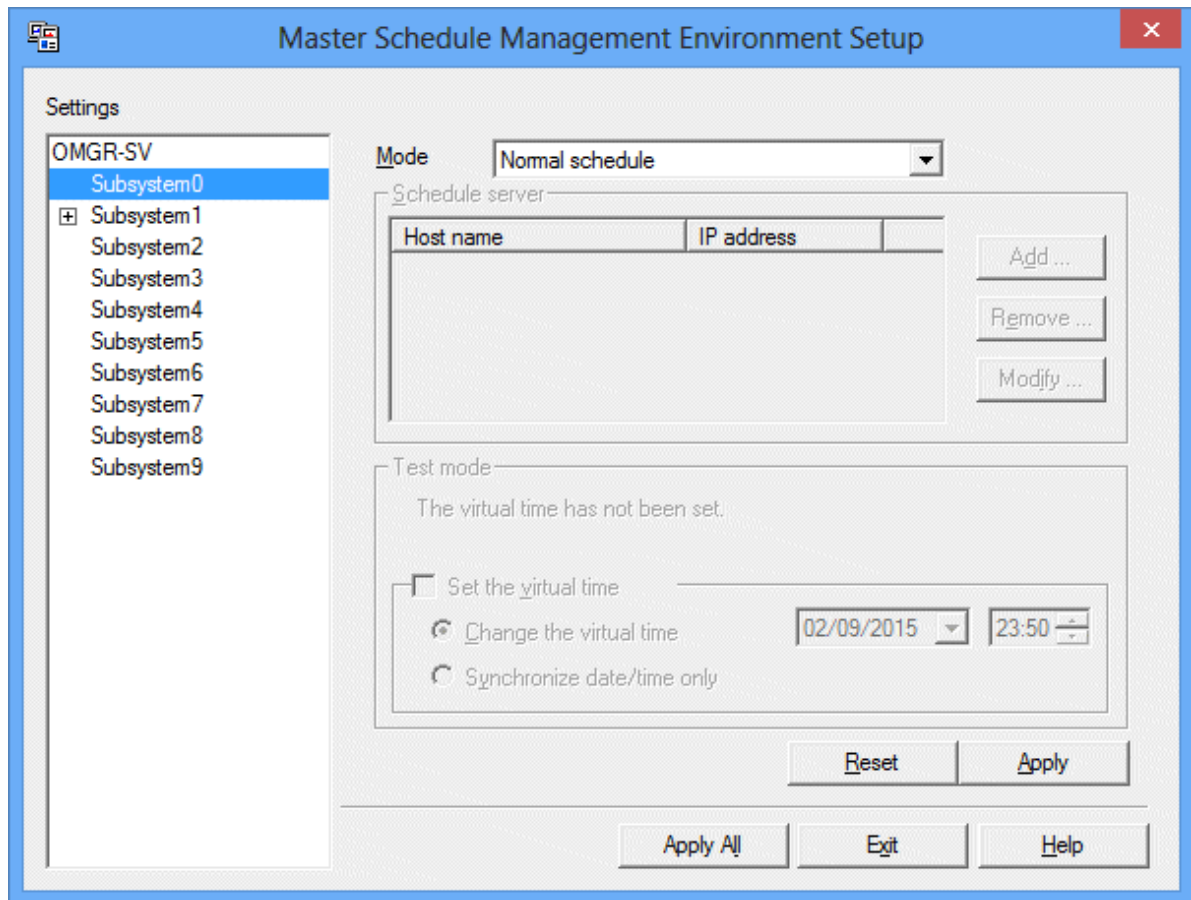
Set the information and then click the **OK** button.

Once the setting is normally removed, the screen returns to the **Master Schedule Management Environment Setup** dialog box. And a message appears confirming if you want to restart the Jobscheduler service or daemon. If you select **Yes**, the Jobscheduler and Job execution control service/daemon restart. The removed schedule server is no longer the target of the daily schedule distribution. If fail in the removal, an error message appears. See "[When failed in releasing a schedule server \[UNIX version\]](#)" to eliminate the error cause and retry.

Be sure to release all schedule servers beforehand.

- From **Mode**, select **Normal schedule**.

Schedule server and **Test mode** will be dimmed on the screen.



- Click the **Apply** button to save and validate the specified contents of the subsystem.

Clicking the Apply button displays a message confirming whether you want to restart the management server's Jobscheduler service or daemon. If you select **Yes**, the Jobscheduler and Job execution control service/daemon restart. The specified settings are validated after the Jobscheduler restarts.

When you have changed the mode, click the **Apply** button or **Reset** button to restore the state prior to the change. Otherwise you won't proceed to another tab. However, once the schedule server is released, you cannot restore its original settings by the **Reset** button.

- Click **Exit** to close the **Master Schedule Management Environment Setup** dialog box.

Note

- If you allocate a subsystem currently used for the daily schedule management to the normal schedule, the master setting of all the projects registered to the management server's subsystem is canceled and they become the target of the normal schedule. It is, however, only after the day change time comes or the Jobscheduler service or daemon is restarted for the project to be a target of the normal schedule.
- When the daily schedule management (test mode) is changed to the normal schedule, the currently specified virtual time remains unchanged. To cancel the currently set virtual time, after the change to the normal schedule has been completed, cancel the virtual time from **Test mode** sheet under the **Define Jobscheduler Startup Parameters** windows they are displayed as you click **Startup parameter** of Systemwalker Operation Manager Environment Setup window and then restart the Jobscheduler service or daemon.
- When the Jobscheduler service or daemon is restarted on the Master Schedule Management environment setup client, the Job Execution Control service or daemon is also restarted.

When failed in releasing a schedule server [UNIX version]

When you failed in releasing a schedule server, followings should be suspected as the potential causes.

- The schedule is currently distributing.

You cannot release the schedule server during the schedule distribution. Be sure to implement the release after the schedule distribution is completed.

- An error has occurred during the schedule distribution.

The release is also become unavailable if an error occurs during the schedule distribution. See the Master Schedule Management function detail error information file to remove the cause and retry the schedule, or cancel the schedule.

For more information, see "[4.1.1 Schedule Status](#)."

For the contents output in the Master Schedule Management function detail error information file and its storage location, see "Messages starting with MpStem" in the *Systemwalker Operation Manager Message Guide*.

- A set of schedule information exists on the target schedule server of release that is Waiting for the application, Waiting for carry-over, or Waiting for error handling.

When there is a set of unapplied schedule information, you cannot release the schedule server. Execute or delete the schedule.

When failed in changing to the normal schedule

When you failed in changing to the normal schedule, the followings should be suspected as the potential causes in addition to those listed as the causes of the failure when releasing the schedule server.

- Failed in operation change

When the operation change is successfully ended, you cannot cause the change to the normal schedule. See the Master Schedule Management function detail error information file to eliminate the cause and retry the schedule again.

For the contents output in the Master Schedule Management function detail error information file and its storage location, see "Messages starting with MpStem" in the *Systemwalker Operation Manager Message Guide*.

2.4 Define an Environment

This section explains the environment defining procedures

Defining an environment is allowed only to that who is administrator (user belonging to the Administrators group, super user or Operation Manager user having the administrator privileges).

Overview

Definition of an environment is set from the windows connected to the management server or schedule server.

- **Master Schedule Management Environment Setup** dialog box

When Systemwalker Operation Manager is installed, default values are specified for each setting. You do not need to create new settings if the default values are used. For details on the default values and items to be set from the windows, see *Systemwalker Operation Manager Online Help*.

2.4.1 Define Management Server Environment

This subsection explains the procedures for defining the environment of management server. The management server allows the following environment setup for each subsystem.

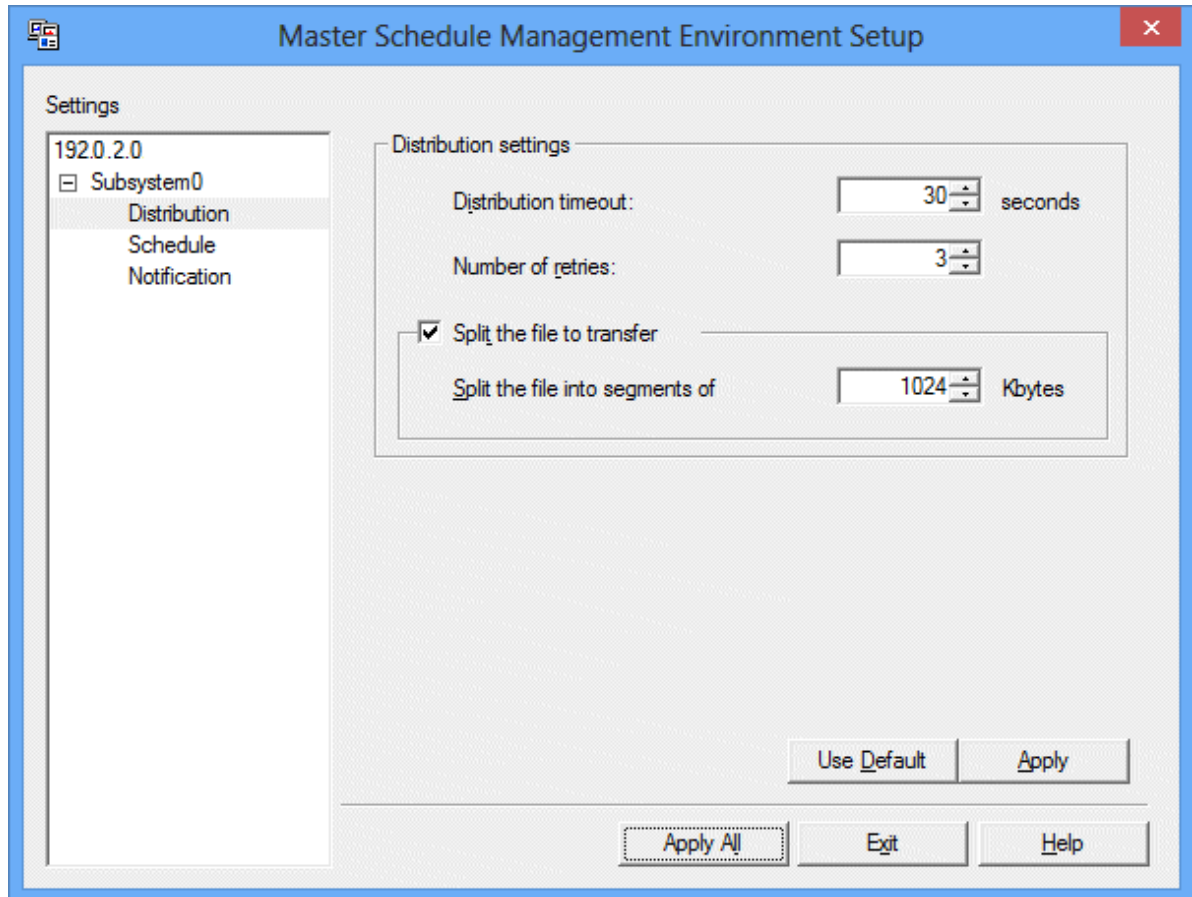
- Distribution [UNIX version]
- Schedule
- Notification

Operation procedure

1. From **Settings** of the **Master Schedule Management Environment Setup** dialog box, select **Distribution**, **Schedule**, or **Notification** for the subsystem to define the environment.

The **Distribution settings**, **Schedule management**, and **Notification settings** windows appears.

Figure 2.1 Distribution settings window

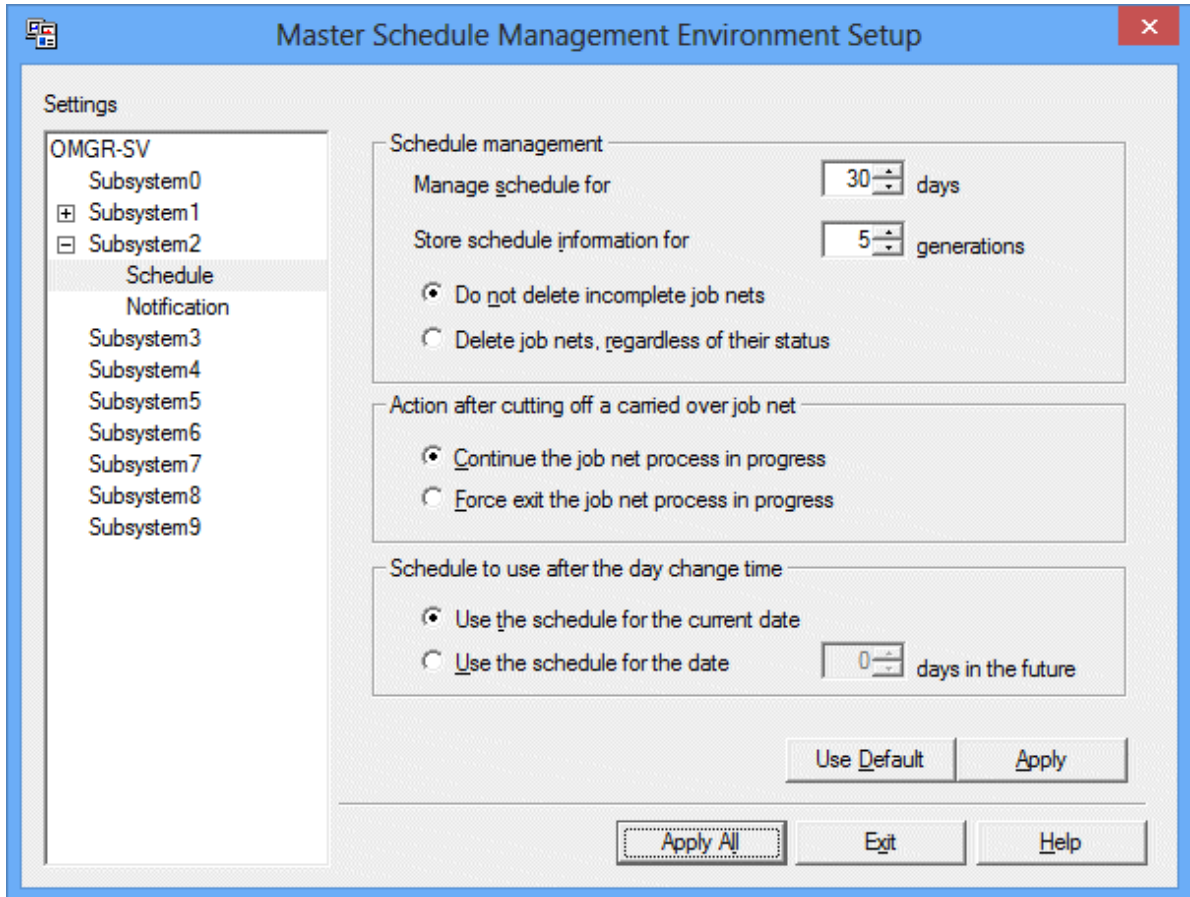


Specify the duration of waiting time and number of retries to be attempted when failed in distribution as well as whether the file transferred in the distribution is to be split, and the split size when the file is to be split.

 Note

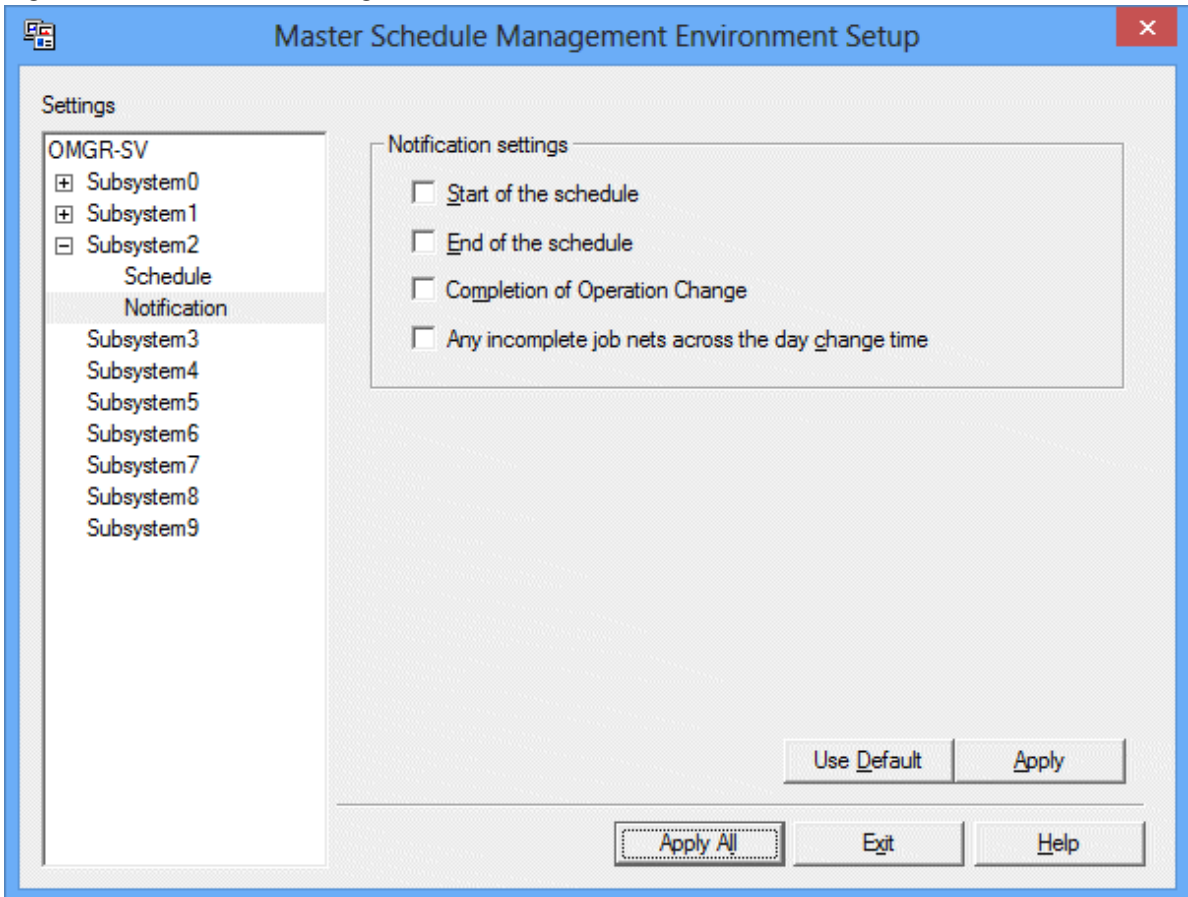
The **Distribution settings** window is displayed only when the schedule server is registered. [UNIX version]

Figure 2.2 Schedule management window



Specify the schedule management, actions to be taken after a carry-over is timed out, and the target of the schedule at the day change time.

Figure 2.3 Notification settings window



Specify the **Notification** settings. Contents of the checkmarks applied to the checkbox are notified to the Event Log/SYSLOG.

- Notifying start of the schedule

MpStem:INFO: 10001: Creation of schedule information has been started. (yyyymmdd)

- Notifying end of schedule

MpStem:INFO: 10002: Creation of schedule information has ended. (yyyymmdd)
MpStem:INFO: 10003: Schedule information already exists. Could not create it. (yyyymmdd)

- Notifying operation change

MpStem:INFO: 10006: Operation change has normally completed.

- Notifying when an uncompleted job net is available even after the day change time comes

MpStem:INFO: 10010: There is a job net that is not completed during the previous day.

For details on the messages, see the Systemwalker Operation Manager Message Guide.

2. Click the **Apply** button after each setting is made in order to save it. You can also save the setting by clicking the **Apply All** button after all settings are made.
3. Click **Exit** to close the **Master Schedule Management Environment Setup** dialog box. If you don't save the settings from **Apply** or **Apply All**, a message "Their contents can be modified. Do you want to apply all?" appears. Answer to it by selecting **Yes**, **No**, or **Cancel**. If **No** is selected, all the defined settings are deleted.



Storing schedule information

Manage schedule for, which is selected from the **Schedule Setting** window, allows you to specify the number of days permitted for the windows such as the **Master Schedule Management Monitor [Status Summary]** and **Master Schedule Management [Status Details]** window to monitor or operate respective sets of information.

From **Store schedule information for**, you can specify the number of generations of schedule information to be saved and maintained. **Do not delete incomplete job nets** and **Delete job nets, regardless of their status** allow you to specify whether to delete a job net when it has exceeded the number of specified saving-generations.

2.4.2 Define Schedule Server Environment [UNIX version]

This explains the procedure for defining the environment of a schedule server. The following settings are available on a schedule server:

- Schedule
- Notification

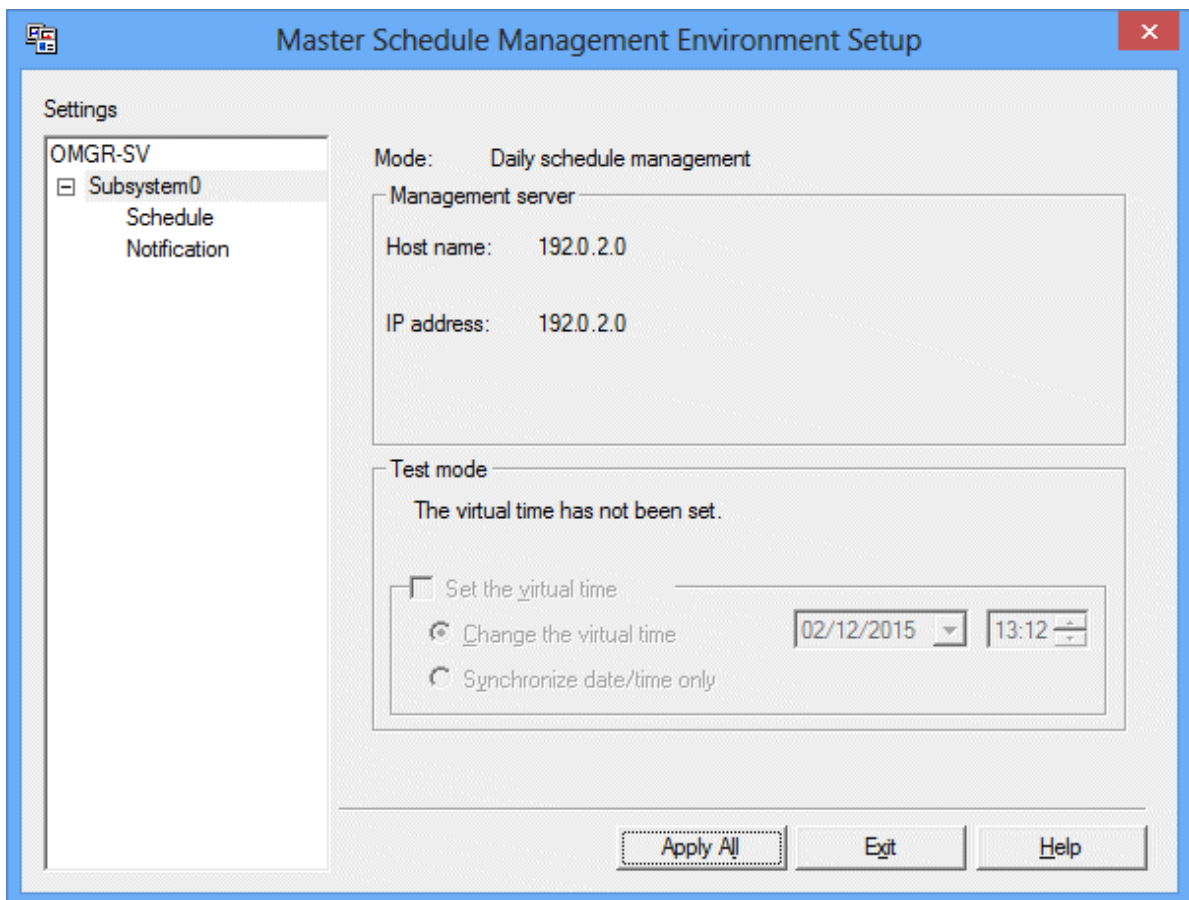
Operation procedure

1. Select **Start >> Systemwalker Operation Manager >> Master Schedule Management Environment Setup**.

The **Master Schedule Management Environment Setup [Login]** window appears. Set the necessary information including that of the connected-to server as needed, and then click **Login**. The connected-to server must be the one that has been configured as a management server with the **stemenvset** environment setup command.

The **Master Schedule Management Environment Setup** dialog box appears, allowing you to confirm the currently specified mode.

- From **Settings**, select a subsystem on which **Schedule**- and **Notification**-related settings are to be done. The screen changes to the subsystem setting window.



You cannot define a subsystem configuration from a schedule server.

- From **Settings** of the **Master Schedule Management Environment Setup** dialog box, select **Schedule** or **Notification** for the subsystem on which environment is defined.

The **Schedule** or **Notification** setting window appears.

The windows appear are the same as that for the management server. Define the schedule or notification settings.

- Click the **Apply** button after each setting is made in order to save it. You can also save the setting by clicking the **Apply All** button after all settings are made.
- Click **Exit** to close the **Master Schedule Management Environment Setup** dialog box. If you don't save the settings from **Apply** or **Apply All**, a message "Their contents can be modified. Do you want to apply all?" appears. Answer to it by selecting Yes, No, or Cancel. If **No** is selected, all the defined settings are deleted.

2.5 Extract and Distribute Policy Information

This section explains the procedure for configuring the currently used environment on another server by enabling the Master Schedule Management function.

Note

- Extraction and distribution of the policy information are not available between different OSs. It is also not available if the code system is different between the same OSs. For more information, see "Extract and Distribute Policy Information" in the *Systemwalker Operation Manager Technical Guide*.
- Before extracting or distributing the policy information of the daily schedule management, set the schedule mode of the distribution destination to daily schedule management. For details, see "[2.3.1 Setup of Daily Schedule Management](#)".

When policy information is distributed to the normal schedule, the schedule by dates project is handled as a normal project and the management by dates is not executed.

- If a schedule by dates projected exists in the distribution destination server, registration error may occur.

In case a registration error occurs in the distribution destination server, delete the schedule by dates project using the stemSchDelete project deletion command and retry executing the schedule manually.

2.5.1 Extract Policy Information

This section explains the procedure for extracting the policy information for the following cases:

- Extracting Master Schedule Management environment setup information
- Extracting master information of the Master Schedule Management function

Refer to the Systemwalker Operation Manager Installation Guide for details on **Extract Policy**.

Extracting Master Schedule Management environment setup information

Use the following procedure to extract Master Schedule Management environment setup information.

Note, however, that a list of registered schedule servers will not be extracted.

1. Display the **Extract Policy** window

Click **Extract Policy** in the **Systemwalker Operation Manager Environment Setup** window connected to the subsystem from which policy will be extracted.

2. Set policy information

When the **Extract Policy** window appears, click the **Environment definition** tab and select the following check box:

- The **Environment setup** check box in the **Master Schedule Management** frame

Policy information can be set only when connecting to a subsystem where the environment of the Master Schedule Management function has been created and whose schedule mode is daily schedule management or daily schedule management (test mode). Policy information cannot be set when connecting to a subsystem where the Master Schedule Management function is not being used.

3. Save policy information

Click the **OK** button to extract information.

Extracting master information of the Master Schedule Management function

Use the following procedure to extract master information of the Master Schedule Management function.

Note, however, that schedule by dates projects will not be extracted as policy information.

1. Display the **Extract Policy** window

Click **Extract Policy** in the **Systemwalker Operation Manager Environment Setup** window connected to the subsystem from which policy will be extracted.

2. Set policy information

When the **Extract Policy** window appears, click the **Registration information** tab and select the following check box:

- The Schedule DB/schedule pattern check box in the Jobscheduler frame

3. Save policy information

Click the **OK** button to extract information.

2.5.2 Distribute Policy Information

Use the following procedure to distribute policy information:

Refer to the Systemwalker Operation Manager Installation Guide for details on **Distribute policy**.

1. If the Master Schedule Management environment has not been created on the distribution destination server, create it with the environment setup command "stemenvset". For details, see "[2.2 Set up and Release the Master Schedule Management Function](#)".

2. The information extracted via **Extract Policy** in the **Systemwalker Operation Manager Environment Setup** window is distributed to the target server via **Distribute Policy**.

Distribute to a subsystem whose schedule mode is daily schedule management or daily schedule management (test mode).

3. Restart the Jobscheduler daemon or service.

If policy information is distributed to a server on which the Master Schedule Management function is not enabled, policy information relating to the environment settings of the Master Schedule Management function will not be applied. When the Jobscheduler daemon starts up, the following message will be output to syslog or the event log:

```
MpStem: WARNING: 10213: Failed to set up policy information.
```

Environment settings for the Master Schedule Management function

In the following cases, future schedule information will remain on the server where policy information was distributed. Cancel future schedules that are not needed.

- When virtual time is set on both the policy information extraction source and distribution destination servers, and the virtual time on the distribution destination server is more recent than the virtual time on the extraction source server
- When the policy information extraction source is using a daily schedule management and the distribution destination server is using a daily schedule management (test mode)

2.6 Monitored Host Definition

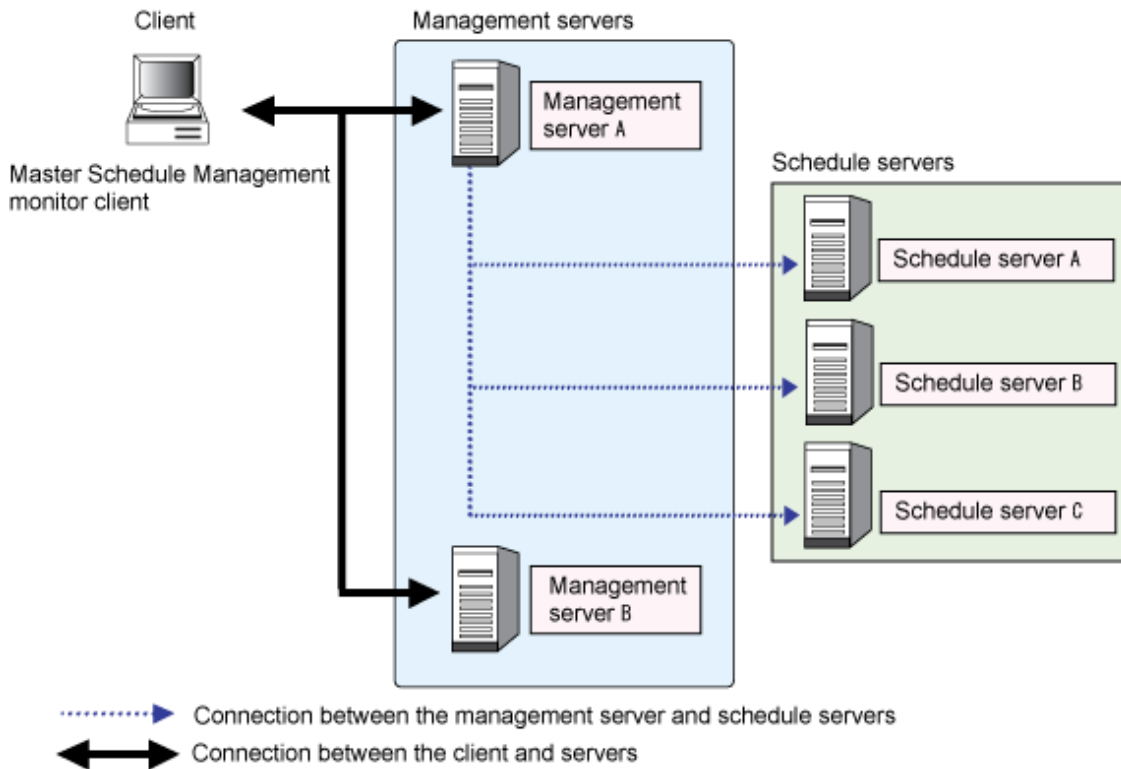
The monitored host should be defined to switch the connected host on a Master Schedule Management monitor client.

For how to register the monitored host definition, see the *Systemwalker Operation Manager Installation Guide*.

The switching operation is variable depending on the version of the connected host. See "[A.3 Supportable Range in Connected Host Switching](#)".

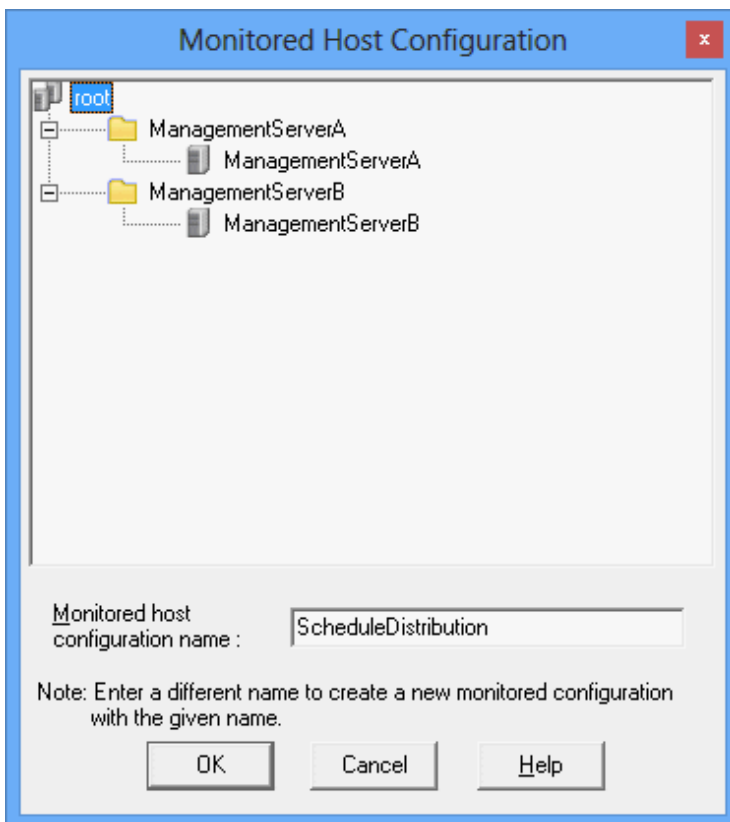
The subsequent description deals with an example of "monitored host definition" assuming an operation mode as shown below.

The monitored host definition allows a Master Schedule Management monitor client to switch the connected host.

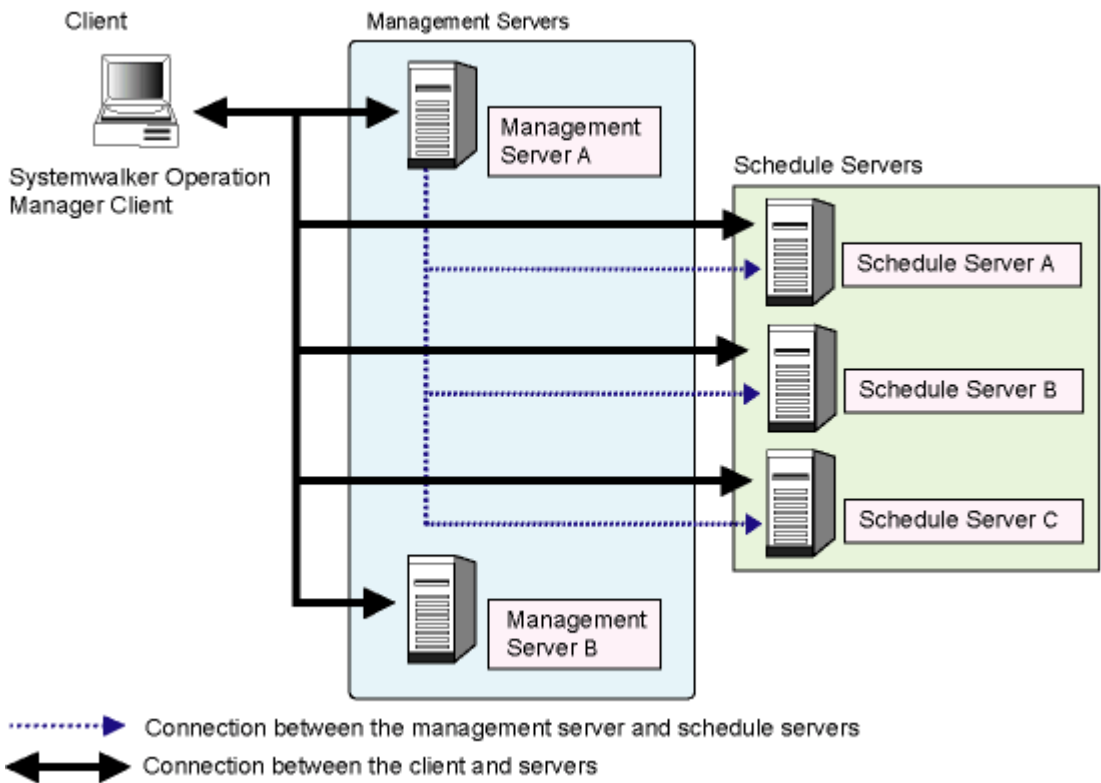


Defining the monitored host

The Master Schedule Management monitor client registers the management server host information in the monitored host definition in order to obtain information by connecting to the management servers.

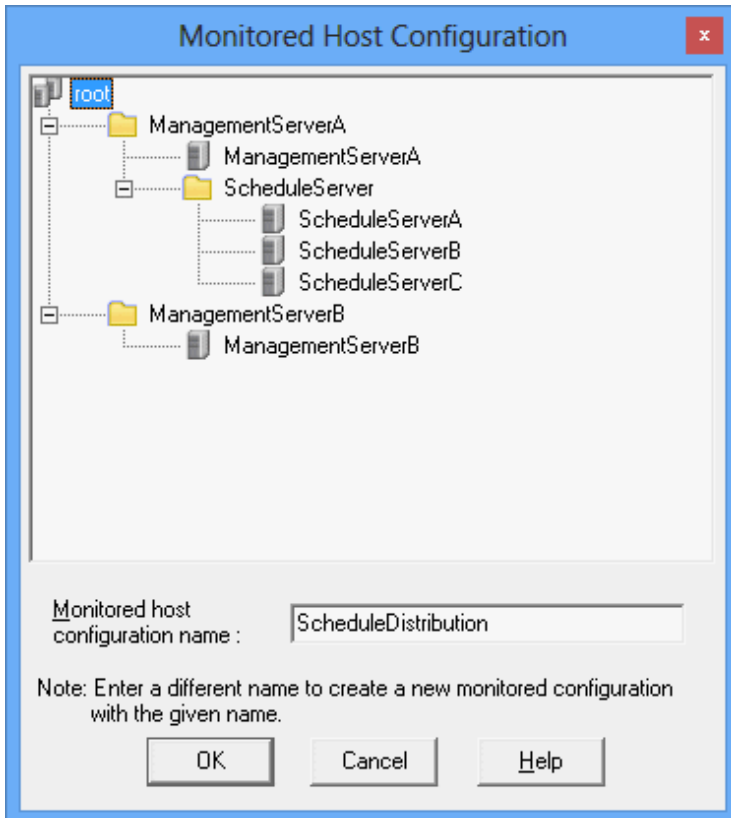


When it is required to switch the connected host on a Systemwalker Operation Manager client in the same operation mode as above, it is required to prepare the monitored host definition separately.



Defining the monitored host

To monitor the job net from a Systemwalker Operation Manager client, register the host information of all of the monitored servers in the monitored host definition.



Chapter 3 Operating Setup

This chapter explains the operating procedures of the Master Schedule Management function.

The description in this chapter assumes the following setups are made.

- The operation environment for using the Master Schedule Management function should be defined.
- The schedule mode should be set as daily schedule management or daily schedule management (test mode).

For details on the above setups, see "[Chapter 2 Environment Definition](#)".

3.1 Daily Schedule Management Operation

This section explains the daily schedule management operation.

3.1.1 Defining master information

This section explains how to register a project or job net in daily schedule management. When you employ a multi-server operation, define the master information from the management server.

The following explains the procedure of defining the master information.

3.1.1.1 Registering and Deleting a Project

When registering a project in daily schedule management, first register it using the normal Systemwalker Operation Manager function and then specify the master settings for the registered project. When turning on daily schedule management, every project in the same system (subsystem) must be caused to the master setting.

To delete a project in daily schedule management, cancel the master settings and then execute the project delete command.

When the master setting was specified for a project and the schedule information was extracted, the project for each process date is created; named as "Project Name +mmdd" with a 5-byte delimiter (+) and a process date indicator. A project having this name is called as a "Schedule by dates project". And the master set project which is used as the source of schedule information extraction is a "Master project".

When specifying or deleting the master setting of a project, use the **stemSetPrjMaster** project master setting command. For more information, see "[stemSetPrjMaster Project Master Setting Command](#)" in the *Systemwalker Operation Manager Reference Guide*. To delete a project, use the **stemSchDelete** command. For more information, see "[stemSchDelete Project Delete Command](#)" in the *Systemwalker Operation Manager Reference Guide*.



Note

- In the daily schedule management operation, following keywords are used for the project name.
 - Schedule by dates project: Master_project_name+mmdd
 - Project for operation change: Master_project_name=mmdd

Therefore, you can't specify the master setting for a project when its last 5 bytes are "+ numeral (4 digits)" or "= numeral (4 digits). If you specify above project name using the **stemSetPrjMaster** project master setting command, the following error message appears.

"Master setting cannot be specified for the designated project."

- Do not manually create "+mmdd" format or "=mmdd" format projects from the **Register Project** window or using the `jobschsetproject` command during the daily schedule management operation. Otherwise, the following phenomena results.
 - Creating "+mmdd" format projects
 - A registration error will occur when Master Schedule Management is performed on mmdd process date.

- A manually created project of "+mmdd" format is not included in the target of control of the Master Schedule Management function, and the carry over control (instruction) and the generation control (specifying the number of generations of information to be maintained) will be unavailable.
- Creating "=mmdd" format projects
 - These projects are automatically sorted into the projects for operation change.
- If a master project access right is changed (including adding/removing access permissions to a user) during the operation, you must specify the project's master setting again. If the master setting is not specified again, the access right to the project won't be enabled during the registration of schedule information. Also note that the change of access right will not be enable for the already registered schedule by dates projects. You must set up the access right for the schedule by dates project as needed.
- Enabling or disabling the currently disabled Extended User Management function and vice versa results in modifying the current access right to the project. Therefore, you must select the master setting for all master projects again. [UNIX version]
- If there is no job net having the process date set in the start date setting of the master information, the schedule by dates project is not created.
- If schedule information is distributed to an older version schedule server, there will be functions that cannot be used. Refer to "[A.2 Supportable Range in Management Server-Schedule Server Connection](#)" for details.

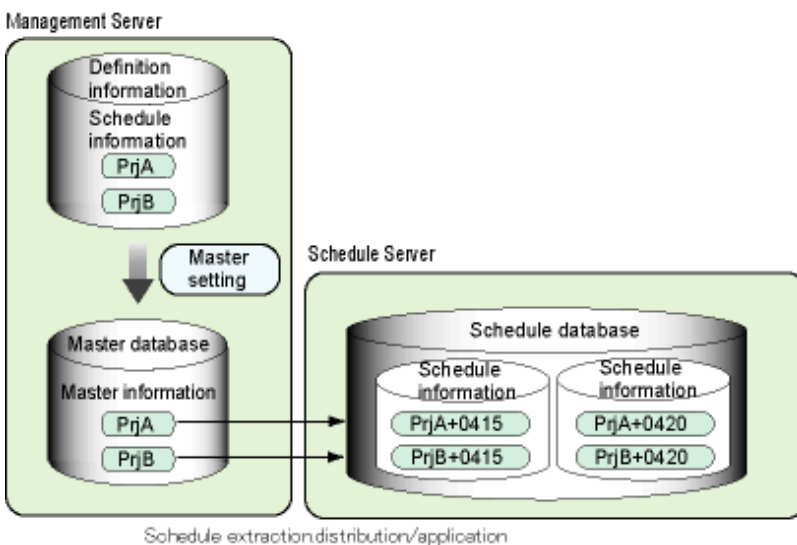
 **Point**

Projects for which the shutdown job net is registered [Windows version]

When it is required to register the shutdown job net for operation of daily schedule management, make an exception by not setting the master for the project for which the shutdown job net is registered. Otherwise, the shutdown job net cannot be recognized because "+mmdd" would be appended to the project name.

3.1.1.2 Master Setting

When creating schedule information for daily schedule management, you must specify the master setting for a project. Specifying the master setting for a project replaces the job net or job information registered to the project with the "master information" comprising the definition information alone, resulting that schedule processing of the job net is suppressed. When the schedule information was extracted from the master information, the schedule information is created; named as "Project Name +mmdd" with a 5-byte delimiter (+) and process date indicator. Job net and jobs are operated according to this schedule.



A database that stores the master information is called the master database. A database that stores schedule information on the process date basis is called the schedule database.

Example of master setting

Following shows the example of specifying the master setting for the project "ProjectA" and "ProjectB".

1. Login to the management server with the system administrator (user belonging to the Administrators group or super user) privilege and then execute stemSetPrjMaster project master setting command.

[Windows version]

```
# Systemwalker installation directory\mpwalker.jm\bin  
\stemSetPrjMaster set -p ProjectA
```

```
# Systemwalker installation directory\mpwalker.jm\bin  
\stemSetPrjMaster set -p ProjectB
```

[UNIX version]

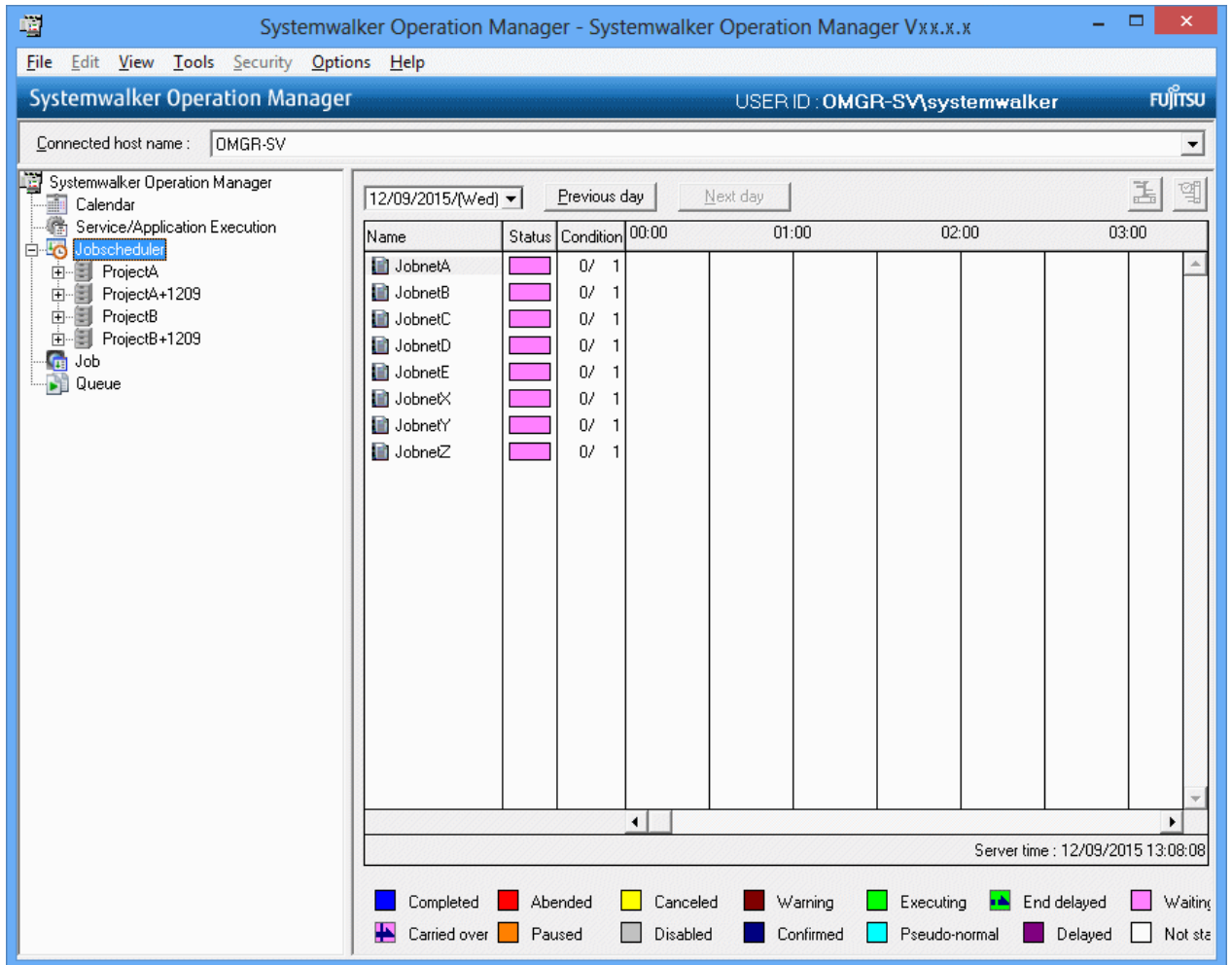
```
# /opt/FJVSstem/bin/stemSetPrjMaster.sh set -p ProjectA
```

```
# /opt/FJVSstem/bin/stemSetPrjMaster.sh set -p ProjectB
```

For more information, see "stemSetPrjMaster Project Master Setting Command" in the *Systemwalker Operation Manager Reference Guide*.

2. Distribute the schedule information. For more information, see "[3.1.2.1 Timings for the Schedule Distribution](#)."

- As the schedule information is applied, the project displays on the **Systemwalker Operation Manager** window as shown below. It is an example of a project whose process date is in December 9.



Note

Notes on the master setting of a project

- The master setting is available on a project basis. This allows both daily schedule management projects and projects that are to be processed according to the current schedule to exist within the same system (subsystem). However, do not mix both types in a system that is a single operation unit because doing so makes job management more complex.

If you want to operate jobs in the traditional schedule in addition to the daily schedule management operations, create subsystems and divide them into daily schedule management subsystems and normal schedule subsystems. Specify the master setting for all projects in the same system (subsystem) as the daily schedule management.

However, do not, as an exception, specify the master setting only for projects for which the termination processing job net is registered, even if they coexist with schedule by dates projects. [Windows]

- If the project for which you are specifying the master setting contains a copy destination job net, the copy destination job net will also be distributed when the schedule by dates project is created. If the copy destination job net is not required, delete it from the project for which you are specifying the master setting.

Displaying project categories

When operating jobs according to daily schedule management projects in the job (selection) tree can be shown categorized into the following folders:

Master information

Stores master projects.

Operation change information

Stores projects for operation changes.

Schedule by dates information (MM/DD)

Stores schedule by dates projects. The folder name takes the form "MM/DD (*month/day*)". In the case of the current day, the folder name becomes "MM/DD (Today)".

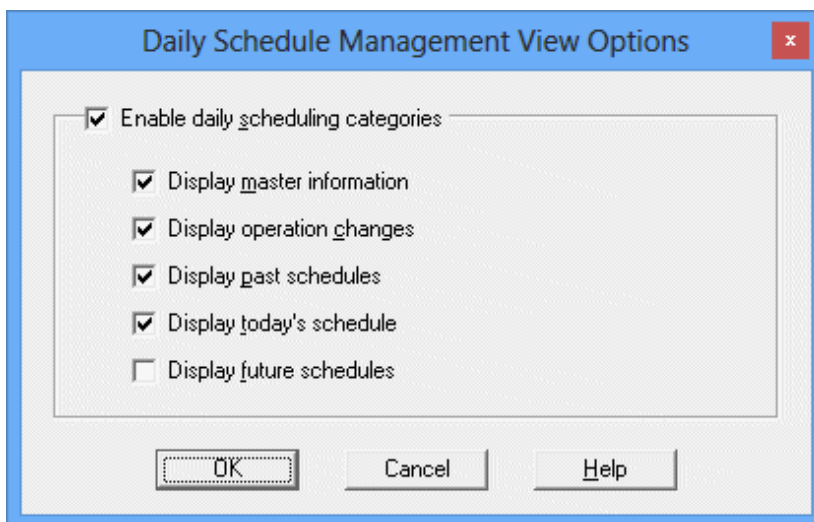
The following window can display projects categorized in this way:

- **Gantt Chart** window

Use the following procedure to set up a categorized display.

1. Select **Daily Schedule View Options** from the **View** menu of the relevant window.

The **Daily Schedule View Options** window will be displayed.



Enable daily scheduling categories:

Select this check box to use the categorization function with daily schedule management. If this check box is selected, the projects for the folders corresponding to the following check boxes selected will be displayed according to categories. If this check box is not selected, projects will be displayed in alphabetical name order under the Jobscheduler folder (or under subsystem folders for multiple subsystem operations).

Display master information:

Categorizes master projects into master information folders. If this check box is not selected, the master information folder will not be displayed.

Display operation changes:

Categorizes projects for operation changes into operation change information folders. If this check box is not selected, or if there is no project for operation changes, the operation change information folder will not be displayed.

Display past schedules:

Categorizes past projects into MM/DD (*past date*) folders. If this check box is not selected, or if there are no past projects, schedule by date information for operation days in the past will not be displayed.

Display today's schedule:

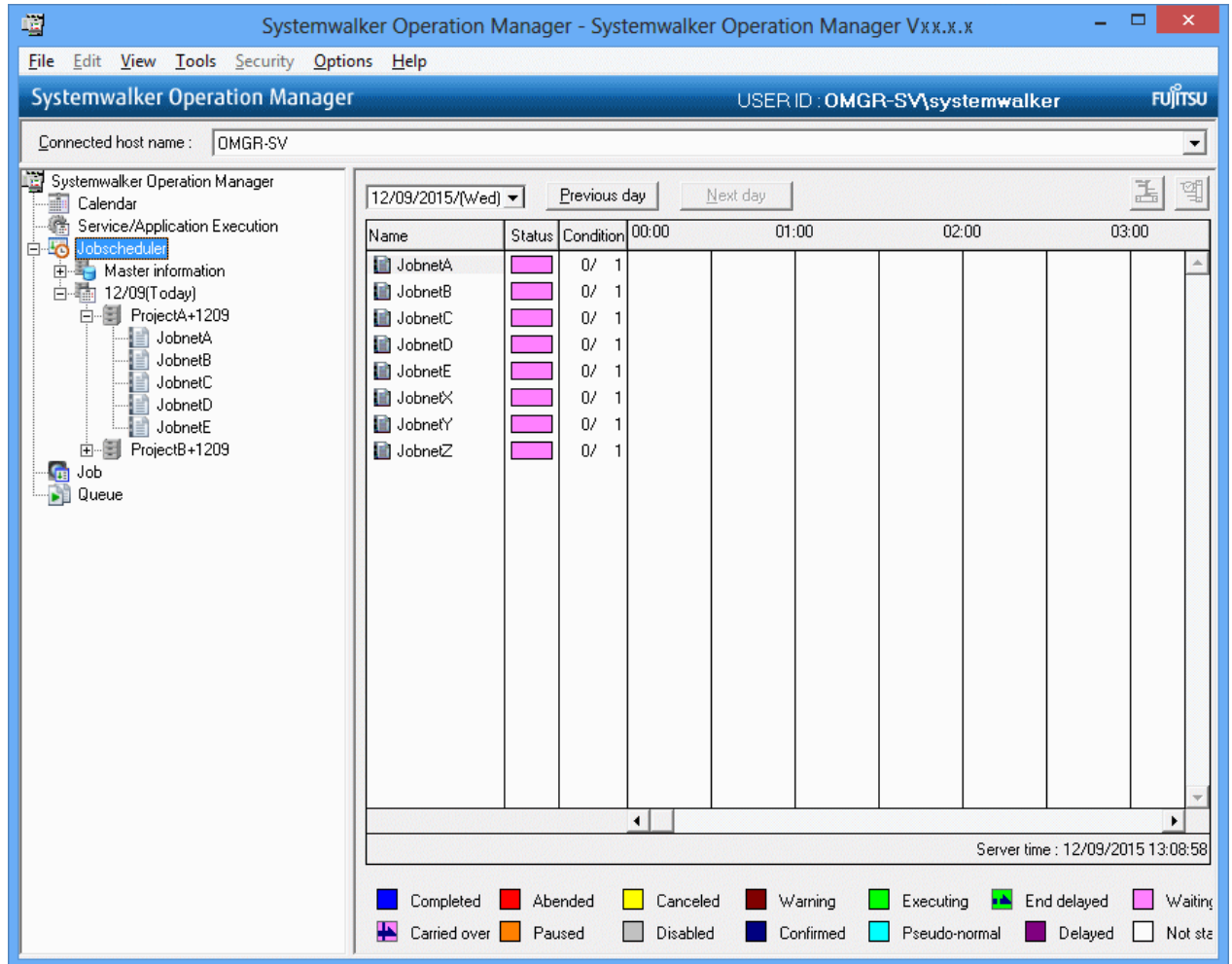
Categorizes today's projects into MM/DD (Today) folders. If this check box is not selected, or if there is no project for the current day, schedule by date information for the current operation day will not be displayed.

Display future schedules:

Categorizes future projects into MM/DD (*future date*) folders. If this check box is not selected, or if there are no future projects, schedule by date information for future operation days will not be displayed.

2. Select the folders to be used in the categorized display and click the **OK** button.

Projects will be shown categorized according to the specified folders.



Note

Notes on displaying projects in categories

- When switching from daily schedule management to daily schedule management (test mode), the date folders displayed as "MM/DD" may fail to be sorted in chronological order. It is not recommended to perform operations that switch an environment containing a schedule by dates project to daily schedule management (test mode). The same applies when the virtual time is changed in daily schedule management (test mode).
- If the master information folder or the operation change information folder is selected, results for the current day or startup schedules or history information will not be displayed.

3.1.1.3 Registering Job Nets

When using the Master Schedule Management function, register the following items to the job net definition information.

- Settings of the target schedule server of distribution

- The settings when message queuing is employed as the job net start condition.

Settings of the target schedule server of distribution [UNIX version]

Check the Enter the jobs in the job net as the network job checkbox from Job Net Properties - Standard Information tab to register the target host name of the distribution to the Default Host Name. In the host name, specify the host name of the schedule server that was registered in the **Master Schedule Management Environment Setup** dialog box. You cannot use an execution subsystem name even if you have defined one. If you specify a non-registered host name in the environment where the schedule server has already registered, the message "Schedule server is not present (Host name)." outputs to SYSLOG during the extraction of schedule information, resulting in an extraction error.

This setting allows to distribute the schedule information of the job net to separate schedule servers.

When the default host name is defined as shown below, the information will be distributed to the management server.

- Omitted
- "localhost"
- MANAGEMENT_HOSTNAME= Host name of management server
- Different default host names are used for the job net within in a group.

In the case of d., the host is requested to handle a job net as a network job.

When a job net is layered, it will be distributed according to the parent job net definition. If the host name that has been defined in the child or linked job nets is not the same as the parent job net, the schedule information will be distributed according to the parent job net definition, so the child or linked job nets will be requested to the host that was specified in the network job.

When only a single server is used for running the operation without registering a schedule server, you should specify the host for a network job for the default host name, similar to the normal schedule.

The settings when message queuing is employed as the Job net start condition

When using queue messages as the job net starting condition, specify **Valid only on startup day** (messagemode COG for the **jobschsetnet** command) from the Job Net Properties - **Message** sheet.

In daily schedule management, job nets are extracted and schedules are managed for each process date. In job nets for which "Start only when message event has occurred" has been set as the startup condition, unless "Valid only on startup days" is specified, past job nets that are waiting for process date messages will also be started up, resulting in a double start.

For job nets that are timed to start with the occurrence of the message without needing to be aware of the process date, build a subsystem environment that does not use daily schedule management, then register the job net in this environment.

You can enable an operating day-conscious message queuing in daily schedule management by registering the **jobschmsgeventex** message event occurrence command to the job net. For details on the operation, see "[3.3.5 Linking a Job Net with Message Event on an Intended Process Date](#)", and for details on the command, see "jobschmsgeventex Message Event Generation Command" in the *Systemwalker Operation Manager Reference Guide*.

Registering the shutdown job net [Windows version]

The shutdown job net can be registered for use in the daily schedule management operation. However, once the shutdown job net starts up, the following conditions are maintained until the Job Scheduler service is restarted.

- The schedule information cannot be distributed.

Automatic scheduling is not executed when the day change time comes. In addition, the schedule operation using the stemManager schedule management command or the Master Schedule Management client cannot be executed.

- The application status of the "Waiting for carry-over" schedule information becomes "Error."

After the Job Scheduler service has restarted, the status becomes "Waiting for carry-over" and the application of the schedule information restarts.

- Commands related to operation change are unavailable.

The stemCopyProject operation change preset command, the stemMoveProject operation change release day change command and the stemBackProject operation change cancellation command cannot be executed.

- The job net operation is unavailable.

The **Start** and **Restart** of job nets cannot be executed in the **Master Schedule Management [Monitor Carried over Job Nets]** window.

- Submission of individual job nets is unavailable.

The stemschnet Job Net Submission Command cannot be executed.

- Projects cannot be deleted.

The stemSchDelete project delete command cannot be executed.

Layering job nets using linked job nets and master linked job nets

You can register layered job nets that use linked job nets and master linked job nets in the master project.

Projects in which linked job nets and master linked job nets can be registered

Linked job nets and master linked job nets can be registered in the following projects:

- Normal projects
- Master projects
- Projects for operation change

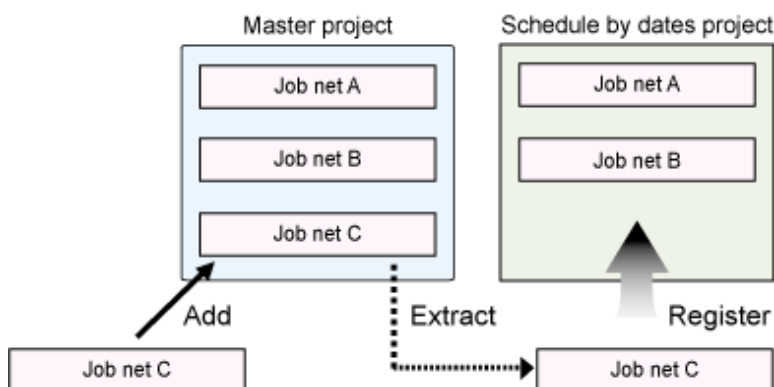
Linked job nets in schedule by dates projects

If a schedule by dates project was created from a master project in which linked job nets and master linked job nets have been registered, the linked job nets in the schedule by dates project will change to normal child job nets. If the master linked job net definition information in the master project is changed after schedule information distribution, it will not be reflected in job nets that have already been distributed. For this reason, master linked job nets of master projects and projects for operation change can be changed even if the job net is under execution. Note that master linked job nets are not registered in schedule by dates projects.

Refer to "Linked Job Nets" in the *Systemwalker Operation Manager User's Guide* for details on linked job nets and master linked job nets.

3.1.1.4 Submitting Individual Job Nets

When job nets are added to the master project after creation of the schedule information, each job net can be submitted individually in the schedule by dates project. The submitted job nets can be handled as a target of carry-over control.



To submit (extract and register) a job net from the master project into an already created schedule by dates project, execute the stemschnet Job Net Submission Command. For details of the command, see "stemschnet Job Net Submission Command" in the *Systemwalker Operation Manager Reference Manual*.

 **Note**

Even when a job net submission fails, the status of the schedule in the **Master Schedule Management [Status Summary]** window or the **Master Schedule Management [Status Details]** window does not change.

Preconditions

Submission of individual job nets presupposes the following conditions.

- Job net
 - A job net registered in the master project or operation change project can be specified.
 - Parent job nets can be specified as layered job nets. Child job nets and linked job nets cannot be specified.
 - A group or a job net in a group cannot be specified.
 - Master linked job nets cannot be specified.
 - The start date should be set for the process date for the job net submission in the master information.
 - If the target schedule by dates project has a job net with the same name as the job net you want to submit, the job net cannot be submitted.
- Project
 - If the Schedule by Dates project does not exist, a new schedule by date project is created.
 - If the schedule by dates project does not exist for the process data on which the job net is to be submitted and the number of registered projects is 1000, the job net cannot be submitted.
- Process date
 - The process date on which the job net can be submitted is either today or future.
 - In the future, the process date can be specified in up to 30 days.
 - The date check is not performed for today, the operation change release date and the process date at the job net submission destination. (If the process date at the job net submission destination is specified on a date after the operation change release date and a master project is specified as the project name in the master information, the job net of the master project is submitted in the schedule by dates project on the process date at the job net submission destination.)
 - The process date should already be subjected to schedule information distribution. If the destination schedule by dates project does not exist on the process date of submission, a new schedule by dates project is created.

Schedule status of submission destination server	Past	Today	Future
Completed	E	A	-
Abended	E	E	E
Executing	E	E	E
No Information	E	E (Note)	E (Note)
Cancellation failed	E	E	E
Waiting for carry-over	E	A	-
Waiting for error handling	E	N/A	-

Schedule status of submission destination server	Past	Today	Future
Waiting for application	E	N/A	N/A
Not executed	E	E	E

A: Applied. (The job net is submitted after setting the start date.)

N/A: Not applied. (The job net is submitted without setting the start date.)

E: Error.

-: Does not exist.

Note)

The job net can be submitted in the rescheduling operation.

- Schedule server [UNIX version]
 - If a schedule server name is specified as the default hostname, the job net is submitted in the schedule server.

Note

Even when the job nets and jobs in the master information are disabled or stopped, the status of the job net or job is not handed over. The status of the job net or job after the job net submission becomes "Waiting for execution".

If you want to hand over the job net or job status in the master information after the job net submission, perform the following procedure.

- Job net
 1. Execute the jobschprint-n command to output the current status of the registered job net.
 2. If the job net is found to be disabled or stopped in 1), execute the jobschcontrol command to disable or stop the job net.
- Job
 1. Execute the jobschprint -p command to output the current status of the registered job.
 2. If the job is found to be disabled or stopped in 1), execute the jobschctljob command to disable or stop the job. (Note)

Note) The job controlled using the jobschctljob command must have a "job name" assigned to it.

Carry-over control

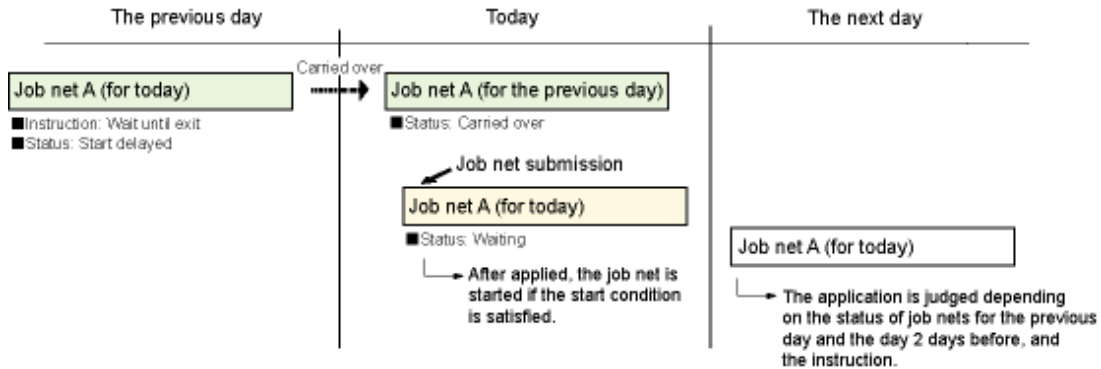
The carry-over control in submission of individual job nets is executed as described below.

The job net carry-over control method is different between the case in which the job net is submitted in today's schedule and the case in which it is submitted in future schedule.

When the job net is submitted in Today's Schedule

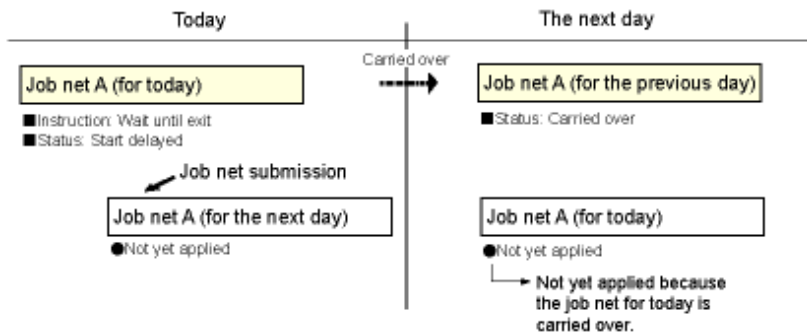
- The schedule for today is applied regardless of the status and instruction of the job net for the previous day.

- Whether or not the schedule for the next day is applied is determined according to the status and instructions for the job nets of the previous day and today.



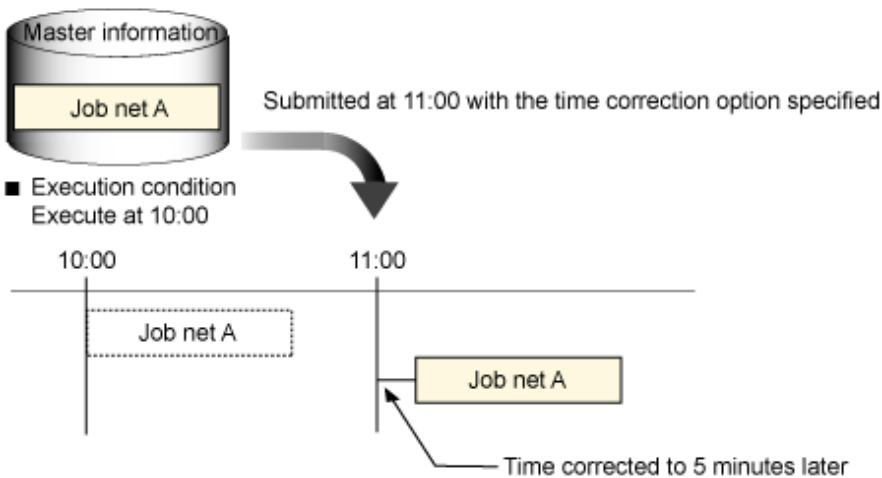
When the job net is submitted in Future Schedule

- When the day change time comes, whether or not the schedule for the next day is applied is determined according to the status and instruction for the job net of today. The job net is submitted in the Not executed status when the command is executed.



Time correction

If a job net whose execution time registered in the master information has passed is submitted individually and the - correct option is used, the job net can be submitted with the scheduled execution time corrected to five minutes after the current time.



Time correction operates when all of the following conditions are satisfied:

- The operating day at the location where the job net is submitted (-d option) is the current day.

- The job net execution condition is **Execute at** (run once per day).
- The job net's scheduled start time has passed.

If the -correct option is specified for a job net that does not meet these conditions, the option will be ignored.

3.1.2 Schedule Distribution

This section explains the schedule distribution processes.

3.1.2.1 Timings for the Schedule Distribution

This section explains the timing for the distribution of schedule information in daily schedule management. In daily schedule management, schedule information can be distributed both automatically and manually.

Timings for automatic schedule distribution

Followings trigger to execute automatic schedule distribution.

- When the day change time comes
- When the Systemwalker Operation Manager Jobscheduler service or daemon is started

However, when the Jobscheduler service or daemon is restarted from the **Master Schedule Management Environment Setup** dialog box, the schedule information is not automatically distributed.

Timings for manual schedule distribution

To perform schedule distribution manually, you can do so from the window for monitoring/operating the schedule status (the **Master Schedule Management [Status Summary]** window/ the **Master Schedule Management [Status Details]** window), or by using stemManager schedule management command. The following lists the timings for manual schedule distribution.

- When recovering from an error occurred in a schedule distribution

When you have failed in extraction or registration of the schedule information, distributing the information by specifying the process date enables schedule distribution from the day when the error occurred.

- When distributing the schedule information for a future process date

You can distribute the schedule information specifying a future process date. And when a modification was conducted on the master information after the registration of schedule information, you can reflect the master information by executing the reschedule. Rescheduling, however, is not available for the today's schedule information that is already in operation.

- Recovery of a process date that has become a past date without execution of the schedule

Even when a process date has become a past date while the schedule was not executed due to server down or other troubles and when the schedule information for the date has not been created, it is still possible to distribute the schedule information for that date. Use the stemManager schedule management command for this purpose.



Note

DO NOT operate a client of Systemwalker Operation Manager during the schedule distribution. Otherwise the client of Systemwalker Operation Manager can be forced to an abnormal end.

See Cautions when Using the Jobscheduler Commands in the *Systemwalker Operation Manager User's Guide*, too.

3.1.2.2 Daily Schedule Distribution [UNIX version]

A job net process date (starting day) as well as the job net information being extracted with the schedule server name specified from **Default Host Name** is compressed and sent to respective schedule servers. You can also split the information to a specified size for the distribution. After the information is successfully distributed to the schedule servers, the schedule information is registered to the Jobscheduler on the schedule server.

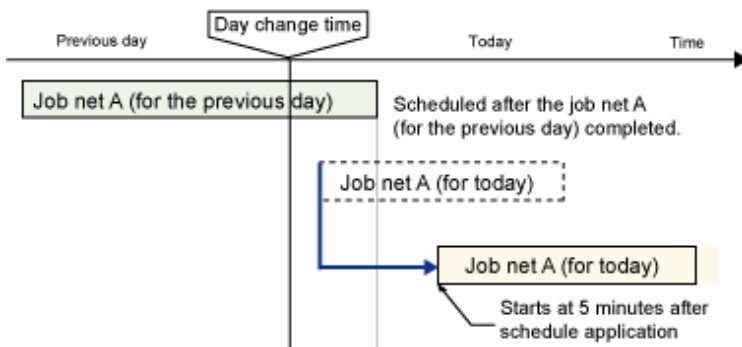
When the schedule information distribution failed due to a line error or server termination, distribution is retried at a pre-determined interval.

The **Master Schedule Management Environment Setup** dialog box is used to specify the split size, distribution time out, and number of retries. For more information, see "2.4 Define an Environment."

3.1.2.3 Application of Schedule Information

Schedule information extracted on the process date basis is applied as the day change time comes.

When operation on a job net was continued beyond the specified day change time, the schedule will be applied to a job net having the same name as the current job net is completed. If, in this case, the job net starting time is already reached, the Master Schedule Management function delays the job net starting time by five minutes. The job net starting time is also corrected when the ending time is specified.

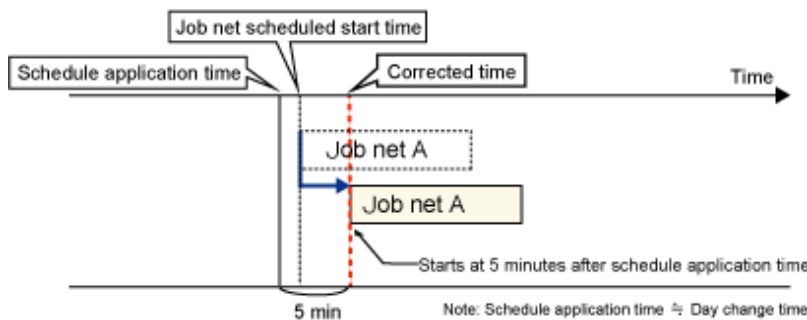


Also, in the following case as well, the job net scheduled start time (*1) is adjusted to 5 minutes after the schedule application time:

- When a job net scheduled start time is set to within +5 minutes from the day change time (schedule application time)

*1:

As schedule applications run immediately after the day change time, the schedule application time becomes almost the same as the day change time.



If there is schedule information with instances of "Abended", "Waiting for error handling", "Waiting for carry-over", or "Waiting for application" schedule status in the past, then application of the current date's schedule information is not performed.

Applying the schedule information immediately before the day change time

When the job net of the previous day completes or the today's schedule is executed immediately before the day change time, the job nets that have already passed the starting time can be applied as described below.

- When the job net starting time exceeds the day change time as a result of delaying the starting time by 5 minutes
- If the job net operation is instructed to be "cut off"

Correct the time to one minute before the day change time so that the job net is executed.

- If the job net operation is instructed to "Wait until exit," "Run concurrently" or "Handle manually"

The time is corrected 5 minutes after the day change time, and the job net is executed.

- When the job net ending time exceeds the day change time as a result of delaying the starting time by 5 minutes, correct the ending time to 1 minute before the day change time.

If the above correction sets the ending time at the same moment as the starting time, the job net is executed as follows.

- If the job net operation is instructed to be "cut off"

The time is not corrected and the job net is executed. Therefore, the job net is not scheduled.

- If the job net operation is instructed to "Wait until exit," "Run concurrently" or "Handle manually"

Correct the starting time to 5 minutes after the day change time and execute the job net. The ending time will be set with respect to the starting time.

Application of an error during schedule distribution

If an error occurs in the schedule information up to previous day, the schedule information is not distributed on the process date. The Waiting for Error Handling state is turned on, instead. When a failed schedule information was recovered from the past process date, the job net is registered as the past schedule but the time-based scheduling not executed. It is also excluded from the carried over job net.

When Waiting for Error Handling state is continued over two or more consecutive process dates because of an error occurred several days before, recovery actions will change the current state to Waiting for Application. But this state does not allow an automatic application of the schedule. To apply the schedule, execute the schedules sequentially from the **Master Schedule Management [Status Summary] / Master Schedule Management [Status Details]** window and then apply them to the day.

See "4.1.4 Operating a Schedule" for more information.

3.1.2.4 Storing Schedule Information

Schedule information is managed on the generation basis on every process date. Past schedule information is stored by the number of generations specified. Specify the number of generations to be stored from the **Master Schedule Management Environment Setup** dialog box. A schedule information is deleted upon its registration when it has been expired because the generation exceeded the number of stored generations. If, however, the target schedule information for deletion contains a carried over job net, its deletion must comply with the settings done from the **Master Schedule Management Environment Setup** dialog box.

Information

Limitations in the number of projects you that can be registered and adjustment of generations of schedule information

The total number of schedule by dates projects on the past day, today and future are up to 1000, which can be registered to a subsystem. For a management server, the number of master projects and projects for operation change are added with the above total number. Take above into account when adjusting the number of generations in which previous schedule information is to be stored.

In a single-server operation, for example, if the number of projects is 10 and the target number of generations for storage is stored is 5, approximately 93-days-worth of future schedules become storable. Adjust the target number of generations for storage considering whether or not 93-days-worth of future schedules enough.

$$\frac{(\text{Number of projects that can be registered (1000)} + (\text{Number of master projects (10)} + \text{Number of schedule by dates projects for the day (10)} + \text{Number of past schedule by dates projects (10 x 5)))}{10} \sim = 93 \text{ (days)}$$

If a schedule distribution is performed when the maximum number of projects is registered, the event is reported to the Event Log/SYSLOG. As the result, saving of the schedule by dates projects begins starting with the oldest one and

execution of its job net are completed in order to register the new schedule. If there is no schedule by dates project that can be deleted, registration of schedule information is ended as an error. You can confirm the information of the saved schedule by dates projects by using the **stemprintnet** saved information confirmation command. For details, see "stemprintnet Saved Information Confirmation Command." in the *Systemwalker Operation Manager Reference Guide*.

Information

The stemprint command can be also used for outputting a job net history information of an process date that is older than the specified number of generations and moved out of the control. As to the job net history information, those information that exist in the currently used log file and a generation old log file in the jobscheduler's log file (jobdb1.log/jobdb2.log/jobdb3.log) are output regardless of the number of generations used for storing the schedule information of the Master Schedule Management function.

For details on the stemprint command, see "stemprint -f(-F)/-g(-G) Command" in the *Systemwalker Operation Manager Reference Guide*.

Note

If the schedule information created in a year is less than the number of generations that store schedule information

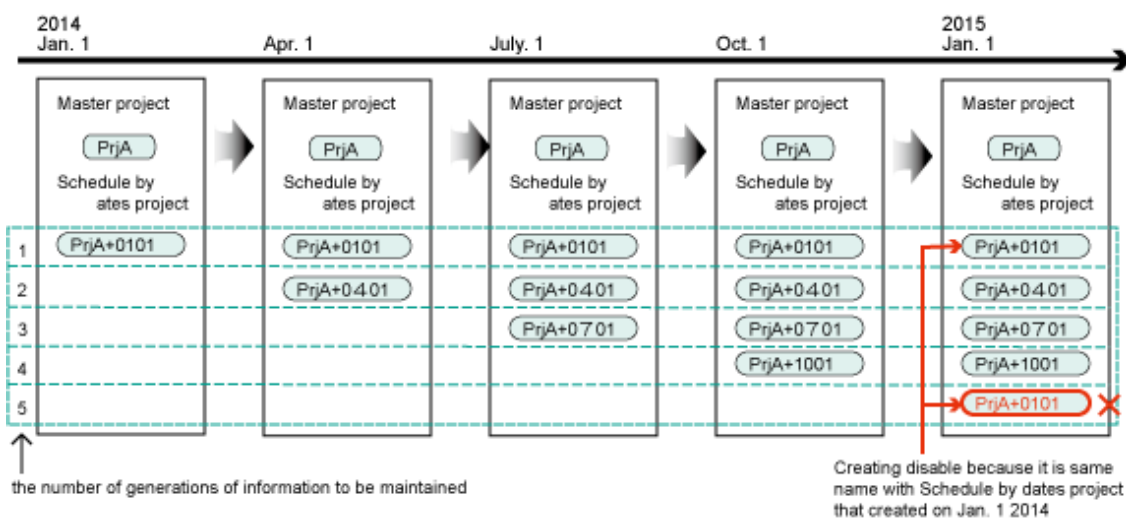
The Master Schedule Management function manages the schedule information by dates, so it cannot manage schedule information for a period longer than a year.

If the schedule information created in a year is less than the number of generations that store schedule information as specified in the **Master Schedule Management Environment Setup** dialog box, schedule by dates projects for different years could have the same name. Creation of a schedule by dates project fails if a project with the same name already exists.

For example, assume the following conditions:

- Number of generations for storing schedule information: 5
- Schedule information created in a year: 4 times (January 1, April 1, July 1, October 1)

In this case, as shown in the figure below, the "PrjA+0101" schedule by dates project for January 1 of the current year remains when an attempt is made to create the "PrjA+0101" schedule by dates project for January 1 of the following year. Therefore, a schedule by dates project with the same name cannot be created.



Preferably, use the normal schedule to manage schedules that are operated only a few times a year. If using the Master Schedule Management function to manage these types of job, reduce the number of generations specified in the

Master Schedule Management Environment Setup dialog box so that the oldest schedule by dates project is deleted automatically.

3.1.2.5 Future schedules

You can confirm a future operation schedule by executing a future schedule in advance. You can reduce a time needed until the start a schedule for the day by registration the schedule information up to the process date.

There are three methods for the future schedule distribution:

- Manual scheduling

You can create a future schedule up to the next 30 days. This approach is used when it is needed to temporarily modifying job contents for a specific day. There are three approaches for the manual scheduling:

- From the **Master Schedule Management [Status Summary]** window or the **Master Schedule Management [Status Details]** window, select **Future Schedule**. Then implement the scheduling from the displayed dialog box by specifying the process date.
- Display status of a schedule of a future date from the **Master Schedule Management [Status Summary]/Master Schedule Management [Status Details]** window. Then select **Start** to execute the schedule.
- Specify the process date on which manual scheduling is to be done and then run the **stemManager** schedule management command.

- Registering job nets for a future schedule to Systemwalker Operation Manager

This approach is used when it is necessary to complete schedule distribution before the day change time comes. Such need will arise, for example, when there is a job net that must be started immediately after the day change time comes.

Registering job nets shown in the example below to Systemwalker Operation Manager allows you to distribute the schedule information for the following day at a specified time.

Registration example:

1. Create a project for the schedule execution on the management server. Don't specify the master setting for this project.
2. Register the following contents of the job net to the schedule-executing project.
 - From **Start Time**, specify the time for schedule distribution as a starting condition.
 - Following is the name of the command used for the job to be registered:
"Systemwalker installation directory \mpwalker.jm\bin\stemManager.exe -n" [Windows version]
"/opt/FJSVstem/bin/stemManager -n" [UNIX version]
 - Specify **Daily** for the starting day.

- Future schedule at day change time

The day change time allows you to implement future scheduling. You can make it happen on a future date from a specified date in the range of 1 to 5 days. This function is used when confirming the schedule information before the operation of the day is started.

When enabling the future scheduling at the day change time, select **Schedule** from **Settings** of the **Master Schedule Management Environment Setup** dialog box and then specify Schedule to use after the day change time.

3.1.2.6 Rescheduling

When the master definition is modified after the future schedule information has been registered, you can reflect the modified master definition by replacing the schedule information.

For rescheduling, specify **Reschedule** from the **Master Schedule Management [Status Summary]/Master Schedule Management [Status Details]** window; or execute the stemManager schedule management command.

Rescheduling is valid only for the scheduled process dates. And rescheduling is applicable to future process dates alone. The applicable process date should be either today or future. It is not applicable to past dates.

Rescheduling is also not applicable to process dates on which a set of schedule distribution has not been completed due to an error or equivalent reasons. Rescheduling is applicable to the following schedule status.

- When the process date is today: "No information"
- When the process date is future: "Waiting for application" or "No information"

Note

If schedule information for the target process date was not extracted from the master information during rescheduling, the registered schedule information of the target process date will be deleted.

3.1.2.7 Deleting Schedule Information

You can delete currently registered schedule information by canceling the scheduling-completed state and thereby restoring the state prior to execution of the scheduling. When an error occurred to a piece of schedule information while its extraction, distribution, or registration, or when a piece of schedule information is in Waiting for Error Handling state, you can delete such information and restore the state prior to execution of the scheduling.

You can delete a piece of schedule information from the window for monitoring/operating the schedule status (**Master Schedule Management [Status Summary]** or **Master Schedule Management [Status Details]**). Or you can also use stemManager schedule management command for the same purpose.

You cannot delete the schedule information if an error occurred during its application.

3.1.2.8 Running Schedule

Start Schedule is implemented manually. Start Schedule is enabled when a schedule's status is in Abended, Waiting for Error Handling, Waiting for Carry-over, Waiting for Past's/Today's Application or Not Executed.

Turning on the Start Schedule brings up following operations depending on the given situation.

- If the schedule is executed after an abended, the schedule distribution is restarted from the point where the error occurred.
- If the schedule is executed from the Waiting for Error Handling state, the schedule is applied independent of the failed schedule carried over to the preceding day.
- If the schedule is executed from the Waiting for a carried over job net, the schedule is applied independent of the carried over job nets up to the preceding day,
- If the schedule is executed from the Waiting for application state, it is applied as is.
- When the schedule is not executed yet and to be executed today or in future, a schedule is newly created.
- A new schedule is created for a past process date on which no schedule was executed.

Start Schedule is implemented from the window for monitoring/operating the schedule status (**Master Schedule Management [Status Summary]** window or **Master Schedule Management [Status Details]** window). Or you can also use the stemManager schedule management command for this purpose.

However, the operations related to application are executable only in the window for monitoring or operating the schedule status and the operations related to a past process date without schedule execution are executable only using the stemManager schedule management command.

Note

- The past date for executing a schedule can be set by going back only up to the same number of days as the number of days the schedule status is managed.

- Use care in the following points when handling a job net registered in the past schedule.
 - The job net is saved when the number of projects that can be registered (1000) is exceeded regardless of the job net status. After the job net is saved, it cannot be controlled from the Systemwalker Operation Manager clients. It is recommended to execute and terminate the registered job nets promptly.
 - The job net is excluded from the target of carry-over control.
 - As the time-based scheduling is not applies, the job net for which a time-based starting condition is set should be started manually.
 - The job net can be linked with a message event is possible provided that an operating day-conscious message event is generated using the -d, -dx, -s and -n options of the jobschmsgseventex command.
(If an operating day-unconscious message event is generated, the job net may be started by an unintended message.)
 - The job net is handled as "Completed" even if it is actually not executed. Even if the **Master Schedule Management Environment Setup** dialog box is set to **Do not delete incomplete job nets**, the job net will be deleted as soon as it has gone out of the managed beyond the number of generations of information to be maintained.

Information

For saving of projects, see "[3.1.2.4 Storing Schedule Information](#)"

3.1.2.9 Modifying Schedule Information

You can modify the schedule information (addition or deletion of a job net or modification of the definitions information) on the process date basis without modifying the master information.

When modifying the schedule information only for the specified process date, select the **Project with "Project name + operating day on which modification is to be conducted (mmdd)"** from the **Job tree** of the **Systemwalker Operation Manager** window and then edit job net information in the Project.

A job net that has been added to the schedule by dates project from the **Create Job Net Anew** window, by copying it from the master project, or by use of jobschsetnet command is handled as the job net of the subject process date alone. Thus such job net is not included the operation instruction-based carry over control.

3.1.3 Running a Schedule in virtual Time framework

Virtual time can be used to perform daily schedule management by specifying daily schedule management (test mode) at the same time as the subsystem is set. You cannot allow both the standard time and virtual time to exist in the same subsystem during the schedule distribution. For details of the set virtual time setting procedure, see "[2.3.2 Setting the Daily Schedule Management \(Test mode\)](#)".

Virtual time-based schedule distribution

When the Master Schedule Management function is operated based on the virtual time, scheduling for respective process dates as well as carry over control is also implemented based on the virtual time. In the operation change, too, the master database is updated according to the date of the virtual time.

Releasing virtual time

To clear the virtual time settings, change the mode of the subsystem on which the virtual time is used from daily schedule management (test mode) to daily schedule management in the **Master Schedule Management Environment Setup** dialog box. When released, all the schedule information created by use of the virtual time operation is discarded. The master information alone remains undiscarded. However, when the operation change is conducted while using the virtual time, the master information will reflect the changes. When restoring its state prior to the change, execute the stemBackProject command. You cannot, however, restore the information used for the operation change. Thus, in this case, you have to save the control statement beforehand using jobschprint -r/-R command.

Note

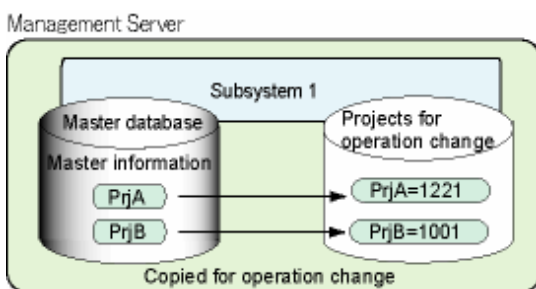
- You can change the future virtual time based on the current one but such change is not available for the past time.
- If you modify the virtual time for the coming 12 months or more when the daily schedule management operation is turned on, namely when a schedule by dates projects are existent, you might fail in registration of schedule information because a piece of other information can already be present on a same process date. In this case, change daily schedule management (test mode) to daily schedule management briefly, then change it back to daily schedule management (test mode) again to set virtual time for the coming 12 months.
- When the setting is changed from daily schedule management (test mode) to normal schedule, the virtual time that was set stays the same but the schedule changes to the normal schedule. To clear the virtual time settings, after the schedule changes to the normal schedule click **Startup parameter** in the **Systemwalker Operation Manager Environment Setup** window. On the **Define Jobscheduler Startup Parameters >> Test mode** tab that is displayed, clear the virtual time settings then restart the Jobscheduler service/daemon.

3.2 Operation Change Procedure

This section explains the operation change procedure.

3.2.1 Outline of Procedure

Operation change is implemented in the operation change project to be created using the project name and release day as the keys. The operation change project is generated in the same subsystem as the master information. The master information is replaced with the operation change project as the release day arrives. At that time, the operation change project will be deleted.



Create the operation change project using the following procedure.

1. Create an operation change project with a command from the Master Schedule Management function.

Specify the Project to change and the release day to be changed and then execute the stemCopyProject operation change preset command. The master project will be copied and the operation change project is created. The name of the operation change Project consists of 5-byte "Project name = release day (mmdd)" and is managed uniquely.

2. Add, change, or delete job net definition information for the operation change Project.

For more information, see "stemCopyProject Operation Change Preset Command" in the *Systemwalker Operation Manager Reference Guide*.

Information

When adding a project on the release day, create the operation change project and job net using the following procedure.

1. Create a project a new. You don't have register the job net as this point.
2. Specify the master setting for the created project executing stemSetPrjMaster project master setting command.

3. Create the operation change project executing stemCopyProject operation change preset command.
4. Register the job net to the created operation change project.

Note

- An operation change release day must be within one year of the date changed.
- The access right and the owner of the project being set in the operation change project are not reflected in the master information.

3.2.2 Releasing Operation Change

The operation change Project is replaced with master information when the release day occurs.

At this time, the master information is saved in the file named "Project name=Release date" in the following directory.

[Solaris and Linux]

`/var/opt/FJSVJOBSC/jobschbackup2` or
`/var/opt/FJSVJOBSC/JOBDBn/jobschbackup2`

[HP-UX]

`/opt/FHPJOBSC/db/jobschbackup2` or
`/opt/FHPJOBSC/db/JOBDBn/jobschbackup2`

[AIX]

`/usr/FAIXJOBSC/db/jobschbackup2` or
`/usr/FAIXJOBSC/db/JOBDBn/jobschbackup2`

[Windows]

Systemwalker installation directory\mpwalker.jm\mpjobsch\jobdb\jobschbackup2
or
Systemwalker installation directory\mpwalker.jm\mpjobsch\jobdb n\jobschbackup2
"n" in "JOBDB n" and "jobdb n" indicates one of the subsystem numbers from 1 to 9.

Saved information is stored in the period specified in the Manage schedule for days item on the **Master Schedule Management Environment Setup** dialog box, and then deleted after the period is expired.

Schedule information for the day is extracted from the mirrored master information and applied to operations.

Note

- When an error occurs during the operation change, the system cannot schedule a process date other than the release day. Implement a recovery (execution of schedule) of the release day on which an error developed, or cancel the schedule.
- When an error occurred during the operation change, cancel the schedule. This operation restores in the master information and the operation change project the state prior to the operation change.
- If you cancel the schedule of the process date on which an error occurred during the operation change, the release day is regarded as a past date, making the operation change not applicable. Change the release day. See "[3.2.5 Changing the Release Day](#)" for more information.
- When an error occurs on the release day for the operation change during schedule distribution, scheduling is canceled, and the schedule is placed into a Not executed state. However, the master information in which the operation is changed does not return to the original state.

3.2.3 Operation Change and Future Scheduling

When there is a changed project managed by a project name and future release day, if a future schedule is executed after that release day, the operation change in a future release day is reflected in the schedule information to be extracted. However, master information is not changed for the operation until the actual release day arrives.

Note

Assume that a future schedule has been executed for a future release day and the schedule status is set to the Waiting for Application. In this situation, if the system fails in replacing the master information on the release day, an error is issued to the operation change alone.

In this case, use the stemManager schedule management command to execute only the operation change function. For more information, see "stemManager Schedule Management Command" in the *Systemwalker Operation Manager Reference Guide*.

3.2.4 Canceling Operation Change

You can cancel the operation change even after you have conducted an operation change and the release day has come. To cancel operation changes, use the stemBackProject operation change cancellation command. Once an operation change is canceled, changed master information returns to the state set before the release day. However, the returned definition information is valid for subsequent scheduling.

For more information, see "stemBackProject Operation Change Delete Command" in the *Systemwalker Operation Manager Reference Guide*.

When you want to delete an operation change project before its release day comes because of an error contained in the project, do it by specifying the operation change project for the project name of stemSchDelete project delete command.

For more information, see "stemSchDelete command" in the *Systemwalker Operation Manager Reference Guide*.

Note

- When an operation change is canceled, changed information is discarded. Please backup any essential information before using the operation change cancellation command to operation change.
 - Return to the original state with an operation change information. When save information is deleted, the user cannot cancel the operation change.
 - When an error occurred in the operation change, you can cancel the operation change. Recover the release day from the error by executing the schedule slated for the date and then cancel the operation change.
-

3.2.5 Changing the Release Day

You can change a release day of an operation change project. To change the release day, execute the stemMoveProject operation change release day change command.

For more information, see "stemMoveProject Operation Change Release Day Change Command" in the *Systemwalker Operation Manager Reference Guide*.

3.2.6 Operation Change Example

The following example shows a procedure for operation change:

The windows shown below are the example of displaying project categories.

See "[Displaying project categories](#)" in "[3.1.1.2 Master Setting](#)" for how to display projects by category.

[Operation Change Job]

Project:

ProjectA

Changed contents:

Add a new job used to collect data for JobnetF.

(Job net comment: JobnetF, Job net name: Add data-F)

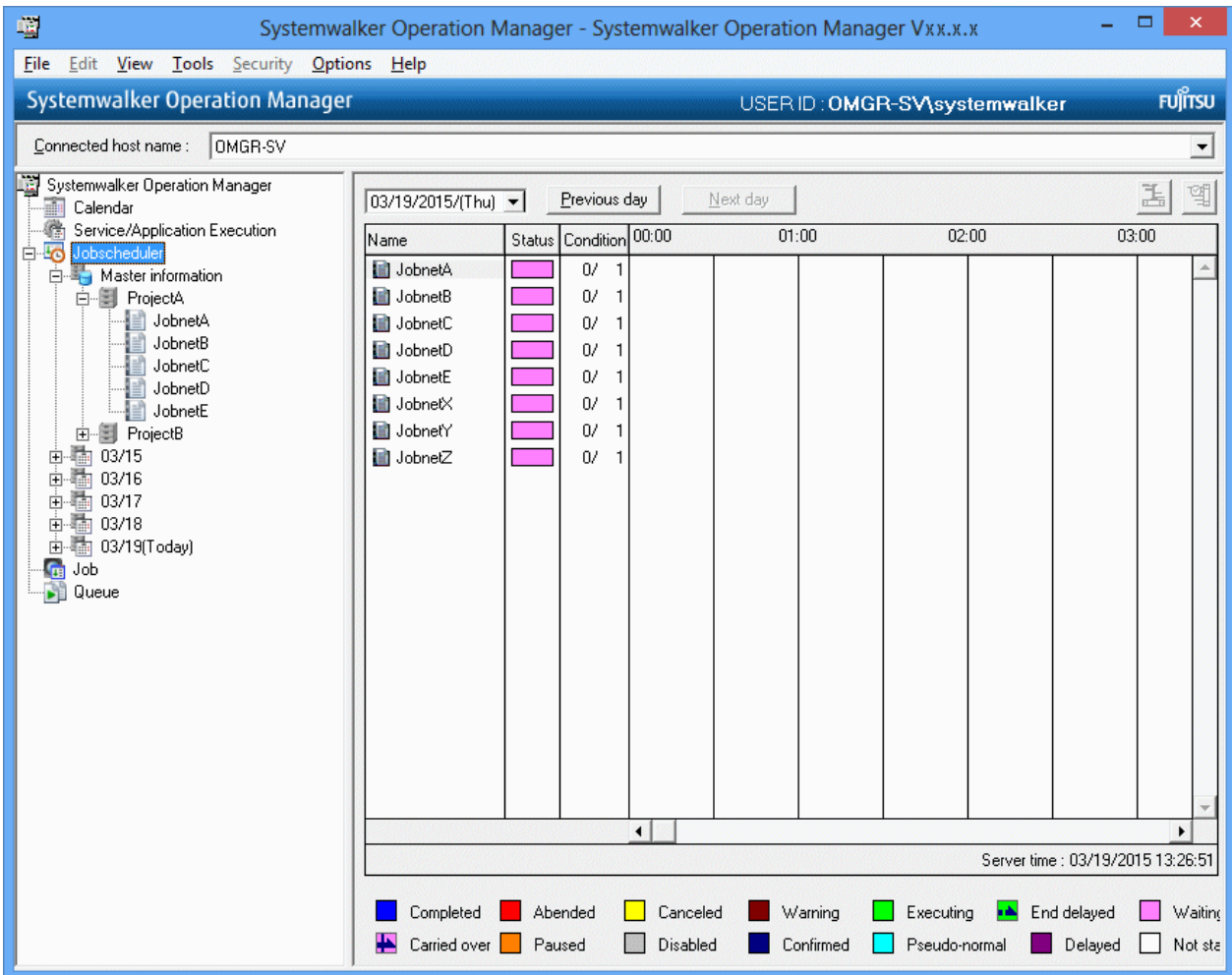
Release day:

4/1

Registration date:

Registration is completed by March 20.

The **Systemwalker Operation Manager** window is displayed as shown below.



1. Create the operation change project after specifying "ProjectA" for the project and April 1 for the release day.

[Windows version]

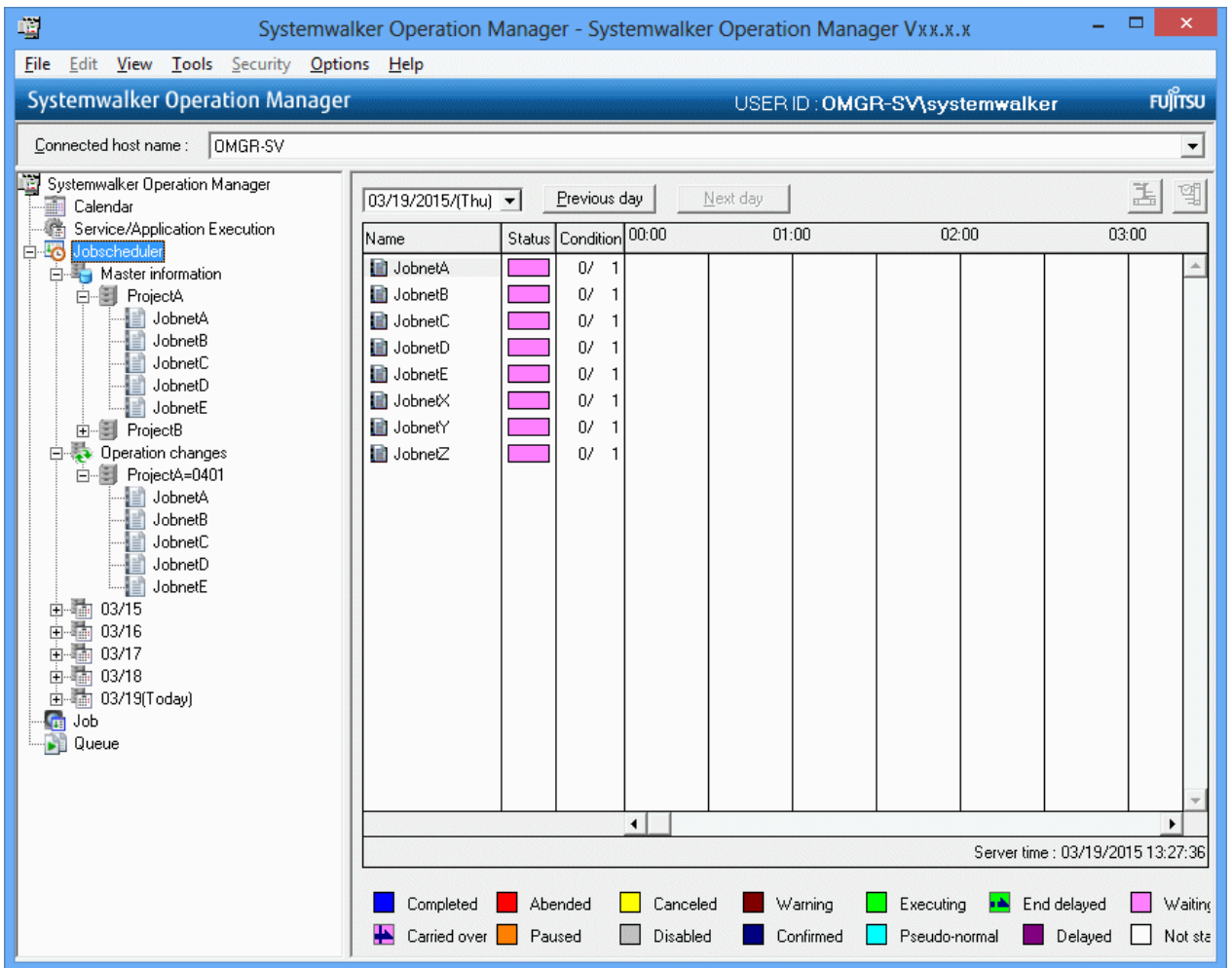
```
Systemwalker installation directory \mpwalker.jm\bin
\stemCopyProject ProjectA -d 0401
```

[UNIX version]

```
# /opt/FJSVstem/bin/stemCopyProject ProjectA -d 0401
```

For more information, see "stemCopyProject Operation Change Preset Command" in the *Systemwalker Operation Manager Reference Guide*.

The operation change project "ProjectA=0401" is created and displayed in the **Systemwalker Operation Manager** window as shown below.



2. Add definition information required to change an operation.

From Systemwalker Operation Manager's client screen, connect to the subsystem on which the master information exists. Project "ProjectA=0401" is created in the subsystem environment and job net information of the Business Project is registered under that Project. Create a new job net comment with the name "JobnetF" and job net name "data-F" in the Project.

It will be displayed in the **Systemwalker Operation Manager** window as shown below.

The screenshot shows the Systemwalker Operation Manager interface. The title bar reads "Systemwalker Operation Manager - Systemwalker Operation Manager Vxx.x.x". The menu bar includes "File", "Edit", "View", "Tools", "Security", "Options", and "Help". The user ID is "OMGR-SV\systemwalker" and the host name is "OMGR-SV".

The left sidebar shows a tree view of the system structure:

- Systemwalker Operation Manager
 - Calendar
 - Service/Application Execution
 - Jobscheduler
 - Master information
 - ProjectA
 - JobnetA
 - JobnetB
 - JobnetC
 - JobnetD
 - JobnetE
 - ProjectB
 - Operation changes
 - ProjectA=0401
 - JobnetA
 - JobnetB
 - JobnetC
 - JobnetD
 - JobnetE
 - JobnetF
 - 03/15
 - 03/16
 - 03/17
 - 03/18
 - 03/19(Today)
 - Job
 - Queue

The main area displays a grid for the date 03/19/2015 (Thu). The grid has columns for time intervals: 00:00, 01:00, 02:00, and 03:00. The rows list job names and their status and condition.

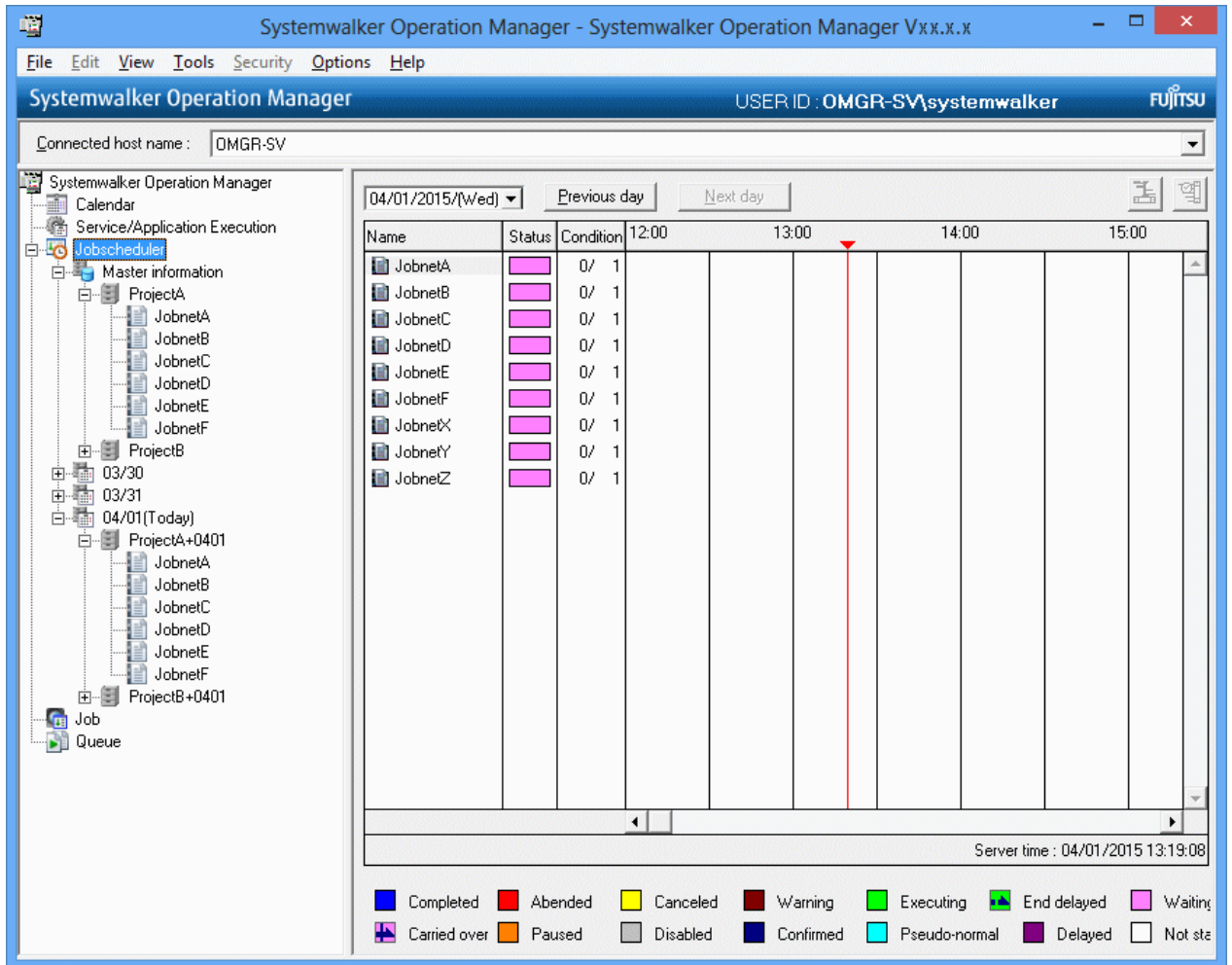
Name	Status	Condition	00:00	01:00	02:00	03:00
JobnetA	Waiting	0/ 1				
JobnetB	Waiting	0/ 1				
JobnetC	Waiting	0/ 1				
JobnetD	Waiting	0/ 1				
JobnetE	Waiting	0/ 1				
JobnetX	Waiting	0/ 1				
JobnetY	Waiting	0/ 1				
JobnetZ	Waiting	0/ 1				

At the bottom, there is a legend for job statuses:

- Completed (Blue square)
- Abended (Red square)
- Canceled (Yellow square)
- Warning (Dark Red square)
- Executing (Green square)
- End delayed (Green square with red border)
- Waiting (Pink square)
- Carried over (Purple square)
- Paused (Orange square)
- Disabled (Grey square)
- Confirmed (Dark Blue square)
- Pseudo-normal (Cyan square)
- Delayed (Dark Purple square)
- Not started (White square)

Server time: 03/19/2015 13:28:47

- Using the release day April 1 as the momentum, the operation change project "ProjectA=0401" replaces the master project "ProjectA".



3.3 Operating a Carried Over Job Net

This section explains how to operate a carried over job net.

In the following states, the Master Schedule Management function can carry over a job net to the next process date when day change time takes effect:

- Abnormal end (Note 1) (Note 3)
- Cancel (Note 1) (Note 3)
- Executing (Note 3)
- Warning (Note 3)
- Waiting (Note 2) (Note 3)
- Paused

Note 1)

The job net is carried over to the next operating day when Verification valid is set but Verification valid was not implemented at the day change time came.

Note 2)

Only the job net that can be carried over to the next operating day in the Waiting state must satisfy the following conditions:

- **Execute at time** is the only setting specified or **Start only when message event has occurred** is specified in **Execution condition** under the **Standard information** tab in the **Job Net Properties** window.
- **Carry over the process regardless of the day change time** is specified under the **Message** tab on the **Job Net Properties** window.
- Since no waiting message event occurred, the day change time reached without starting the job net.

When the job net definition information is either of the following, the schedule is applied after canceling **Valid only on startup day**.

- When the specification in **Instruction** in the Standard information sheet in the **Job Net Properties** window is other than "Cut off".
- When **Carry over the process regardless of the day change time** is specified in the Message sheet in the **Job Net Properties** window.

Note 3)

If a job net is copied and started, neither the copy source job net nor the copy destination job net is carried over. These job nets are collectively referred to as a "carried over job net."

Those job nets that are excluded from the carry over in the Master Schedule Management function

The following job nets are excluded from the carry over in the Master Schedule Management function:

- Group (Note 1)
- Job net in a group (Note 1)
- Child job net of layered job nets (Note 2)
- Linked job nets of layered job nets (Note 3)

Note 1)

Carryover of a group is done by use of the function of Systemwalker Operation Manager. Thus, groups are not included in the target of the Master Schedule Management function.

Note 2)

Child job net is handled as a job. Thus they are not included in the target of the Master Schedule Management function.

Note 3)

Linked job nets are treated as jobs, therefore they are not treated as carry-over targets in the Master Schedule Management function.

Information

Verification valid means that the following items are defined:

- **Validate job net confirmation** is checked in the **Advanced Settings for Verification** window
- When a job net Canceled, **Check canceled** is checked in addition to the above.

3.3.1 Specifying an Operation Instruction

Users can define operating instructions in a job net when the job net is carried over to the next operating day. Operating instructions are processed when the day change time takes effect after the schedule is applied.

Users can define the following operating instructions:

Cut off

This instruction is used to automatically cut off a carried over job net.

Wait until exit

This instruction is used to schedule a job net when it is automatically carried over to the next operating day for its processing to be completed.

Run concurrently

This instruction is used to schedule a job net to be automatically carried over to the following day when day change time takes effect, regardless of whether job net processing is completed.

Handle manually

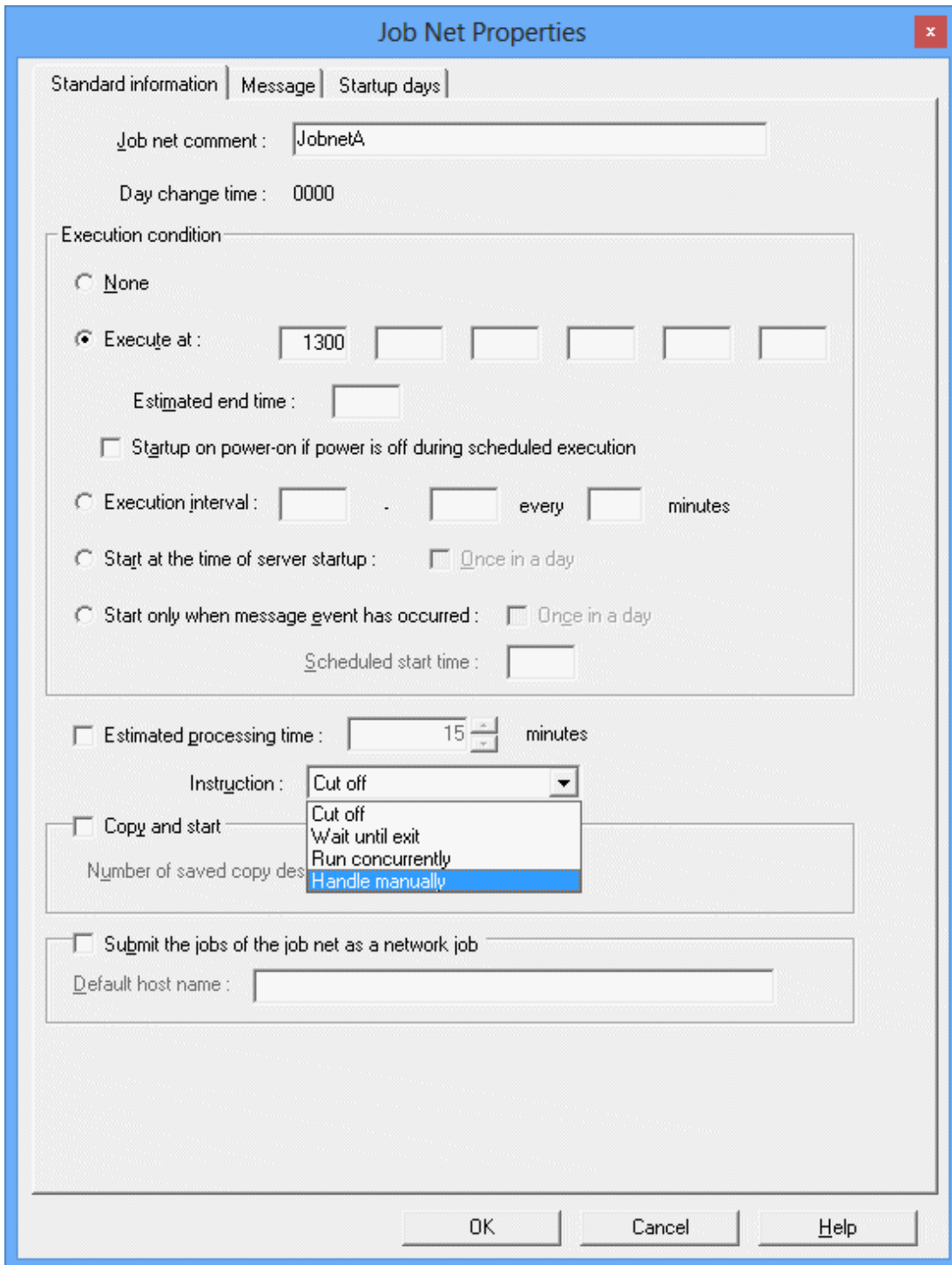
This instruction is used for a job net that requires an operator's judgment. If the job net must be executed today, it is carried over to the next operating day according to the operator's judgment and not unconditionally.

By specifying **Handle manually**, a job net not executed today is paused the next day.

To execute these operation instructions, use the **Job Net Properties** window or the jobschsetnet command.

Settings in the Job Net Properties window

This setting is done from the **Job Net Properties** window - **Standard Information** tab. The screen image is as shown below.



Using the jobschsetnet command for settings

Describe the following operand and values in the job net control statement of the jobschsetnet command, and then register the job net.

Operand

carryovermode

Specified value

Specify one of the CANCEL (Cut off), OVER (Wait until exit), PARALLEL (Run concurrently), and ACTION (Handle manually) instructions.

Default

CANCEL

3.3.2 Operation of Carried Over Job Net

This section explains how a carried over job net operates when day change time takes effect in combination with the status of the operating instructions. For details on the job net operation for each operation instruction and details on user operations, see "[4.2.1 Status and Operation of a Carried Over Job Net](#)".

When there is a carried over job net, users can specify the item in the **Master Schedule Management Environment Setup** dialog box, and report it to the Event Log/SYSLOG. See "[2.4 Define an Environment](#)" for more information.

When a carried over job net is Abended or Canceled

When a carried over job net is abnormally ended or Canceled and no confirmation is processed while Verification valid is set, it is carried over to the next operating day in the same state. The status and operations of a carried over job net vary depending on the operating instructions.

Job net in Cut off

A job net that is Abended or Canceled is not handled as a carried over job net, and the same job net is scheduled on that day.

Job nets in Wait until exit and job nets in Handle manually

No job net with the same name is scheduled during the day. Job nets with the same name in a day are scheduled when confirmation is processed.

Job net in Run concurrently

The same job net in a day scheduled as a carried over job net remains Abended or Canceled.

When a carried over job net is Executing, Warning, or Paused

The status and operations of a carried over job net vary depending on the operating instructions.

Job net in Cut off

A job net in the Cut off is handled as specified in the **Master Schedule Management Environment Setup** dialog box. Operation on a job net is continued if you select "Continue the job net process in progress". When **Force exit the job net process in progress** is specified, job nets in the Executing or Warning state are canceled, and job nets in the Paused state are made Disabled. In any case, the job net of the day is scheduled as the day change time comes.

Job nets waiting for exit and job nets to be handled manually

A job net in a Handle manually or Wait until exit is automatically carried over to the next operating day when the day change time takes effect. The same job net in the day is scheduled once the carried over job net is completed. A job net in an executing or warning state is not Paused by a Handle manually instruction.

Job Net in Run concurrently

A job net in the Run concurrently is automatically carried over to the next operating day when the day change time takes effect. The same job nets of the day are scheduled as the day change time comes regardless of the state of the carried over job net.

When a carried over job net is in the Waiting state

When **Carry over the process regardless of the day change time** is not specified in the **Message** tab in the **Job Net Properties** window, the job net schedule is deleted once the day change time takes effect and the same job net in the day is scheduled when the day change time takes effect. When **Carry over the process regardless of the day change time** is specified, the status and operations of a job net vary depending on the operating instruction.

Job net in Cut off

Job net execution conditions are discarded as the day change time comes, and the same job nets of the day are scheduled as the day change time comes.

Job net in Wait until exit

A job net is automatically carried over to the next operating day when the day change time takes effect and is executed when execution conditions are satisfied. The same job net in the day is scheduled when the job net in the wait unit exit is completed.

Job net in Run concurrently

A job net is automatically carried over to the next operating day when the day change time takes effect and is executed when execution conditions are satisfied. The same job net in the day is scheduled when the day change time takes effect, regardless of the state of the carried over job net.

Job net in Handle manually

Job nets are paused when the day change time takes effect. When the user performs any operation for a carried over job net and the carried over job net is completed, the same job net today is scheduled.



Information

- The behavior of job nets that have been carried over from the previous days varies depending on the execution condition.

If the execution condition is Execute at, (single startup) or Start only when message event has occurred:

The carried over job nets will be started in order, starting with the oldest job net.

If the execution condition is Execute at (single-startup), and there is a delayed message event, and 'Startup on power-on if power is off during scheduled execution' is selected, and 'Wait for startup time' on the Job Net Properties >> Message tab is not selected:

The carried over job nets will be started in order, starting with the oldest job net.

If the execution condition is Execute at (multiple startups) or Execution interval:

The same job net for the current day will be scheduled, and the job nets carried over from the previous days will be discarded.

- When the execution condition is set to **Start only when message event has occurred**, the operation of a carryover job net will change according to the **Once in a day** specifications.

When Once in a day is set:

The carried over job net will start only once and will not start again after that.

When Once in a day is not set:

The carried over job net will be started once and then will continue to be started each time a message event is notified until the day change time is reached.

Example of operation

The following explains example of operations resulting from respective operation instruction.

Following explanation is based on the excerpt on the **Gantt Chart** window of the **Systemwalker Operation Manager** window. It is assumed here that the day change time is set to 00:00.

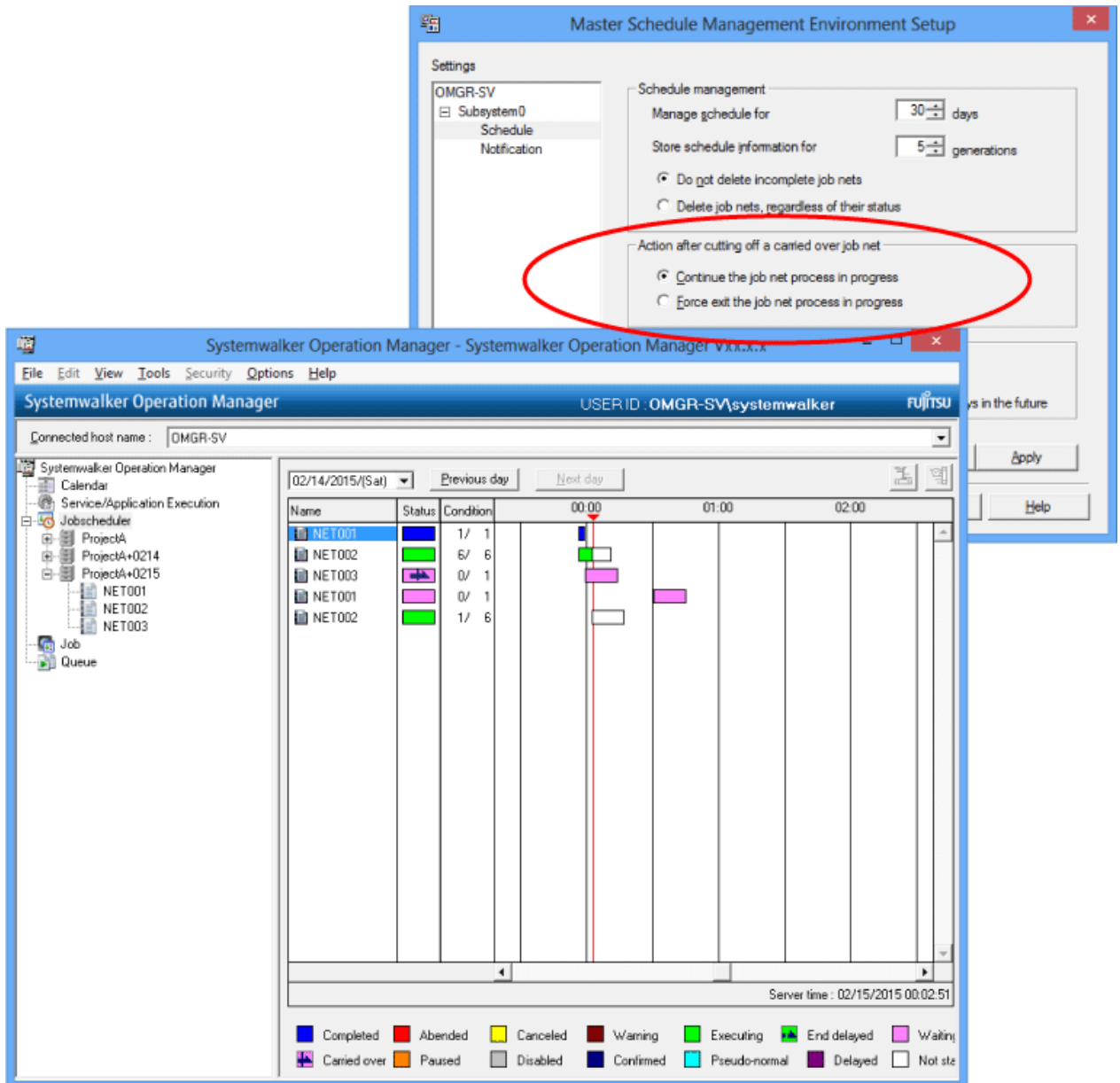
When the operation instruction is Cut off

The following explains an example of the job net operation when the operation instruction is Cut off.

- When the "Action after cutting off a carried over job net" is selected for "Continue the job process in progress"

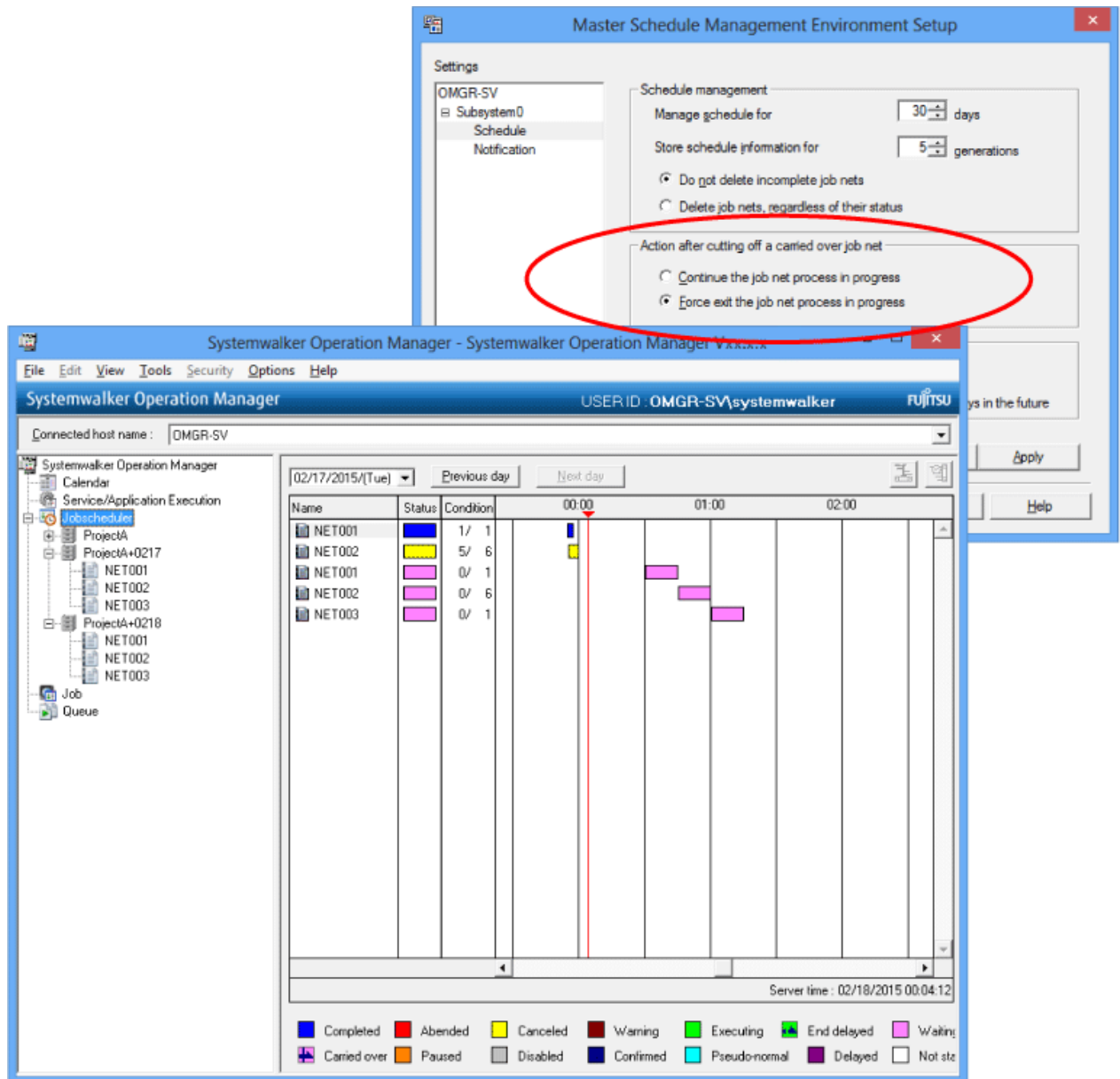
A job net whose processing was started in the previous day is continued crossing the day change time 00:00. And the job of the day is started as the starting time comes in the same way as in the "Run concurrently". (See the following "NET002")

Starting plan of the job net that was Waiting for Execution in the previous day is canceled and the starting plan for the day is set instead. (See the following figure "NET003")



- When "Force exit the job net process in progress" is selected for "Action after cutting off a carried over job net" A job net that had been executed during the previous day is cancelled as the day change time 00:00 comes, and then the one to be executed on the day will be set. (See the following figure "NET002")

Schedule of a job net that had been waiting for execution in the previous day is canceled like in "Continue the job net process in progress" operation, and the one to be executed on the day is set. (See the following figure "NET003")



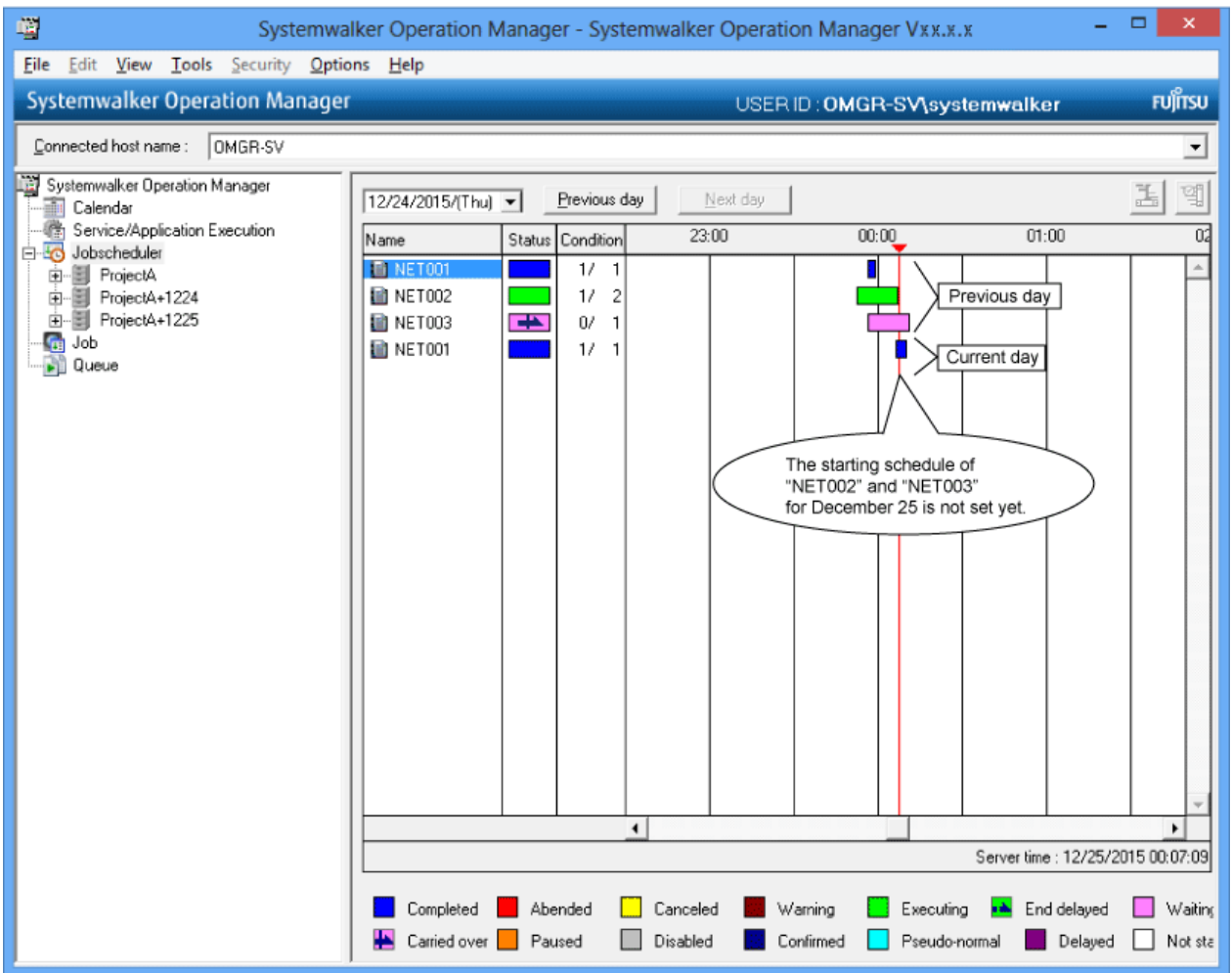
When the operation instruction Wait until exit:

The following explains an example of a job net operation when the operation instruction is Wait until exit.

- Before the job net for the previous day is completed

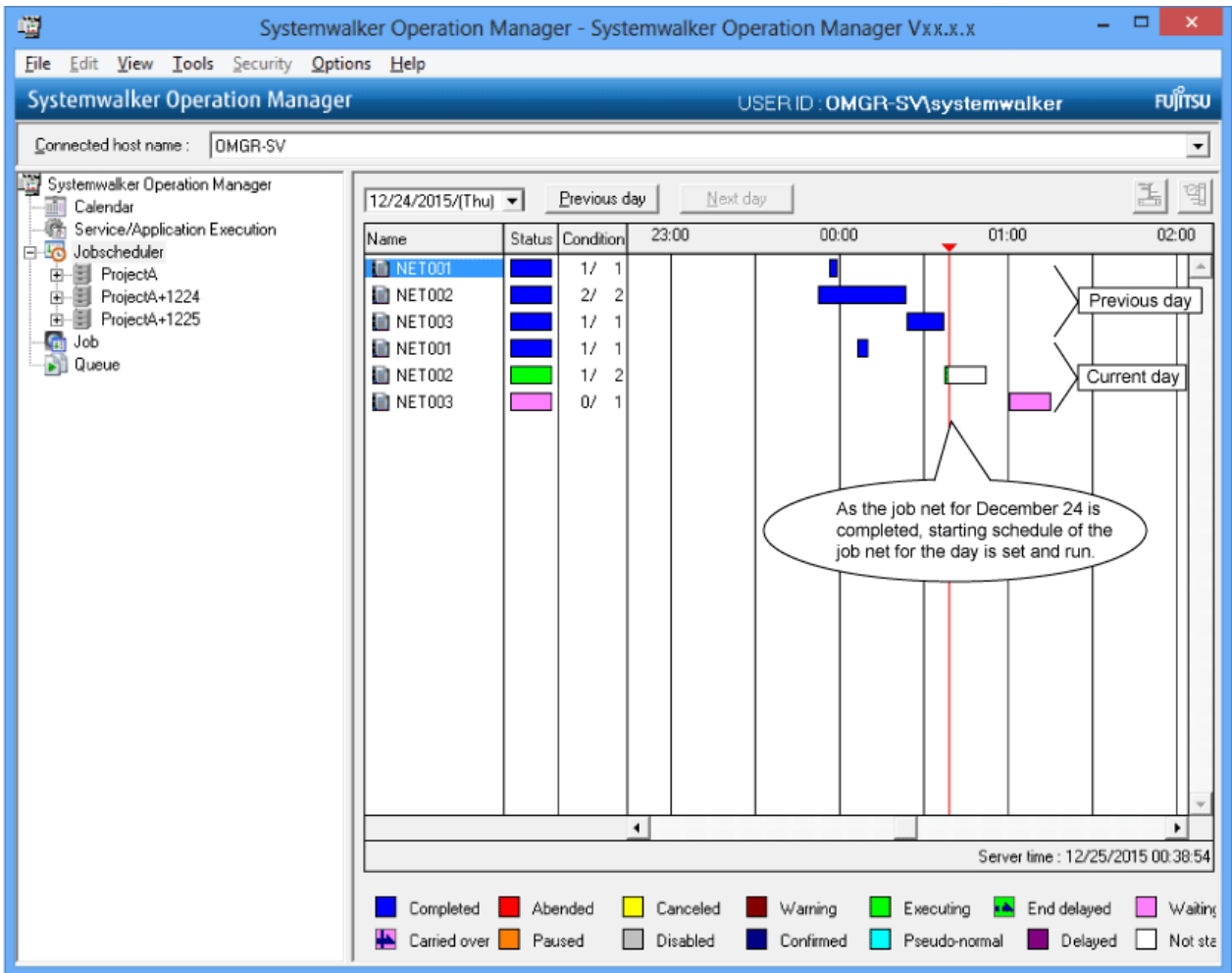
Until the job net for the previous day is completed, the job net for the day won't be set.

"NET003" in the following figure is started upon issuance of the message that is generated as "NET002" is ended. Execution of "NET002" is continued across the day change time 00:00 and "NET003" is in Waiting (carry over), thus the starting schedule of "NET002" and "NET003" for December 25 won't be set.



- After the job net for the previous day has been completed

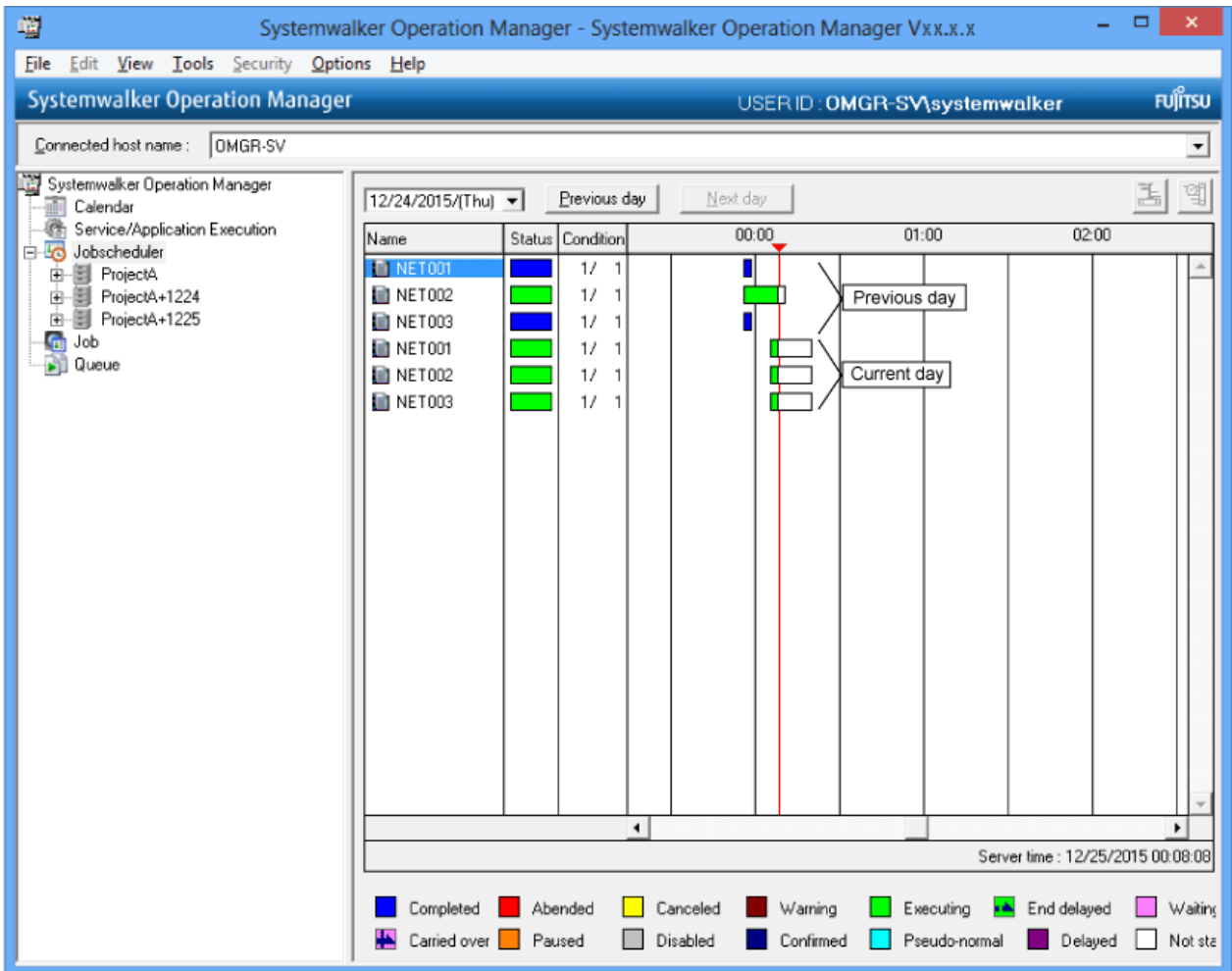
As the job net for the previous day is completed, starting schedule of the job net for the day is set and run. (See "NET002" and "NET003" in the following figure)



When the operation instruction is Run concurrently

The following explains an example of a job net operation when the operation instruction is Run concurrently.

The starting schedule of the job net is set and it will be started at the specified time even if the job net for the previous day is not completed. (See "NET002" and "NET003")

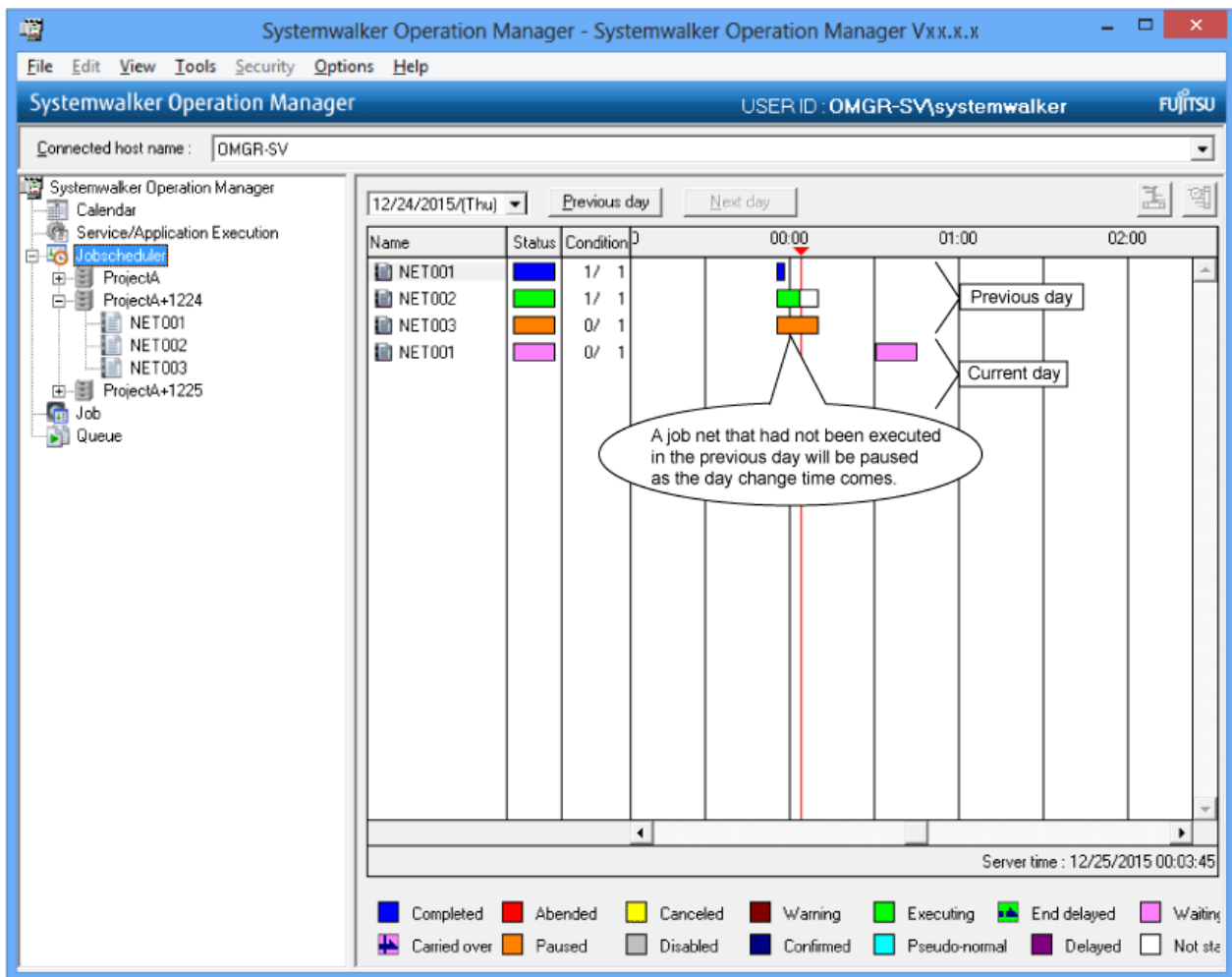


When Handle manually is specified in the operation Instruction

The following explains an example of a job net operation when the instruction is Handle manually.

A job net that had not been executed in the previous day will be paused as the day change time comes.

Assume that "NET002" in the following figure is under process, and the day change time came to "NET003" while its start was being kept delayed. "NET001" is ended normally. So the starting schedule of the job net for the day will be set. The starting schedule is, at this point, not set yet for "NET002" that is currently under process and also for "NET003" whose start is being delayed. "NET003" is paused and caused to the Handle manually state.



3.3.3 Handling of Carried Over Job Net

When the Handle manually or Wait until exit is specified in order that today's schedule waits for a previous day's schedule to complete, wait until the carried over job terminates normally or take appropriate action so that the job net is placed into Completed, Pseudo-normal, Revoke, Disabled, Confirmed, Abended, (invalid confirmation processing), or Canceled (invalid confirmation processing).

If the user takes no action, the job net continues and the same job net is not scheduled that day.

Information

Revoke state

The Revoke state is used to terminate a carried over job net without starting it. If Revoke processing is performed for a job net in the carried over state according to the conditions below, the job net is placed into the Revoke state.

- **Execute at time** is the only setting specified or **Start only when message event has occurred** is specified in **Execution condition** under the **Standard information** tab in the **Job Net Properties** window.
- **Carry over the process regardless of the day change time** is specified under the **Message** tab on the **Job Net Properties** window.
- Since no waiting message event occurred, the day change time reached without starting the job net.



State of job net

When a carried over job net continues beyond the time the day change time takes effect, it is completed in the following states:

- Normal termination
- Pseudo-normal
- Disabled
- Revoke
- Con-firmed
- Abended or Canceled when **Verification valid** is not specified



Job net Start delayed

When **Start only when message event has occurred**, **Once in a day**, and **Scheduled start time** are specified as execution conditions in the job net properties; the start schedule time lapses to wait for a carried over job net. When a day is scheduled, it is the **Start delayed** in normal schedule, but it does not so where daily schedule management is executed.

3.3.4 Carrying over Job Nets when the Server Stop is paused

If the day change time passes while the server is paused, the process will be carried over when the server restarts.

In the following cases, the job nets will also be carried over while the server is paused. This does not happen if the server is running.

- In the **Job Net Properties** window, only one **Execute at** has been specified as the **Execution condition** on the **Standard information** tab
- In the **Job Net Properties** window, **Startup on power-on if power is off during scheduled execution** has been specified as the **Execution condition** on the **Standard information** tab
- The scheduled startup time of the job net expired while the server was paused

3.3.5 Linking a Job Net with Message Event on an Intended Process Date

When a job net has been carried over while waiting for a message, which is its starting condition, you can generate the message on the intended process date and notify of the message only to the job net to be executed on the subject date.

The following approaches are available for generating the message event on the target process date and starting up the job net of the target process date.

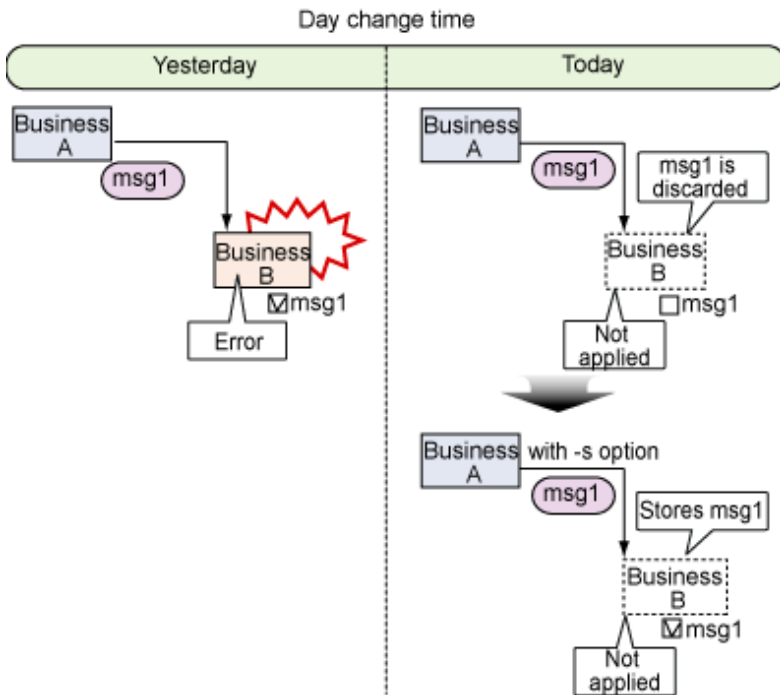
- Generating a message event for the schedule of the same process date
- Generating a message event for the schedule of the next process date
- Generating a message event for the schedule of the specified process date

Generating a message event for the schedule of the same process date

To generate a message event as a job in a job net, specify **-dx** or **-s** option in the **jobschmsgeventex** message event issuance command, and then register it in the job of the job net. In this case, when the registered job net starts, it reports a message event to a job net on the same process date that the registered job net starts.

When specifying the **-dx** option, a message event cannot be enabled to an unapplied job net with **Valid only on startup days** specified. To enable a message event to such a job net, specify the **-s** option.

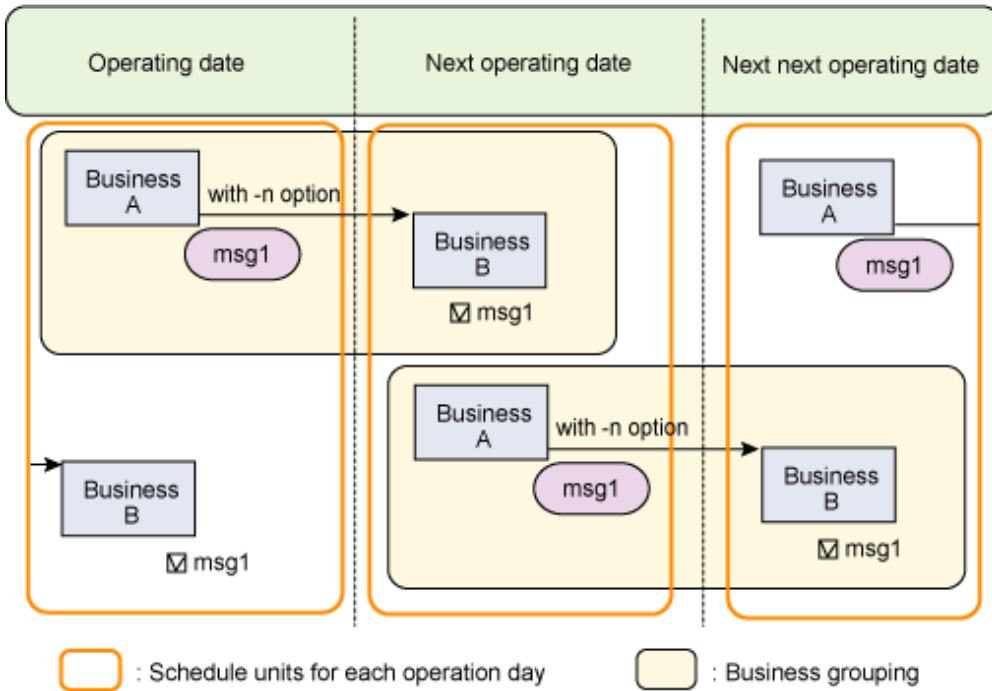
For example, in the following diagram, Business B (job net B) of today has not been applied since Business B (job net B) of yesterday terminated abnormally. In this case, preceding Business A is operating and even if a message event has been generated, it is discarded since Business B has not been applied. However, if you specify the -s option, message events for Business B will also be stored.



Generating a message event for the schedule of the next process date

To generate a message event to a job net of the next process date, specify the -n option for the jobschmsgeventex message event issuance command and register it on a job in the job net. A message event will be notified to the schedule information on the next process date of the job net in which the command has been registered.

For example, if business is configured to cross over into the next operating day, as shown in the following diagram, and message events for the next operating day are enabled, business that crosses over into the next operating day can be automatically scheduled every time by registering the future schedule information before the next operating day is reached.



Generating a message event for the schedule of the specified process date

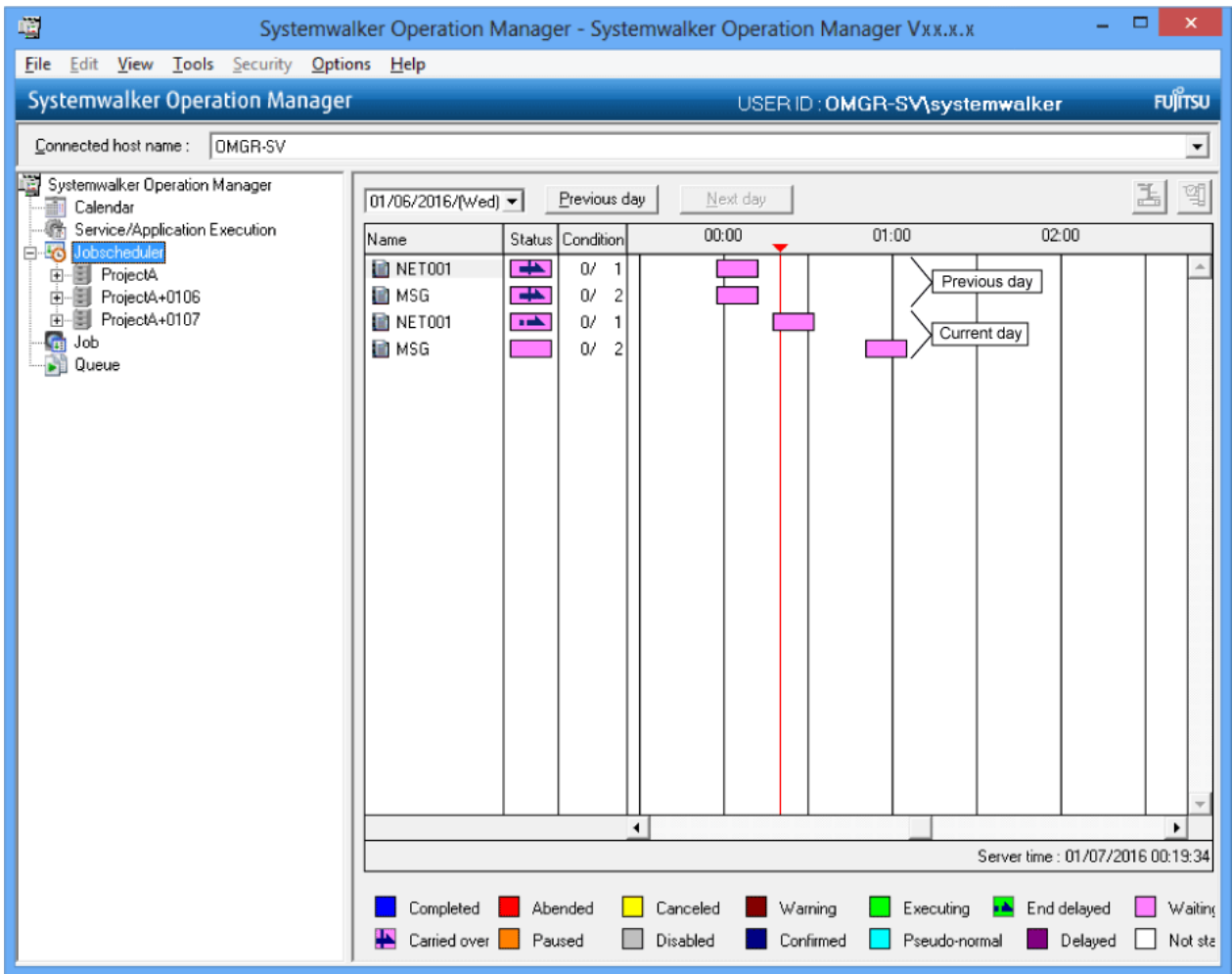
To generate a message event, users can specify a process date in the -d option of the jobschmsgeventex message event issuance command. The system then reports a message event to a job net in the process date specified in the -d option.

Example of Message Event-based Job Net Operation

The following explains how the job net scheduled for respective process dates are linked and operated with the message event. In this explanation, the day change time is assumed to be at 00:00.

- Before generation of an message event

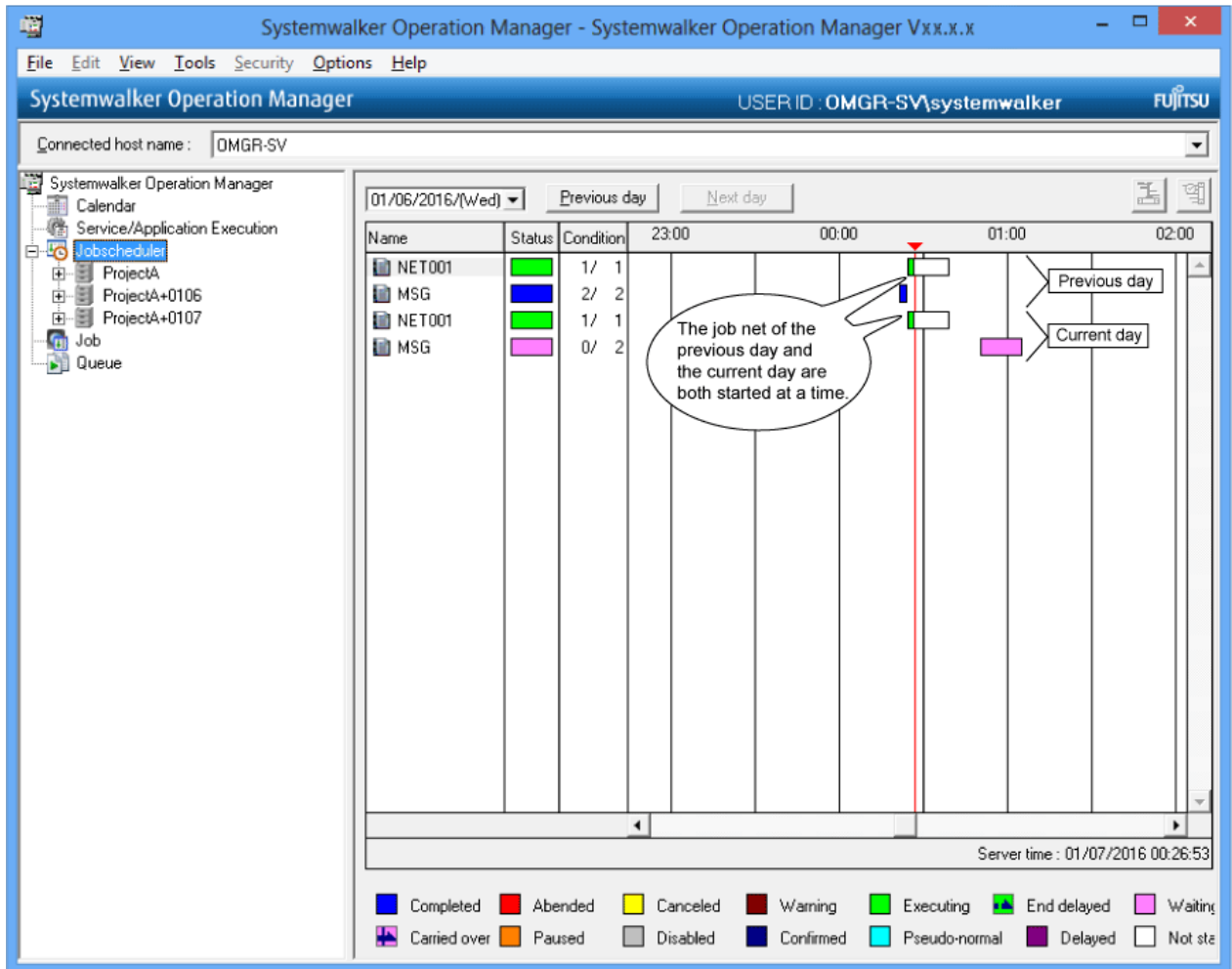
"NET001" in the following figure is assumed to wait for and start as the message event is being generated with the job net MSG. In the following figure, "NET001" and MSG for January 6 as well as "NET001" and MSG for January 7 are in the Waiting state.



- When the message was generated by use of jobschmsgevent command

It is assumed here that jobschmsgevent command message with the job net MSG for January 6.

Since jobschmsgevent command does not include the concept of the process date, the message is notified to "NET001" of every process date and "NET001" of all days are started.



- When the message was generated by use of jobschmsgeventex command
Assume that jobschmsgeventex command message was generated by use of the job net MSG for January 6.

jobschmsgeventex command allows generating the message only for the projects that have been registered on the date when the command was registered. Thus, "NET001" of January 6 alone is started.

The screenshot shows the Systemwalker Operation Manager interface. The main window displays a calendar for 01/06/2016 (Wednesday). The left sidebar shows a tree view with 'Jobscheduler' selected, containing 'ProjectA', 'ProjectA+0106', and 'ProjectA+0107'. The main area shows a grid of job execution bars for 'NET001' and 'MSG' jobs. A callout bubble points to a bar for 'NET001' at 00:00, with the text: 'Only the job net of the previous day is started.' The status bar at the bottom indicates 'Server time : 01/07/2016 00:17:15'.

Name	Status	Condition	23:00	00:00	01:00	02:00
NET001	Executing	1/ 1		Starts		
MSG	Completed	2/ 2				
NET001	Waiting	0/ 1				
MSG	Waiting	0/ 2				

Legend:

- Completed (Blue)
- Abended (Red)
- Canceled (Yellow)
- Warning (Dark Red)
- Executing (Green)
- End delayed (Green with arrow)
- Waiting (Pink)
- Carried over (Purple)
- Paused (Orange)
- Disabled (Grey)
- Confirmed (Dark Blue)
- Pseudo-normal (Cyan)
- Delayed (Dark Purple)
- Not started (White)

Chapter 4 Monitor and Operation

This chapter explains how to monitor and operate the Master Schedule Management function.

The windows to be explained in this chapter are displayable only to the users with the administrator privileges (user belonging to the Administrators group, super users or Operation Manager users with administrator privileges).

4.1 Monitoring and Operating the Schedule Status

This section explains how to monitor and operate a schedule.

4.1.1 Schedule Status

This subsection explains the various status of a schedule. There are nine schedule statuses as described follow:

Completed

Displayed in blue.

This status indicates that the schedule information is normally extracted, distributed, registered, or applied.

Abended

Displayed in red.

It indicates that an error occurred during schedule distribution or application of the schedule. There are four types of schedule errors: extraction, distribution, registration and application errors depending on at what stage an error occurred.

Executing

Displayed in green.

This status indicates that the schedule information is currently being extracted, distributed, or registered.

No information

Displayed in white.

This status indicates that there is either no schedule information (job net definition information) in the specified process date or the schedule information has not been distributed.

Not executed

Displayed in pink.

It indicates that the schedule distribution has not been executed yet.

Cancellation failed

Displayed in yellow.

This status indicates that the system has failed to cancel the schedule information.

Waiting for carry-over

Displayed in orange.

This status indicates that, even though the process date has been scheduled, some job nets from the previous day have been carried over because they were not executed or are still executing, which means that these job nets for the current day cannot be applied.

Those job nets waiting for carry-over will be applied after the job nets for the previous day are completed or cut off. When all the scheduled job nets for the process date are applied, the status for process date schedule will be "Completed".

Waiting for error handling

Displayed in purple.

This status indicates that application of the schedule information is kept in waiting state because there was an error in the past schedule distribution.

Waiting for application

Displayed in light blue

This status indicates that the schedule information is not applied although it has been registered. This status is applicable for the future process dates.

Data is sorted in ascending or descending order in the window in the following order: abended, waiting for carry-over, waiting for error handling, cancellation failed, executing, not executed, waiting for application, no information, and completed.

4.1.2 Collectively Monitoring Schedule Status

This subsection explains the procedure for collectively monitoring the status of distributed schedules from the management server.

Overview

When collectively monitoring the status of schedules of the management server and the schedule servers connected to the management server, use the following window connected to the management server.

- **Master Schedule Management [Status Summary]**

Operation procedure

1. Select **Start >> Systemwalker Operation Manager >> Master Schedule Management**.

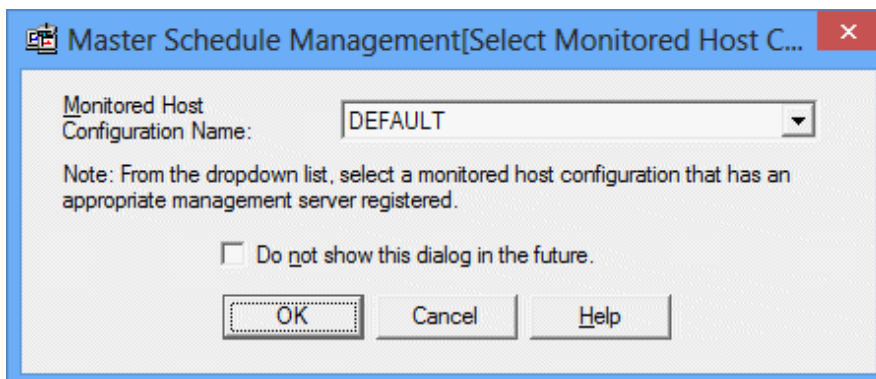
The **Master Schedule Management [Login]** window appears.

2. If necessary, set the information about the monitoring server then click the **Login** button. Only the management server can be used as the monitoring server for the connection. When specifying the login user, specify the system administrator (user belonging to the Administrators group in Windows or superuser in UNIX). When the Extended User Management function is enabled in UNIX, specify an Operation Manager user that has administrative privileges. If the user ID that was specified does not have administrative privileges, an error message will be displayed.

When the **Master Schedule Management [Select Monitored Host Configuration]** window is displayed, select a monitored host definition and click the **OK** button.

The **Master Schedule Management [Select Monitored Host Configuration]** window is not displayed in the following cases.

- When the definition of the registered monitored host is only "DEFAULT".



Monitored host configuration name

The combo box lists the definitions of the registered monitored hosts. Select the definition of the desired monitored host.

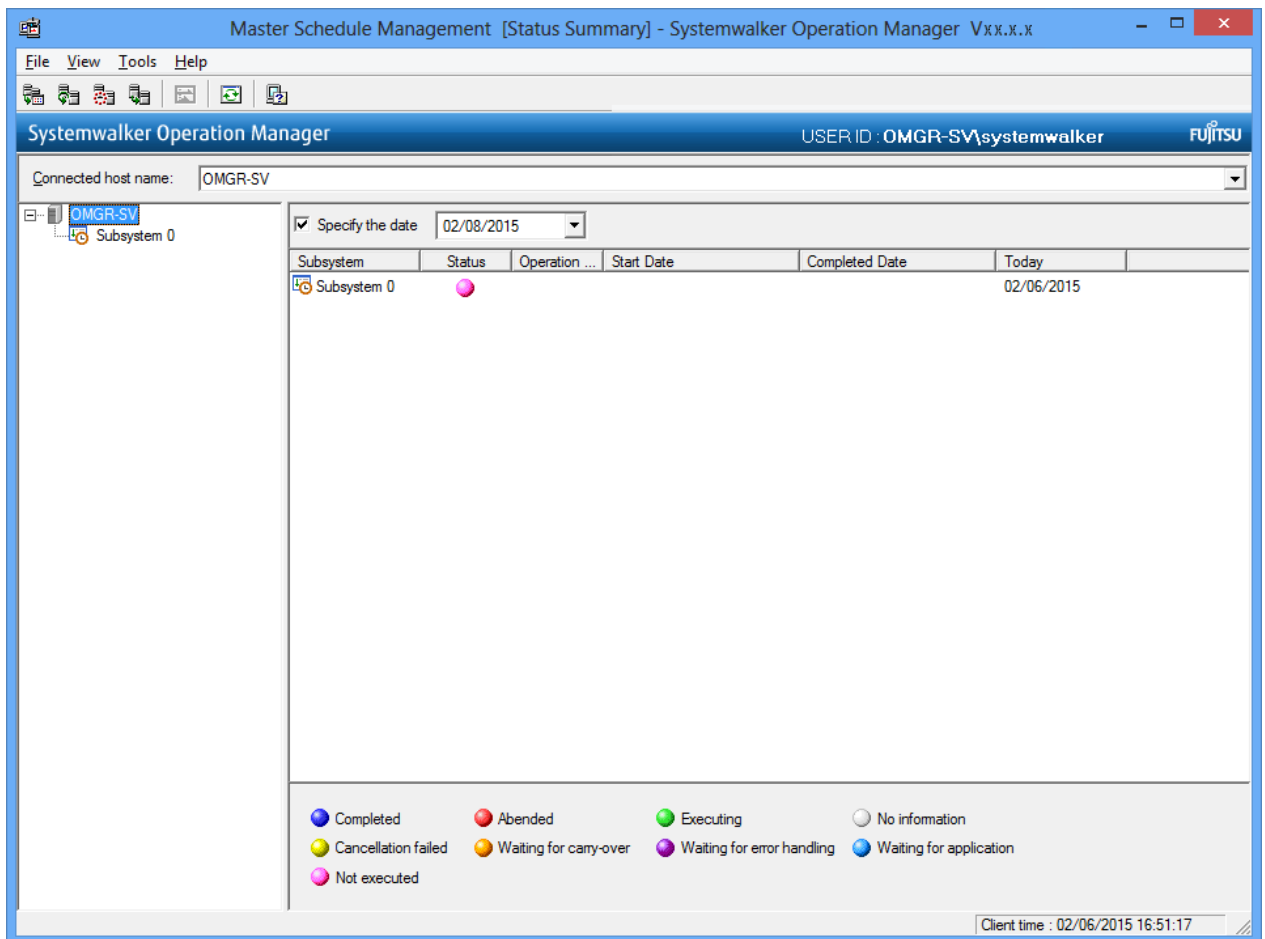
For how to register the monitored host definition, see ["2.6 Monitored Host Definition"](#).

Do not show this dialog in the future.

When the **OK** button is clicked after checking this checkbox is checked, the **Master Schedule Management [Select Monitored Host Configuration]** window is not displayed the next time the **Master Schedule Management [Status Summary]** is started up. When the **Master Schedule Management [Select Monitored Host Configuration]** window is not displayed, the last selected monitored host definition will be used. If the last selected monitored host definition does not exist, the **Master Schedule Management [Select Monitored Host Configuration]** window is displayed.

If you want to display the **Master Schedule Management [Select Monitored Host Configuration]** window at the next startup, select **Enable Monitored Host Configuration Selection** in the **View** menu of the **Master Schedule Management [Status Summary]** or **Master Schedule Management [Status Details]** window.

3. The **Master Schedule Management [Status Summary]** window appears.



Connected host name

The combo box lists the names of the monitored host definitions selected in the **Master Schedule Management [Select Monitored Host Configuration]** window.

If you want to use a monitored host definition on a Master Schedule Management monitor client, register the servers having the Master Schedule Management environment set as "Management server" in the monitored host definition. For how to register the monitored host definition, see ["2.6 Monitored Host Definition"](#).

The monitored server can be switched to the server selected in this combo box. The monitored server will be connected using the same user ID and password as those of the monitoring server being connected and authorization will be executed.

When the same user ID and password are used for both the monitoring server and the monitored server:

The monitored server is connected after completion of the authorization processing.

When a different user ID is used for the monitoring server and the monitored server:

The **Enter Password of Connected Host** window is displayed. Enter the user ID and password of a user that has administrative privileges in the monitored server. This will be a user belonging to the Administrators group or superuser; when the Extended User Management function is enabled, an Operation Manager user that has administrative privileges. The connection to the monitored server can then be made using one of these accounts.

Information

Second and subsequent connection to the monitored server with a different user ID

When the connection is made to the monitored server with a different user ID, authorization processing for the second or later connection will be performed automatically using the user ID information that was authenticated in the first connection, so the **Enter Password of Connected Host** window will not be displayed.

Host tree

The window displayed varies depending on the contents selected on the host tree.

When the management server is selected:

The **Master Schedule Management [Status Summary]** window appears, and the status of the schedule are collectively displayed for each subsystem.

When a subsystem is selected:

The **Master Schedule Management [Status Details]** window appears displaying status of the schedule server registered to the selected subsystem. ("localhost" indicates the management server.)

When the schedule server is selected:

The **Master Schedule Management [Status Details]** window appears displaying the status of the selected schedule server alone. ("localhost" indicates the management server.)

For more information about the **Master Schedule Management [Status Details]** window, see "[4.1.3 Monitoring Details of Schedule Status](#)".

If the Job Scheduler function of the management server is stopped, the name of the stopped subsystem and the names of the schedule servers registered in the stopped subsystem are displayed in orange.

Specify the date

Applying a checkmark to the checkbox makes the process date specifiable. Specify the process date whose status to be displayed from the calendar. A process date of which schedule distribution had been executed is indicated in bold when the schedule is already distributed.

Display items

This paragraph explains the settings for the various schedule status displayed in the **Master Schedule Management [Status Summary]** window. For more information about the display settings for the entire screen, see *Systemwalker Operation Manager Online Help*.

Subsystem

Displays a subsystem (including a subsystem in test mode) specified for daily schedule management.

Specify a subsystem and then double-click it or click the **ENTER** key to display the **Master Schedule Management [Status Details]** window. For more information about the **Master Schedule Management [Status Details]** window, see "[4.1.3 Monitoring Details of Schedule Status](#)".

Status

It displays the schedule statuses. See "[4.1.1 Schedule Status](#)" for more information.

Operation Change

It displays how the operation changes conducted on the process date currently displayed are reflected on it. It is displayed as shown below.

Not displayed:

No operation is changed. It indicates the operation changes are not conducted because an operation change project is not present or, when present, its release day is slated for a future date.

Blue:

The master information has normally been replaced.

Red:

The system failed to operation change.

Start Date

Displays the start date for the first schedule created in the MM/DD/YYYY HH:MM:SS format.

Completed Date

Displays the completion date of the latest schedule creation in the MM/DD/YYYY HH:MM:SS format.

Today

Displays today's date. Today's date is usually indicated. You can confirm today's date when the subsystem is daily schedule management (test mode) and the virtual time is specified.

4.1.3 Monitoring Details of Schedule Status

This subsection explains the procedure for monitoring the details in a schedule status in a subsystem or schedule server.

Overview

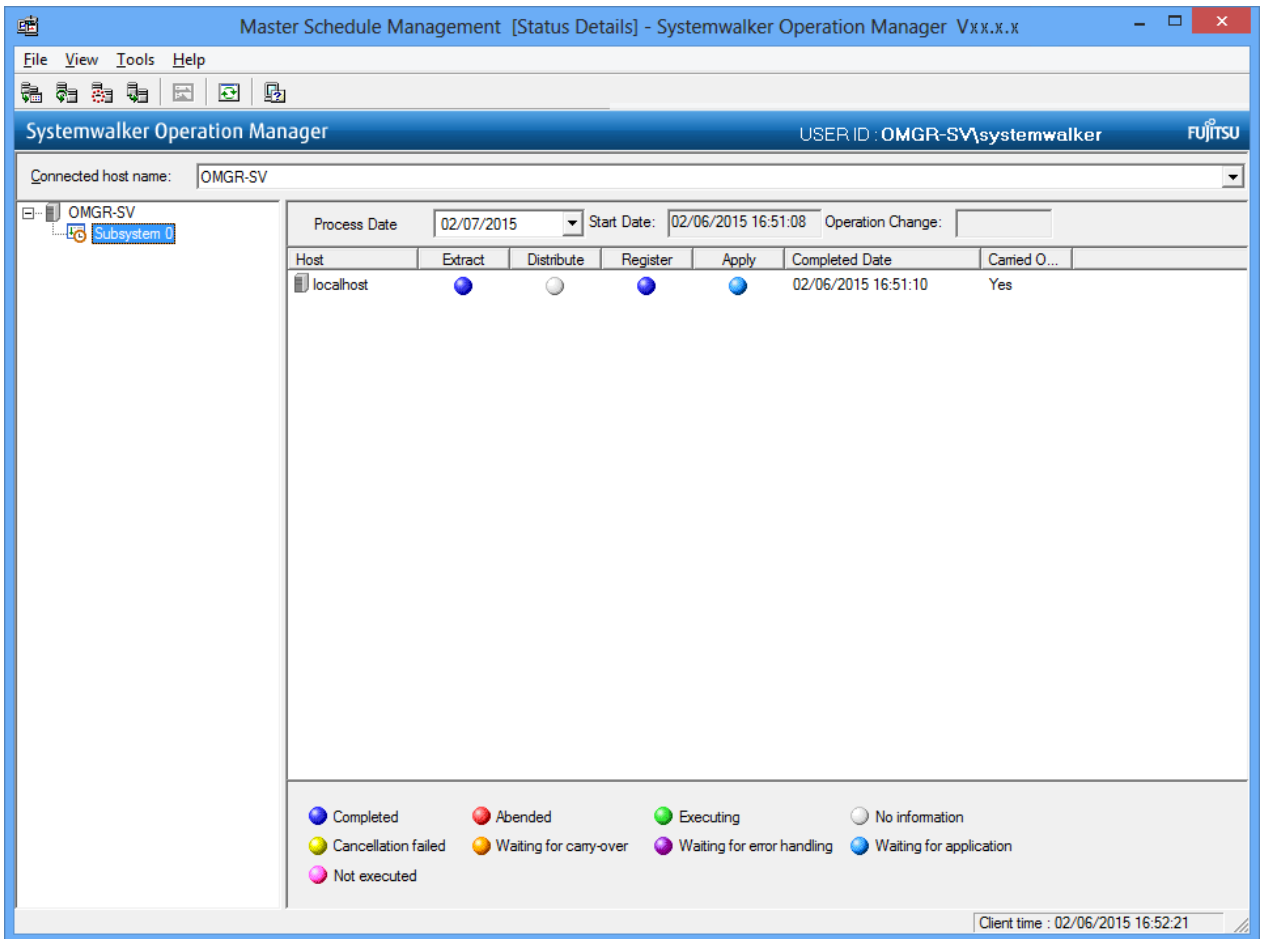
The following window allows you to monitor detailed status of the schedule of a subsystem or schedule server.

- **Master Schedule Management [Status Details]**

Operation procedure

1. From the **Master Schedule Management [Status Summary]** window, display the **Master Schedule Management [Status Details]** window in one of the following ways:
 - Select a subsystem or schedule server displayed in **Host tree**.
 - Double-click a desired subsystem in the list, or select the subsystem and then click the **ENTER** key.

The **Master Schedule Management [Status Details]** window appears.



Connected host name

The combo box lists the names of the monitored host definitions selected in the **Master Schedule Management [Select Monitored Host Configuration]** window.

If you want to use a monitored host definition on a Master Schedule Management monitor client, register the servers having the Master Schedule Management environment set as "Management server" in the monitored host definition. For how to register the monitored host definition, see "[2.6 Monitored Host Definition](#)".

The monitored server can be switched to the server selected in this combo box. The monitored server will be connected using the same user ID and password as those of the monitoring server being connected and authorization will be executed.

When the same user ID and password are used for both the monitoring server and the monitored server:

The monitored server is connected after completion of the authorization processing.

When a different user ID is used for the monitoring server and the monitored server:

The **Enter Password of Connected Host** window is displayed. Enter the user ID and password of a user that has administrative privileges in the monitored server. (This will be a user belonging to the Administrators group or superuser; when the Extended User Management function is enabled, an Operation Manager user that has administrative privileges) The connection to the monitored server can then be made using one of these accounts.



Second and subsequent connection to the monitored server with a different user ID

When the connection is made to the monitored server with a different user ID, authorization processing for the second or later connection will be performed automatically using the user ID information that was authenticated in the first connection, so the **Enter Password of Connected Host** window will not be displayed.

.....

Host tree

A subsystem or schedule server that displays details about the status is selected.

Selecting either a subsystem or schedule server changes the one displayed. To display the **Master Schedule Management [Status Summary]** window, select the management server.

If the Job Scheduler function of the management server is stopped, the name of the stopped subsystem and the names of the schedule servers registered in the stopped subsystem are displayed in orange.

Process Date

Specify the process date for the detailed status to be displayed from the calendar. A process date of which schedule distribution had been executed is indicated in bold when the schedule is already distributed.

Display items

This paragraph describes the display settings for the detailed schedule status displayed on the **Master Schedule Management [Status Details]** window. For more information about the display settings for the entire screen, see *Systemwalker Operation Manager Online Help*.

Start Date

Indicates when creation of the schedule information of the subsystem currently displayed was first started.

Operation Change

Displays the operation change status of the subsystem displayed. If no operation is changed, this field is blank. When a change to an operation completes as expected, **Completed** appears; otherwise, **Abended** appears.

Host

Displays the host name of a schedule server. The management server is displayed as the localhost.

Extract/Distribute/Register/Apply

Displays the extract, distribute, register, or apply status of the schedule information for every process date. See "4.1.1 [Schedule Status](#)" for more information.

Completed Date

Displays the completed date for the latest schedule created in the MM/DD/YYYY HH:MM:SS format.

Carried Over Job Net

Displays existence of a carried over job net with "Yes" or "No". When a process date is changed, if the server displayed in detail contains a carried over job net, then "**Yes**" appears on the screen.

4.1.4 Operating a Schedule

This section explains how to operate a schedule.

Overview

To operate a schedule, use the **Master Schedule Management [Status Summary]** window or **Master Schedule Management [Status Details]** window connected to the management server.

The table below lists how a schedule is created depending on its operations and status.

Schedule operation	Operable schedule status	Operable process date	Schedule result
Future	Not executed	Future	A future schedule information is created anew.
Reschedule	Waiting for application	Future	Extracts, distributes, and registers the schedule information again
	No information	The day/future	
Delete	Abended (*1) Waiting for error handling Cancellation failed Waiting for application	All	Deletes the schedule information and returns to the not executed status
	No information	The day/future	Not executed status is restored.
Start	Abended	All	Scheduling is started from the point where an error occurred (in extract, distribution, registration, or application).
	Not executed	The day/future	Schedule information is extracted, distributed, registered, and applied anew.
	Waiting for error handling Waiting for carry-over handling	All	Forcibly applies the schedule information
	Waiting for application	Past/the day	Forcibly applies the schedule information.

*1:

Abnormal applications excluded.

Remarks:

The "Application error", "Waiting for error handling", or "Waiting for carry-over" status is not provided for a future schedule.



Note

Schedule operation when the Job Scheduler function is stopped

Schedule operation is not available when the Job Scheduler function is stopped in the management server. If a schedule operation is attempted, error message "Cannot control the schedule because the jobscheduler daemon/service is not running." is displayed after the operation.

Note

During schedule operations, Systemwalker Operation Manager must be running on the management server and all the schedule servers.

4.1.4.1 Creating a Future Schedule Information

Specify a target subsystem to create future schedule information.

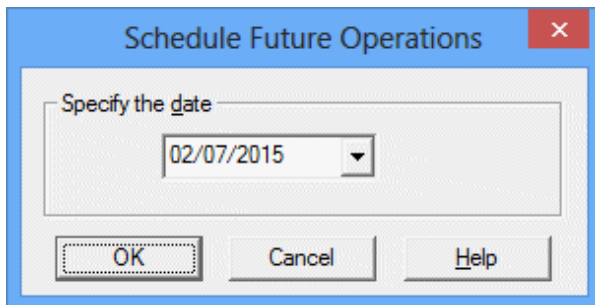
Note

- Only future process dates are targeted for creation, excluding today and past days.
- A future schedule can be created only for the process date on which the schedule is not executed.

Operation procedure

1. Select a target subsystem using one of the following methods:
 - Select a target subsystem(s) in **Subsystem** on the **Master Schedule Management [Status Summary]** window.
 - Select a target subsystem in **Host tree**, then display the **Master Schedule Management [Status Details]** window.
2. Select **Schedule >> Future** in the **File** menu on the **Master Schedule Management [Status Summary]** window or **Master Schedule Management [Status Details]** window. (Or right-click, and select **Future** from the pop-up menu.)

The **Schedule Future Operations** dialog box appears.



Specify the date

Specify the process date for the future schedule to execute.

The default is the next day. You can specify the data in range of 30 days from the following day. You cannot specify a process date on which distribution of the schedule has already been completed. When two or more subsystems are selected, the user can specify process dates after the next day of the most distant day in the subsystems.

3. Specify a process date for the future schedule to execute, then click the **OK** button.

The **Confirm Scheduled Operations** dialog box appears.

Confirm Scheduled Operations

Operation: Future

Process Date: 02/10/2015

Hosts/subsystems:

<input checked="" type="checkbox"/> Subsystem 0	<input type="checkbox"/> Subsystem 6
<input checked="" type="checkbox"/> Subsystem 1	<input type="checkbox"/> Subsystem 7
<input checked="" type="checkbox"/> Subsystem 3	<input type="checkbox"/> Subsystem 8
<input type="checkbox"/> Subsystem 4	<input type="checkbox"/> Subsystem 9
<input checked="" type="checkbox"/> Subsystem 5	

OK Cancel Help

Hosts/subsystems

Displays only the selected subsystem. You can cancel the selected value as necessary.

Confirm the target subsystem for the future schedule to is execute, then click the **OK** button.

The future schedule information is created for the selected subsystem.

4.1.4.2 Rescheduling

This section explains to conduct rescheduling of a subsystem or schedule server.

Note

- The applicable process date should be either today or future. It is not applicable to past dates.
- Rescheduling is applicable to the following schedule status. It is not applicable when the schedule status is abnormal.
 - When the process date is today: "No information"
 - When the process date is future: "Waiting for application" or "No information"

Operation procedure

1. Select a target subsystem or schedule server using one of the following methods. Specify the today's date or a future date as the process date.
 - Select a target subsystem(s) in **Subsystem** on the **Master Schedule Management [Status Summary]** window.
 - Select a target subsystem or schedule server in **Host tree**, then display the **Master Schedule Management [Status Details]** window.
 - Select a target schedule server(s) in **Host** on the **Master Schedule Management [Status Details]** window.

2. Select **Schedule >> Reschedule** in the **File** menu on the **Master Schedule Management [Status Summary]** window or **Master Schedule Management [Status Details]** window. (Or right-click, and select **Reschedule** from the pop-up menu.)

The **Confirm Scheduled Operations** dialog box appears.

Figure 4.1 When a subsystem is selected:

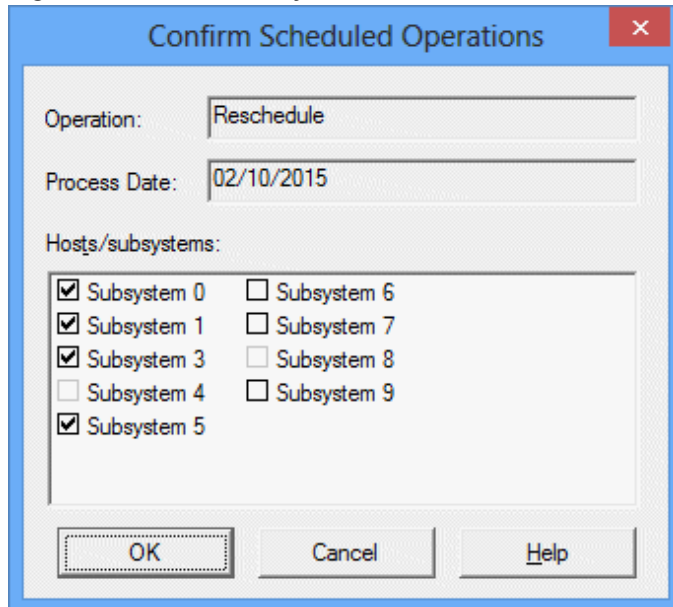
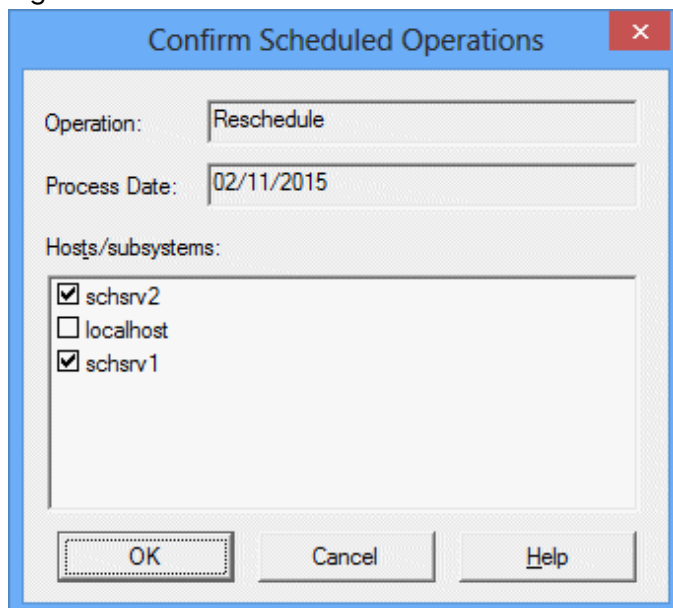


Figure 4.2 When a schedule server is selected:



Hosts/subsystems

When a subsystem is selected for operation, it is displayed. When a schedule server is selected, it is displayed.

You can cancel the selected value as necessary.

3. Confirm the target subsystem or schedule server for rescheduling, then click the **OK** button.

The selected subsystem or schedule server is rescheduled.

4.1.4.3 Deleting a Schedule

This operation is used for deleting a schedule for a target subsystem.

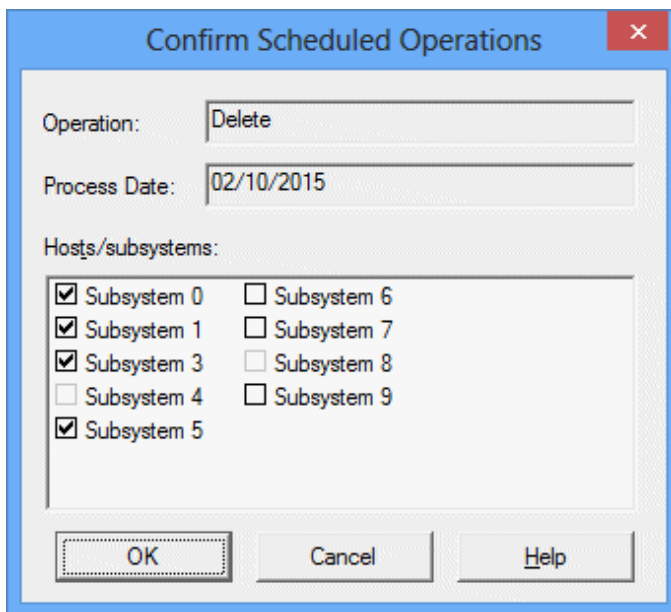
Note

- When the schedule status is in the No information, only the future dates including today as process dates are targeted for process date. It is not applicable to the past days.
- When the schedule is in the Abended (excluding the application error status), Waiting for error handling, Cancellation failed, or Waiting for application status, all the process dates are assumed to be targets. Delete the registered schedule information or schedule information in which an error occurs, and then return the schedule itself to the Not executed status.
- If you cancel a schedule, the job net scheduled for the targeted process date will not start.

Operation procedure

1. Select a target subsystem using one of the following methods:
 - Select a target subsystem(s) in **Subsystem** on the **Master Schedule Management [Status Summary]** window.
 - Select a target subsystem in **Host tree**, then display the **Master Schedule Management [Status Details]** window.
2. Select **Schedule >> Delete** in the **File** menu on the **Master Schedule Management [Status Summary]** window or **Master Schedule Management [Status Details]** window. (Or right-click, and select **Delete** from the pop-up menu.)

The **Confirm Scheduled Operations** dialog box appears.



Hosts/subsystems

Displays only the selected subsystem. You can cancel the selected value as necessary.

3. Confirm the target subsystem in which the schedule is deleted, then click the **OK** button.
The schedule for the selected subsystem is deleted.

4.1.4.4 Starting a Schedule

Start a schedule for a subsystem or schedule server.

Note

- This operation is available when a schedule is in an Abended, Waiting for error handling, Waiting for carry-over, past/the day Waiting for application or the day/future Not executed status.
- When a subsystem is specified, the schedule is started only on the schedule server in which an Abended on the subsystem specified.
- When the schedule is in the Not executed status, create a new schedule for the day or for a future process date.

Operation procedure

1. Select a target subsystem or schedule server using one of the following methods. Specify a subsystem in the Abended, Waiting for error handling, Waiting for carry-over, past/the day Waiting for application, or the day/future Not executed status or specify a schedule server in any of the above status except the Not executed status.
 - Select a target subsystem(s) in **Subsystem** on the **Master Schedule Management [Status Summary]** window (two or more subsystems are selectable).
 - Select a target subsystem or schedule server in **Host tree**, then display the **Master Schedule Management [Status Details]** window.
 - Select a target schedule server(s) in **Host** on the **Master Schedule Management [Status Details]** window.
2. Select **Schedule >> Start** in the **File** menu on the **Master Schedule Management [Status Summary]** window or **Master Schedule Management [Status Details]** window. (Or right-click, and select **Start** from the pop-up menu.)

The **Confirm Scheduled Operations** dialog box appears.

Figure 4.3 When a subsystem is selected:

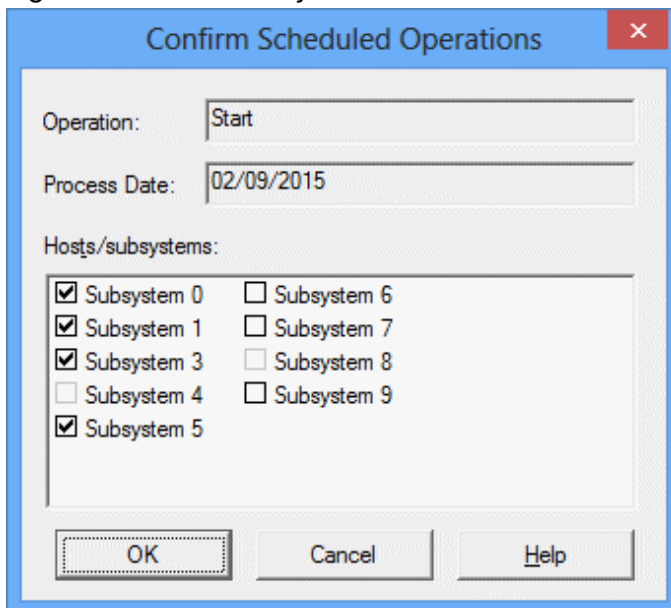
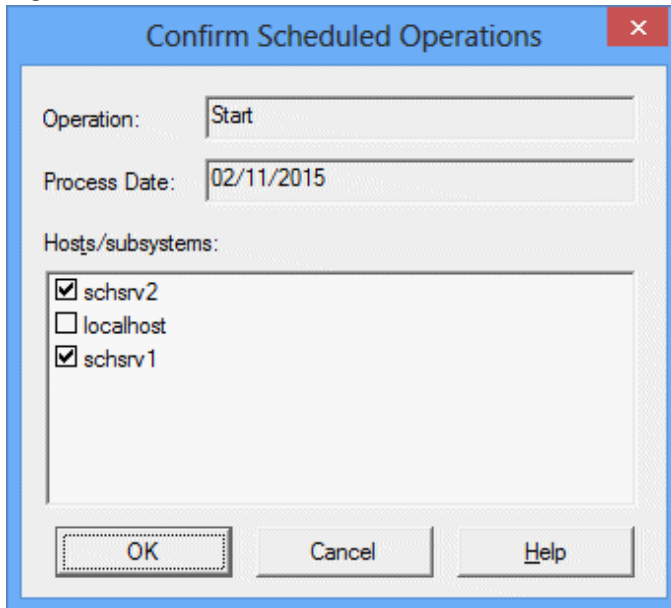


Figure 4.4 When a schedule server is selected:



Hosts/subsystems

When a host (schedule server) is selected for operation, the host name is displayed. When a subsystem is selected, the subsystem name is displayed.

You can cancel the selected value as necessary.

3. Confirm the target subsystem or schedule server in which the schedule is executed, then click the **OK** button. The schedule is executed in the selected subsystem or schedule server.

4.2 Monitoring and Operating the Carried Over Job Nets

This section explains how to monitor and operate a carried over job net.

4.2.1 Status and Operation of a Carried Over Job Net

This section explains the status and operation of a carried over job net.

4.2.1.1 Operating a Carried Over Job Net

This section explains how to operate a carried over job net.

Operation for handle manually

The following carried over job net operations are provided for Handle manually in addition to Systemwalker Operation Manager job net operations (canceled, start, restart, pause, continue, disable, enable, confirm, and revoke).

Click the **Standard information** tab and select **Handle manually** in **Instruction** in the **Job Net Properties** window. When day change time takes effect, the operations for Handle manually are available for job nets that are in a paused status (either an executing, warning, or carried over status for cut off). They are also available for applying the schedule of the day.

Operation for handle manually	Meaning
Run concurrently	It turns on "Continue" for the job net currently "Paused" status by the instruction "Handle manually" and, at the same time, implements scheduling of the job net slated for today.

Operation for handle manually	Meaning
Prioritize	It leaves the job currently "Paused" status by the instruction "Handle manually" is left as is, and implements scheduling of the job net slated for today.
Cut off	It causes a job net currently "Paused" status by the instruction "Handle manually" to the "Disabled" status, "Canceled" a job net under "Executing" or "Warning" status, and revokes a "Carried over" job net status in order to schedule the job net slated for the day.

Relationships between job net status and operations

The table below shows the relationships between the status and operations of a carried over job net.

Operations other than Run concurrently, Prioritize, and Cut off are the same as the job net operations when the Master Schedule Management function is not enabled. See "Operating Job Net" in the *Systemwalker Operation Manager User's Guide*.

Operations Run concurrently, Prioritize, and Cut off are available only when the Master Schedule Management function is effective and Handle manually is selected as an operation instruction.

Status	Completed (Note 1)	Abandoned	Canceled	Warning	Executing (Note 2)	Waiting (Note 3)	Paused	Disabled	Confirmed	Carried over	Not executed
Canceled	N	N	N	Y	Y	N	N	N	N	N	N
Start	Y	Y	Y	N	N	Y	N	N	Y	Y	Y
Restart	N	Y	Y	N	N	N	N	N	Y	N	N
Pause	Y	Y	Y	N	N	Y	N	N	Y	Y	Y
Continue	N	N	N	N	N	N	Y	N	N	N	N
Disable	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y
Enable	N	N	N	N	N	N	N	Y	N	N	N
Confirm	N	Y (Note 4)	Y (Note 4)	N	N	N	N	N	N	N	N
Revoke	N	N	N	N	N	N	N	N	N	Y	N
Run concurrently	N	N	N	N	N	N	Y (Note 5)	N	N	N	N
Prioritize	N	N	N	N	N	N	Y (Note 5)	N	N	N	N
Cut off	N	N	N	Y (Note 5)	Y (Note 5)	N	Y (Note 5)	N	N	Y (Note 5)	N

Y: Operable N: Inoperable

- Note 1: Includes pseudo-normal status
- Note 2: Includes end delayed
- Note 3: Includes start delayed
- Note 4: Available when the confirm operation is enabled.
- Note 5: Available when the instruction is "Handle manually".

Preventing inappropriate operations on a carried over job net

When operating a carried over job net, be sure to display the dialog box for confirming the operation. It will help preventing inappropriate operations. Confirmation of the operations is available from the **Confirmation Settings** dialog box.

The **Confirm Scheduled Operation** dialog box related to the operation "Handle manually" supports the following job net operations.

Operation for handle manually	Action needed to display [Confirmation Settings] dialog
Run concurrently	Continue
Prioritize	Start
Cut off	One of Canceled, Disable and Revoke

For the detailed procedures of turning on or off of the **Confirmation Settings** dialog box, refer to *Systemwalker Operation Manager User's Guide*.

4.2.1.2 Carried Over a Job Net Handling Status

The table below lists the handling status for a carried over job net

Handling status	Meaning
Deleted	The schedule was deleted the next day because it could not be executed today. This status is applied to job nets in the "Waiting" status (for which "Cut off" is specified in Instruction) carried over to the next day, or to job net not completed today (for which " Carry over the process regardless of the day change time " is not specified).
Aborted	The schedule was forcibly terminated the next day because it could not be fully processed today. It is applicable when Instruction is "Cutoff" and Force exit the job net process in progress is specified for Action after cutting off a carried over job net from Master Schedule Management environment setup. Above status is brought up if you, under the given environment, cancel a job net currently in "Executing" or in the "Warning" status, or disable a currently "Paused" job net. However, if a job net operation to the "Warning" status because it has an abnormal job is "Canceled", it is placed into the "Not handled" status.
Carried over	The schedule was executed the next day because it could not be fully processed today.

Handling status	Meaning
	This status will be brought up as a job net was "Completed" when Instruction is "Cut off" and Continue the job net process in progress is selected for Action after cutting off a carried over job net from Master Schedule Management Environment Setup .
Exit on following day	The schedule was completed the next day because it could not be fully processed today and was carried over to the next day. In this case, the following state will be brought up. - If Instruction is "Cut off" and if the job net being set as Action after cutting off a carried over job net >> Continue the job net process in progress during Master Schedule Management environment setup is terminated normally and disabled. - This status is brought up when the status a job net whose Instruction is "Wait until exit" or "Run concurrently" becomes "Completed" or "Disabled".
Not handled	The operator has not yet handled the job net. This status is applied when no handle manually is performed although "Handle manually" is specified in Instruction.
Handled	The operator has handled the job net. This status is applied when any handle manually is performed according to "Handle manually" specified in Instruction.

4.2.1.3 Instructions for a Carried Over Job Net

The table below lists the instructions for a carried over job net displayed on **Master Schedule Management [Monitor Carried over Job Nets]** window.

Instruction	Meaning
Cut off	The action by the operator is unnecessary; automatically cancels a job net. This instruction turns on an operation (Canceled or Continue) for a job net for which Executing, Warning or Paused is specified from the Action after cutting off a carried over job net of Master Schedule Management Environment Setup .
Wait until exit	It makes the action by the operator is unnecessary; and automatically carried over a job net to the next day. The schedule for the next day is executed when the carried over job net is fully processed.
Run concurrently	It makes the action by the operator is unnecessary; and automatically carried over a job net to the next day. The schedule for the next day is set as the day change time comes, regardless of whether the carried over job net is completed or not.
Handle manually	This job net does require the action by the operator. A job net is carried over to the next day according to the operator's judgment. A job net in the "Not executed" status that could not be completed today is placed into the "Paused" status on the next day.

4.2.1.4 Job Net Operation for each Instruction

This section explains how to operate a job net for each instruction.

When Cut off - continued is specified in Instruction

The table below lists the operations when "Cut off" is specified in **Instruction** and **Continue the job net process in progress** is selected in **Action after cutting off a carried over job net** in the **Master Schedule Management Environment Setup** dialog box.

	Job net status before day change time	Processing at day change time	Job net status after day change time	Handling status	Job net status after operation	Handling status
1	Waiting	Delete the schedule	Not executed	Deleted	-	-
2	Abended Canceled	None	Abended Canceled	Not handled	Confirmed/ Completed	Exit on following day
3					Disabled	Aborted
4					Others	Carried over
5	Warning Executing Paused	None	Warning Executing Paused	Carried over	Completed	Exit on following day
6					Disabled	Aborted
7					Others	Carried over

Remarks:

A job net's status "Waiting" includes "Start delayed" and, when it is under "Executing", the status includes "End delayed".

Scheduling of a job net of the same name for the day is done as the day change times comes.

When Cut off - forced exit is specified in Instruction

The table below lists the operations when "Cut off" is specified in **Instruction** and **Force exit the job net process in progress** is selected in **Action after cutting off a carried over job net** in the **Master Schedule Management Environment Setup** dialog box.

	Job net status before day change time	Processing at day change time	Job net status after day change time	Handling status	Job net status after operation	Handling status
1	Waiting	Delete the schedule	Not executed	Deleted	-	-
2	Abended Canceled	None	Abended Canceled	Not handled	Confirmed/ Completed	Exit on following day

	Job net status before day change time	Processing at day change time	Job net status after day change time	Handling status	Job net status after operation	Handling status
3					Disabled	Aborted
4					Others	Carried over
5	Executing	Cancel the job net	Canceled	Aborted	-	-
6	Warning	Cancel the job net	Abended Note 1)	Not handled	Confirmed/ Completed	Exit on following day
7					Disabled	Aborted
8					Others	Carried over
9	Paused	Disable the job net	Disabled	Aborted	-	-

Note 1)

When a job net placed into the "Warning" status by cancellation is "Canceled", it is done so after the day change time.

In this case, the handling status is set into the "Aborted" status.

Remarks:

A job net's status "Waiting" includes "Start delayed" and, when it is under "Executing", the status includes "End delayed".

A job net with the same name for the day is scheduled when day change time takes effect.

When Wait until exit or Run concurrently is specified in Instruction

The table below lists the operations when **Wait until exit** or **Run concurrently** is specified in **Instruction**.

	Job net status before day change time	Processing at day change time	Job net status after day change time	Handling status	Job net status after operation	Handling status
1	Abended Canceled Warning Executing Waiting Paused	None	Abended Canceled Warning Executing Carried over Paused	Carried over	Confirmed/ Completed/ Disabled	Exit on following day
2					Not executed	Deleted
3					Others	Carried over

Remarks:

A job net's status "Waiting" includes "Start delayed" and, when it is under "Executing", the status includes "End delayed".

When the instruction for a today's job net with the same name is "Wait until exit", its scheduling will be done as the handling status turned to "Exit on following day". When the instruction is "Run concurrently", the target job net will be scheduled as the day change time comes.

When Handle manually is specified in Instruction

When **Handle manually** is specified in **Instruction**, the following processing is performed:

Handling status after the day change time

The table below lists the relationships between the job net status before and after day change time takes effect and the handling status after the day change time.

	Job net status before day change time	Processing at day change time	Job net status after day change time	Handling status
1	Abended Canceled	None	Abended Canceled	Carried over
2	Waiting	Pause	Paused	Not handled
3	Paused	None	Paused	Not handled
4	Executing Warning	None	Executing Warning	Carried over

Remarks:

A job net's status "Waiting" includes "Start delayed" and, when it is under "Executing", the status includes "End delayed".

Job net operations and handling status

The table below lists the handling status at operation of a job net

	Job net status	Job net operation	Job net status after operation	Handling status
1	Abended Canceled	Confirm	Confirmed	Handled
2		Disable	Disabled	
3		Start	Completed	
4		Restart	Other than Completed	
5	Paused	Pause	Paused	Not handled
6		Continue	Completed	Handled
7		Run concurrently		
8		Continue	Executing Warning Abended Canceled	Carried over
9		Run concurrently		
10	Carried over	Prioritize	Paused	Not handled
11		Disable	Disabled	Handled
		Cut off	Disabled	Handled
		Start	Completed	Handled
			Other than Completed	Carried over

	Job net status	Job net operation	Job net status after operation	Handling status
12		Pause	Paused	Not handled
13		Disable	Disabled	Handled
14		Revoke Cut off	Not executed	Deleted
15	Executing	Canceled Cut off	Canceled	Carried over
16	Warning	Canceled Cut off	Abended (Note)	Carried over

Note)

If you cancel a job net in "Warning status" that had been originally canceled, the resulting status is also "Canceled".

Remarks:

A job net's status "Waiting" includes "Start delayed" and, when it is under "Executing", the status includes "End delayed".

A today's job net having the same name is not scheduled when **Handle manually** is specified in **Instruction** and **Not handled** or **Carried over** is specified as the handling status. It is scheduled after the carried over job net is placed into the Handled status.

4.2.1.5 Example of Handle Manually

When **Handle manually** is specified in **Instruction** of **Job Net Properties**, take the following action for a carried over job net:

Schedule a job net for the day without processing an unexecuted job net

Specify, **Cut off** for a job net operation.

The unexecuted job net in the Paused status is placed into the Disabled status, and a job net is scheduled in the day.

The operation is performed in the same way "**Disable**" is specified for a job net operation.

Schedule a job net in the day after completing an unexecuted job net

Specify, **Continue** for the job net operation.

After the **Continue**, the job net is placed into the carried over status, and it is executed when execution conditions are satisfied.

The handle manually is performed the same way **Wait until exit** is specified in **Instruction** under **Job Net Properties**.

Schedule a job net in the day together with processing an unexecuted job net

Specify, **Run concurrently** for the job net operation.

Execute **Continue** to the unexecuted job net ("Paused" status) and then schedule a job net in the day.

The handle manually is performed the same way **Run concurrently** is specified in **Instruction** under **Job Net Properties**.

Schedule a job net for the day, as an unexecuted job net remains unchanged

Specify, **Prioritize** for the job net operation.

While continuing the unexecuted job net ("Paused" status), schedule a job net in the day.

4.2.2 Monitoring a Carried Over Job Net

This section explains how to monitor a carried over job net.

Overview

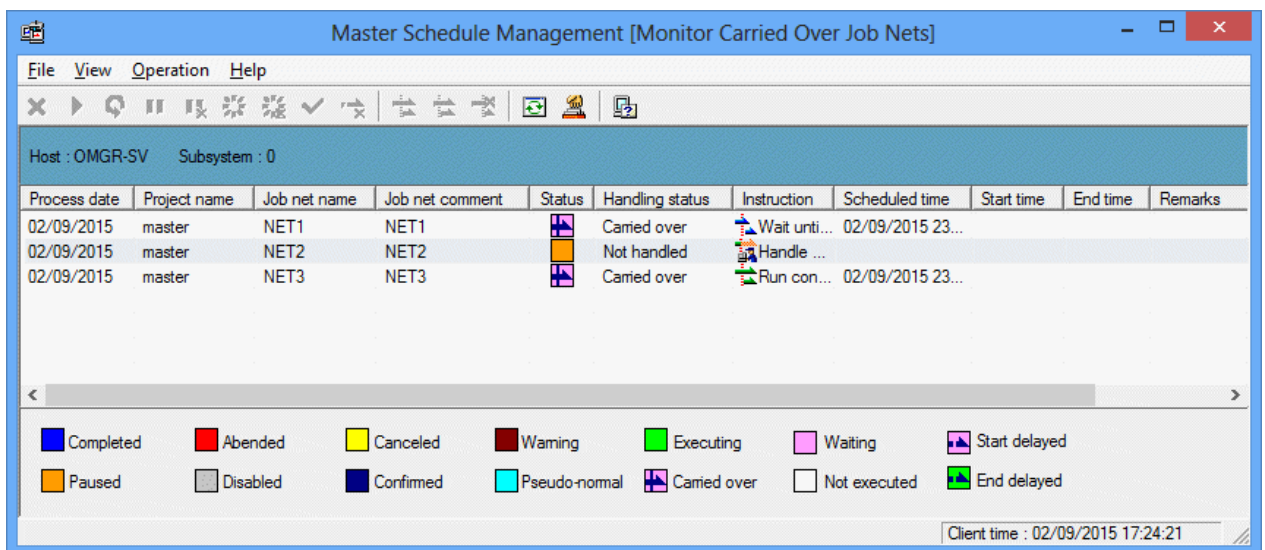
The following window allow monitoring a carried over job net.

- **Master Schedule Management [Monitor Carried over Job Nets]**

Operation procedure

1. Select a schedule server in the **Master Schedule Management [Status Details]** window, and then specify Monitor Carried Over Job Nets in the Tools menu.

Master Schedule Management [Monitor Carried over Job Nets] for the selected schedule server is displayed for a subsystem displaying this detailed status.



2. Use the "Project name", "Job net name", "Job net comment", "Remarks character string", "Status", and "Instruction" to filtering the carried over job nets displayed. Specify the Filtering from the View menu. When narrowing down the job nets, select "Filtration" from the View menu.

The **Define Filtering Conditions** dialog box appears.

The screenshot shows the "Define Filtering Conditions" dialog box. It features a blue title bar with the text "Define Filtering Conditions" and a close button (X) in the top right corner. The main area is divided into several sections: "Project name" with a text input field; "Job net" with sub-sections for "Job net name:", "Job net comment:", and "Search keyword in remarks:", each with a corresponding text input field; "Status" with a list of 10 status options, each preceded by a checked checkbox: Completed, Paused, Abended, Disabled, Canceled, Confirmed, Warning, Pseudo-normal, Executing, Carried over, Waiting, Not executed, Start delayed, and End delayed; and "Instruction" with a list of 4 instruction options, each preceded by a checked checkbox: Cut off, Wait until exit, Handle manually, and Run concurrently. At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Specify the conditions for filtering and then click the **OK** button.

Display items

This paragraph explains the items displayed for the carried over job nets displayed in the **Master Schedule Management [Monitor Carried over Job Nets]** window. For more information about the display settings for the entire screen, see *Systemwalker Operation Manager Online Help*.

Host

Displays the currently displayed server name.

Subsystem

Displays the currently displayed subsystem number.

Process date

Displays the process date for the carried over job net.

Project name

Displays the master project name of the project to which a carried over job net belongs.

Job net name

Displays the job net name of a carried over job net.

Job net comment

Displays the job net comment of the carried over job net.

Status

Displays the current status of the carried over job net. The job net status is the same as when the Master Schedule Management function is not enabled except for Not executed, Start delayed, and End delayed. See the Job Net Status in the *Systemwalker Operation Manager User's Guide* for more information.

The Not executed, Start delayed, and End delayed status are explained as follows:

Not executed:

In the Systemwalker Operation Manager client, this status is displayed in the Gantt chart of the **Monitor Job Net** window when the job net does not start when the server starts unless action is enabled when power is not turned on. (**Waiting** in the **Job Net Management** window)

In the **Master Schedule Management [Monitor Carried over Job Nets]** window, this status indicates that execution condition is discarded for an unexecuted job net.

Start delayed/End delayed

In the **Master Schedule Management [Monitor Carried over Job Nets]** window, when job nets are applied on the following day or later as they could not be applied on the scheduled date due to the carried over job nets etc., they are treated as carried over job nets. In this case, their handling status will be displayed as "Carried over" even if they are Start delayed or End delayed.

Handling status

Displays the handling status for the carried over job net. For handling status, see "[4.2.1.2 Carried Over a Job Net Handling Status](#)".

Instruction

Displays the instruction specified for the carried over job net. For the instructions, see "[4.2.1.3 Instructions for a Carried Over Job Net](#)".

Scheduled time

Displays the scheduled time for a job net.

Start time

Displays the scheduled job net start time.

End time

Displays the scheduled job net end time.

Remarks

Displays remarks for the job net.

4.2.3 Operate a Carried Over Job Net

The following explains how to operate and handle a carried over job net.

Overview

The following window allows operating a carried over job net.

- **Master Schedule Management [Monitor Carried over Job Nets]**

Operation procedure

1. Select a job net in the **Master Schedule Management [Monitor Carried over Job Nets]** window. You can select two or more job nets at a time.
2. Select a job net operation in the **Operation** menu. For the available operations for a job net, see "[4.2.1.1 Operating a Carried Over Job Net](#)".

4.3 Monitoring and Operating the Scheduled Job Nets

The following description explains how to monitor and operate the scheduled job nets.

4.3.1 Monitoring the Scheduled Job Nets

When the management by dates project is created by distribution of schedule information, the status of the job nets in the project can be monitored using the **Systemwalker Operation Manager** window.

Displaying project categories

You can display the status of job nets which are operating under daily schedule management by categorizing them into the following folders in the **Job Selection** tree.

- Master information
- Operation change information
- Schedule by dates information (MM/DD)

See "[Displaying project categories](#)" in "[3.1.1.2 Master Setting](#)" for how to display projects by category.

A display example is shown below:

The screenshot shows the Systemwalker Operation Manager interface. The main display area features a Gantt chart for the date 03/30/2015 (Monday). The chart lists jobnets JobnetA through JobnetZ, all of which are in a 'Waiting' status (indicated by pink bars) and have a condition of '0/ 1'. The time slots shown are from 00:00 to 03:00. A legend at the bottom identifies various status icons: Completed (blue), Abended (red), Canceled (yellow), Warning (dark red), Executing (green), End delayed (green with red), Waiting (pink), Carried over (purple), Paused (orange), Disabled (gray), Confirmed (dark blue), Pseudo-normal (cyan), Delayed (purple), and Not sta (white).

Name	Status	Condition	00:00	01:00	02:00	03:00
JobnetA	Waiting	0/ 1				
JobnetB	Waiting	0/ 1				
JobnetC	Waiting	0/ 1				
JobnetD	Waiting	0/ 1				
JobnetE	Waiting	0/ 1				
JobnetX	Waiting	0/ 1				
JobnetY	Waiting	0/ 1				
JobnetZ	Waiting	0/ 1				

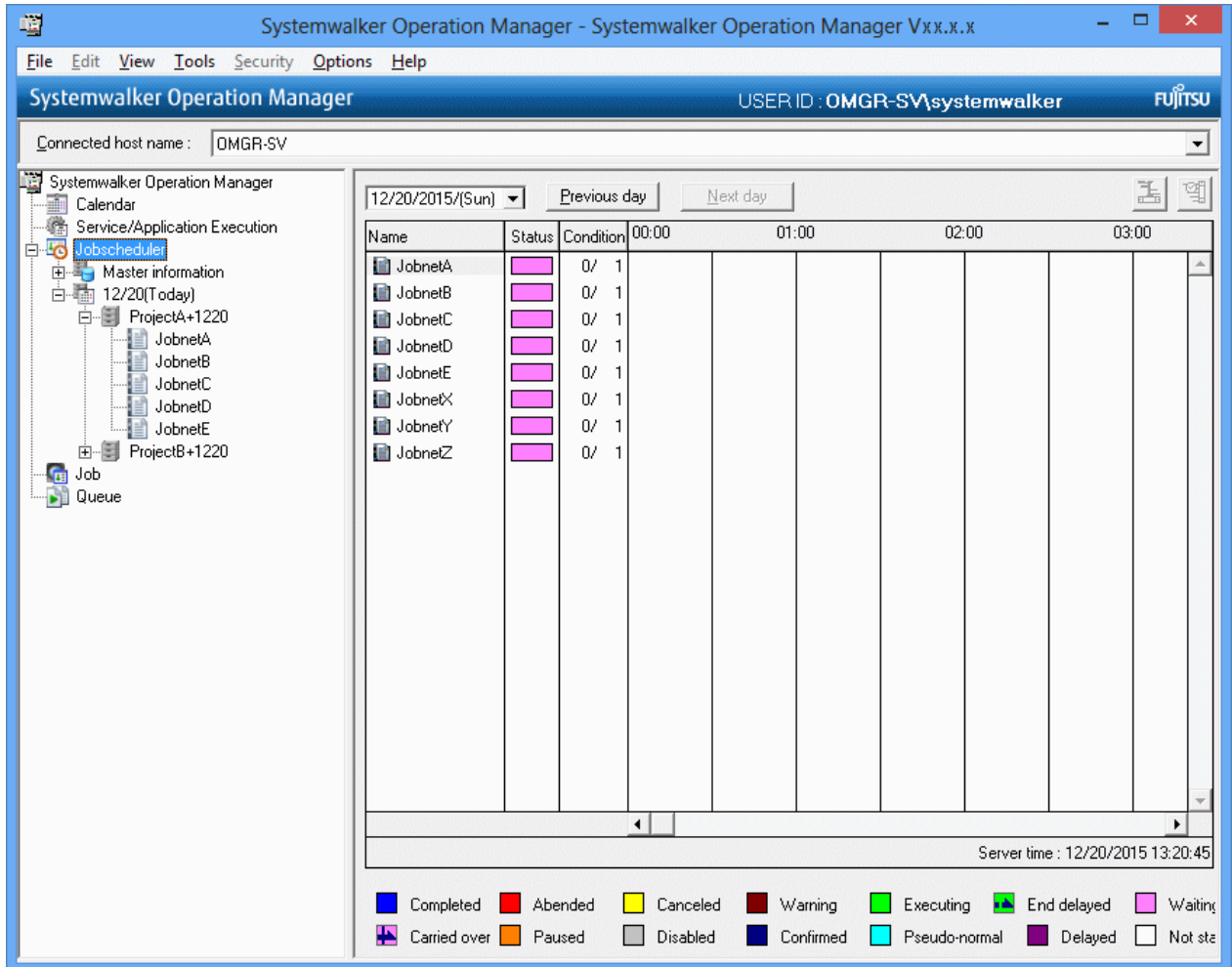
Examples of future schedule display

When a future schedule is created, it is displayed as shown below. The windows shown below are the example of displaying project categories.

- Before creation of the future schedule

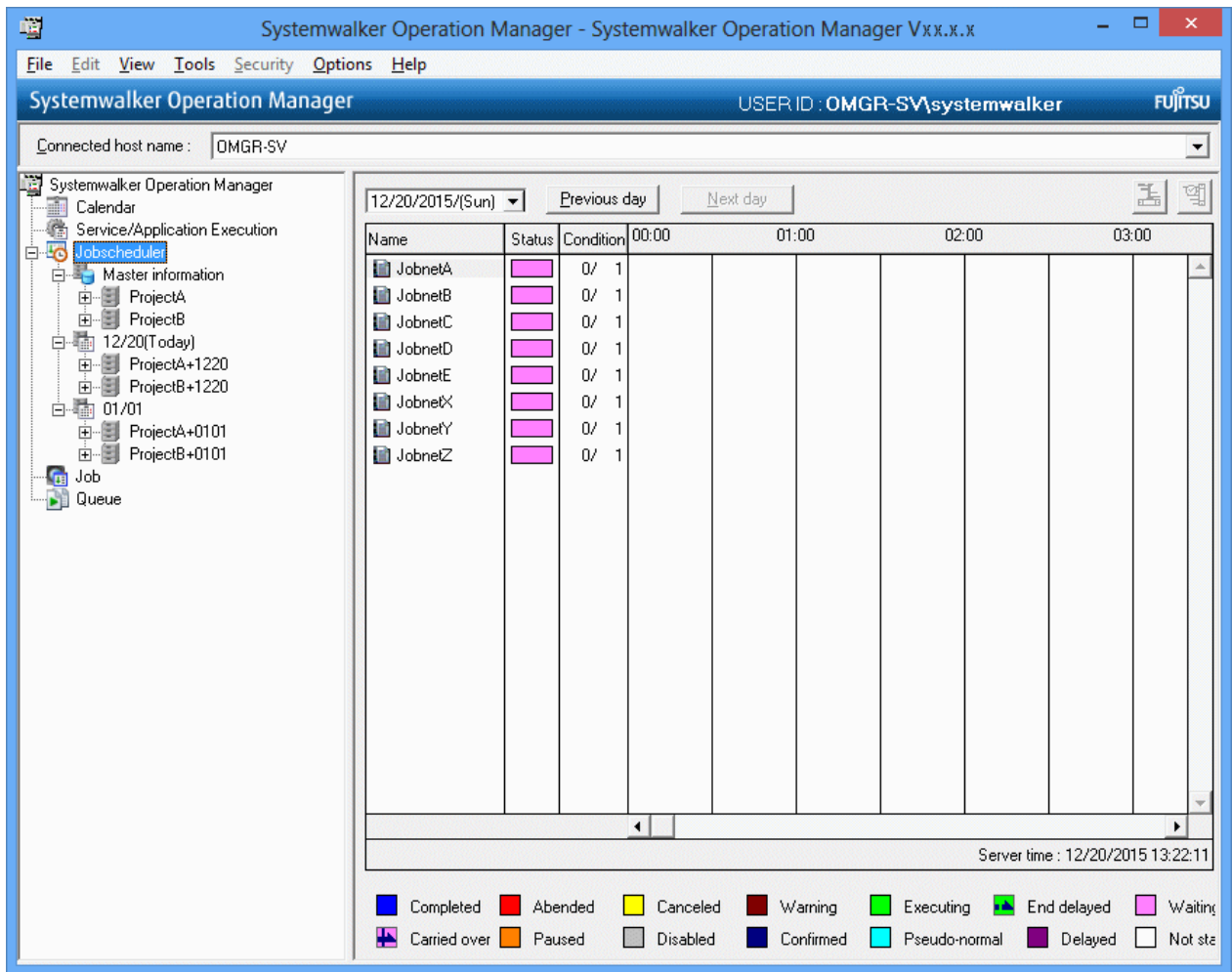
Assume that the **Systemwalker Operation Manager** window is opened as shown below and that you are creating the future schedule for January the 1st.

For detailed procedure of creation of future schedule, see "[4.1.4.1 Creating a Future Schedule Information](#)".



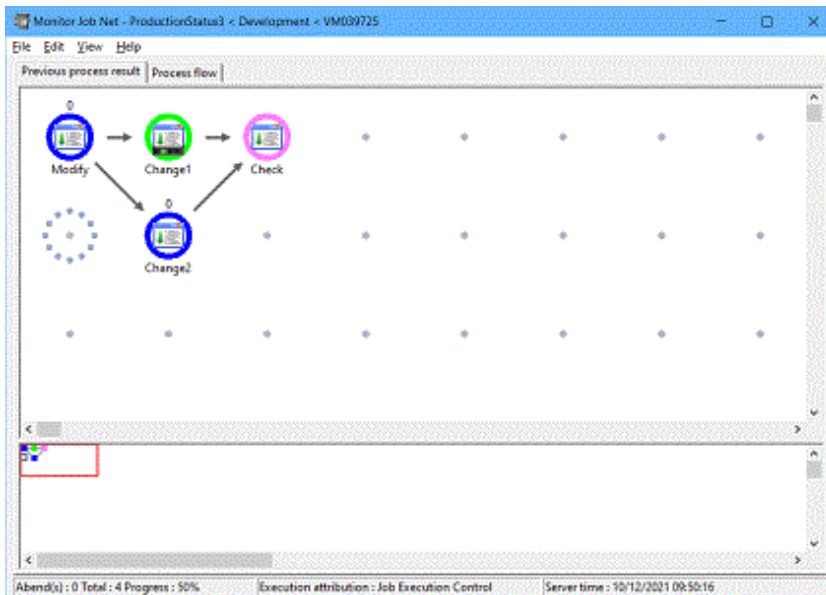
- After creation of the future schedule

When the project for January the 1st is created, it is displayed in the "Waiting" status.



The **Monitor job net** window allows you to confirm the configuration of the layered job nets of the past, today and future including the child or linked job nets with start date settings.

The configuration of the completed job nets is displayed with the past schedule by dates projects and that of the job nets to be started is displayed with the future schedule by dates projects.



See the following manual for the job net monitoring procedure.

- "*Systemwalker Operation Manager User's Guide*"

Note

A job net added manually to a schedule by dates project is not subjected to the control of the Master Schedule Management function. As a result, the job net configuration according to the process dates cannot be displayed in the **Monitor Job net** window.

4.3.2 Operating the Scheduled Job Nets

The job nets in the schedule by dates project created by distributing the schedule information can be operated as required using a Systemwalker Operation Manager client or the jobschcontrol command.

See the following manuals for the job net operation procedure.

- "*Systemwalker Operation Manager User Guide*" for the operation using the Systemwalker Operation Manager client.
- "*Systemwalker Operation Manager Reference Guide*" for the operation using the jobschcontrol command.

When a layered job net including child or linked job nets with start date settings is started manually, the job net is executed based on the configuration according to the process date regardless of the date on which it is started.

Note

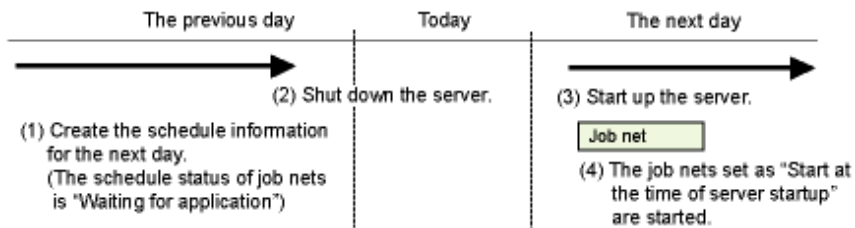
When a layered job net that has been added and registered manually to a schedule by dates project is started manually, the job net is executed with the configuration on the date on which it is started.

4.3.3 Operation when the Server Stops after the Day Change Time

When the startup condition of a job net is "Start at the time of server startup," care is required for the schedule operation if the server stops after the day change time.

Outline

When a job net with the "Start at the time of server startup" starting condition stops after the day change time, it is required to create in advance the schedule information of the process date on which the server is started.



Operation procedure

- When the server is intentionally stopped after the day change time:

Execute the future schedule of the process date on which the server is started using the **Master Schedule Management [Status Summary]** window, **Master Schedule Management [Status Details]** window or the stemManager schedule management command.

- When the server is unintentionally stopped after the day change time:

To allow the future schedule to be created always, set the target of scheduling at the day change time in the **Master Schedule Management Environment Setup** dialog box to "**Execute Future schedule**".

Note

.....

If the schedule information of the process date on which the server is started is not created in advance, the schedule status of the process date on which the server is started becomes "Not Started" and the job net with the "Start at the time of server startup" setting is not started. It is also excluded from the target of carry-over job net.

.....

Appendix A Consistency with the Earlier version

This appendix explains consistency of the current Master Schedule Management function with its earlier versions.

Refer to "Compatibility with Earlier Versions" in the *Systemwalker Operation Manager Technical Guide* for information on the generic names of the Systemwalker Operation Manager versions used in this Appendix, and also shows the correspondence among the versions in respective platforms.

A.1 Supportable Range in Client-Server Connection

This section explains the allowable range when you connect the client and server belonging to the different versions of the Master Schedule Management function.

The client of the Master Schedule Management function denotes the following clients.

- Client of Master Schedule Management Environment Setup
- Client of Master Schedule Management Monitor

Connection Availability between Client and Server in the Master Schedule Management (Schedule Distribution) Function

		Server		
		V13.2.0 V13.3.0 V13.3.1	V13.8.0	V17.0.0 V17.0.1
Client	V13.2.0 V13.3.0 V13.3.1	A	N/A	N/A
	V13.8.0	A	A	N/A
	V17.0.0 V17.0.1	A	A	A

A: Connection available

N/A: Connection not available

Connection Availability between Server and Client of the Master Schedule Management Environment Setup

The following table describes the connection between client of the Master Schedule Management Environment Setup and the server.

		Server		
		V13.2.0 V13.3.0 V13.3.1	V13.8.0	V17.0.0 V17.0.1
Client	V13.2.0 V13.3.0 V13.3.1	A	N/A	N/A
	V13.8.0	A	A	N/A
	V17.0.0 V17.0.1	A	A	A

A: Connection available
 N/A: Connection not available

 **Note**

When connection is made from the client of the new version to the earlier version server, you cannot use the functions not offered from the server side version. An error message appears if you connect to a server running a Standard Edition (SE) of Systemwalker Operation Manager.

A.2 Supportable Range in Management Server-Schedule Server Connection

This section explains the supportable range when you connect the management server and schedule server used in the Master Schedule Management function.

Supportable range when a different OS is used between them

The Schedule Distribution function does not support the management server-schedule server configuration when their OS is not identical. The configuration of the management server-schedule server must be identical to that of the Solaris/HP-UX/AIX versions or, that of the Linux/Linux for Itanium versions.

		Schedule server					
		Solaris version	HP-UX version	AIX version	Linux version	Linux for Itanium version	Windows version
Management server	Solaris version	A	A	A	N/A	N/A	N/A
	HP-UX version	A	A	A	N/A	N/A	N/A
	AIX version	A	A	A	N/A	N/A	N/A
	Linux version	N/A	N/A	N/A	A	A	N/A
	Linux for Itanium version	N/A	N/A	N/A	A	A	N/A
	Windows version	N/A	N/A	N/A	N/A	N/A	N/A

A: Schedule distribution is available
 N/A: Not available

Supportable range between different versions

The following table shows the supportable range when the management server and schedule server belong to a different version.

		Schedule server			
		V13.2.0	V13.3.0 V13.3.1	V13.8.0	V17.0.0 V17.0.1
Management server	V13.2.0	A	A	A (*3)	A (*3)
	V13.3.0 V13.3.1	A (*1, 2)	A	A (*3)	A (*3)
	V13.8.0	A (*1, 2, 3,4)	A (*3,4)	A (*3)	A (*3)

		Schedule server			
		V13.2.0	V13.3.0 V13.3.1	V13.8.0	V17.0.0 V17.0.1
n t s e r v e r	V17.0.0 V17.0.1	A (*1,2,3,4,5,6)	A (*3,4,5, 6)	A (*3,5,6)	A

A: Schedule distribution is available

N/A: Not available

***1)**

If there are any definitions that exceed the maximum number of characters for the old version, an extraction error will occur when schedules are distributed. Refer to "Incompatible items" under "Migrating from V13.2.0 to V13.3.0" in the *Systemwalker Operation Manager Release Guide* for more information.

***2)**

Note the following points if the schedule server is running V13.0.0 or earlier.

- An extraction error will occur when schedules are distributed if there are any job nets where **Start only when message event has occurred** or **Carry over the process regardless of the day change time** have been selected for the execution conditions.
- If a user is set up with change rights for the master project, change rights will be replaced with reference rights before distribution, because change rights cannot be used on the distribution destination.

***3)**

Schedule distribution cannot be performed from the management server that uses the Systemwalker authentication repository to the schedule servers (including Systemwalker Operation Manager V13.3.1 and earlier servers) that do not use the Systemwalker authentication repository.

Schedule distribution also cannot be performed from the management server (including Systemwalker Operation Manager V13.3.1 or earlier server) that does not use the Systemwalker authentication repository to the schedule servers that use the Systemwalker authentication repository.

When using the Systemwalker authentication repository, match the settings for the repository on the management server and all the schedule servers.

***4)**

An extraction error will occur in the following situations:

- Job net has been registered with setting **Copy and start**.
- Job has been registered with setting any of following situation.
 - **Wait for preceding job using OR condition** has been set.
 - **Job net variable prefix** has been set.
- Any of the following job has been registered.
 - **Determine File Existence**
 - **Wait for Message Event**
 - **Wait until Specified Time**
 - **Determine Job Net Variable**

*5)

If the subsystem day change time has been set for the management server, note the following:

- Ensure that the subsystem day change time for the management server and the system day change time for the schedule server are the same. If a different day change time is set for each subsystem of the management server, a schedule server will be required for each subsystem of the management server.

*6)

Distribution results in an extraction error in the following cases.

- One of the following jobs is registered.
 - REST Execution
 - SAP Cloud Service Collaboration



Note

- When the Master Schedule Management function's environment is built with the management server-schedule server configuration, updating of the servers must start with the schedule servers. Namely all the schedule servers must be updated first prior to update of the management servers.

If precedence is given to the management server, schedule distribution becomes unavailable until the schedule server is updated.

- If schedule information is distributed from the management server to a schedule server running an older version, define the schedule information to be distributed within the range of functions that can be used with the version used by the schedule server. Distribution will result in an extraction error if the definitions include functions that have been added with a version that is newer than the version used by the schedule server.

A.3 Supportable Range in Connected Host Switching

The following explains the connectable range in switching the connected hosts on a Master Schedule Management monitoring client.

The following table shows the connectable range between different versions.

		Server		
		V13.2.0 V13.3.0 V13.3.1	V13.8.0	V17.0.0 V17.0.1
Client	V13.2.0 V13.3.0 V13.3.1	S	-	-
	V13.8.0	S	S	-
	V17.0.0 V17.0.1	S	S	S

-: Connection unavailable.

S: Monitored server can be switched by selecting one of monitored host definitions.

Appendix B Limited Values

This appendix explains the limited values of the Master Schedule Management function.

B.1 Limited Values for Operation

This section explains the limited values for operation.

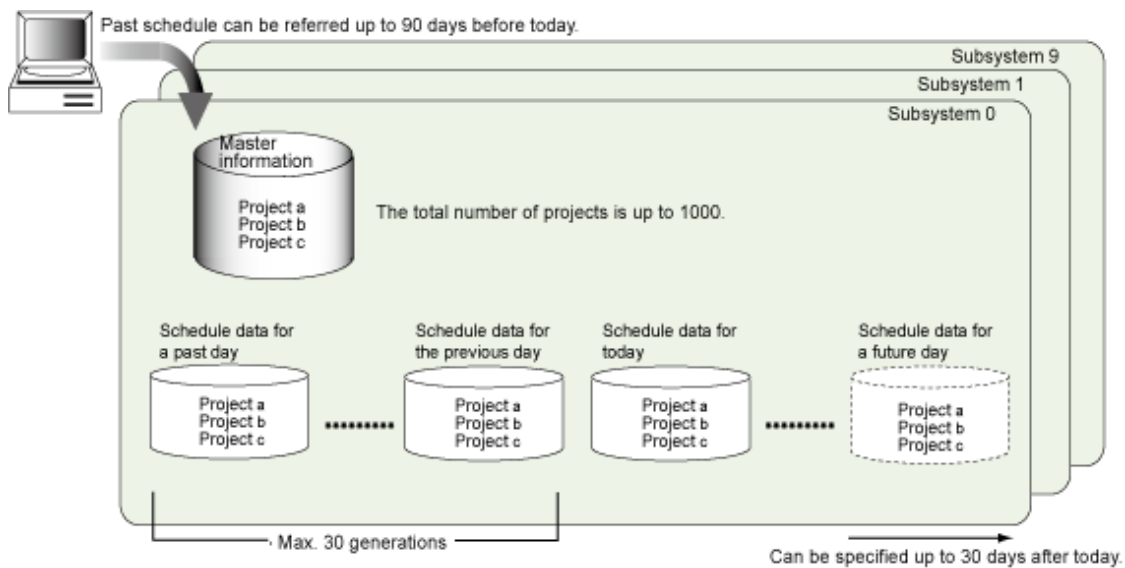
Schedule servers that can be registered in the management server [UNIX version]

The user can register up to five schedule servers for each subsystem in a management server, excluding the management server.

B.2 Limited Values for Schedule Information

This section explains the limited values for schedule information.

- The user can register up to 1000 projects including the master projects and the projects for operation change as well as the past, this day and future schedule by dates projects, for each subsystem.
- Schedule information can be stored in up to 30 generations.
- The future schedule information can be registered for 30 days after this day.
- The schedule state can be checked for maximum 90 days before this day.



Appendix C Conventions Used in This Document and Trademarks

C.1 Abbreviations and Generic Terms Used

- The term "Windows Server 2022" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2022 Standard (x64)
 - Microsoft(R) Windows Server(R) 2022 Datacenter (x64)
- The term "Windows Server 2019" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2019 Standard (x64)
 - Microsoft(R) Windows Server(R) 2019 Datacenter (x64)
- The term "Windows Server 2016" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2016 Standard (x64)
 - Microsoft(R) Windows Server(R) 2016 Datacenter (x64)
- The term "Server Core" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2022 Standard Server Core
 - Microsoft(R) Windows Server(R) 2022 Datacenter Server Core
 - Microsoft(R) Windows Server(R) 2019 Standard Server Core
 - Microsoft(R) Windows Server(R) 2019 Datacenter Server Core
 - Microsoft(R) Windows Server(R) 2016 Standard Server Core
 - Microsoft(R) Windows Server(R) 2016 Datacenter Server Core
- The term "Windows(R) 10" is used to refer to all of the following products:
 - Windows(R) 10 Home (x64)
 - Windows(R) 10 Pro (x64)
 - Windows(R) 10 Enterprise (x64)
- Windows Internet Explorer(R) is abbreviated as "Internet Explorer".
- Versions of Systemwalker Operation Manager that run on all of the following operating systems are referred to as "Windows versions of Systemwalker Operation Manager" or simply "Windows versions":
 - Windows
 - 64-bit versions of Windows, except Itanium
- Articles specific to the version of Systemwalker Operation Manager that runs on 32-bit versions of Windows are referred to as "Windows x86 version".
- Articles specific to the version of Systemwalker Operation Manager that runs on Itanium-compatible versions of Windows are referred to as "Windows for Itanium version".
- Articles specific to the version of Systemwalker Operation Manager that runs on 64-bit versions of Windows, except Itanium, are referred to as "Windows x64 version".
- Server Core, Windows Server 2022, Windows Server 2019, and Windows Server 2016 may be abbreviated as "Windows servers".
- Oracle Solaris may be referred to as Solaris, Solaris Operating System or Solaris OS.

- Versions of Systemwalker Operation Manager that run on Solaris are referred to as "Solaris versions of Systemwalker Operation Manager" or simply "Solaris versions".
- Articles specific to the version of Systemwalker Operation Manager that runs on 32-bit versions of Solaris are referred to as "Solaris 32-bit version".
- Articles specific to the version of Systemwalker Operation Manager that runs on 64-bit versions of Solaris are referred to as "Solaris 64-bit version".
- Versions of Systemwalker Operation Manager that run on HP-UX are referred to as "HP-UX versions of Systemwalker Operation Manager" or simply "HP-UX versions".
- Versions of Systemwalker Operation Manager that run on AIX are referred to as "AIX versions of Systemwalker Operation Manager" or simply "AIX versions".
- Articles specific to the version of Systemwalker Operation Manager that runs on 64-bit versions of Linux, except Itanium, are referred to as "Linux x64 version" or simply "Linux versions".
- Articles specific to the version of Systemwalker Operation Manager that runs on 32-bit versions of Linux are referred to as "Linux x86 version".
- Articles specific to the version of Systemwalker Operation Manager that runs on Itanium-compatible version of Linux are referred to as "Linux for Itanium version".
- Solaris, HP-UX, AIX, Linux and Linux for Itanium versions of Systemwalker Operation Manager are referred to collectively as "UNIX versions of Systemwalker Operation Manager" or simply "UNIX versions".
- Solaris, HP-UX, AIX and Linux may be referred to as "UNIX servers".
- Systemwalker Operation Manager Standard Edition may be abbreviated as "SE".
- Systemwalker Operation Manager Enterprise Edition may be abbreviated as "EE".
- Standard Edition may be abbreviated as "SE" and Enterprise Edition may be abbreviated as "EE".
- Arcserve(R) Backup for Windows is abbreviated as "Arcserve".
- Microsoft(R)-Mail that is provided as a standard feature with Windows NT(R) is abbreviated as "MS-Mail".

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