

Fujitsu Software Systemwalker Operation Manager V17.0.1

Release Guide

UNIX/Windows(R)

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Preface

Purpose of This Document

This document describes the migration method, notes, and incompatible items applicable when updating Systemwalker Operation Manager.

Intended Readers

This document is intended for users who will upgrade Systemwalker Operation Manager.

Conventions Used in This Document

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

Trademarks

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

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Contents

Chapter 1 Additional Functions Overview.....	1
1.1 Functions that Have Been Added in V17.0.1.....	1
1.1.1 Support for Red Hat Enterprise Linux 9.....	1
1.1.2 Setting the PATH environment variable.....	1
1.1.3 Microsoft Identity Platform (V2.0) Endpoint Support for the jobschsetauthinfo Command.....	1
1.1.4 Adding a public key encryption method that can be used for SSH communication during job execution on a remote machine [Windows].....	1
1.2 Functions Changed in Previous Versions.....	1
1.2.1 Functions that Have Been Added in V17.0.0.....	1
Chapter 2 Incompatible Notes.....	4
2.1 Migrating from V12.0L10/12.1 to V13.2.0.....	4
2.1.1 Incompatible Items.....	4
2.2 Migrating from V13.2.0 to V13.3.0/V13.3.1.....	9
2.2.1 Incompatible Items.....	9
2.3 Migration from V13.3.0/V13.3.1 to V13.8.0.....	15
2.3.1 Incompatible Items.....	15
2.4 Migrating from V13.8.0 to V17.0.0.....	32
2.4.1 Incompatible Items.....	32
2.5 Migrating from V17.0.0 to V17.0.1.....	40
Appendix A Functional Differences between Versions and Levels.....	41
Appendix B Conventions Used in This Document and Trademarks.....	57
B.1 Abbreviations and Generic Terms Used.....	57
B.2 Trademarks.....	60

Chapter 1 Additional Functions Overview

This chapter describes the new functions and major changes that are added when Systemwalker Operation Manager is migrated to this version level product. It also describes the products that can be migrated.

1.1 Functions that Have Been Added in V17.0.1

This section explains functions that have been added in V17.0.1.

1.1.1 Support for Red Hat Enterprise Linux 9

The following has been added to the supported operating systems of Systemwalker Operation Manager.

Server OS: Red Hat Enterprise Linux 9

1.1.2 Setting the PATH environment variable

Any path can now be added to the PATH environment variable used to search for job files.

By defining the paths together in the PATH environment variable definition file, you do not need to specify a full path for each job.

1.1.3 Microsoft Identity Platform (V2.0) Endpoint Support for the jobschsetauthinfo Command

The jobschsetauthinfo command can now register credentials in the form of Microsoft Identity Platform (V2.0) endpoints.

Authentication using the Microsoft Identity Platform (V2.0) endpoint is now available for working with services in Microsoft Azure using REST Run Jobs.

For information about the jobschsetauthinfo command, refer to the "*Systemwalker Operation Manager Reference Guide*".

1.1.4 Adding a public key encryption method that can be used for SSH communication during job execution on a remote machine [Windows]

Run a job on a remote machine (using the mjrmjob command) For SSH communications, ECDSA is now available as a public-key encryption method in addition to RSA.

The public key is created with the mjkeygen command. For information about the mjkeygen command, refer to the "*Systemwalker Operation Manager Reference Guide*".

1.2 Functions Changed in Previous Versions

1.2.1 Functions that Have Been Added in V17.0.0

This section explains functions that have been added in V17.0.0.

Support for Windows Server 2022 and Windows (R) 11

The following has been added to the supported operating systems of Systemwalker Operation Manager.

Server OS: Windows Server 2022

Client OS: Windows(R) 11

Cloud Service Linkage [Windows] [Linux]

REST execution job has been added as the job linked Cloud Service.

Improving interoperability on the cloud [Windows] [Linux]

Linking the Cloud Service, you can now use distributed execution function using Autoscale. The notification from the Cloud Service allows you to increase or decrease the number of execution servers in the host group according to the amount of work and resource usage.

Web API [Windows] [Linux]

You can now use REST Interface for external use of Systemwalker Operation Manager. You can operate, get information, and change the definition of Systemwalker Operation Manager to access the exposed URI using HTTP methods.

For the details of Web API, refer to the "Web API [Windows] [Linux]" in the "*Systemwalker Operation Manager Reference Guide*".

Supporting Microsoft Edge of Web Console

You can now use Web console in the Microsoft Edge IE mode.

For the Microsoft Edge IE mode, refer to the Microsoft public documentation.

Supporting LDAP administration users

You can now use Systemwalker Operation Manager by users and group managed OpenLDAP.

For the details, refer to the "*Systemwalker Operation Manager Installation Guide*".

Displaying History of the Hostname/User ID Input Area of the [Login] Window

In the "Login" window (Note), the Hostname/User ID Input Area is now a combo box. The past input history is saved, and it can be selected.

Note: Target [Login] window

- Systemwalker Operation Manager [Login] window
- Systemwalker Operation Manager Environment Setup [Login] window
- Jobscheduler info print [Login] window
- multi-server monitoring [Login] window
- Master Schedule Management [Login] window [EE]
- Master Schedule Management Environment Setup [Login] window [EE]

Improving GUI usability of Export/Import

In the **Systemwalker Operation Manager Import** and **Systemwalker Operation Manager Export** window, the window operability is improved when Import/Export destination is displayed.

Extending the Upper Limit Value that can be defined as the Job Definition Variables

The Upper Limit Value that can be defined as the Job Definition Variables is extended (Older version: 100, This version :1000)

Executing and Specifying the Port number of mjrmtjob command

In the mjrmtjob(Command/Shell Script execution on the remote machine) command, You can now specify the port number. By specifying any port number, you can now execute the job on the remote machine more secure.

For the details of mjrmtjob, refer to the "*Systemwalker Operation Manager Reference Guide*".

-ncheall option of jobschsetnet commnd

The "-ncheall" option is now added to jobschsetnet command. You can now restore the specified value of an operand to its default value when you change job net.

Project Information Control Statement Output Command

The "stemrintproject command", the command for outputting project information in control statement format is now added. You can now migrate and divert project Information more easily.

For the details of stemrintproject command, refer to the "*Systemwalker Operation Manager Reference Guide*".

Collective control command of the Job Net/Group in the Project

The "jobschoperate command" that collectively controls (Stop All/Cancel Stopping All/Disable All/Cancel Disabling All) job net and group in the project is now added.

For the jobschoperate command, refer to the "*Systemwalker Operation Manager Reference Guide*".

Extending the multiplicity of Job [Windows]

In the Windows version, the maximum number of jobs that can be started simultaneously on one system is now extended.

(Older version: Up to 99 multiplicity, This version: Up to 999 multiplicity)

You can now set it on the client, the command, and the web console.

Chapter 2 Incompatible Notes

This chapter describes the notes for upgrading of Systemwalker Operation Manager to the new version and the incompatible items in the upgrading.

Check range of notes and incompatible items in migration

This chapter provides important information about incompatibilities and other problems that can arise when upgrading from Systemwalker Operation Manager V12 and later versions. The different versions are listed in ascending order. Users are advised to begin reading from the section that corresponds to the version that they will be upgrading from. The information in all subsequent sections will also apply.

2.1 Migrating from V12.0L10/12.1 to V13.2.0

This section lists incompatibilities associated with migration from Systemwalker Operation Manager V12.0L10/12.1 to Systemwalker Operation Manager V13.2.0.

2.1.1 Incompatible Items

This section explains incompatible items associated with migration from Systemwalker Operation Manager V12.0L10/12.1.

Incompatible items in Power Control

- The following setting is no longer available because the support for MS-Mail has been removed:
[Windows version]
 - With the shutdown monitoring options, MS-Mail cannot be used as a means of **Notify to operator when monitoring target is incomplete**.
[Corrective Action]
Use the E-Mail.

Incompatible items in Jobscheduler

- The following setting is no longer available because the support for MS-Mail has been removed:
[Windows version]
 - When a job net is abended, user notification using MS-Mail has become impossible.
[Corrective Action]
None
 - Startup of a job net upon reception of a MS-Mail notification is no longer available.
[Corrective Action]
Use the E-Mail.
- The shutdown.exe command is no longer available. This has led to the change in the shutdown exit (program). [Windows version]
[Corrective Action]
When shutdown.exe has been used as the shutdown exit (program) of the previous version, the exit is abended if you attempt to shut down the machine because of the absence of shutdown.exe. If this happens, modify the setting so that the shutdown exit (program) uses the shutdown command provided by the OS.

For the setting procedures, see the *Systemwalker Operation Manager User's Guide*.

- The start time specified in the **Display start time setup** window has been changed from "hour-minute" to "hour" only.

[Corrective Action]

None

- The execution condition for a job net in a group cannot be set to "None" with the jobschsetnet command.

[Corrective Action]

None

- Login users cannot log in from Systemwalker Operation Manager clients if the expiry date for their password is the current date. [Solaris version]

[Corrective Action]

Change the password for these login users.

Incompatible items common to Jobscheduler and the Master Schedule Management function

- The operation of a job net has changed when the execution condition is set to "**Start only when message event has occurred**" and "**Once in a day**" and the following settings are in place:
 - When a job net for which "**Scheduled start time**" is not specified reaches the day change time, the job net status of the previous day will be inherited.
 - When a job net for which "**Scheduled start time**" is specified reaches the day change time, and the job net is not scheduled to start on that day, the job net status of the previous day will be inherited.
 - If a "Reinstate" operation is performed on a job net for which "**Scheduled start time**" is not specified, the status of the job net will appear as "Waiting" in the Gantt chart.

(This is the same operation that occurs when a "Reinstate" operation is performed on a job net for which "**Scheduled start time**" is specified.)

[Corrective Action]

None



Incompatible items in the Master Schedule Management function

- The schedule by dates project has been excluded from policy information when **Jobscheduler - Schedule DB/schedule pattern** is specified in the **Registration information** tab of the **Extract Policy** window in an environment where the Master Schedule Management function is used.

[Corrective Action]

None

- In earlier versions, if the jobschmsgeventex message event generation command with the -dx option is executed from jobs that are not registered with the schedule by dates project, or network jobs and distributed execution jobs that are registered with the schedule by dates project, the -dx option is ignored. In the current version, however, the -dx option is not ignored and message event generation will fail.

[Corrective Action]

Use the -d option to specify a working day when a message event is to be generated.

Incompatible items in Event Monitoring - Action Management

- The following setting is no longer available because the support for MS-Mail has been removed: [Windows version]

- Document notification by E-mail (MS-Mail) is no longer available.

[Corrective Action]

Use the E-Mail.

- "Mp_SendMSMail" of the Action Execution API provided by Systemwalker Operation Manager of previous versions is no longer available. Here, the previous versions refer to the following versions:
 - MpWalker/JM V3.0
 - SystemWalker/OperationMGR V4.0

[Corrective Action]

None

Incompatible items in Task Link

- The RASCI.EXE remote access control command is no longer available.

[Corrective Action]

None

- The following UDP ports are no longer used:

- 2681/udp
- 2686/udp

[Corrective Action]

None

Incompatible items with the messages

- The "project name" and "job net name" have been added to the following messages:

- MpMjes: WARNING: 10114
- MpMjes: Warning: 9006

For further information on the modified messages, see the *Systemwalker Operation Manager Message Guide*.

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

- "Reset LANG environment variable. Rerun command." has been added to the following messages:

- MpJobsch: WARNING: 0288
- MpStem: ERROR: 10324

For further information on the modified messages, see the *Systemwalker Operation Manager Message Guide*.

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

- The following messages have been deleted:

- MpJobsch: Warning: 3288

[Corrective Action]

None

- The following messages are no longer output because the UDP ports (2681/udp and 2686/udp) have been removed:

- mpnjsov: Error: 10265

- mpnjsosv: Error: 10308
- "Error occurred when Client Task Link engine start. Error Event ID(0xA819)..."

[Corrective Action]

None

- The following message has been deleted because the support for MS-Mail has been removed:
 - Messages in "Messages starting with MpAosfP [Windows]"
 - ID: 212 to 218, 260 to 263, 2100 to 2102

[Corrective Action]

None

- "[-toplevel]" has been added to the following messages:
 - MpJobsch: ERROR: 0004
 - MpJobsch: INFO: 1004
 - MpJobsch: ERROR: 0313
 - MpJobsch: INFO: 1313
 - MpJobsch: ERROR: Usage: jobschprintcsv

Refer to the *Systemwalker Operation Manager Message Guide* for details on changed messages.

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

Incompatible items in installation

- The installation of the server function has been changed as follows:
 - In new installation, the Systemwalker Operation Manager environment setup client is not installed.

[Corrective Action]

If you want to install the Systemwalker Operation Manager environment setup client, check the **Client Functions of Systemwalker Operation Manager** checkbox in the **Select option function** window.

- In upgrade installation, if only the Systemwalker Operation Manager environment setup client has been installed, the Systemwalker Operation Manager environment setup client and Systemwalker Operation Manager client are installed.

[Corrective Action]

None

Incompatibilities associated with connecting to earlier versions

- Connections from Systemwalker Operation Manager V11.0L10 to MpWalker/JM are no longer supported.
 - It is no longer possible to connect to MpWalker/JM because the required client window is not installed.

[Corrective Action]

None

To migrate to this version, confirm each of the notes and incompatible items in migration by referring to "[Check range of notes and incompatible items in migration](#)".

Incompatible items in ACL

- If the password for an Operation Manager user is set using the mpsetpasswd command when the Extended User Management function is used, the number of characters that can be specified for the password has changed from 16 bytes or less to between 5 and 16 bytes.

[Corrective Action]

None

If policies have been distributed from an old version and Operation Manager has been upgraded, password information for Operation Manager users will be inherited unchanged. The next time passwords are changed, the new passwords must be at least 5 bytes long.

- When the "-p" option is specified with the mpsetacl command, the command will terminate normally only if just one correct value (w, c, x or r) is specified.

[Corrective Action]

None

- With earlier versions, if you omit the -s option or specify "-s 0" for the mplstacluser command, the list of users who have the access rights to the projects registered on all subsystems was displayed. However, from V13.2.0, the list of users who have the access rights to the projects registered on subsystem 0 is displayed.

[Corrective Action]

If you wish to display the list of users who have the access rights to the projects registered on all subsystems as in the past, submit the command repeatedly for each created subsystem as shown below.

Example) When subsystems 0, 1, and 3 exist

```
mplstacluser -s 0
```

```
mplstacluser -s 1
```

```
mplstacluser -s 3
```

Incompatible items in Job Execution Control

- When execution priority is specified for network jobs, the execution priority that has been specified for jobs that run on an execution server will now be applied.

[Corrective Action]

None

- If there are multiple projects with the same owner in the **Define Job Owner's Information** window, and password information is defined to a project with "Undefined" password information, the password information can now be applied to all the other projects that have "Undefined" password information. Refer to "Defining the Job Owner Information [Windows version]" in the *Systemwalker Operation Manager Installation Guide* for details.

[Corrective Action]

None

- In the **Add/Change - Job** window >> **Detail Information** sheet >> **Effective user name**, you can now specify the domain user.

[Corrective Action]

None

Incompatible items in action management

- Audio notification and pager reports can be made if users log in using Windows Vista(R).

[Corrective Action]

None

2.2 Migrating from V13.2.0 to V13.3.0/V13.3.1

This section lists incompatibilities associated with migration from Systemwalker Operation Manager V13.2.0 to Systemwalker Operation Manager V13.3.0/V13.3.1.

2.2.1 Incompatible Items

This section explains incompatible items associated with migration from Systemwalker Operation Manager V13.2.0.

Incompatible items in ACL

The maximum number of characters that can be used in user ID and passwords registered using the Extended User Management function has been increased as shown in the following table.

Item	V13.2.0 and earlier	V13.3.0
User ID	12 bytes	20 bytes
Password	16 bytes	50 bytes

Incompatible items in power control

- If a machine running Windows Vista(R) or Windows Server 2008 is to be specified as the destination of a pop-up notification, install any of the following products:
 - Systemwalker Centric Manager
 - Clients [Selected option: Action Execution (Audio Notification)]
 - Operation Management Clients [Selected option: **Action Execution (Audio Notification)**]
 - Job Servers
 - Section Management Servers
 - Operation Management Servers
 - Systemwalker Operation Manager
 - Clients [Selected option: Action Execution (Audio Notification)]
 - Servers

Incompatible items in Jobscheduler

- If the string "@.VPARAM@" exists within the **Command**, **Parameters** or **Request host** parts of a job definition, that string will be treated as a variable for replacing a variable parameter.
- **Copy** has been changed to **Reuse** in the following menus (the function itself has not changed):
 - **Copy** in the **File** menu of the **Systemwalker Operation Manager** window
 - **Copy** in the pop-up menu that appears when the Jobscheduler function is selected in the job selection tree
 - **Copy** in the **File** menu of the **Job Net Management** window
 - **Copy** in the pop-up menu of the **Job Net Management** window
- **Yes** under **Messages** in the **Job List** window has been changed to **All message events for this job net have occurred**, **Some message events for this job net have occurred** or **No message events for this job net have occurred**, depending on the message status.

- The maximum number of projects that can be registered with Jobscheduler has been increased to 1,000.
- New control statements have been added to the control statements output by the jobschprint -r and jobschprint -R commands.

[Corrective Action]

If control statements that are output are to be used in Operation Management Server V13.2.0 or earlier, delete the following new control statement information before using them.

Control statement for jobs: iconposition

Control statement for job nets within a group: iconposition

- The job flow icon animation function, which was discontinued from Systemwalker Operation Manager V11.0L10/11.0, is now available from V13.3.0 with a new display format. Refer to the Systemwalker Operation Manager Online Help or *Systemwalker Operation Manager User's Guide* for details.
- File extensions for schedule files and backup schedule files have been changed:
 - From "project name.dbx" to "project name.dbz"
 - From "project name.grp" to "project name.grz"

[Corrective Action]

If the above files are used, change them so that they can be browsed according to the file name with the new extension.

- File naming system for previous log of jobs (job standard output and standard error output) has been changed:

[Windows]

[Old file name]

"project name_jobnet name"_nnn.log" (nnn: any numeric characters)

[New file name]

"project name_jobnet name"_cccccccccccccccc.log" (cccccccccccccccc: any characters)

[UNIX]

[Old file name]

"project name_jobnet name.log"

[New file name]

"project name_jobnet name"_nn.log" (nn: any numeric characters)

[Corrective Action]

If the above files are used, change them so that they are browsed according to the new naming system.

- Name length-limit checks for the jobschmsgsevent command options "message event name", "project name", and "job net name" are performed according to the following length-limit each:
 - Message event name: 12 bytes
 - Project name: 50 bytes
 - Job net name: 50 bytes

This change does not affect operations of job nets that are targeted for this command.

[Corrective Action]

None

- Full path checks for the following items for Operation Manager clients are no longer performed:
 - **Default log file** in the **Detail Information** sheet of the **Add/Change/Monitor Job** window

- **Default error log file** in the **Detail Information** sheet of the **Add/Change/Monitor Job** window

[Corrective Action]

None

- The display format of "End Code" (completion code) that is displayed in the output results when jobschprintcsv -g or jobschprintcsv -f is specified has been changed as shown below.

[V13.2.0 or earlier]

"End Code" is padded with spaces to constitute 3 digits if there are fewer than 3 digits.

[V13.3.0 or later]

"End Code" is output as is.

[Corrective Action]

If using "End Code", note that the value may be different from that of Systemwalker Operation Manager V13.2.0 or earlier.

Incompatible items associated with character number limitations in setup items

The number of characters that can be specified in the following setup items has been increased.

Item	V13.2.0 or earlier	V13.3.0
Job net name	8 bytes	50 bytes
Job net comment	24 bytes	100 bytes
Group name	8 bytes	50 bytes
Group comment	24 bytes	100 bytes
Job command name	64 bytes	300 bytes
Project name	20 bytes	50 bytes
Master project name (Note)	15 bytes	45 bytes
User ID	20[windows]/12[UNIX] bytes	20 bytes
Password	14[windows]/16[UNIX] bytes	50 bytes

Note) Only when the Master Schedule Management function is used

When the following windows are used, a warning message such as "Specified function is not supported in this version." will appear and information will fail to be displayed:

- If the length of a project name, job net name, job net comment, group name or group comment in the **Job Selection** window exceeds the maximum number of characters permitted by the earlier version, the message referred to above will appear and information about the entire subsystem will not be displayed.
- If the length of a job command name in the **Job List** window or the **Monitor Job Net** window exceeds the maximum number of characters permitted by the earlier version, the message referred to above will appear and the **Job List** window or the **Monitor Job Net** window will not be displayed.

- If **Job** is selected in the **View Job Status/Operate** window and the job command name exceeds the maximum number of characters permitted by the earlier version, the message referred to above will appear and the information will not be displayed.
- If the length of a job command name to be displayed in the **Job List** tab of the **View Queue Details** dialog box exceeds the maximum number of characters permitted by the earlier version, the message referred to above will appear and the information will not be displayed.
- If the length of a project name, job net name, job net comment, group name or group comment in the **Browse Registration Info** window exceeds the maximum number of characters permitted by the earlier version, the message referred to above will appear and the **Browse Registration Info** window will not be displayed.
- If the length of a job net name, job net comment, group name or group comment in the **Print Jobscheduler Info** window exceeds the maximum number of characters permitted by the earlier version, the message referred to above will appear and the information will not be displayed. (All fields will remain blank.)
- If the length of a job net project name, job net name, job net comment, group comment, parent job net name or parent job net comment in the **Job Nets Management** window exceeds the maximum number of characters permitted by the earlier version, the message "Host name: Subsystem number : Specified function is not supported in this version." will appear in the status field of the **Job Nets Management** window and information about the target subsystem will not be displayed.
- If the length of a project name, job net name or job net comment in a carried over job net in the **Master Schedule Management [Monitor Carried over Job Nets]** window exceeds the maximum number of characters permitted by the earlier version, the error message "Failed to obtain the list of carried over job nets." will appear and the **Master Schedule Management [Monitor Carried over Job Nets]** window will be displayed with the carried over job net information blank.

The above message will also appear in the Web GUI and some functions will become unavailable.

[Corrective Action]

If a definition in a server running the new version of Systemwalker Operation Manager exceeds the maximum number of characters permitted by the earlier version or if information containing a definition that exceeds the maximum number of characters permitted by the earlier version is to be displayed, connect to a client running the new version.

Incompatible items in Job Execution Control

- In previous UNIX versions, job output information was not displayed in the following windows when a job was canceled. However, job output information is displayed in V13.3.0 and later versions.
 - **Previous log** tab of the **Monitor - Job net** window
 - **Job Output Info** window

Note, however, that job output information will not be displayed (as before) when "Normal" has been selected.
- In the case of a new Systemwalker Operation Manager installation, the job object mode has become the job startup method and the following operations have changed:
 - In previous versions, when an exception occurred in a job (parent and child processes), a message to that effect was output to the previous log. However, in V13.3.0, the message is no longer output to the previous log.
 - In previous versions, when an exception occurred in a JCL job, normal steps would not be executed and the final job step specified as "only" would be executed. However, in V13.3.0, normal steps are executed and the final job step specified as "only" is not.
 - In previous versions, when an exception occurred in a child process of a job, the exception code of the child process was treated as the job completion code, but in V13.3.0 the completion code of the parent process is treated as the job completion code.

- The -nt option (non-trace mode) of the qsub command is disabled.
- Applications that use job objects cannot be started.

[Corrective Action]

In the Windows version, the above incompatibilities can be prevented by changing to trace mode. To change to trace mode, clear the **Enable job object mode** check box in the **Options** tab of the **Define Operating Information** window.

- The startup mode of job processes has been changed as follows:
 - Trace mode and non-trace mode cannot be used in the Windows for Itanium version.
 - If the Windows for Itanium version is upgraded from V13.2.0 or earlier, the job object mode becomes the job startup mode.
- If the load balancer function of the previous version is being used, it is no longer possible to submit jobs to servers running V13.2.0 or earlier, nor can jobs be received from servers running V13.2.0 or earlier. Link to servers running version V13.3.0 or later.

[Corrective Action]

Use the distributed execution function. With the distributed execution function, requests to execute jobs can be sent to servers running different versions and levels, and jobs can also be received from servers running different versions and levels.

- With the definition for the job owner information, the following error message is to be output. [Windows version]:

- "An authentication error occurred. code = xxxx"

[Parameter]

xxxx: Operating system's error code which you received during authentication

This may have occurred for the following reason:

- It is configured with the OS settings so that you must change the password of the startup account, or the user's account is no longer valid.

[Corrective Actions]

If the user who attempted to define the job owner information is allowed to have job execution rights, set a password of the user account for that user or validate the user account with the OS settings.

Incompatible items in the client functions

- It is possible to specify a string in the format other than an absolute path for "Default log file" and "Default error log file" in the **Detail Information** sheet of the **Add/Change/Monitor Job** window when connecting to a server running V13.3.0 or later. This change is made because the job definition variables are not necessarily to be specified in the path format.

[Corrective Action]

None

EE

Incompatible items in the Master Schedule Management function

- It is possible to distribute schedule information to schedule servers in earlier versions. Refer to "Supportable Range in Management Server-Schedule Server Connection" in the "Systemwalker Operation Manager User's Guide - Master Schedule Management" for details.

[Corrective Action]

None

Incompatible items in action management

- If any of the machines listed under **Destination List** in the **Popup** tab of the **Action Definition** dialog box is running Windows Vista(R), install one of the following products:
 - Systemwalker Centric Manager
 - Clients [Selected option: Action Execution (Audio Notification)]
 - Operation Management Clients [Selected option: Action Execution (Audio Notification)]
 - Job Servers
 - Section Management Servers
 - Operation Management Servers
 - Systemwalker Operation Manager
 - Clients [Selected option: Action Execution (Audio Notification)]
 - Servers
- Pager notifications can no longer be sent.
[Corrective Action]
Use short mail.

Incompatible items in event monitoring

The following menu items have been removed from the **Monitored Event Table** window

- **Copy Event** under the **Event** menu
- **Copy Action** under the **Action** menu

[Corrective Action]

Copy and paste events and actions using either the **Edit** menu or keyboard operations.

Incompatible items in linkage functions

Formerly, a client started as an administrator to link to Systemwalker Centric Manager. However, from V13.3.0 onwards, a client starts after user authentication.

Incompatible items with the messages

- "Pager" has been changed to "Short Mail" in the following messages:

- MpAosfB: ERROR: 3100
- MpAosfB: ERROR: 3106
- MpAosfB: ERROR: 4100
- MpAosfB: ERROR: 4106
- MpAosfB: ERROR: 5006

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

- The upper limits mentioned in the following messages have changed:
 - MpJobsch: ERROR: 6029
 - MpJobsch: ERROR: 0258
- The user name must be specified within 20 bytes.

- The password must be specified within 50 bytes.
 - MpJobsch: WARNING: 3303:
 - MpJobsch: ERROR: 6029
 - MpJobsch: ERROR: 0029
 - MpJobsch: WARNING: 0029
 - MpJobsch: ERROR: 0182
 - MpJobsch: ERROR: 7182
 - MpJobsch: ERROR: 6316
 - The option notations in the message text for the following messages have changed.
 - MpJobsch: ERROR: 0004
 - MpJobsch: ERROR: 0313
 - MpJobsch: INFO: 1004
 - MpJobsch: INFO: 1313
- [Corrective Action]
- If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.
- "99" in the following message output by the Job Execution Control command has been changed to "X":
 - An illegal value is set to the maxexec parameter. Specify the process multiplicity between 1 and 99
- Refer to the *Systemwalker Operation Manager Message Guide* for details on changes to messages.

2.3 Migration from V13.3.0/V13.3.1 to V13.8.0

This section lists incompatibilities associated with migration from Systemwalker Operation Manager V13.3.0/V13.3.1 to Systemwalker Operation Manager V13.8.0.

2.3.1 Incompatible Items

This section explains incompatible items associated with migration from Systemwalker Operation Manager V13.3.0/V13.3.1.

Incompatible items in startup account

- It is now not required to enter a startup account at installation, and a local system account is used as the service startup account instead.

Because of this, the "pwchangeo" command used for changing a password for the startup account is no longer supported.

Also note that the account of job execution user required when executing a job is changed from the service startup account to the local system account if the **Execute jobs under the respective job owner's authority** option is not selected in the **Options** sheet of the **Define Operating Information** window. Therefore, you must check if the job to be run can be executed by the local system account.

[Corrective Action]

Refer to "Changing the Startup Account" in the *Systemwalker Operation Manager Installation Guide* when you desire to change the service start account from the local system account to another.

Incompatible items in ACL

- The Systemwalker User Management function cannot be used if the Extended User Management function is enabled. [UNIX]

[Corrective Action]

Use the mpsetusermode command (with the -s off option) to disable the Extended User Management function.

It is possible to check whether the Extended User Management function is currently enabled or not using the mpusermode command.

- The pwchangeo password change command [Windows] is no longer available.

[Corrective Action]

None

- In V13.8.0, the process for server timeouts that occurs in communications from clients to servers at "Log in to Systemwalker Operation Manager" and at "Registration/Modification/Deletion of access rights to the project" has changed. [Solaris]

In versions prior to V13.3.0/V13.3.1, the client and server are disconnected only in the situation noted in (a) below. However, in V13.8.0, this happens in the situation noted in (b) as well:

- a. When data completely fails to reach the server, and a specified interval (timeout time) has passed.
- b. After part of the data has reached the server, a specified interval (timeout time) passes without data reaching the server.

[Corrective Action]

None

Normally there is no impact from this change.

However, when configuring access rights for a project as below, if it takes more than 90 seconds to display the **Set Permissions** window after selecting **Permissions**, the system environment needs to be reviewed:

- In the job selection window of the **Systemwalker Operation Manager** window, select a project, select **Permissions** from the **Security** menu, and display the **Set Permissions** window

Incompatible items in Jobscheduler

- It is unnecessary to specify a service logon account name in the createsubsystem command option. [Windows]

- A condition for the project name where the shutdown process job net is registered has been changed from using the same name as the user name that is specified in the logon account for the Jobscheduler service to using "SYSTEM". [Windows]

[Corrective Action]

Register a project with the project name "SYSTEM" within the same subsystem. Copy the shutdown process job net to this project (project with "SYSTEM" name) using the duplication or copy function of job net or using the jobschsetnet command with -ncop option. After copying the job net, delete the job net on the copy source.

- A file for schedule pattern information has been changed from "db_calendar.default" to "db_calendar_ex.default".

[Corrective Action]

Make changes so that a file for schedule pattern information is being referenced in a new file name.

- In the output of the jobschprint -a command, the following is now added

[Additional Items]

<Schedule Pattern Mode>: AND

Offset Holiday: OFF

[Corrective Action]

None

- The following have been removed from job icons:

- GLOVIA-C business object
- GLOVIA-C job
- Remote access control (Connect) job
- Remote access control (Disconnect) job

[Corrective Action]

If definitions from an earlier version are migrated, the above job icons will also be migrated.

- In SE versions, the maximum number of job nets that can be registered in one project is 255. Previously, the copy destination job nets for copy and startup that used variable parameters and suffixes were included in the count, but they no longer are included.

[Corrective Action]

None

- The **Wait for time** job has been moved from the **Criterial jobs** category in the **Select category** combo box of the **New Job Net** window to the **Event wait jobs** category.

[Corrective Action]

If using **Wait for time** jobs, use one of the following categories: **All available jobs to register**, **Basic jobs**, or **Event wait jobs**.

- The "File wait" job has been renamed "Wait for file".

In addition, the procedure for specifying **Monitoring event** in the **Add/Change - Job** window when the Command Wizard is used to create Wait for file jobs has been changed. The settings corresponding to -wait, -delete, and -update in the chkfile and jobschchkfile commands have been eliminated.

However, the previous **Add/Change - Job** window is displayed in the following cases:

- When a file wait job registered using an older version is migrated.
- When the Command Wizard is disabled, a job that specifies -wait, -delete, or -update in the chkfile or jobschchkfile command is registered, the Command Wizard is then enabled, and the **Add/Change - Job** window is displayed. (*1)
- When a client is connected to an older version server.

[Corrective Action]

None

However, by using the procedure above (*1), you can display the previous **Add/Change - Job** window and change the settings.

- The types of icons displayed in the icon selection area when you have selected **Basic jobs** in the category selection area in the **New Job Net** window have changed as follows:

Before	After
Execute command	Execute command
Send message	Send message
Start service	Determine File Existence
Stop service	Determine Job Net Variable
Check service status	Start service
File wait	Stop service
Backup cooperation	Check service status
Check log file	Wait for file
Wait for time	Wait for Message Event
	Backup cooperation
	Check log file
	Wait for time
	Wait until Specified Time

- The **Batch transfer the CSV files for faster processing** setting is specified as an initial value in the **Systemwalker Operation Manager Import** and **Systemwalker Operation Manager Export** windows. Import and export can no longer be canceled when this setting is specified.

[Corrective Action]

To enable cancellation during import and export that was available previously, clear **Batch transfer the CSV files for faster processing**. It is no longer possible to cancel import and export for individual CSV files when this setting is specified.

- The **Variable parameters** item in the **Previous log** tab of the **Monitor - Job** window has been integrated into **Job net variable** and the display format has been changed.

[Corrective Action]

None

- The maximum length of a job definition variable value that can be specified in the **Job Definition Variables** window has been extended from 200 bytes to 512 bytes.

[Corrective Action]

None

- Job definition variables, variable parameters, and job net variables can now be used as variable values for **Environment variables** in the **Detail information** tab of the **Add/Change - Job** window. Therefore, if a string in the format "*@variable name@*" exists as a variable value in the environment variables and there is a job definition variable, variable parameter, or job net variable with the same "variable name", the "*@variable name@*" part is replaced with the variable value before the job is executed.

Strings in the format "*@variable name@*" for which no job net variable name has been set are treated as normal strings.

[Corrective Action]

Change the variable names to be used for job definition variables and variable parameters.

- If there is a string the same as the variable name of a job net variable(*2) automatically set by the system as a definition item (*1) in the **Add/Change - Job** window, the string is treated as a variable for replacement.

*1: Applicable definition items in the **Add/Change - Job** window

- **Command**
- **Parameters**
- **Directory**
- **Request host**
- **Queue name**
- **Effective user name**
- **Standard output file**
- **Standard error output file**
- Variable values in **Environment variables**

*2: Content replaced by a job net variable set automatically by the system

Variable name	Replaced content
@.PROJECT@	Project name
@.JOBNET@	Job net name
@.JOBNAME@	Job name
@.SUB_SYSTEM@	Subsystem number
@.MASTER_PROJECT@	Master project name

- The status of the copy destination job net when a job net has been copied using **Copy, Paste, and Reuse** on a Systemwalker Operation Manager client has been changed.

[V13.3.0/V13.3.1 or earlier]

"Waiting"

[V13.8.0 or later]

"Disabled"

[Corrective Action]

To change the status to "Waiting", **Enable** the copy destination job net.

- The end codes for the following messages displayed in the **Job History** window have been added or changed.

passed (The job has been passed.)

The end code "0", "248" or "249" is now displayed.

cancel end (The job has been canceled.)

The end code "248" or "249" is now displayed in addition to the traditional end code "256".

[Corrective Action]

None

- The execution result when the chkfile/jobschchkfile, jobschchecklog, or jobschchecktime command terminates normally is now sent to the standard output.

[Corrective Action]

None

- Additional control statement types are now output by the jobschprint -r command.

[Corrective Action]

To use output control statements in a version earlier than V13.8.0, delete the added control statement information.

[Added control statement information]

Job net control statements: copystart, jobnetsavenumber

Job control statement: netvar_prefix

Incompatible items in Job Execution Control

- When the Systemwalker User Management function is used, if the logged-in user ID is a Systemwalker common user, the **Enter Password of Connected Host** window for specifying user ID and password will be displayed when selecting "Job" or "Queue" in the **Job Selection** window with the Systemwalker Operation Manager client. If the operating system user is specified and authenticated in this window, you can access job information owned with the logged-in user ID that you specified.

Also note that monitoring and operations on the **View Job Status/Operate** window or the **View Queue Status/Operate** window are performed under the privileges of generic users even when the user ID specified in the **Enter Password of Connected Host** window is the operating system administrative user.

[Corrective Action]

None

Once the user ID and password are specified, those are re-used unless the client logout is performed.

If the logged-in user is the administrator user, authentication is not required in this case even when the Systemwalker User Management function is used. And monitoring and operations on the **View Job Status/Operate** window or the **View Queue Status/Operate** window can be performed under the administrator privileges.

- A startup account for Job Execution Control service has changed to a local system account.

Because of this, jobs are executed under the privilege of the Job Execution Control startup account (local system account) if the **Execute jobs under the respective job owner's authority** check box is not selected in the **Define Operating Information** window - **Options** sheet.

Perform corrective actions if necessary.

[Corrective Action]

Change the startup account for the Job Execution Control to the one that was set in the previous version before upgrading to V13.8.0.

- A check of the character type is now performed on the access name specified in the JCL file statement.

Characters included in access names must meet the following conditions:

- Only alphanumeric characters and "_" (underscores) are used
- The first character is not a numeral

[Corrective Action]

Modify any access names you are specifying that do not fulfill the above conditions.

- If performing an upgrade installation from an earlier version, the default value for the startup mode of job processes is now the job object mode.

If the startup mode of job processes prior to the upgrade was trace mode, this will also be changed to job object mode. The change from trace mode to job object mode means that the following functions are no longer available:

- mjptree command

[Corrective Action]

Clear the **Enable job object mode** check box in the **Options** sheet of the **Define Operating Information** window to return to trace mode. The mjptree command will be available again once trace mode is restored.

- Local jobs and distributed execution jobs that set a user not existent in the submitting server as the effective user now return an error at submission and not at execution. [UNIX]

[Corrective Action]

None

- If the number of processes performed with generic user privileges has reached the limit value for the Linux kernel, the behavior of this job for the user to execute a job have been changed as follows. [Linux]

[V13.3.0/V13.3.1 or earlier]

Executed with superuser rights.

[V13.8.0 or later]

Executed with generic user privileges.

[Corrective Action]

None

- If writing to the job execution history information (<date on which the log file was created>.log) fails, a message indicating that writing failed (shown below) is now output to the event log. [Windows]

- MpMjes: WARNING: 1646
- MpMjes: WARNING: 1647
- MpMjes: WARNING: 1648
- MpMjes: WARNING: 1649
- MpMjes: ERROR: 1650

Refer to the *Systemwalker Operation Manager Message Guide* for information on message bodies

[Corrective Action]

None



Incompatible items in Master Schedule Management

- It is now possible to start carried over job nets in the past working days if all the following conditions are met:
 - The **Execute at** option (single startup) is selected.

- There is a message to being waited for.
- The **Startup on power-on if power is off during scheduled execution** check box is selected.
- The **Wait for startup time** check box is not selected.

[Corrective Action]

None

- It is no longer necessary to specify the service logon account name in the stemregservice command option. [Windows]

Incompatible items in client functions

- ".NET Framework" is now required when the client function is installed or uninstalled, and when the client function is used.

Refer to "Installing and uninstalling the .NET Framework" in "Notes Prior to Installation" of the *Systemwalker Operation Manager Installation Guide* for the method to install the .NET Framework.

[Corrective Action]

None

- Incompatible item in the **Select Schedule Pattern Information** window

The **Select Schedule Pattern Information** window is automatically closed when starting the **Schedule Pattern Information** window by selecting the **New** or **Open** button from the **Select Schedule Pattern Information** window.

[Corrective Action]

None

- Operation confirmation for groups, job nets, or jobs for the following client functions is now enabled by default:

- Systemwalker Operation Manager clients
- Multi-server monitoring clients
- Master Schedule Management monitor clients

If an upgrade installation is performed, the settings made for operation confirmation in the previous version are inherited.

[Corrective Action]

Adjust the settings in the following windows to disable operation confirmation:

- For the Systemwalker Operation Manager clients and Master Schedule Management monitor clients
 1. Select **Tool >> Confirmation Settings** in the Systemwalker Operation Manager client.
 2. Adjust the settings in the **Confirmation Settings** window.
- For multi-server monitoring clients
 1. Select **Options >> Confirmation Settings** in the **Job Nets Management** window.
 2. Adjust the settings in the **Confirmation Settings** window.

Incompatible items when linking to Systemwalker Centric Manager

- When directly displaying the **Monitor Job Net** window of the job net that has terminated abnormally while linking to Systemwalker Centric Manager V13.4.0 or later, the window to be displayed has changed to the **Monitor Job Net** window of Web Console.

However, if a Windows user is logged in to the Systemwalker console, the window to be displayed is the **Monitor Job Net** window of the Operation Manager client function that is running on the same Windows system where the Systemwalker console is installed.

[Corrective Action]

None

- When starting the Operation Manager Web Console or Systemwalker Operation Manager clients while linking to Systemwalker Centric Manager, prior to calling these functions, a process for using port numbers of the Systemwalker Operation Manager common service (JMSRV) has been added.

Refer to the *Systemwalker Operation Manager Installation Guide* for details on port numbers.

[Corrective Action]

None

Incompatible items when using Systemwalker Operation Manager from a Web browser

- It is no longer possible to browse calendar registration information from the Web browser (Web Console).

[Corrective Action]

To view calendar registration information, use the **Systemwalker Operation Manager** window.

- The "omcgisv.exe" process for the Web linkage function no longer exists as this function has been changed to the Web Console.

[Corrective Action]

None

Incompatible items with messages

- The texts of the following messages have been changed:

- MpJobsch: ERROR: 0004
- MpJobsch: ERROR: 0101
- MpJobsch: ERROR: 0313
- MpJobsch: ERROR: 0316
- MpJobsch: ERROR: 0393
- MpJobsch: ERROR: 0394
- MpJobsch: ERROR: 0397
- MpJobsch: INFO: 1004:
- MpJobsch: INFO: 1014
- MpJobsch: INFO: 1101
- MpJobsch: INFO: 1309
- MpJobsch: INFO: 1313
- MpJobsch: INFO: 1316

- MpJobsch: INFO: 1393
- MpJobsch: INFO: 1394

[Corrective Action]

If the message text is used by application programs or monitoring programs, replace the old message text so that the new message text is recognized.

- In the message bodies below, "monitor_hosts" has been changed to "monitor_hosts_ex":
 - ERROR: Failure in getting tree data for monitor_hosts
 - ERROR: get tree data for monitor_hosts
 - ERROR: monitor_hosts file access error
 - ERROR: monitor_hosts file open error
 - monitor_hosts data get error

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

- The file name displayed in the message below has been changed from "monitor_hosts" to "monitor_hosts_ex":
 - MpJobsch: WARNING: 0279
 - MpJobsch: WARNING: 4279

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

Refer to the *Systemwalker Operation Manager Message Guide* for information on message bodies.

- The message of the following source name has not been output.
 - F3FMshs
- The message of the following source name has been output.
 - AHS
 - F3FMwsc_OMGR

[Corrective Action]

If an application program or monitoring program uses any of the message bodies above, change the program to recognize the new message body.

Incompatible items for installation function

- Under a specific condition, it is no longer necessary to restart a system after installation, and Systemwalker Operation Manager automatically starts when the installation is complete.
- If any of the conditions below is met, it is necessary to restart the system as it did before:
- If the service pack is not applied in the Windows Server 2003 STD/Windows Server 2003 DTC/Windows Server 2003 EE:

- For operating systems earlier than Windows Server 2003 STD/Windows Server 2003 DTC/Windows Server 2003 EE
- A system has Systemwalker Centric Manager installed.
- Not a new installation
- A system has the Microsoft Visual C++ 2005 Redistributable package installed, and the condition for requiring startup is satisfied because the version is earlier than that bundled in the product.

[Corrective Action]

None

Incompatible items in monitored host definition files

File names of the monitored host definition files, and the file extensions, have been changed:

Before	After
monitor_hosts	monitor_hosts_ex
*.mhs	*.mhz

[Corrective Action]

When using the above files, change them to reference the new file names.

Maximum length is changed when specifying the IP address within the calendar destination host definition file

The maximum length of the IP address specified in the file defining the host that reflects calendar information (calendar destination host definition file "calcphost.def"), when changing the calendar with the calendar's automatic reflection function in enabled status, has been extended during cluster operations.

Max length of the IP address before change	Max length of the IP address after change
15 bytes	45 bytes

[Corrective Action]

None

Incompatible items in display on Windows servers/clients

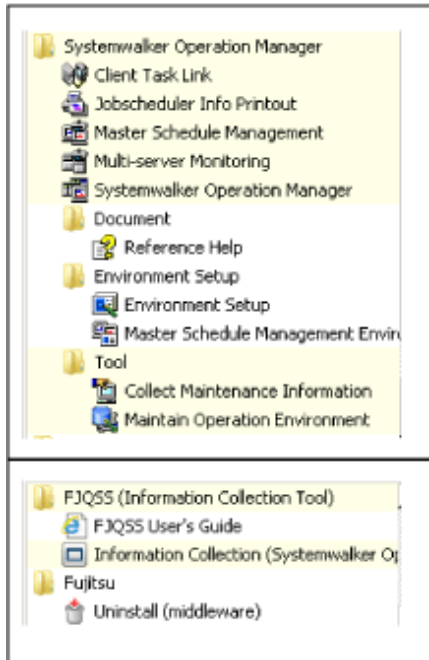
The configuration of the **Start** menu (**Start** screen) to be registered when Systemwalker Operation Manager is installed has been changed in the following cases.

- When upgrading from Windows Server 2008 or Windows 7 or earlier to Windows Server 2012 or Windows 8

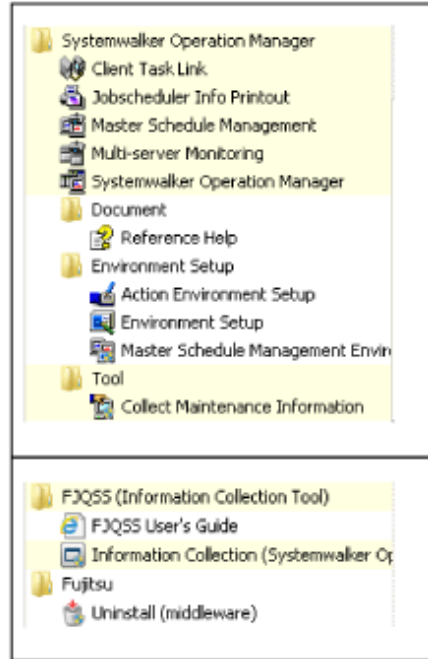
Note that the icon images displayed in each menu and their names have not been changed.

Menu configuration applicable before upgrade

[Start] menu for Windows Server 2008
(If the installation type is [Server].)



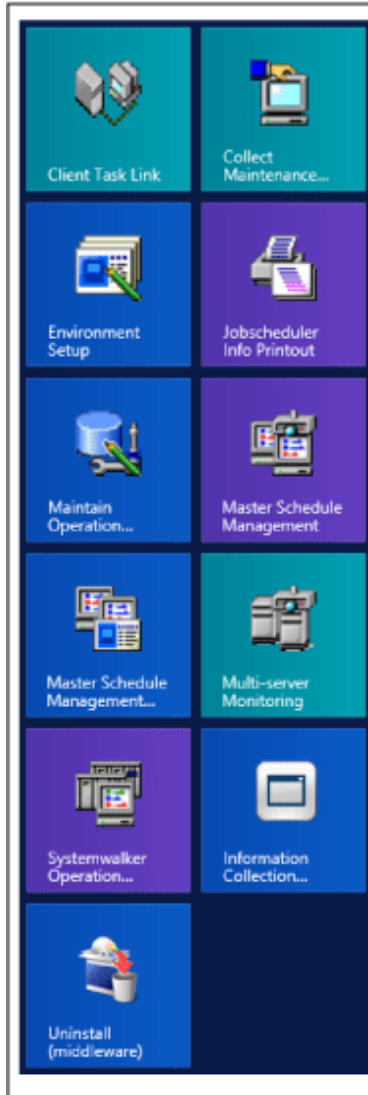
[Start] menu for Windows® 7
(If the installation type is [Client].)



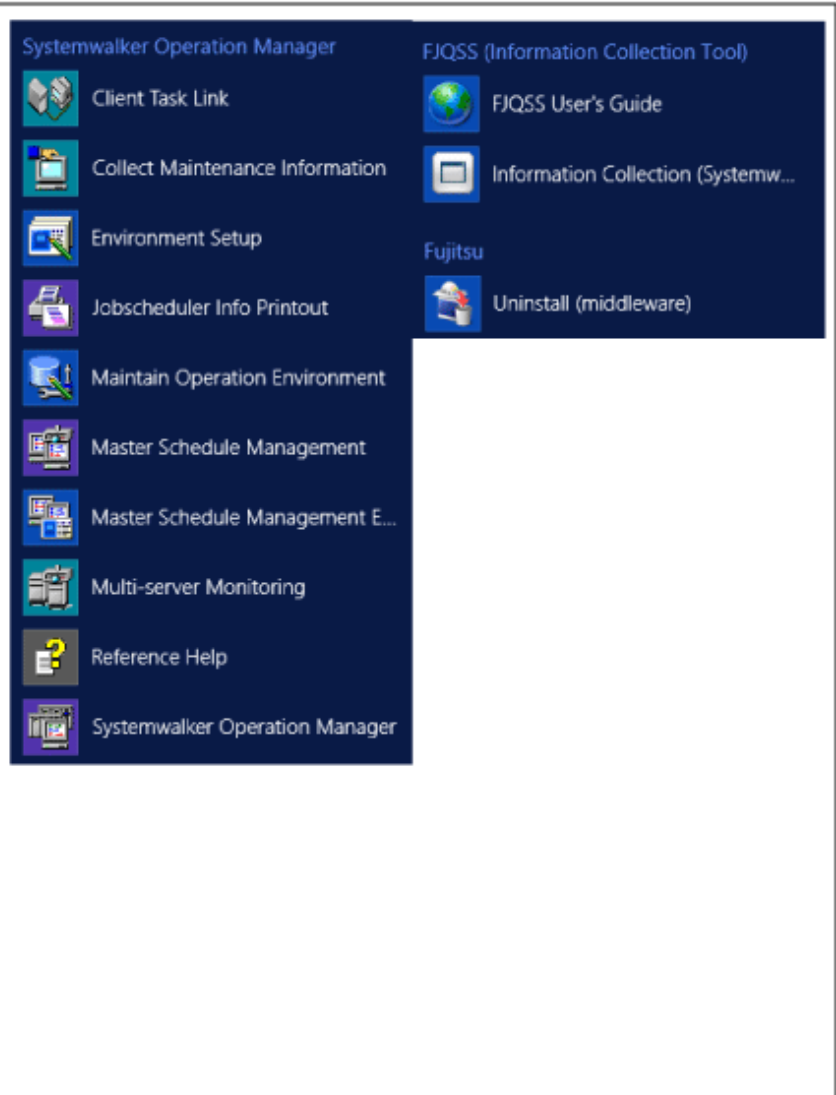
Menu configuration applicable after upgrade

[Start] / [App] windows for Windows Server 2012
 (If the installation type is [Server].)

[Start] windows

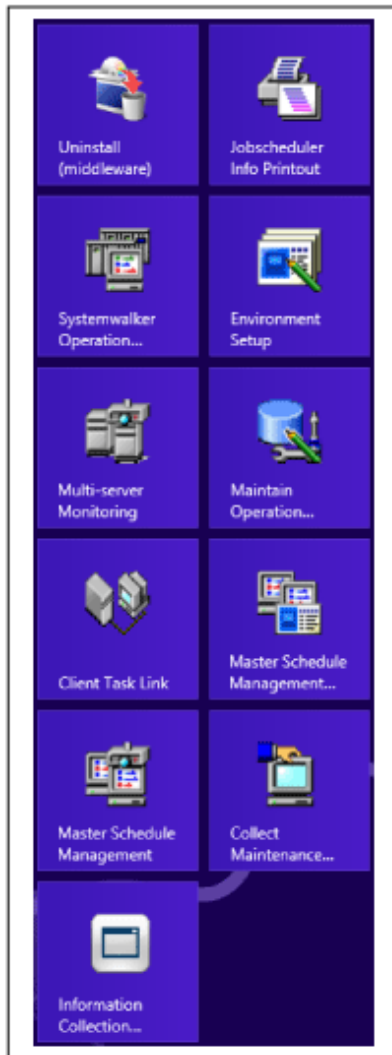


[App] windows



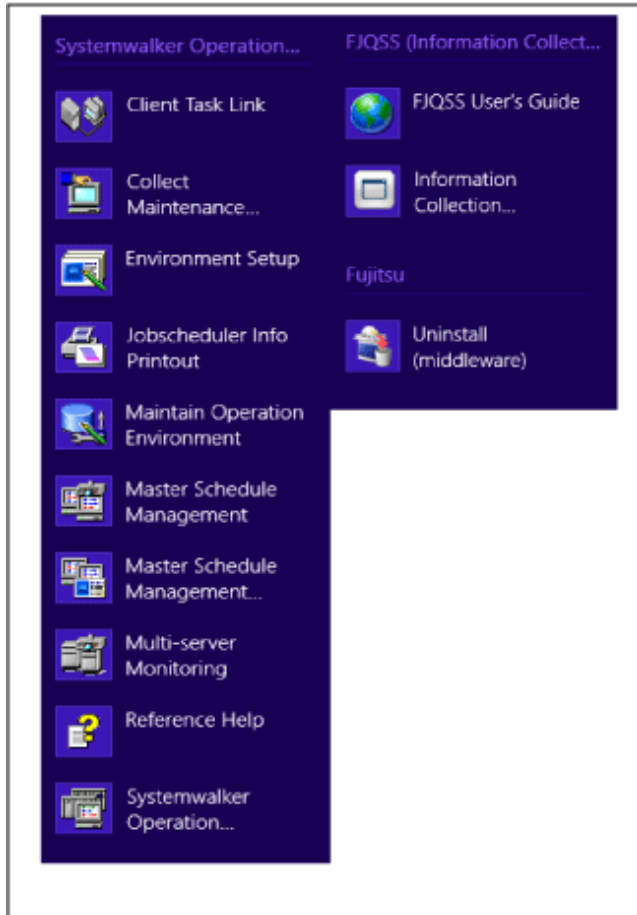
[Start] windows for Windows® 8
(If the installation type is [Client].)

[Start] windows



[App] windows for Windows® 8
(If the installation type is [Client].)

[App] windows



[Corrective Action]

None

Information

Customizing the Start screen on Windows Server 2012 and Windows 8

- User-defined grouping is enabled by dragging and dropping icons in the **Start** screen.
- The **Start** screen can be zoomed out by scrolling the mouse wheel backward while pressing the **Ctrl** key. Then, you can select an icon group and change its name (or name it).

Furthermore, you can check which shortcut belongs to which product by right-clicking on the relevant shortcut and selecting **Open file location** from the context menu on the bottom of the screen. The Explorer displayed shows the corresponding product name.

Incompatibilities during installation [Windows version]

- The following symbols and spaces are not supported to use for the installation directory. When any of these are specified, the behavior has changed as follows:
 - !"#%&'()*+,-./;<=>?@[^_`{|}

[Before]

The installation continues.

[After]

Installation is interrupted, and the following error message is displayed:

Only alphanumeric characters are available for the Installation destination directory.

[Corrective Action]

Click **OK** in the dialog box to reenter the installation directory name. Installation processing will continue when the directory name is correctly entered.

Incompatibilities relating to stopping daemons at shutdown in Red Hat Enterprise Linux 7 [Linux]

The following incompatibilities apply when daemons are stopped at shutdown:

[V13.3.1 or earlier]

When the operating system is shut down, all Systemwalker Operation Manager daemons are automatically stopped normally.

[V13.8.0 or later]

In Red Hat Enterprise Linux 7, the operating system may need to be stopped or restarted in the cases below even if the daemons are configured to stop automatically when the operating system is stopped. In these cases, manually execute the `poperationmgr service/daemon` termination command in advance to stop the Systemwalker Operation Manager daemons.

- The daemons were manually restarted (using the `poperationmgr/soperationmgr` command, for example).
- The daemons were restarted using daemon control in the environment setup window.
- The backup command was executed.
- A policy was distributed with "Apply once" specified.

Incompatibilities relating to changing the output file and work directory in a Solaris environment [Solaris]

- The following directories for sending output files in a Solaris environment have been changed:

- Output log file for the `swcolinf` maintenance information collection command

[V13.3.0/V13.3.1 or earlier]

`/tmp/swcolinf.log`

[V13.8.0 or later]

`/var/tmp/swcolinf.log`

- Output log file used at silent installation

[V13.3.0/V13.3.1 or earlier]

`/tmp/swsilent.log`

[V13.8.0 or later]

`/var/tmp/swsilent.log`

- Output log file used when uninstallation of OMGR fails

[V13.3.0/V13.3.1 or earlier]

`/tmp/systemwalker_swopeuninstall.log`

[V13.8.0 or later]

/var/tmp/systemwalker_swopeuninstall.log

[Corrective Action]

None

- The work directory used for file compression/expansion processing by the Task Link function has been changed from /tmp (memory) to /var/tmp (disk).

As a result, performance during execution of server file compression/expansion jobs may deteriorate, depending on the file size, number of files, and machine performance. Thoroughly verify performance when using file compression/expansion provided by the Task Link function.

[Corrective Action]

None

The customization file for the daemons bulk start has been changed [UNIX]

The customization file for the daemons bulk start has been changed.

Specifically, the first command line to start the communication infrastructure function has been deleted, and the number "xx" specified in the "DAEMONxx (Lo)" has been changed.

The customization file for the daemons bulk start has been stored in:

/etc/opt/FJSVftlo/daemon/custom/rc3.ini

[Corrective Action]

None

Incompatible items in Web Console

- The initial port number used by the Web Console has changed.

Thus, the URL specified when connecting to the web console function has changed.

[V13.6.1 or earlier]

The initial port number used by Web console is 18443.

URL entered in the WWW browser:

http://Host name of Systemwalker Operation Manager server:18443/
Systemwalker-omgr/login.op

[V13.7.0 or later]

The initial port number used by Web console is 9900.

URL entered in the WWW browser:

:http://Host name of Systemwalker Operation Manager server:9900/
Systemwalker-omgr/login.op

[Corrective Action]

If the port number is already used, change unused port number.

- The procedure for changing the port number used by the Web Console function has changed.

To change the port number used by the Web console, the stopping/starting Systemwalker Operation Manager is required before and after changing.

For the procedure how to change the port number of the Web console, refer to the "Changing Port Numbers" in the "Systemwalker Operation Manager Installation Guide"

[Corrective Action]

None

- In the Web console, the behavior of the mouse pointer icon that appears while selecting menu and tab, and an operation is running on the server has changed.

[Before changing]

It's an hourglass.

[After changing]

The arrow remains.

[Corrective Action]

By displaying "Waiting" image information, determine whether the process is running or not.

2.4 Migrating from V13.8.0 to V17.0.0

This section lists incompatibilities associated with migration from Systemwalker Operation Manager V13.8.0 to Systemwalker Operation Manager V17.0.0.

2.4.1 Incompatible Items

Removed features

The following features have been removed:

- Single sign-on feature linking with ServerView Operations Manager
- User Management used the Systemwalker Authentication Repository

In addition, the following features are no longer available:

- Systemwalker Common User Management
- Systemwalker Single sign-on

If the user/group definitions on the Systemwalker authentication repository is used to set project permission in the previous versions, the target definition will be deleted and registered when you migrate to this version. The same is true for any of the following migration methods:

- Upgrade installation
- Distribution of policy information
- swtrans command

Incompatible items in the Daemon Stop when Shutdown in Red Hat Enterprise Linux 7 [Linux]

The following incompatibilities are for daemon stop on shutdown:

[V13.8.0]

In Red Hat Enterprise Linux 7, the operating system may need to be stopped or restarted in the cases below even if the

daemons are configured to stop automatically when the operating system is stopped. In these cases, manually execute the

operationmgr service/daemon termination in advance to stop the Systemwalker Operation Manager daemons.

- The daemons were manually restarted (using the `poperationmgr/soperationmgr` command, for example).
- The daemons were restarted using daemon control in the environment setup window.
- The backup command was executed.
- A policy was distributed with "Apply once" specified.

[V17.0.0 or later]

When the operating system is stopped, all daemons in the Systemwalker Operation Manager are stopped automatically and successfully.

Incompatible items for the startup process of the Systemwalker Operation Manager [Linux]

The following incompatibilities are for the startup process of the Systemwalker Operation Manager.

[V13.8.0]

The startup process is being performed by SysVinit compatibility control.

[V17.0.0 or later]

The startup process is being performed by system control.

Incompatible items for the Power Control

Power control feature linking with power control devices is no longer available on Solaris and Linux.

[Corrective Action]

None

Incompatible items for the access rights

Defining user restrictions

For new installation, the user restriction definition (Note) defaults have changed.

Note:

Restricting only users in the `swadmin` group defined in the **Define Operation Manager Shared Parameter** window, to use the command functions for starting demand jobs, job nets of Job Execution Control Attributes, and job schedule.

[V13.8.0 or earlier]

Installed with User Restriction definitions disabled (Unspecified).

[V17.0.0 or later]

Installed with the user restriction definition enabled (Specified).

[Corrective Action]

Change the user restriction definition.

For the user restriction definition, refer to the "Define User Restrictions" in the "*Systemwalker Operation Manager Installation Guide*".

Exit information [Windows]

The access rights to the file and the storage directory (*Systemwalker installation directory*\MpWalker.JM\bin) of the exit program has been changed before and after the following operations:

- Upgrade from Old to Current version
- Changing the Definition of User Restrictions (Disable -> Enable/Enable -> Disable)

[V13.8.0 or earlier]

The permissions are not changed.

[V17.0.0 or later]

In both exit program file and the storage directory, the normal user/swadmin will no longer have write permission.

[Corrective Action]

For deploying exit program, use system administrator (Users/superusers in the Administrators group) privileges.

Incompatible items for Systemwalker Operation Manager distribution [Login] window

For the specifying distribution destinations/login user, the following changes have been made:

- **Distribution specification** is unchecked.

[Client on V13.8.0 or earlier]

[Windows]

Set the server (on which the Systemwalker Operation Manager environment settings client is running) logging into the desktop.

[UNIX]

Not optional.

[Client on V17.0.0 or later]

Set the server connecting to the Systemwalker Operation Manager environment settings client.

- **Log in user specification** is unchecked.

[Client on V13.8.0 or earlier]

[Windows]

Set the user ID (which run the Systemwalker Operation Manager environment settings client) logging into the desktop.

[UNIX]

Not optional.

[Client on V17.0.0 or later]

Set the user ID connecting to the Systemwalker Operation Manager environment settings client.

Incompatible items for the Job Scheduler

- The time waiting job (jobschchecktime command) registered in Job net is now waiting for the scheduled start date of Job net.

[Before]

The time waiting job waits for the time of the day the job is started.

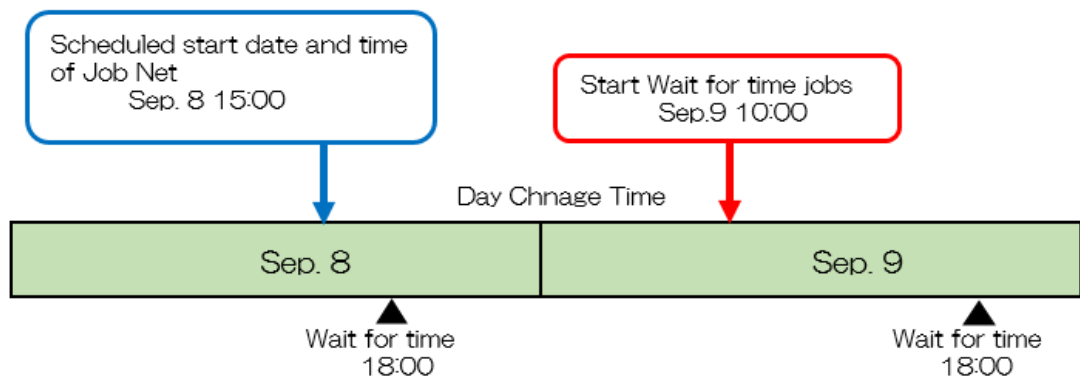
[After]

The time waiting job waits for the scheduled start date of Job net.

The following are examples:

- Scheduled start date and time of Job net: September 8, 15:00
- Waiting time of the time waiting job: 18:00

- Start date and time of the time waiting job: September 9, 10:00



- [Before]

If the day change time is exceeded, the meeting time will be September 9, 18: 00.

In the example above, the time waiting job waits until 18: 00 at September 9.

- [After]

Even if the daily change time is exceeded, the meeting time is 18: 00, which is September 8 of the scheduled start time of Job net

In the example above, the time waiting job ends immediately because the time of September 8, 18: 00 has passed.

[Corrective Action]

None

- For the date and time, the job displayed in the **Job History** window and the job start and end dates and times displayed in the **Job Net History** window, even if a large number of job nets are registered, the time is improved to be more accurate.

[Before]

The date and time obtained by the job scheduler are displayed for the job net, start and end time of the job, etc.

[After]

The start and end times of the job net are displayed by the job scheduler, and the start and end times of the job obtained by the job execution control are displayed.

[Corrective Action]

None

- When changing job net and job, the behavior of jobs, child job nets, and link job nets has changed.

[V13.8.0 or earlier]

Even if the stop and disable states are set, they are changed to the execution waiting state when changing.

[V17.0.0 or later]

If the stop and disable states are set, the state before the change is retained when changing.

[Corrective Action]

None

- In the **Job Net Management** window, the icon (First part of the column of **Job net name**) representing the original job net (Job Net/ Parent Job Net/Child Job Net/Link Job Net), they may become identical to

usual job net (Each of Job Net/Parent Job Net/Child Job Net/Link Job Net) icon.

With depending on the timing of **Copy and startup**, the type of the job net icon that is the same as the normal job net icon varies. Shown below:

When Copy and startup in the Job Net Properties window is set and execute the copy and startup

- Child Job Net (Original)
- Link Job Net(Original)

When Copy and startup is executed (Execute the jobschmsgevent command with the -c option) due to the occurrence of a message event

- Job Net (Original)
- Parent Job Net (Original)
- Child Job Net (Original)
- Link Job Net (Original)

[Corrective Action]

None

- To the child job net of original job net, you can now operate **Pause, Continue, Disable, Enable** in the **Operation** menu.

[Corrective Action]

None

- To the child job net of original job net, you can now operate the option of pause/continue/disable/enable of the jobschcontrol command.

[Corrective Action]

None

- To the child job net of original job net, you can now operate the option of pause/continue/disable/enable by the job net operations API, job net operations API/EE, job net operations (start parameter specification) API and job net operations (start parameter specification) API/EE.

[Corrective Action]

None

Incompatible items for Importing/Exporting from GUI

The following behavior changes have been made when importing/exporting from the GUI

- The error messages and message dialogs for importing/exporting job net definition CSV files from the GUI have changed.
- For importing, import of all job net definition CSV files is now aborted if there is an error in the process of processing the job net definition CSV files.
- For exporting, job net definition information is processed on a project-by-project basis, so if an error occurs during processing, the job net definition information for the project in error is not output. If a subsystem is specified, job net definition information for the project that did not result in an error is output.
- If the same file name exists in the destination directory, it is now overwritten.

[Corrective Action]

If you want to use specifications of Systemwalker Operation Manager V 13.8.0 or earlier, you can switch between them in the client-side definition file (jobschr.ini). For the details, refer to the "Importing and Exporting from the GUI (When connecting to the V 13.8.0 or earlier servers) " in the "Systemwalker Operation Manager User's Guide".

Incompatible items in the mjsview command and operation record information files for Job Execution Control

The subsystem numbers of the request source and execution destination are now output to the mjsview command execution result and the operation record information files for Job Execution Control.

- When a network job is submitted to any subsystem number, the subsystem number of the execution destination is now output to the mjsview command execution result on the request source server.
- When a network job or distributed execution job is submitted, the subsystem number of the request source is now output to the mjsview command execution result on the execution server.
- When the event type is "job submission event" or "job completion event" in the job record of the operation record information files for Job Execution Control, the subsystem numbers are now output.

[Corrective Action]

None

Incompatible items for Job Execution Control

- By changing PATH environment variable of the job execution control daemon, in the destination server for network jobs, the path that is searched for job files has changed. [UNIX]

[Corrective Action]

Enter the full path in the **Command** or **Directory** column of the **Add/Change - Job** window.

- When the data transmission and reception process become unresponsive in the network job operation, the timeout period (in seconds) until the process is interrupted changes. [UNIX]

[V13.8.0 or earlier]

30 seconds

[V17.0.0 or later]

60 seconds

[Corrective Action]

Refer to the "Failed to Execute the Network Job (Error Message:MJS881S is Output)" in the "*Systemwalker Operation Manager Troubleshooting Guide*".

- In the Options sheet of the Define Operating Information window, you can no longer set Execute jobs under the respective job owner's authority. [Windows]

Jobs with the job execution control attribute always execute in job object mode.

Also, the following commands and command options are no longer available:

- Mjptree command
- qsub -nt option

[Corrective Action]

None

- The following changes have been made to the library and header files. [For Linux 64bit]

[V13.8.0 or earlier]

LIB:

libmjes.so

INCLUDE:

mjesapi.h

[V17.0.0 or later]

LIB:

libmjes_x64.so

INCLUDE:

mjesapi_x64.h

The following changes have been made to the library and header files. [For Solaris 64bit]

[V13.8.0 earlier]

LIB:

libmjes.so

INCLUDE:

mjesapi.h

[V17.0. or later]

LIB:

libmjes_64.so

INCLUDE:

mjesapi_64.h

Incompatible items when linking with Systemwalker Centric Manager

When the client features of the Systemwalker Operation Manager are installed, the window of the Systemwalker Operation Manager that starts up has been changed by directly displaying the monitor window of the job net that ended abnormally, from the monitor window of Systemwalker Centric Manager.

[V13.8.0]

The Job net monitoring window of the web console is displayed.

[V17.0.0 or later]

The **Monitor - Job net** window of the web console is displayed.

[Corrective Action]

You can display the job net monitoring screen of the web console by setting mpjobweb.ini file.

For the details of setting, refer to the "Directly Displaying the Monitoring Window for the Abended" in the "*Systemwalker Operation Manager Installation Guide*"

Incompatible items in client functions

The function that displays and updates the job selection tree per project and that was provided for avoiding the restrictions that are not remedied in PG91113 is operated based on the settings in the client operating environment file (Jobschr.ini). These operations have been changed.

As a result, only one project can now be expanded at a time in the job selection tree of the Systemwalker Operation Manager client.

Refer to "Client Response Performance" in the *Systemwalker Operation Manager User's Guide* for details.

[Corrective Action]

None

Incompatible items in the Web console

- The port number used by the web console is no longer listed in the services file.

[V13.8.0 or earlier]

The port number used by the web console is automatically listed in the services file when installation.

[V17.0.0 or later]

The port number used by the web console is no longer listed in the services file.

Note that you don't need to add it manually.

[Corrective Action]

None

- Added the settings required to monitor the web console from the Systemwalker Centric Manager.

For the details of setting, refer to the "Directly Displaying the Monitoring Window for the Abended" in the "*Systemwalker Operation Manager Installation Guide*"

Incompatible items for Defining Encrypted Communication (HTTPS communication) of the Web Console/Web API

The certificate/key management environment used to define encrypted communications has changed.

[V13.8.0 or earlier]

SMEE and SCLR libraries are used.

[V17.0.0 or later]

OpenSSL libraries are used.

Systemwalker Operation Manager version 17.0. 0 or later does not install the SMEE or SCLR libraries.

The Certificate/Key Management Environment constructed by the "Definitions for Encrypted Communications (HTTPS Communications) for the Web Console" in the "*Systemwalker Operation Manager Installation Guide*", they are not used in the Systemwalker Operation Manager V17.0.0 or later.

[Corrective Action]

Refer to the "Definitions for Encrypted Communications (HTTPS Communications) for the Web Console/ Web API" in the "*Systemwalker Operation Manager Installation Guide*" of the Systemwalker Operation Manager V17.0.0 or later and construct the Certificate/Key Management Environment.

When migrating from the certificate/key management environment of the Systemwalker Operation Manager V13.8.0 or earlier, refer to the "Migrating Certificate/Key Management Environment" in the "*Systemwalker Operation Manger Upgrade Guide*".

Incompatible items for messages output during installation and uninstallation [UNIX]

The following information and messages are no longer output:

- Information about the list of files that are being deployed during the installation process
- The following confirmation message before uninstalling

```
<< Precautions >>
Cannot delete the following products. They are in use by another product.

- SMEE/SCLR

To delete these products, follow the instruction provided in the manual.
Refer to the section "Notes after Uninstallation" in Installation Guide for details.

Do you want to continue with the uninstallation of this package?
[y,n]
```

- The following message after uninstalling

```
<< Precautions >>
To delete the products indicated below, follow the instruction provided in the manual.
Refer to the section "Notes after Uninstallation" in Installation Guide for details.

- SMEE/SCLR
```

[Corrective Action]

If the message body is used by an application program or monitoring program, change it to recognize the new message body.

Incompatible items with the messages

- The following messages are no longer output:[EE]
 - MpJobsch: INFO: 1254
 - MpJobsch: ERROR: 0254

[Corrective Action]

None

- The body of the following message has changed:
 - MpJobsch: ERROR: 0101
 - MpJobsch: ERROR: 0316

[Corrective Action]

If the message body is used by an application program or monitoring program, change it to recognize the new message body.

- The following source name messages are no longer printed:
 - F3FMwsc_OMGR

[Corrective Action]

If the message body is used by an application program or monitoring program, change it to recognize the new message body.

- The following source name messages are now printed:
 - PCMI
 - F3FMpcmi-STFJMJAVAEE [Windows]
 - F3FMglassfish5-STFJMJAVAEE [Windows]
 - GLASSFISH5 [UNIX]

[Corrective Action]

None

Refer to the "*Systemwalker Operation Manager Message Guide*" for details on changes to messages.

2.5 Migrating from V17.0.0 to V17.0.1

There are no incompatible items when migrating from Systemwalker Operation Manager V17.0.0 to Systemwalker Operation Manager V17.0.1.

Appendix A Functional Differences between Versions and Levels

The functions provided vary depending on the version and level of Systemwalker Operation Manager. The functional differences between versions and levels are shown in the table below.

[Windows version]

Classification	Functionality	Details	V13.x	V17.x	Remarks
Security	Extended User Management function		N2	N2	
	Access control		Y4 (*1) V13.2.0	Y1	*1: Registration permissions have been added.
	Restricting execution users		Y2 V13.2.0	Y1	
	Audit logs		Y2 V13.2.0	Y1	
	Systemwalker authentication repository		Y2 V13.8.0	N1	
Power schedule	Server power on/off control	Single server power control	Y1 (*1)	Y1	*1: Windows x86 servers only.
		Multi-server power control	Y1 (*1)	Y1	*1: Windows x86 servers only.
Calendar	Calendar		Y1	Y1	
		Settings to reflect rescheduling changes to holiday definitions	Y2 V13.2.0	Y1	
Job scheduling	Automatic job execution/	Batch jobs	Y1	Y1	
		Systemwalker script	Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
	Job management	Recovery jobs	Y1	Y1	
		Conditional branching for completion codes	Y1	Y1	
		Termination processing job nets	Y3 (*1) V13.8.0	Y1	*1: The registration destination project has changed.
		Normal attribute job nets	N2	N2	
		CSV entry support for definitions	Y1	Y1	
		File wait command	Y4 (*1) V13.8.0	Y1	*1: Wait for creation/deletion/update can be used, wildcard character can be specified
		Check log file command	Y1	Y1	
		Time (specified time) wait command	Y4 (*1) V13.8.0	Y1	*1: Wait until Specified Time can be used
		Variable parameters (job net variable)	Y2 (*1) V13.3.0 Y4 (*2) V13.8.0	Y1	*1: Variable parameters can be specified *2: Job net variable can be specified
		Project management	Y1	Y1	
		Group function	Y1	Y1	
		Job net layering	Y1	Y1	
		Message linkage	Y4 (*1) V13.2.0	Y1	*1: Message linkage jobs can be carried over.

Classification	Functionality	Details	V13.x	V17.x	Remarks
		Job definition variables	Y2 V13.3.0	Y1	
		Linked job nets	Y2 V13.8.0	Y1	
		Wait with OR	Y2 V13.8.0	y1	
		Concurrent execution of job nets	Y2 (*1) V13.8.0	Y1	*1: Concurrent execution using copy and startup is supported
		Memo function for jobs and job nets	Y4 (*1) V13.8.0	Y1	*1: Memos can be searched.
		Day change time of sub system	N2	Y2 V17.0.0	
	Job monitoring and operation		Y1	Y1	
		Multi-server monitoring	Y4 (*1) V13.3.0	Y1	*1: General users are permitted.
		Job operation commands	Y1	Y1	
		Startup days carryover control	Y1	Y1	
		Batch processing of projects	Y2 V13.2.0	Y1	
	Multi-server monitoring GUI		Y1	Y1	
	Job history display		Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
	Jobscheduler printing		Y1	Y1	
	Startup day	Business day	Y2 V13.2.0	Y1	
		Preview display	Y2 V13.8.0	Y1	
Job execution control	Queue control		Y1	Y1	
	Network Job function		Y4 (*1) V13.8.0	Y1	*1: The Schedule Server Name Notification function has been added.
		I/O file transfer	Y2 (*1) V13.8.0	Y1	*1: When executing demand jobs.
	History information output	History information	Y1	Y1	
		Operation record information	Y1	Y1	
	Load Balancing function		Y1	Y1	Continued as the Compatibility function.
	Distributed Execution function		Y4 (*1) V13.8.0	Y1	*1: Schedule Server Name Notification and Submit Failure Notification functions added.
	JCL		Y1	Y1	
	Start mode specification		Y2 V13.8.0	Y1	
Execute jobs on remote machines		N2	Y2 V17.0.0		
Event monitoring		Y1	Y1		
Action management	Action monitoring and operation		Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
	Action execution API		Y1	Y1	
Backup Link			Y1	Y1	ARCserve is required
Start service s/apps	Service Execution function		Y1	Y1	
	Application Execution function		Y1	Y1	
Policy operation			Y1	Y1	
Web	Web Linkage function		N1 V13.8.0	N2	
	Web Console		Y2 V13.8.0	Y4(*2)	*1: Incorporating GlassFish (Deleting communication infrastructure) *2: Internet available
	Single sign-on		Y2(*1) V13.8.0	N1	*1: Systemwalker Single sign-on
	Web API		N2	Y2	
Task Link	File transfer		Y1	Y1	
	File compression/expansion		Y1	Y1	
	File operation		Y1	Y1	
	Application execution		Y1	Y1	
	Remote access control		N1	N2	
	Client power on/off control		Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
Interstage linkage			Y1	Y1 (*1)	*1 Interoperable Work Unit: UTY/CORBA only
Cloud Service linkage			N2	Y2	
High-reliability functions	Support for cluster systems	Microsoft(R) Cluster Service	N1 V13.8.0	N2	EE only
		Microsoft(R) Failover Clustering	Y2 V13.3.0	Y1	EE only
		SafeCLUSTER	N1	N2	EE only
		Sun Cluster	N2	N2	
		MC/serviceGHP serviceG	N2	N2	
		PRIMECLUSTER	N2	N2	
		HACMP PowerHA	N2	N2	
	Backup without stopping		Y1	Y1	
	Server mirroring	Execution server for network jobs	Y1	Y1	
Large-scale systems	Large-scale operations		Y1	Y1	EE only
	Subsystems		Y1	Y1	EE only
Schedule distribution (Master Schedule Management)	Process date management schedule (daily schedule management)	Separated into daily schedules for distributed execution and	Y2 V13.2.0	Y1	EE only Supported only for operations where a single server acts as both the management server and the schedule server.

Classification	Functionality	Details	V13.x	V17.x	Remarks
function)		management on each server			
		Reflects master changes to future schedules	Y2 V13.2.0	Y1	
		Generates schedules for past dates	Y2 V13.2.0	Y1	
	Operation Change function	Enables job definitions to be changed in advance, then reflects them in a batch on the relevant day	Y2 V13.2.0	Y1	
	Carryover control	Action to be taken when the day change time is exceeded, and the execution control for the day's schedule	Y2 V13.2.0	Y1	
Tools	Installation		Y4 (*1) V13.8.0	Y1	*1: No startup account required.
	Common tools	Batch startup and stop	Y1	Y1	
		Batch backup and restore	Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
	Diagnostic/ Maintenance tools		Y1	Y1	
	FJQSS		Y2 V13.8.0	Y1	
Option	Cloud Option		N2	Y1	

Y1: Function exists

Y2: New function

Y3: Incompatibilities exist

Y4: Function has been enhanced

N1: Function has been removed

N2: No function exists

[UNIX version]

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
Security	Extended User Management function		Y1	Y1	
	Access control		Y4 (*1) V13.2.0	Y1	*1: Registration permissions have been added.
	Restricting execution users		Y2 V13.2.0	Y1	
	Audit logs		Y2 V13.2.0	Y1	
	Systemwalker authentication repository		Y2 V13.8.0	Y1	Solaris/Linux only
Power schedule	Server power on/off control	Single server power control	N1 (*1)(*2)	N2	*1: Solaris servers and Linux x86 servers only. *2: Function removed in V13.8.0.
		Multi-server	N1 (*1)(*2)	N2	*1: Solaris servers and Linux x86 servers only. *2: Function removed in V13.8.0.

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
		power control			
Calendar	Calendar		Y1	Y1	
		Settings to reflect holiday definitions	Y2 V13.2.0	Y1	
Job scheduling	Automatic job execution/Job management	Batch jobs	Y1	Y1	
		Systemwalker script	Y1	Y1	
		Recovery jobs	Y1	Y1	
		Conditional branching for completion codes	Y1	Y1	
		Termination processing job nets	N2	N2	
		Normal attribute job nets	Y1	Y1	
		CSV entry support for definitions	Y1	Y1	
		File wait command	Y4 (*1) V13.8.0	Y1	*1: Wait for creation/deletion/update can be used, wildcard character can be specified
		Check log file command	Y1	Y1	
		Time (specified time) wait	Y4 (*1) V13.8.0	Y1	*1: Wait until Specified Time can be used

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
		command			
		Variable parameters (job net variable)	Y2 (*1) V13.3.0 Y4 (*2) V13.8.0	Y1	*1: Variable parameters can be specified *2: Job net variable can be specified
		Project management	Y1	Y1	
		Group function	Y1	Y1	
		Job net layering	Y1	Y1	
		Message linkage	Y4 (*1) V13.2.0	Y1	*1: Message linkage jobs can be carried over.
		Job definition variables	Y2 V13.3.0	Y1	
		Linked job nets	Y2 V13.8.0	Y1	
		Wait with OR	Y2 V13.8.0	Y1	
		Concurrent execution of job nets	Y2 (*1) V13.8.0	Y1	*1: Concurrent execution using copy and startup is supported
		Memo function for jobs and job nets	Y4 (*1) V13.8.0	Y1	*1: Memos can be searched.
		Day change time of system	N2	Y2 V17.0.0	
	Job monitoring and operation		Y1	Y1	
		Multi-server monitoring	Y4 (*1) V13.3.0	Y1	*1: General users are permitted.
		Job operation	Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
		n commands			
		Startup days carryover control	Y1	Y1	
		Batch processing of projects	Y2 V13.2.0	Y1	
	Multi-server monitoring GUI		Y1	Y1	
	Job history display		Y1	Y1	
	Jobscheduler printing		Y1	Y1	
	Startup day	Business day	Y2 V13.2.0	Y1	
		Preview display	Y2 V13.8.0	Y1	
Job execution control	Queue control		Y1	Y1	
	Network Job function		Y4 (*1) V13.8.0	Y1	*1: The Schedule Server Name Notification function has been added.
		I/O file transfer	Y2 (*1) V13.8.0	Y1	*1: When executing demand jobs.
	History information output	History information	Y1	Y1	
		Operation record information	Y1	Y1	
	Load Balancing function		N2	N2	

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
	Distributed Execution function		Y4 (*1) V13.8.0	Y1	*1: Schedule Server Name Notification and Submit Failure Notification functions added.
	JCL		Y1	Y1	*1: Select output such as steps.
	Start mode specification		Y2 V13.8.0	Y1	
	Execute jobs on remote machines		N2	Y2 V17.0.0	
Event monitoring			N2	N2	
Action management			N2	N2	
Backup Link			N2	N2	
Start service s/apps	Service Execution function		N2	N2	
	Application Execution function		Y1	Y1	
Policy operation			Y1	Y1	
Web	Web Linkage function		N1 V13.8.0	N2	
	Web Console		Y2 V13.8.0	Y4(*2)	*1: Incorporating GlassFish (Deleting communication infrastructure) *2: Internet available
	Single sign-on		Y2 V13.8.0	N1	
	Web API		N2	Y2(*1)	*1: Linux only

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
Task Link	File transfer		Y1	Y1	
	File compression/expansion		Y1	Y1	
	File operation		Y1	Y1	
	Application execution		Y1	Y1	
	Remote access control		N2	N2	
	Client power on/off control		Y1	Y1	
Interstage linkage			Y1	Y1 (*1)	Solaris/Linux/Linux for Itanium only *1: Interoperable Work Unit: UTY/CORBA only
Cloud Service linkage			N2	Y2(*1)	*1: Linux only
Workload Organizer linkage			Y1 V13.2.0 only	N2	Solaris only Requires "Workload Organizer"
High-reliability function	Support for cluster systems	Microsoft(R) Cluster Server	N2	N2	
		Microsoft(R) Failover Clustering	N2	N2	
		SafeCLUSTER	N1	N2	Solaris EE only

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
		Sun Cluster*1 Oracle Solaris Cluster	Y1	Y1	Solaris EE only *1: Up to V13.x
		MC/ serviceG HP serviceG	Y1	N2	HP EE only
		PRIMECLUSTER	Y1 V13.2.0(*1) V13.8.0(*2)	Y2 (*2)	EE only *1: Solaris/Linux/Linux for Itanium only. *2: Solaris/Linux only.
		HACMP PowerHA	Y2 V13.2.0	N2	AIX EE only 1:1 operation standby, 2 node mutual standby only
	Backup without stopping		Y1	Y1	
	Server mirroring	Execution server for network jobs	Y1	Y1	
Large-scale systems	Large-scale operations		Y1	Y1	EE only
	Subsystems		Y1	Y1	EE only
Schedule distribution (Master Schedule Management function)	Process date management schedule (daily schedule management)	Separated into daily schedules for distributed execution and management on each server	Y1 (*1)	Y1	EE only *1: Solaris/Linux/Linux for Itanium/HP/AIX.
		Reflects master changes	Y2 (*1) V13.2.0	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
		to future schedules			
		Generate schedules for past dates	Y2 (*1) V13.2.0	Y1	
	Operation Change function	Enables job definitions to be changed in advance, then reflects them in a batch on the relevant day	Y1 (*1) V13.2.0	Y1	
	Carryover control	Action to be taken when the day change time is exceeded, and the execution control for the day's schedule	Y1 (*1) V13.2.0	Y1	
Tools	Installation		Y1	Y1	
	Common tools	Batch startup and stop	Y1	Y1	
		Batch backup and restore	Y1	Y1	
	Diagnostic/		Y1	Y1	

Classification	Functionality	Details	V13.x	V17.x	Remarks
			Solaris Linux Linux for Itanium HP-UX AIX	Solaris Linux	
	Maintenance tools				
	FJQSS		Y2 V13.8.0	Y1	

Y1: Function exists

Y2: New function

Y3: Incompatibilities exist

Y4: Function has been enhanced

N1: Function has been removed

N2: No function exists

Appendix B Conventions Used in This Document and Trademarks

B.1 Abbreviations and Generic Terms Used

- The term "Windows Server 2019 " 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 "Windows Server 2012 R2" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2012 R2 Foundation (x64)
 - Microsoft(R) Windows Server(R) 2012 R2 Standard (x64)
 - Microsoft(R) Windows Server(R) 2012 R2 Datacenter (x64)
- The term "Windows Server 2012" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2012 Foundation (x64)
 - Microsoft(R) Windows Server(R) 2012 Standard (x64)
 - Microsoft(R) Windows Server(R) 2012 Datacenter (x64)
 - Microsoft(R) Windows Server(R) 2012 R2 Foundation (x64)
 - Microsoft(R) Windows Server(R) 2012 R2 Standard (x64)
 - Microsoft(R) Windows Server(R) 2012 R2 Datacenter (x64)
- The term "Server Core" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2022 Datacenter Server Core
 - Microsoft(R) Windows Server(R) 2022 Standard 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 Server 2008" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2008 Standard (x86)/(x64)
 - Microsoft(R) Windows Server(R) 2008 Enterprise (x86)/(x64)
 - Microsoft(R) Windows Server(R) 2008 Datacenter (x86)/(x64)
 - Microsoft(R) Windows Server(R) 2008 Foundation (x64)
 - Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(TM) (x86)/(x64)

- Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM) (x86)/(x64)
- Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM) (x86)/(x64)
- Microsoft(R) Windows Server(R) 2008 R2 Foundation (x64)
- Microsoft(R) Windows Server(R) 2008 R2 Standard (x64)
- Microsoft(R) Windows Server(R) 2008 R2 Enterprise (x64)
- Microsoft(R) Windows Server(R) 2008 R2 Datacenter (x64)
- The term "Windows Server 2003 STD" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Standard Edition
 - Microsoft(R) Windows Server(R) 2003, Standard x64 Edition
 - Microsoft(R) Windows Server(R) 2003, Standard Edition
- The term "Windows Server 2003 DTC" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2003 R2, Datacenter x64 Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Datacenter Edition
 - Microsoft(R) Windows Server(R) 2003, Datacenter x64 Edition
 - Microsoft(R) Windows Server(R) 2003, Datacenter Edition for Itanium-based Systems
 - Microsoft(R) Windows Server(R) 2003, Datacenter Edition
- The term "Windows Server 2003 EE" is used to refer to all of the following products:
 - Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition
 - Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
 - Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems
 - Microsoft(R) Windows Server(R) 2003, Enterprise Edition
- 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)
- The term "Windows(R) 8.1" is used to refer to all of the following products:
 - Windows(R) 8.1 (x64)
 - Windows(R) 8.1 Pro (x64)
 - Windows(R) 8.1 Enterprise (x64)
- The term "Windows(R) 8" is used to refer to all of the following products:
 - Windows(R) 8 (x86)
 - Windows(R) 8 Pro (x86)
 - Windows(R) 8 Enterprise (x86)
 - Windows(R) 8 (x64)
 - Windows(R) 8 Pro (x64)
 - Windows(R) 8 Enterprise (x64)

- Windows(R) 8.1 (x86)
- Windows(R) 8.1 Pro (x86)
- Windows(R) 8.1 Enterprise (x86)
- Windows(R) 8.1 (x64)
- Windows(R) 8.1 Pro (x64)
- Windows(R) 8.1 Enterprise (x64)
- The term "Windows(R) 7" is used to refer to all of the following products:
 - Windows(R) 7 Home Premium (x86)
 - Windows(R) 7 Professional (x86)
 - Windows(R) 7 Enterprise (x86)
 - Windows(R) 7 Ultimate (x86)
 - Windows(R) 7 Home Premium (x64)
 - Windows(R) 7 Professional (x64)
 - Windows(R) 7 Enterprise (x64)
 - Windows(R) 7 Ultimate (x64)
- The term "Windows Vista(R)" is used to refer to all of the following products:
 - Windows Vista(R) Home Basic (x86)
 - Windows Vista(R) Home Premium (x86)
 - Windows Vista(R) Business (x86)
 - Windows Vista(R) Enterprise (x86)
 - Windows Vista(R) Ultimate (x86)
 - Windows Vista(R) Home Basic (x64)
 - Windows Vista(R) Home Premium (x64)
 - Windows Vista(R) Business (x64)
 - Windows Vista(R) Enterprise (x64)
 - Windows Vista(R) Ultimate (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".
- Windows(R) 2000, Windows Server 2003 STD, Windows Server 2003 DTC, Windows Server 2003 EE, Windows Server 2008, Windows Server 2008 EE, Windows Server 2008 DTC, Windows Server 2008 STD, Windows Server 2008 Foundation, Windows Server 2008 R2, Server Core, Windows Server 2012,

Windows Server 2012 R2, Windows Server 2016, Windows Server 2019, and Windows Server 2022 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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