FUJITSU

FUJITSU Software
Systemwalker Operation Manager

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.

Abbreviations and Generic Terms Used

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

- The term "Windows Server 2008 STD" 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 Standard without Hyper-V(TM)
- The term "Windows Server 2008 DTC" is used to refer to all of the following products:
  - Microsoft(R) Windows Server(R) 2008 Datacenter (x86)/(x64)
  - Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(TM)
- The term "Windows Server 2008 EE" is used to refer to all of the following products:
  - Microsoft(R) Windows Server(R) 2008 Enterprise (x86)/(x64)
  - Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(TM)
- 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) 2000" is used to refer to all of the following products:
  - Microsoft(R) Windows(R) 2000 Professional
  - Microsoft(R) Windows(R) 2000 Server
  - Microsoft(R) Windows(R) 2000 Advanced Server
  - Microsoft(R) Windows(R) 2000 Datacenter Server
- The term "Windows NT(R)" is used to refer to all of the following products:
  - Microsoft(R) Windows NT(R) Server network operating system Version 4.0
  - Microsoft(R) Windows NT(R) Workstation operating system Version 4.0
- The term "Windows(R) 8.1" is used to refer to all of the following products:
  - 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) 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)
- The term "Windows(R) XP" is used to refer to all of the following products:
  - Microsoft(R) Windows(R) XP Professional x64 Edition
  - Microsoft(R) Windows(R) XP Professional
  - Microsoft(R) Windows(R) XP Home Edition
- Microsoft(R) Windows(R) Millennium Edition is abbreviated as "Windows(R) Me".
- Microsoft(R) Windows(R) 98 operating system is abbreviated as "Windows(R) 98".
- Microsoft(R) Windows(R) 2000 Server is abbreviated as "Windows(R) 2000 Server".
- 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, and Windows Server 2012 R2 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".
- Versions of Systemwalker Operation Manager that run on the following operating system are referred to as "Linux versions of Systemwalker Operation Manager" or simply "Linux versions":
  - Linux
  - 64-bit versions of Linux, except Itanium
- 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".
- 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".
- 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".
- BrightStor(R) 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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Contents

Chapter 1 Additional Functions Overview 1
1.1 Functions Added in V13.8.0 1
1.2 Functions that Have Been Changed in V13.8.0 5
1.3 Functions that Have Been Changed in Earlier Versions 8
1.3.1 Functions Added in V13.3.0/V13.3.1 8
1.3.2 Functions That Were Changed in V13.3.0/V13.3.1 10
1.3.3 Functions That Were Added/Changed in V13.2.0 12

Chapter 2 Incompatible Notes 17
2.1 Migrating from V11.0L10/11.0 to V12.0L10/12.1 17
2.1.1 Incompatible Items 17
2.2 Migrating from V12.0L10/12.1 to V13.2.0 19
2.2.1 Incompatible Items 19
2.3 Migrating from V13.2.0 to V13.3.0/V13.3.1 24
2.3.1 Incompatible Items 24
2.4 Migration from V13.3.0/V13.3.1 to V13.8.0 30
2.4.1 Incompatible Items 31

Appendix A Functional Differences between Versions and Levels 46

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 Added in V13.8.0

This section explains the functions that were added in V13.8.0.

License Validation

This function validates the Systemwalker Operation Manager server license.

Concurrent Execution Using Copy and Startup

Copy and startup can now be specified in a job net definition, so the same job net can be executed concurrently.

Previously, a job net that generated message events had to be prepared separately before a job net could be copied and started. Now you can define a job net to always be copied and started without a message event being generated.

Added Event Wait Jobs

"Event wait job" has been added as a category. Jobs of this type wait for a particular event to be generated before they are executed. Event wait jobs include the following:

- Wait for file job

  Waits until a particular file is created, updated, or modified.

- Wait for Message Event job

  Waits until a particular message event occurs.

- Wait for time job

  Waits until the specified time arrives.

- Wait until Specified Time job

  Waits for the specified time, starting from the time when the job started executing.

Job Link Using Job Net Variables

Information can now be passed between jobs in a job net by using job net variables.

Additional Criterial Jobs

The following jobs have been added to "Criterial jobs", which check for particular events:

- Determine File Existence job

  Checks whether a particular file exists.

- Determine Job Net Variable job

  Checks the value of the job net variable specified by execution of the preceding job.

Wait with OR Condition for Preceding Job

A job can now wait with OR condition for the preceding job.

You can make a job wait with OR condition for multiple preceding jobs and start the succeeding job when any of the preceding jobs satisfies the condition.

Improvements to Enable File Waiting for Jobs

The functionality of the chkfile command and jobschchkfile command has been improved.

The capability to wait for files to be resized has been added to the existing functionality (waiting for file creation, update, and deletion). In addition, you can now specify a wildcard character (*) in the name of a file to be waited for and you can even specify a monitoring interval.

64-Bit Supported by Solaris Versions [Solaris]

Solaris versions of Systemwalker Operation Manager now support 64-bit architecture.

Red Hat Enterprise Linux 7.0 Supported [Linux]

Systemwalker Operation Manager now also supports the following operating system:

Server operating system:	Red Hat Enterprise Linux 7.0

Single Sign-On function linked with ServerView Operations Manager

Web Console Single Sign-On is now possible between ServerView Resource Orchestrator and Systemwalker Operation Manager by linking with ServerView Operations Manager in a cloud environment where ServerView Resource Orchestrator is installed.

Refer to "Definitions when Linking with ServerView Operations Manager to Perform Single Sign-On" in the *Systemwalker Operation Manager Installation Guide* for details.

Improved GUI

The GUIs provided with Systemwalker Operation Manager have been revised as follows:

- The Set Job Owner button has been added to the **Options** sheet in the **Define Operating Information** window.

  Previously, executing a job under the owner's authority required the settings for job execution and the settings for the job owner information (password information) to be defined separately. However, the job owner information (password information) can now be configured as part of the settings for executing a job under the owner's authority.

  Refer to "Defining the System Operating Information" in the *Systemwalker Operation Manager Installation Guide* for details.

Support for Windows Server 2012 R2 and Windows(R) 8.1

Systemwalker Operation Manager now also supports the following operating systems:

Server OS:	Windows Server 2012 R2
Server OS	Windows Server 2012
Client OS	Windows(R) 8
Client OS:	Windows(R) 8.1

In addition, the Web Console function can be used with "Internet Explorer 11", the Web browser provided as standard with Windows Server 2012 R2 and Windows(R) 8.1. The desktop version of Internet Explorer 11 can be used.

In addition, the Web Console function can be used using the Web browser Internet Explorer 10 that is provided as standard with Windows Server 2012 and Windows(R) 8.

Note that new UIs for Windows Server 2012 and Windows(R) 8 are not supported.

Supporting SELinux [Linux]

The SELinux (Security-Enhanced Linux) function of Linux is newly supported.

By supporting this function, Systemwalker Operation Manager can be used in environments where the SELinux function for Red Hat Enterprise Linux 6.2 or later is enabled.

Compatibility with IPv6

Compatibility with internet protocol version 6 (referred to as "IPv6" hereafter) has been added.

Accordingly, you will be able to use functions provided by Systemwalker Operation Manager on machines that operate in existing IP version 4 (referred to as "IPv4" hereafter) communications environments, IPv6 communications environments, and in mixed IPv4/IPv6 communications environments.

Systemwalker Operation Manager Web Console

The screen that is used from the traditional Web browser has been revamped. Additionally, it is now possible to monitor and operate Systemwalker Operation Manager from the Web browser without making complex settings that were traditionally required for Web servers and Web browsers because it can now link to the Web server function that is provided as communications infrastructure common to Systemwalker products.

Centrally Managing Users with a Systemwalker Authentication Repository

By using a Systemwalker authentication repository, user management for Systemwalker products that support the Systemwalker authentication repository can now be centralized. Centralizing user management reduces the management load for system administrators and also makes it possible to operate the entire system more securely. A Single Sign-on function is also possible with users in the Systemwalker authentication repository, and operations staff can securely use multiple Systemwalker products after logging in just once.Refer to the *Systemwalker Operation Manager Installation Guide* for details.

Registering the Same Job Net with Multiple Parent Job Nets

It is now possible to register the same job net (linked job net) in multiple parent job nets. It is also now possible to register more than one of the same job net (linked job net) in a single parent job net.

Refer to "Layering Job Nets" in the *Systemwalker Operation Manager User's Guide* for details.

Extended Functions for Distributed Execution Jobs, Network Jobs, and Demand Jobs

The following is now possible with distributed execution jobs and network jobs:

- Execution equalization for execution servers

  With the Distributed Execution function, it is now possible to switch methods between sharing and not sharing the number of submitted jobs to one execution server among existing groups, depending on the operation.

  If an execution server with the same name is defined in multiple host group definitions, the number of jobs submitted to the same execution server can be shared between the host groups.

  Refer to "Operating Methods" in the *Systemwalker Operation Manager Technical Guide* for details.

- I/O file transfer

  The I/O files required by applications running on the execution server can now be transferred automatically between schedule servers and the execution servers.

  Specify the name of file to be transferred in the environment variable of the user who executes the qsub command.

  Refer to "qsub Job Submit Command" and "Environment Variable Configuration File for the Job Execution Control" in the *Systemwalker Operation Manager Reference Guide* for details.

- Environment variable designations

  "- env environment variable settings file name" has been added to the qsub command option. This option is used to specify any environment variable that will be given to a job.

  The specified environment variable is inherited by the execution server even for network jobs and it can be viewed with the job process on the execution server.

  Refer to "qsub Job Submit Command" in the *Systemwalker Operation Manager Reference Guide* for details.

- Notification when distributed execution jobs fail to be submitted

  Systemwalker Operation Manager detects that the distributed execution job submission to a particular execution server cannot be made, then that particular execution server is temporarily excluded from the distribution target, and this fact is notified by outputting a message to the SYSLOG or event log on the schedule server.

- Notification of the schedule server name

  When network jobs and distributed execution jobs are executed, the host name of the schedule server is notified to the job that is executed on the execution server.

  Refer to "Job Execution Environment" in the *Systemwalker Operation Manager User's Guide* for details.

- Selecting whether to save job result files

  "-no" has been added to the qsub command option. It is now possible to specify not to generate the job result file (either a standard output file or a standard error output file) when jobs are submitted using the qsub command.

  If the job result file is not required, specify this option.

  Refer to "qsub Job Submit Command" in the *Systemwalker Operation Manager Reference Guide* for details.

- Termination exit for demand jobs

  It is now possible to confirm that demand jobs have terminated. This can be done by placing the termination exit for demand jobs within the system.

  Information such as the job completion code is passed to the termination exit for demand jobs, together with the job name and job number, making it possible to detect errors with demand jobs and so on.

  Termination exits for demand jobs can be used by creating an executable file (a shell script or program) that follows the naming conventions and then placing the file in the specified path.

  Refer to "Exit Information" in the *Systemwalker Operation Manager Reference Guide* for details.

Startup Mode Specification Command

A startup mode specification command has been added.

This makes it possible to specify whether the daemon or service starts in initialization mode or persistent mode the next time it starts.

Refer to "mjsmdset Startup Mode Specification Command" in the *Systemwalker Operation Manager Reference Guide* for details.

Job Net Startup days Preview Display

The startup days of the job net set in the **Startup days** sheet of the **Job Net Properties** window can now be quickly checked using the **Preview** button on the same window. Refer to the *Systemwalker Operation Manager User's Guide* and *Systemwalker Operation Manager Online Help* for details.

Extended Function for the jobschdeftocsv Command and jobschcsvtodef Command

With holiday information and schedule pattern, it is now possible to convert from CSV file format to control statement format or vice versa.

Calendar Holiday Information Control Statement Format Output Command

The jobschprint command has been extended so that it can now output calendar holiday information using holiday information control statement format. Refer to "jobschprint -rh Command" in the *Systemwalker Operation Manager Reference Guide* for details.

Schedule Pattern Information Control Statement Format Output Command

The jobschprint command has been extended so that it can now output schedule pattern information using schedule pattern control statement format. Refer to "jobschprint -rsp Command" in the *Systemwalker Operation Manager Reference Guide* for details.

Job Net Memo Search Command

The jobschnetmemo command has been extended so that it can now search the content of the memos for job nets and output job nets that match certain conditions.

Refer to "jobschnetmemo Command" in the *Systemwalker Operation Manager Reference Guide* for details.

Note

Note that the following restriction applies when a client running a newer version is connected to a server running an earlier version:

- Functions not provided by the server cannot be used.

1.2 Functions that Have Been Changed in V13.8.0

This section explains the functions that were changed in V13.8.0.

Import/export

You can now specify batch transfer of CSV files when importing or exporting job and job net definition information from the GUI to the Systemwalker Operation Manager server.

Refer to "Importing and Exporting Definition Information from the GUI" in the *Systemwalker Operation Manager User's Guide* for details.

Option specified in the jobschsetnet command when copying a job net

The jobschsetnet command option to be specified for copying a job net has been changed to -ncpy.

The previous -ncop option can still be used.

Refer to the *Systemwalker Operation Manager Reference Guide* for details.

Menu Configuration of Systemwalker Operation Manager to be Registered with the Windows Start Screen

The start menu (start screen) configuration to be registered by installing Systemwalker Operation Manager has been changed in the following cases:

- When upgrading from Windows Server 2008 or Windows(R) 7 or earlier operating system to Windows Server 2012 or Windows(R) 8 operating system.

Refer to 2.4.1 Incompatible Items for details on images that have been changed.

Change in the maximum length of the IP address specified in 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 changed during cluster operations.

Changes

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

Systemwalker's Brand Mark

The brand mark of the whole Systemwalker products has been redesigned. With this change, the image graphic for screens displayed in Systemwalker Operation Manager has changed.

Using Systemwalker Operation Manager from a Web Browser

The method for setting and definition when using Systemwalker Operation Manager from a Web browser has been revamped. In addition, security has been strengthened and an electronic certificate issued by Certification Authority is now required. Refer to "Related Software" in the Systemwalker Operation Manager Technical Guide for details.

Startup Account and Service Startup Account

It is now unnecessary to set up a startup account that was previously required at installation. And it is no longer necessary to specify a service startup account at service startup. Operations that required the startup account and service startup account have changed to the operations with a local system account. As the results, the following specifications have been changed:

Change in the createsubsystem command option

It is now unnecessary to specify a service logon account name in the createsubsystem command option and a local system account is automatically specified to the service logon account name of the subsystem to be created.

Refer to "createsubsystem.exe/sh Subsystem Environment Create Command" in the Systemwalker Operation Manager Reference Guide for details.

Registration destination project of the shutdown process job net

A condition for the project where the shutdown process job net is registered has been changed as follows:

Before:
The project should have the same name as the user ID that is specified in the logon account for the Jobscheduler service.

Now:
The project should have the name "SYSTEM".

Refer to "Shutting Down the System at Optional Times [Windows version] in the *Systemwalker Operation Manager User's Guide* for details.

Change in the stemregservice command option

It is now unnecessary to specify a service logon account name in the stemregservice command option. This is because that a local system account is automatically specified to the logon account name that is used when registering the service for cluster of the Master Schedule Management function.

Refer to "stemregservice Service Registration Command for Cluster [Windows]" in the *Systemwalker Operation Manager Reference Guide* for details.

Discontinue support of the pwchangeo password change command

The pwchangeo password change command is now obsolete because there is no need to specify a startup account, and so this command is no longer required.

Maximum Number of Execution Servers That Can Be Defined

The maximum number of execution servers that can be defined in the host groups provided by the Distributed Execution function has changed from 10 to 100.

Systemwalker Operation Manager Clients Called from Systemwalker Centric Manager

Systemwalker Operation Manager clients that are called when the Systemwalker Operation Manager window is directly displayed by linking to Systemwalker Centric Manager have changed, depending on the versions of Systemwalker Centric Manager and Systemwalker Operation Manager.

If both Systemwalker Centric Manager (which is doing the calling) and Systemwalker Operation Manager (which is being called) are in V13.4.0 or later, the Web Console will now be called.

Refer to "Systemwalker Operation Manager Clients that is Called from Systemwalker Centric Manager" in the *Systemwalker Operation Manager Technical Guide* for details.

Startup days/Calendar/Operation Period Sheets in Job Net Properties Window

The **Startup days**/**Calendar**/**Operation Period** sheets in the **Job Net Properties** window have been changed as follows.

Startup days sheet

Only three patterns "Schedule Pattern", "Another job net" or "Other" can be selected as the standard for startup days of job nets. The settings "Yearly", "Monthly" and "Business days" that were previously selected in **Basic information** on the **Startup days** sheet can now be performed in the **Startup Days(Other)** window that is displayed by selecting the **Other** option button on the **Startup days** sheet and clicking the **Edit** button.

Additionally, items that were previously set in the **Calendar** and **Operation period** sheets can now be set in the **Startup days** sheet.

Calendar sheet

The **Calendar** sheet of the **Job Net Properties** window has been removed. Items that were previously set in the **Calendar** sheet can now be set in the **Startup days** sheet of the **Job Net Properties** window if the **Detail Mode** display is used.

Operation period sheet

The **Operation period** sheet of the **Job Net Properties** window has been removed. Items that were previously set in the **Operation period** sheet can now be set in the **Startup days** sheet of the **Job Net Properties** window if the **Detail Mode** display is used.

Refer to the *Systemwalker Operation Manager User's Guide* and *Systemwalker Operation Manager Online Help* for details

Extended Setting Method for Setting Startup Days

The setting method for startup days has been extended as follows:

- Registering multiple schedule patterns

  It is now possible to register up to four schedule patterns when setting up startup day information for job nets. Refer to the *Systemwalker Operation Manager User's Guide* for details.

- Extended shift process for startup days

  If the reference day in the processing that shifts the startup days for job nets is a holiday, it is now possible to select whether to treat the reference day as a holiday or as an operating day. Refer to the *Systemwalker Operation Manager Online Help* for details.

Schedule Pattern Window

It is now possible to select from "Yearly", "Monthly" and "Business days" standards to make settings. As well as the **Save** button for saving schedule pattern information, **Cancel** and **Help** buttons have also been added. Refer to the *Systemwalker Operation Manager User's Guide* and *Systemwalker Operation Manager Online Help* for details.

Term and Expression

The following terms and expressions have been changed to make it easy to understand functions and usages.

Term/Expression in V13.3.0/V13.3.1 or before	Term/Expression in V13.8.0 or later
Schedule Distribution	Master Schedule Management
schedule by dates	daily schedule management
allocation of schedule information	daily schedule distribution
desired status	Watching delay of job/job net

In the client window to perform user authentication, the following terms have been changed to common Systemwalker terms.

Terms in V13.3.0/V13.3.1 or before	Terms in V13.8.0 or later
user name	user ID
logon/log on	login/log in
log off	log out

Output in the jobschprint -u Command

In the environment where the Systemwalker User Management function is enabled, the item "User Name" with the jobschprint -u command can be output up to 32 bytes.

Refer to "jobschprint -u Command" in the *Systemwalker Operation Manager Reference Guide* for details.

Changes in Audit Log Output for ACL Manager [UNIX]

When Systemwalker Operation Manager coexists with Systemwalker Centric Manager in the system using a non-Itanium 64-bit Linux architecture, audit logs for ACL Manager are output to two files separately as it is explained in the following table:

		Centric Manager	
		V13.8.0 or later (Linux x86)	**V13.8.0 or later (Linux x64)**
Operation Manager	**V13.2.0 - V13.3.0/ V13.3.1**	Normal operation	Audit logs for ACL Manager are output to two files separately, regardless of the installation order of Systemwalker Centric Manager and Systemwalker Operation Manager.
	V13.8.0 or later (Linux x86)	Normal operation	Audit logs are output to two files separately if Systemwalker Operation Manager is installed before Systemwalker Centric Manager is installed.
	V13.8.0 or later (Linux x64)	Audit logs are output to two files separately if Systemwalker Operation Manager is installed before Systemwalker Centric Manager is installed.	Normal operation

Refer to "Defining Audit Log Output" in the *Systemwalker Operation Manager Installation Guide* for details.

1.3 Functions that Have Been Changed in Earlier Versions

This section explains changes that were made in earlier versions.

1.3.1 Functions Added in V13.3.0/V13.3.1

This section explains the functions that were added in V13.3.0/V13.3.1.

Replacing registered job Information

Jobs can be defined in advance using job definition variables, so that when a job is executed, the values of all the job definition variables can be changed at the same time.

Refer to "Using Job Definition Variables to Replace Job Registration Information Together" in the *Systemwalker Operation Manager User's Guide* for details.

Job net linkage using variable parameters

It is now possible to pass variable parameters to a job net that will become the notification destination of a message event. The item **Start with variable parameters** has also been added to the job net operation menu, which makes it possible to pass variable parameters to a job manually when starting it. The jobschcontrol command can now use the newly added start option to start with variable parameters.

Refer to "Using Variable Parameters to Link to a Job Net when a Message Event Occurs" and "Starting a Job Net with Variable Parameters" in the *Systemwalker Operation Manager User's Guide* for details. Refer also to "jobschmsgevent Command" in the *Systemwalker Operation Manager Reference Guide*.

Copying and pasting job nets

It is now possible to use **Copy** and **Paste** menu items to copy a job net in the Job Selection tree. A shortcut key is also available for this purpose.

Refer to "Changing the Job Nets" in the *Systemwalker Operation Manager User's Guide* for details.

Importing and exporting job net information from the GUI

It is now possible to import and export job/job net and group definition information from Systemwalker Operation Manager client windows.

If a Systemwalker Operation Manager client running V13.3.0 or later connects to one of the following Systemwalker Operation Manager server versions, job/job net and group definition information can be imported and exported via the GUI:

- Windows versions: V11.0L10 and later
- Solaris versions: V11.0 and later
- Linux versions: V11.0L10 and later
- HP-UX versions: V13.2.0 and later
- AIX versions: V13.2.0 and later

Refer to "Importing and Exporting Definition Information" in the *Systemwalker Operation Manager User's Guide* for details.

Animated display of job flow icons

An animated display function has been added to job flows in the **Previous process result** tab of the **Monitor Job Net** window and the **Monitor Group** window.

When the animated display is enabled, jobs or job nets that are running, are in a warning state or have terminated abnormally will be animated.

Refer to the online help or the *Systemwalker Operation Manager User's Guide* for details.

Icon position information/operational status added to control statements

It is now possible to handle job icon position information and job and job net operational status information in CSV/control statement I/O commands.

Refer to "Job Net Control Statement", "Job Control Statement", "Group Control Statement", and "Group Job Net Control Statement" in the *Systemwalker Operation Manager Reference Guide* for details.

Multi-server monitoring by general users

Even general users can now monitor multiple servers according to their authority.

Refer to "Support of Connection during Multi-server Monitoring" in the *Systemwalker Operation Manager Technical Guide* and "Monitoring Multiple Servers" in the *Systemwalker Operation Manager User's Guide* for details.

"Message" display in the Job List window

In the **Job List** window, details about the message generation status are now displayed in the **Message** field and details about the message reception status are now displayed below the **Message** field.

Refer to "Monitoring Job Nets" in the *Systemwalker Operation Manager User's Guide* for details.

Submitting subsystem-specified jobs

In V13.2.0 and earlier versions, when a network job was requested by a subsystem, the request could only be sent to subsystems with the same subsystem number on other hosts. From V13.3.0 onwards, network job requests can be sent to any subsystem by specifying the subsystem number. It does not matter if the subsystem is on the own host or another host.

Refer to "Requesting Network Jobs from a Subsystem" in the *Systemwalker Operation Manager User's Guide* for details.

Outputting the previous log of a job

When linked to Systemwalker Centric Manager, it is now possible to use the mail notification action available in event monitoring to send information about completed job nets (previous log information, etc.) as a mail attachment.

Refer to "Monitoring the Job Net Execution Status" in the *Systemwalker Operation Manager Installation Guide* and "jobschgetoutput Command" in the *Systemwalker Operation Manager Reference Guide* for details.

Providing support for pop-up messages in Windows Vista(R) and Windows Server 2008

The pop-up function can now be used in Windows Vista(R) and Windows Server 2008 systems on which the Messenger service is not running. This means that pop-up messages can be sent to Windows Vista(R) and Windows Server 2008 systems.

Refer to "Registering Execution Actions" and "Setting Shutdown Monitoring Options" in the *Systemwalker Operation Manager User's Guide* for details.

Authentication when linking to Systemwalker Centric Manager

If Systemwalker Operation Manager is linked to Systemwalker Centric Manager and a Systemwalker Operation Manager client function is called from Systemwalker Centric Manager, user authentication is performed and operation takes place according to the user's authority, even in the case of a general user.

Refer to "Monitoring the Job Net Execution Status" in the *Systemwalker Operation Manager Installation Guide* for details.

API for changing job net startup times

A job net startup time modification API that can obtain or change the startup time of a job net has been added.

Refer to "Job Net Start Time Change API" and "Job Net Start Time Change API/EE" in the *Systemwalker Operation Manager Reference Guide* for details.

Addition of Windows 64-bit API

When a Windows for Itanium version of Systemwalker Operation Manager is used, 64-bit APIs can be used in addition to conventional 32-bit APIs.

Refer to "API Information" in the *Systemwalker Operation Manager Reference Guide* for details.

1.3.2 Functions That Were Changed in V13.3.0/V13.3.1

This section explains the functions that were changed in V13.3.0/V13.3.1.

Maximum number of projects that can be registered

The maximum number of projects that can be registered with Jobscheduler has been increased from 256 to 1000.

Increased number of characters that can be specified in definitions

The number of characters that can be set in the following definition items has been increased.

Item	V13.2.0 or earlier	V13.3.0/V13.3.1
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

Item	V13.2.0 or earlier	V13.3.0/V13.3.1
User name	20[windows]/12[UNIX] bytes	20 bytes
Password	14[windows]/16[UNIX] bytes	50 bytes

```
Note) Only when the Schedule Distribution Function is used
```

Note, however, that when connected to a server running an earlier version of Systemwalker Operation Manager, the number of characters that can be set from the client is limited to the maximum limit of the earlier version.

Job multiplicity during distributed execution

In UNIX versions, the number of concurrent jobs that can be executed by each server during distributed execution has been increased from 99 to 999.

Refer to "Defining the System Operating Information" in the *Systemwalker Operation Manager Installation Guide* for details.

Reusing job nets

Copy has been changed to **Reuse** in the following job net menus (the function itself has not changed):

- **Copy** in the **File** menu of the **Systemwalker Operation Manager** window
- **Copy** in the pop-up menu displayed 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

Define Jobscheduler Startup Parameters window (Use function1 and Event output tabs)

Use function1 sheet of the Define Jobscheduler Startup Parameters window

The settings in the **Schedule option** frame have been changed to the settings in the **Advanced Settings for Verification** window that is displayed by clicking the **Advanced Settings** button with the **Enable verification** check box selected in the **Verification at error occurrence** frame.

When the **Enable verification** check box in the **Use function1** sheet is selected, the following check boxes will be selected by default:

Advanced Settings for Verification window

- Validate job net confirmation
- Validate group confirmation
- Check canceled

Event output tab of the Define Jobscheduler Startup Parameters window

The settings in the **Job net status** and **Controlling the desired status** frames have been changed to the settings in the **Advanced Settings for Event Output** window displayed by clicking the **Advanced Settings** button with the **Output error notifications to syslog/event log** check box selected in the **Event output** tab.

If the status of the **Output error notifications to syslog/event log** check box in the **Event output** tab is changed from deselected to selected, the following will be set by default:

Job net status

- Abended
- Skipped
- Canceled
- Closed

- Refused

Controlling the desired status

- Notify when job net is not started even after the specified start time is lapsed
- Notify when job is not terminated even after the specified time is lapsed
- Notify when job net is not ended even after the specified end time is lapsed

Completion Monitoring dialog box

The dialog box invoked when **Popup** is selected in the **Notification Means** frame of the **Completion Monitoring** window and the **Details** button is clicked has been changed to the **Popup Notification Destination Definition List** dialog box. When connected to a system running V13.2.0 or an earlier version, the **Pop-up Notification Destination Definition** dialog box will be displayed.

Refer to "Setting Shutdown Monitoring Options" in the *Systemwalker Operation Manager User's Guide* for details.

Using Short Mail when an event occurs

When the event monitoring function generates an event such as a message reporting a system error, it is possible to send a short mail to the system administrator. This function replaces the pager notification function provided in V13.2.0 and earlier versions.

Installing clients

In addition to the ability to perform an upgrade installation from UNIX clients to UNIX clients and from Windows clients to Windows clients, it is now possible to perform the following upgrade installations:

- From UNIX clients to Windows clients
- From Windows clients to UNIX clients

File name for job standard output and job standard error output

The job standard output file name and the job standard error output file name have changed.

Refer to "Standard Output and Standard Error Output for Jobs" in the *Systemwalker Operation Manager User's Guide* for details.

1.3.3 Functions That Were Added/Changed in V13.2.0

This section explains the functions that were added or changed in V13.2.0.

V13.2.0

Added functions

Function name	Added function
Additional access right (change right)	A change right that permits a user to only change or register job nets and groups within projects has been added to the other access rights (reference, operation and update rights). Refer to the following manuals for details: - "Access Control" in the *Systemwalker Operation Manager Technical Guide* "Setting Access Rights for Projects" in the *Systemwalker Operation Manager User's Guide*

Function name	Added function
Restrictions on executing users [UNIX]	A definition that permits only users specified in the user control list for job execution to execute jobs has been added. Refer to the following manuals for details: - "Defining the user control list for job execution [UNIX]" in the *Systemwalker Operation Manager Installation Guide* - "User Limit Lists for Job Execution" in the *Systemwalker Operation Manager Reference Guide*
Audit log output	A record of operations performed in Systemwalker Operation Manager can be output to an audit log file. When installed, Systemwalker Operation Manager is set up to output audit logs. This makes it possible to know who performed what operations, where they were performed, and when. Refer to the following manuals for details: - "Audit Log Output" in the *Systemwalker Operation Manager Technical Guide* - "Defining Audit Log Output" in the *Systemwalker Operation Manager Installation Guide* - "Analyzing Audit Logs" in the *Systemwalker Operation Manager User's Guide* - "mpsetlogsend_omgr Command" and "Audit Log Files" in the *Systemwalker Operation Manager Reference Guide*
Carrying over message linkage job nets	When the execution condition is set to "**Start only when message event has occurred**", it is now possible to carry over job nets started by message linkage. The **Message** tab of the **Job Net Properties** window is used to define job net carryover. Refer to the following manuals for details: - "Job Net Information Settings" in the *Systemwalker Operation Manager User's Guide* - "Carried Over the Job Net" in the *Systemwalker Operation Manager User's Guide*
EE Linking next-day job nets by message events	EE When the Schedule Distribution function is used, it is now possible to use the -n option of the message event generation command "jobschmsgeventex" to enable message events in the schedule of the next operating day. It is also possible to use the -s option to enable message events for unapplied job nets when generating message events with respect to schedule information of the same operating day. Refer to the following manuals for details:

Function name	Added function
	- "Linking a Job Net with Message Event on an Intended Process Date" in the *Systemwalker Operation Manager User's Guide - Schedule Distribution* - "jobschmsgeventex Message Event Generation Command" in the *Systemwalker Operation Manager Reference Guide*
EE A policy for the Schedule Distribution function as additional policy information extraction/distribution item	EE The extraction and distribution of policy information for the Schedule Distribution function can now be performed from **Extract Policy** and **Distribute Policy** sections of the **Systemwalker Operation Manager Environment Setup** window. Refer to" Extract and Distribute Policy Information" in the *Systemwalker Operation Manager User's Guide - Schedule Distribution* for details.
More detailed meaning of completion code	For jobs in job nets whose execution attribute is a Job Execution Control attribute or an Interstage attribute, the completion code reported to Jobscheduler by Job Execution Control (the actual completion code) is now displayed in the **Code** field of the **Previous log** tab of the **Monitor - Job** window. Refer to "Monitoring Scheduled Jobs" and "Displaying Previous Log of Scheduled Jobs" in the *Systemwalker Operation Manager User's Guide* for details.

Additional OS support for APIs	- The APIs provided by Jobscheduler can now be used in Linux
	  - Job Net Manipulation API
	  - Job Net Manipulation API/EE
	  - Job Net Manipulation (Startup Parameter Specification) API
	  - Job Net Manipulation (Startup Parameter Specification) API/EE
	  - Group Manipulation API
	  - Group Manipulation API/EE
	- The following APIs provided by Job Execution Control can now be used in Solaris, Linux and Linux for Itanium versions:
	  - Job Submission API
	  - Job Delete API
	  - Job Delete API/EE
	  - Job Status Acquisition API
	  - Job Status Acquisition API/EE
	  - Error Message Acquisition API
	Refer to the *Systemwalker Operation Manager Reference Guide* for details.

Function name	Added function
EE Improved screen visibility	EE When using the Schedule Distribution function, it is now possible to categorize and display business tree projects in the following folders: - Master information - Operation change information - Schedule by date information Schedule by date information is displayed by date. Refer to "Master Setting" in the *Systemwalker Operation Manager User's Guide - Schedule Distribution* for details.
Connection destination host names displayed in titles	The connection destination host name, the subsystem number and the project name are now displayed in the title bar of the following windows. They are also displayed in the **Add/Change - Job** window and the **Monitor - Job Net** window only when these windows are set up to do so. - **Recovery Change Job Net** window - **Monitor Job Net** window - **Monitor Group** window - **Job Net Management** window - **Group Management** window - **Add/Change-Job** window (*1) - **Monitor-Job net** window ***1:** Information is displayed in the **Add/Change - Job** window only when this window is invoked from the **Recovery Change Job Net** window. Refer to "Displaying the Connection Destination Host Name" in the *Systemwalker Operation Manager User's Guide* for details.
Automatic scrolling in Gantt charts	When displaying the **Gantt Chart** window, it is now possible to always automatically scroll update times and job nets whose scheduled startup time is closest to the update time in the center of the **Gantt Chart** window. The update time refers to the system time that information is updated. Note, however, that if a virtual time is set, the update time will become a virtual time. **Automatically scrolling horizontally** The center for horizontal movement in the Gantt chart becomes the update time.

Function name	Added function
	Automatically scrolling vertically The center for vertical movement in the Gantt chart becomes the job net/group among the job nets/groups waiting to be executed whose scheduled startup time is closest to the update time. Automatic scrolling can be used in the following cases: - When the Gantt chart of the current day is being displayed - Automatic scrolling in a vertical direction is performed when items are sorted according to the startup time. Refer to "Automatic Gantt Chart Scrolling" in the *Systemwalker Operation Manager User's Guide* for details.

Command improvements	- An option to display only the first level of a job net (i.e., no child job nets) has been added to the following commands, which are used to display job net lists:
	  - jobschprint -n(-N) command
	  - jobschprintcsv -n command
	  - stemprint -n(-N) command
	  When business is conducted using hierarchical job nets, this option makes it easier to see the status of job nets on the first level.
	- An option to automatically correct startup times has been added to the job net submission command "stemschnet".
	Refer to the *Systemwalker Operation Manager Reference Guide* for details.

Additional OS support for Schedule Distribution	The Schedule Distribution function is now available also with the AIX version. Refer to the *Systemwalker Operation Manager User's Guide - Schedule Distribution* for details.

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 V11.0L10/11.0 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 V11.0L10/11.0 to V12.0L10/12.1

This section lists incompatibilities associated with migration from Systemwalker Operation Manager V11.0L10/11.0 to Systemwalker Operation Manager V12.0L10/12.1.

2.1.1 Incompatible Items

This section explains incompatible items associated with migration from Systemwalker Operation Manager V11.0L10/11.0.

Incompatible items in Jobscheduler

- The use of "." (dot) is restricted for some definition.

  For the following definition, it is no longer allowed to specify a string that is made up of dots, any string that starts with "." (dot), or any string that ends in "." (dot):

  - Project name
  - Job net name
  - Job name

  [Corrective Action]

  None

Incompatible items in Job Execution Control

- When using Distributed Execution function, you can no longer add a host name to a host group that shares the same name. When two or more same host names are defined in a host group, define of the second time and after is ignored in the migration. (Warning message is output.))

  [Corrective Action]

  None

Incompatible items with the messages

- The following message bodies have been changed: [Windows version]
  - Automatic Operation Support (Source name: MpAosfB)

    Message ID: 3052/3054/3058/3152
  - Power control (source name: MpAosfP)

    Message ID: 136
  - Calendar command (Source name: MpJmCal)

    Message ID: 0050 to 0053/0055/0057 to 0067/0069 to 0070

- Task Link (Source name: mpnjsosv)

  Message ID: 0x2433

- Jobscheduler command (Source name: MpJobsch)

  Message ID: 6107/7245/7355/7358

[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 message bodies have been changed: [Windows version]

  - Previous history message in Job Execution Control

    "Job Execution Control: Exception during job job-name(jobno.hostname) execution. Exceptional code is xxxx."

[Corrective Action]

If an application program or monitoring program uses the message body above, change the program do recognize whichever of the following new messages is appropriate:

- "Job Execution Control: Job job-name (jobno.hostname) has been cancelled by the user or due to stop of the Job Execution Control service. Exit code: 0x40000222."
- "Job Execution Control: The Job job-name (jobno.hostname) has been cancelled because its processing time exceeded the maximum. Exit code: 0x40000322."
- "System: An exception occurred while processing the job job-name (jobno.hostname). Exception code: "code." There may be a problem in the application or the system environment. Find out the cause of this exception. Refer to the *Systemwalker Operation Manager Troubleshooting Guide*. "
- "System: An exception occurred while processing the job job-name (jobno.hostname). Application name: "app-name". Exception code: "code". There may be a problem in the application or the system environment. Find out the cause of this exception. Refer to the *Systemwalker Operation Manager Troubleshooting Guide*. "

- The following message bodies have been changed: [Windows version]

  - Previous history message in Job Execution Control

    "Job Execution Control: Exception during jobstep <jobstep-name> execution. Exceptional code is xxxx."

[Corrective Action]

If an application program or monitoring program uses the message body above, change the program do recognize whichever of the following new messages is appropriate

- "Job Execution Control: The jobstep "job-step" has been cancelled by the user or due to stop of the Job Execution control service. Exit code: 0x40000222."
- "Job Execution Control: The jobstep "jobstep" has been cancelled because its processing time exceeded the maximum. Exit code: 0x40000322."
- " System: An exception occurred while processing the jobstep "jobstep". Exception code: "code." There may be a problem in the application or the system environment. Find out the cause of this exception. Refer to the *Systemwalker Operation Manager Troubleshooting Guide*. "
- " System: An exception occurred while processing the jobstep "jobstep". Application name: "app-name". Exception code: "code". There may be a problem in the application or the system environment. Find out the cause of this exception. Refer to the *Systemwalker Operation Manager Troubleshooting Guide*."

- The error type and event ID of the following messages have been changed. [Windows version]

  - MpJobsch: Error: 6136: The host name is too long in the monitoring permission host definition file.

[Corrective Action]

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

  - MpJobsch: Warning: 3136: The host name is too long in the monitoring permission host definition file.

- The following message bodies have been changed: [UNIX version]

  - Calendar command (Source name: MpJmCal)

    Message ID: 0050 to 0052/0054/0056 to 0060/0062/0065 to 0070

  - Jobscheduler command (Source name: MpJobsch)

    Message ID: 0027/0107/0245/0339/0355/0358

  - Master Schedule Management (Source name: MpStem)

    Message ID: 10130/10138/10305/10310/10315/10324/10329

  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 error type of the following messages has been changed. [UNIX version]

  - Systemwalker Operation Manager's infrastructure functions (Source name: MpJmSrv)

    Message ID: 0027

  - Messages output the event viewer or SYSLOG by the Jobscheduler command (Source name: MpJobsch)

    Message ID: 0026/0029/0093/0381

  - Messages output to anything other than event viewer or SYSLOG by the Jobscheduler command (Source name: MpJobsch)

    Message ID: 0081/0276/0335/0336/0381

  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

- "Failed to obtain user definition information. (YYY: ZZZ)", the message body as the access right is set, has been changed to "Access right information of the project is not existent (YYY:ZZZ)". [UNIX version]

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

  [Corrective Action]

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

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".

2.2 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.

2.2.1 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

EE

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:
  - mpnjsosv: 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.

- The text for the following messages has been changed. [Windows version]

  Automatic operation support (Source name: MpAosfB)

  Message ID:

  - 1001/1009/1021 to 1023/1026 to 1030
  - 3001 to 3024/3050 to 3058/3080 to 3086/3100 to 3112/3150/3151/3200 to 3207
  - 4004/4009
  - 5004 to 5006/5013 to 5015/5021
  - 7000 to 7011

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

  [Corrective Action]

  If the message text is used by user applications, replace the old message text with the new one.

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

Incompatible items in action management

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

  [Corrective Action]

  None

2.3 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.

2.3.1 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 "Animated display of job flow icons" 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"_ccccccccccccccc.log" (ccccccccccccccc: 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 jobschmsgevent 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**

Item	V13.2.0 or earlier	V13.3.0
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.

2.4 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.

2.4.1 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.

- 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 Send message Start service Stop service Check service status File wait Backup cooperation Check log file Wait for time	Execute command Send message Determine File Existence Determine Job Net Variable Start service Stop service Check service status Wait for file 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 execution rights 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

EE

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.

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:
  - 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

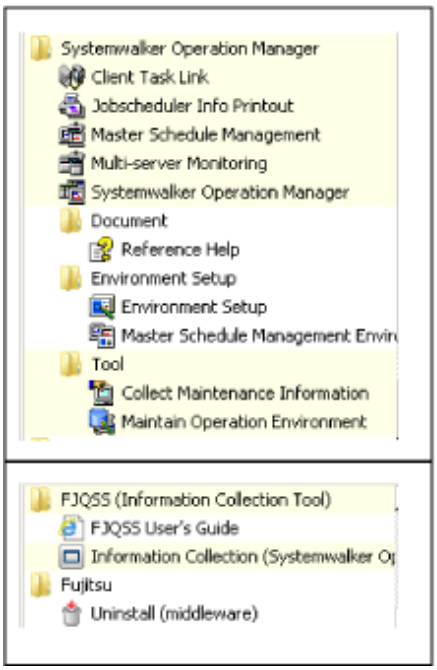
The configuration of the **Start** menu (**Start** screen) to be registered when Systemwalker Operation Manager is installed has been changed in the following cases.

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

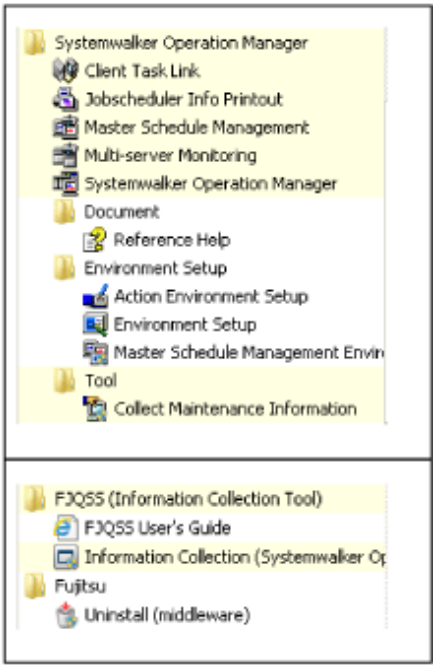
Note that the icon images displayed in each menu and their names have not been changed.

Menu configuration applicable before upgrade

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



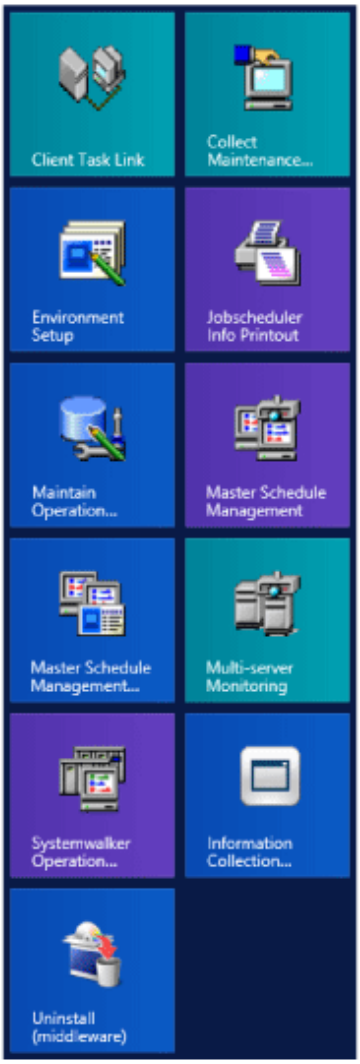
[Start] menu for Windows® 7
(If the installation type is [Client].)



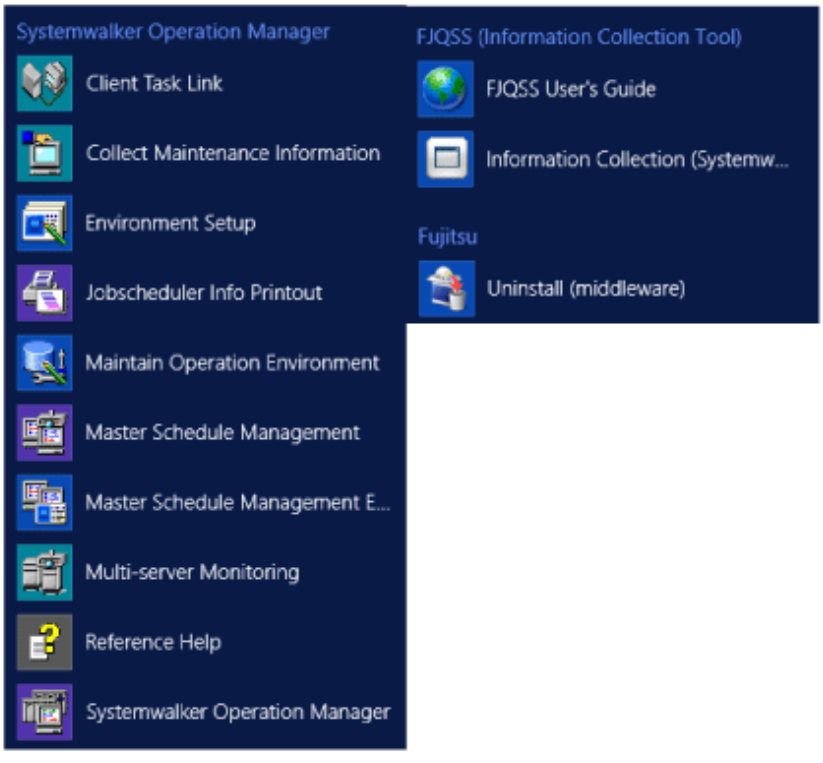
Menu configuration applicable after upgrade

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

[Start] windows

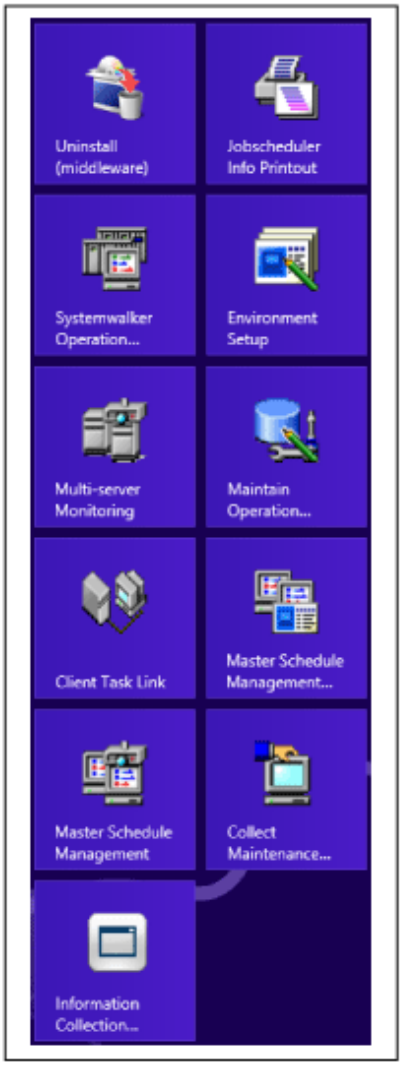


[App] windows



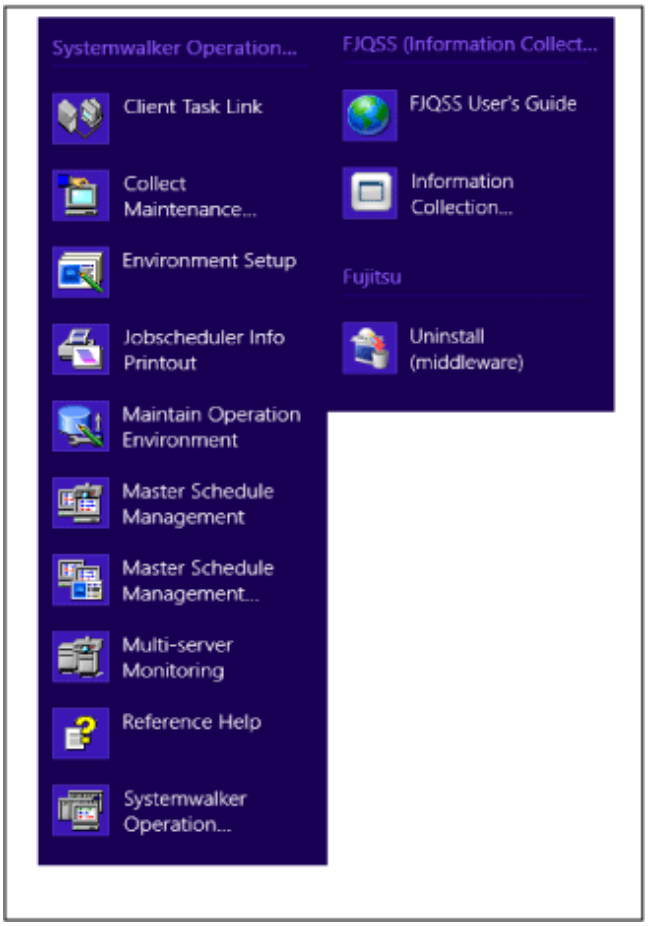
[Start] windows for Windows® 8
(If the installation type is [Client].)

[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

Incompatibilities relating to changing the indication order of date

- The indication order of date which displayed in the following functions have been changed:

Functions	indication order (old edition)	indication order (V13.8.0)
qjstat command *1	Year.Month.Day	Month.Day.Year
mjsview command *1	Year/Month/Day	Month/Day/Year
operation record files for Job Execution Control *1	Year/Month/Day	Month/Day/Year
Job Output Info of Interstage attribute job	Year/Month/Day or Day/Month/Year	Month/Day/Year

- Notice *1: Only for UNIX version has been changed

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	V11.*x*	V13.*x*	Remarks
Security	Extended User Management function		N2	N2	
	Access control		Y1	Y4 (*1) V13.2.0	*1: Registration permissions have been added.
	Restricting execution users		N2	Y2 V13.2.0	
	Audit logs		N2	Y2 V13.2.0	
	Systemwalker authentication repository		N2	Y2 V13.8.0	
Power schedule	Server power on/off control	Single server power control	Y1	Y1 (*1)	*1: Windows x86 servers only.
		Multi-server power control	Y1	Y1 (*1)	*1: Windows x86 servers only.
Calendar	Calendar		Y1	Y1	
		Settings to reflect rescheduling changes to holiday definitions	N2	Y2 V13.2.0	
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	

Classification	Functionality	Details	V11.*x*	V13.*x*	Remarks
		Termination processing job nets	Y1	Y3 (*1) V13.8.0	*1: The registration destination project has changed.
		Normal attribute job nets	N2	N2	
		CSV entry support for definitions	Y1	Y1	
		File wait command	Y1	Y4 (*1) V13.8.0	*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	Y1	Y4 (*1) V13.8.0	*1: Wait until Specified Time can be used
		Variable parameters (job net variable)	N2	Y2 (*1) V13.3.0 Y4 (*2) V13.8.0	*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	Y1	Y4 (*1) V13.2.0	*1: Message linkage jobs can be carried over.
		Job definition variables	N2	Y2 V13.3.0	
		Linked job nets	N2	Y2 V13.8.0	
		Wait with OR	N2	Y2 V13.8.0	
		Concurrent execution of job nets	N2	Y2 (*1) V13.8.0	*1: Concurrent execution using copy and startup is supported
		Memo function for jobs and job nets	Y2 L10	Y4 (*1) V13.8.0	*1: Memos can be searched.

Classification	Functionality	Details	V11.*x*	V13.*x*	Remarks
	Job monitoring and operation		Y1	Y1	
		Multi-server monitoring	Y1	Y4 (*1) V13.3.0	*1: General users are permitted.
		Job operation commands	Y2 L10	Y1	
		Startup days carryover control	Y2 L10	Y1	
		Batch processing of projects	N2	Y2 V13.2.0	
	Multi-server monitoring GUI		Y2 L10	Y1	
	Job history display		Y1	Y1	
	Jobscheduler printing		Y1	Y1	
	Startup day	Business day	N2	Y2 V13.2.0	
		Preview display	N2	Y2 V13.8.0	
Job execution control	Queue control		Y1	Y1	
	Network Job function		Y1	Y4 (*1) V13.8.0	*1: The Schedule Server Name Notification function has been added.
		I/O file transfer	N2	Y2 (*1) V13.8.0	*1: When executing demand jobs.
	History information output	History information	Y1	Y1	
		Operation record information	Y4 (*1) L10	Y1	*1: Job net names and project names have been added to records.
	Load Balancing function		Y1 (*1)	Y1 (*1)	*1: Continued as the Compatibility function.
	Distributed Execution function		Y2 L10	Y4 (*1)(*2) V13.8.0	*1: Dynamic changes added to definitions. *2: Schedule Server Name Notification and Submit

Classification	Functionality	Details	V11.*x*	V13.*x*	Remarks
					Failure Notification functions added.
	JCL		Y4 (*1) L10	Y1	*1: Select output such as steps.
	Start mode specification		N2	Y2 V13.8.0	
Event monitoring			Y1	Y1	
Action management	Action monitoring and operation		Y1	Y1	
	Action execution API		Y1	Y1	
Backup Link			Y1	Y1	ARCserve is required
Start services /apps	Service Execution function		Y1	Y1	
	Application Execution function		Y1	Y1	
Desired State Management			Y1	Y1	
Policy operation			Y1	Y1	
WWW (Web) console	Web Linkage function		Y1	N1 (*1)	*1: Function removed in V13.8.0.
	Web Console		N2	Y2 V13.8.0	
	Single sign-on		N2	Y2 V13.8.0	
Job output control (output file print control)	Print control		N1	N2	Requires Systemwalker PrintMGR
	Print status monitoring and operation		N1	N2	

Classification	Functionality	Details	V11.*x*	V13.*x*	Remarks
	Print results notification		N1	N2	
Task Link	File transfer		Y1	Y1	
	File compression/ expansion		Y1	Y1	
	File operation		Y1	Y1	
	Application execution		Y1	Y1	
	Remote access control		Y1	N1	
	Client power on/off control		Y1	Y1	
Interstage linkage			Y1	Y1	
Tivoli linkage			N1	N2	Requires authorization for each version/level
High-reliability functions	Support for cluster systems	Microsoft(R) Cluster Service	Y4 L10	N1 (*1)	EE only *1: Removed in V13.8.0.
		Microsoft(R) Failover Clustering	N2	Y2 V13.3.0	EE only
		SafeCLUSTER	Y1	N1	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	Y1	Y1	

Classification	Functionality	Details	V11.*x*	V13.*x*	Remarks
		network jobs			
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	N2	Y2 (*1) V13.2.0	EE only *1: Supported only for operations where a single server acts as both the management server and the schedule server.
		Reflects master changes to future schedules	N2	Y2 V13.2.0	
		Generates schedules for past dates	N2	Y2 V13.2.0	
	Operation Change function	Enables job definitions to be changed in advance, then reflects them in a batch on the relevant day	N2	Y2 V13.2.0	
	Carryover control	Action to be taken when the day change time is exceeded, and the execution control for the day's schedule	N2	Y2 V13.2.0	
Tools	Installation		Y1	Y4 (*1) V13.8.0	*1: No startup account required.

Classification	Functionality	Details	V11.*x*	V13.*x*	Remarks
	Common tools	Batch startup and stop	Y1	Y1	
		Batch backup and restore	Y1	Y1	
	Diagnostic/ Maintenance tools		Y1	Y1	
	FJQSS		N2	Y2 V13.8.0	

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	V11.*x*	V12.*x*	V13.*x*	Remarks
			Solaris Linux	Solaris Linux for Itanium	Solaris Linux Linux for Itanium HP-UX AIX	
Security	Extended User Management function		N2	Y2 12.0	Y1	
	Access control		Y1	Y1	Y4 (*1) V13.2.0	*1: Registration permissions have been added.
	Restricting execution users		N2	N2	Y2 V13.2.0	
	Audit logs		N2	N2	Y2 V13.2.0	
	Systemwalker authentication repository		N2	N2	Y2 V13.8.0	Solaris/Linux only
Power schedule	Server power on/off control	Single server power control	Y1 (*1)	Y1 (*2)	N1 (*2)(*3)	*1: Solaris servers and Linux servers only. *2: Solaris servers and Linux x86 servers only. *3: Function removed in V13.8.0.

Classification	Functionality	Details	V11.*x*	V12.*x*	V13.*x*	Remarks
			Solaris Linux	Solaris Linux for Itanium	Solaris Linux Linux for Itanium HP-UX AIX	
		Multi-server power control	Y1 (*1)	Y1 (*2)	N1 (*2)(*3)	*1: Solaris servers and Linux servers only. *2: Solaris servers and Linux x86 servers only. *3: Function removed in V13.8.0.
Calendar	Calendar		Y1	Y1	Y1	
		Settings to reflect holiday definitions	N2	N2	Y2 V13.2.0	
Job scheduling	Automatic job execution/ Job management	Batch jobs	Y1	Y1	Y1	
		Systemwalker script	Y1	Y1	Y1	
		Recovery jobs	Y1	Y1	Y1	
		Conditional branching for completion codes	Y1	Y1	Y1	
		Termination processing job nets	N2	N2	N2	
		Normal attribute job nets	Y1	Y1	Y1	
		CSV entry support for definitions	Y1	Y1	Y1	
		File wait command	Y2 (*1) 11.0	Y1	Y4 (*2) V13.8.0	*1: Same functionality provided as the Windows version. *2: Wait for creation/ deletion/update can be used, wildcard character can be specified
		Check log file command	Y1	Y1	Y1	
		Time (specified	Y1	Y1	Y4 (*1) V13.8.0	*1: Wait until Specified Time can be used

Classification	Functionality	Details	V11.*x*	V12.*x*	V13.*x*	Remarks
			Solaris Linux	Solaris Linux for Itanium	Solaris Linux Linux for Itanium HP-UX AIX	
		time) wait command				
		Variable parameters (job net variable)	N2	N2	Y2 (*1) V13.3.0 Y4 (*2) V13.8.0	*1: Variable parameters can be specified *2: Job net variable can be specified
		Project management	Y1	Y1	Y1	
		Group function	Y1	Y1	Y1	
		Job net layering	Y1	Y1	Y1	
		Message linkage	Y1	Y1	Y4 (*1) V13.2.0	*1: Message linkage jobs can be carried over.
		Job definition variables	N2	N2	Y2 V13.3.0	
		Linked job nets	N2	N2	Y2 V13.8.0	
		Wait with OR	N2	N2	Y2 V13.8.0	
		Concurrent execution of job nets	N2	N2	Y2 (*1) V13.8.0	*1: Concurrent execution using copy and startup is supported
		Memo function for jobs and job nets	Y2 11.0	Y1	Y4 (*1) V13.8.0	*1: Memos can be searched.
	Job monitoring and operation		Y1	Y1	Y1	
		Multi-server monitoring	Y1	Y1	Y4 (*1) V13.3.0	*1: General users are permitted.
		Job operation commands	Y2 11.0	Y1	Y1	
		Startup days carryover control	Y2 11.0	Y1	Y1	

Classification	Functionality	Details	V11.*x* Solaris Linux	V12.*x* Solaris Linux for Itanium	V13.*x* Solaris Linux Linux for Itanium HP-UX AIX	Remarks
		Batch processing of projects	N2	N2	Y2 V13.2.0	
	Multi-server monitoring GUI		Y2 11.0	Y1	Y1	
	Job history display		Y1	Y1	Y1	
	Jobscheduler printing		Y1	Y1	Y1	
	Startup day	Business day	N2	N2	Y2 V13.2.0	
		Preview display	N2	N2	Y2 V13.8.0	
Job execution control	Queue control		Y1	Y1	Y1	
	Network Job function		Y4 (*1) 11.0	Y1	Y4 (*2) V13.8.0	*1: Only user registration on the execution server is possible. *2: The Schedule Server Name Notification function has been added.
		I/O file transfer	N2	N2	Y2 (*1) V13.8.0	*1: When executing demand jobs.
	History information output	History information	Y1	Y1	Y1	
		Operation record information	Y4 (*1) 11.0	Y1	Y1	*1: Job net names and project names have been added to records.
	Load Balancing function		N2	N2	N2	
	Distributed Execution function		Y2 11.0	Y4 (*1) 12.0	Y4 (*2) V13.8.0	*1: Dynamic changes added to definitions. *2: Schedule Server Name Notification and Submit Failure Notification functions added.
	JCL		Y4 (*1) 11.0	Y1	Y1	*1: Select output such as steps.

Classification	Functionality	Details	V11.*x*	V12.*x*	V13.*x*	Remarks
			Solaris Linux	Solaris Linux for Itanium	Solaris Linux Linux for Itanium HP-UX AIX	
	Start mode specification		N2	N2	Y2 V13.8.0	
Event monitoring			N2	N2	N2	
Action management			N2	N2	N2	
Backup Link			N2	N2	N2	
Start services/ apps	Service Execution function		Y1	Y1	Y1	
	Application Execution function		Y1	Y1	Y1	
Desired State Management			Y1	Y1	Y1	
Policy operation			Y1	Y1	Y1	
WWW (Web) console	Web Linkage function		Y1	Y1	N1 (*1)	*1: Function removed in V13.8.0.
	Web Console	N2	N2	N2	Y2 V13.8.0	
	Single sign-on		N2	N2	Y2 V13.8.0	
Job output control (output file print control)			N2	N2	N2	
Task Link	File transfer		Y1	Y1	Y1	
	File compression/ expansion		Y1	Y1	Y1	
	File operation		Y1	Y1	Y1	

Classification	Functionality	Details	V11.*x*	V12.*x*	V13.*x*	Remarks
			Solaris Linux	Solaris Linux for Itanium	Solaris Linux Linux for Itanium HP-UX AIX	
	Application execution		Y1	Y1	Y1	
	Remote access control		N2	N2	N2	
	Client power on/off control		Y1	Y1	Y1	
Interstage linkage			Y1	Y1	Y1	Solaris/Linux/ Linux(V10L10 or later) for Itanium only
Tivoli linkage			N1	N2	N2	Requires authorization for each version/level
Workload Organizer linkage			Y2 11.0	Y1	Y1 V13.2.0 only	Solaris only Requires "Workload Organizer"
High-reliability function	Support for cluster systems	Microsoft(R) Cluster Server	N2	N2	N2	
		Microsoft(R) Failover Clustering	N2	N2	N2	
		SafeCLUSTER	Y1	Y1	N1	Solaris EE only
		Sun Cluster	Y1	Y1	Y1	Solaris EE only
		MC/ serviceGHP serviceG	Y1	N2	Y1	HP EE only
		PRIMECLUSTER	Y4 (*1) 11.0	Y4 (*2) 12.0	Y4 (*3) V13.2.0 Y4 (*1) V13.8.0	EE only *1: Solaris/Linux only. *2: Solaris/Linux for Itanium only. *3: Solaris/Linux/Linux for Itanium only.
		HACMP PowerHA	N2	N2	Y2 V13.2.0	AIX EE only 1:1 operation standby, 2 node mutual standby only

Classification	Functionality	Details	V11.*x* Solaris Linux	V12.*x* Solaris Linux for Itanium	V13.*x* Solaris Linux Linux for Itanium HP-UX AIX	Remarks
	Backup without stopping		Y1	Y1	Y1	
	Server mirroring	Execution server for network jobs	Y1	Y1	Y1	
Large-scale systems	Large-scale operations		Y1	Y1	Y1	EE only
	Subsystems		Y1	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	Y2 (*1) 11.0	Y1 (*2)	Y4 (*3)	EE only *1: Solaris only. *2: Solaris/Linux for Itanium. *3: Solaris/Linux/Linux for Itanium/HP/AIX.
		Reflects master changes to future schedules	N2	N2	Y2 (*3) V13.2.0	
		Generates schedules for past dates	N2	N2	Y2 (*3) V13.2.0	
	Operation Change function	Enables job definitions to be changed in advance, then reflects them in a batch on the relevant day	Y2 (*1) 11.0	Y1 (*2)	Y4 (*3) V13.2.0	
	Carryover control	Action to be taken	Y2 (*1) 11.0	Y1 (*2)	Y4 (*3) V13.2.0	

Classification	Functionality	Details	V11.*x* Solaris Linux	V12.*x* Solaris Linux for Itanium	V13.*x* Solaris Linux Linux for Itanium HP-UX AIX	Remarks
		when the day change time is exceeded, and the execution control for the day's schedule				
Tools	Installation		Y1	Y1	Y1	
	Common tools	Batch startup and stop	Y1	Y1	Y1	
		Batch backup and restore	Y1	Y1	Y1	
	Diagnostic / Maintenance tools		Y1	Y1	Y1	
	FJQSS		N2	N2	Y2 V13.8.0	

Y1: Function exists
Y2: New function
Y3: Incompatibilities exist
Y4: Function has been enhanced
N1: Function has been removed
N2: No function exists