

Systemwalker Runbook Automation



Troubleshooting Guide

Windows/Linux

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Preface

Purpose of This Document

This document describes how to deal with problems that occur with the following version of Systemwalker Runbook Automation.

- Systemwalker Runbook Automation V14.1.0
- Systemwalker Runbook Automation V15.0.0
- Systemwalker Runbook Automation V15.1.0
- Systemwalker Runbook Automation V15.1.1
- Systemwalker Runbook Automation V15.1.2

Intended Readers

This document is intended for people who want to understand the basic operations and functions of Systemwalker Runbook Automation and will use Systemwalker Runbook Automation to manage automatic operation processes.

Abbreviations and Generic Terms Used

- The term "Windows(R) 8" refers to the following products:
 - Windows(R) 8 Pro(x86)
 - Windows(R) 8 Enterprise(x86)
 - Windows(R) 8 Pro(x64)
 - Windows(R) 8 Enterprise(x64)
- The term "Windows(R) 7" refers to the following products:
 - Windows(R) 7 Home Premium(x86)
 - Windows(R) 7 Professional(x86)
 - Windows(R) 7 Ultimate(x86)
 - Windows(R) 7 Enterprise(x86)
 - Windows(R) 7 Home Premium(x64)
 - Windows(R) 7 Professional(x64)
 - Windows(R) 7 Ultimate(x64)
 - Windows(R) 7 Enterprise(x64)
- The term "Windows Vista (R)" refers to the following products:
 - Windows Vista(R) Home Basic(x86)
 - Windows Vista(R) Home Premium(x86)
 - Windows Vista(R) Business(x86)
 - Windows Vista(R) Ultimate(x86)
 - Windows Vista(R) Enterprise(x86)
 - Windows Vista(R) Business(x64)
 - Windows Vista(R) Ultimate(x64)
- The term "Windows(R) XP" refers to the following products:
 - Microsoft(R) Windows(R) XP Professional x64 Edition

- Microsoft(R) Windows(R) XP Professional
- Microsoft(R) Windows(R) XP Home Edition
- The term "Windows Server 2012" refers to the following products:
 - Microsoft(R) Windows Server(R) 2012 Standard(x64)
 - Microsoft(R) Windows Server(R) 2012 Datacenter(x64)
- The term "Windows Server 2008" refers to the following products:
 - 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)
 - Microsoft(R) Windows Server(R) 2008 Standard(x86)
 - Microsoft(R) Windows Server(R) 2008 Enterprise(x86)
 - Microsoft(R) Windows Server(R) 2008 Standard(x64)
 - Microsoft(R) Windows Server(R) 2008 Enterprise(x64)
 - Microsoft(R) Windows Server(R) 2008 Datacenter(x64)
 - Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V(x86)
 - Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V(x86)
 - Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V(x64)
- The term "Windows Server 2003" refers to the following products:
 - Microsoft(R) Windows Server(R) 2003, Standard Edition
 - Microsoft(R) Windows Server(R) 2003, Enterprise Edition
 - Microsoft(R) Windows Server(R) 2003, Standard x64 Edition
 - Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Standard Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition
 - Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
- The Oracle Solaris Operating System may be referred to as Solaris, Solaris Operating System or Solaris OS.
- Microsoft (R) Cluster Server and Microsoft (R) Cluster Service are referred to as MSCS.
- Versions of Systemwalker Runbook Automation that run on Windows systems are referred to as Windows versions.
- Versions of Systemwalker Runbook Automation that run on Linux systems are referred to as Linux versions.

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This guide uses screenshots in accordance with Microsoft Corporation's guidelines.

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Chapter 1 Troubleshooting Flow

To identify the cause of errors, it is recommended to collection maintenance information in Systemwalker Runbook Automation. By collecting information immediately after an error occurs, it is possible to investigate and find the causes of errors that cannot be resolved using the procedures described in this chapter.

If an error occurs, follow the steps below:

1. If you think an error occurred, then collect maintenance information.
2. For each symptom, perform the appropriate checks and actions
3. If you have been able to solve the error, then you can continue the operation.
Keep the information collected in step 1, in case you need to use it next time the error occurs.
4. If have not been able to solve the error, then send the information collected in step 1 to Fujitsu technical support, and ask them to conduct an investigation.

1.1 Collecting Investigation Data

Collect the data displayed below on the Management Server, Development Computer or Linked Server where an error has occurred.

1.1.1 Maintenance Information for Management Servers

Use the `swrba_collectinfo` command to collect investigation data for Management Servers:

[Windows]

```
<Installation directory for Systemwalker Runbook Automation>\bin\swrba_collectinfo <storage directory>
```

[Linux]

```
/opt/FJSVswrbam/bin/swrba_collectinfo <storage directory>
```



See

Refer to the *Systemwalker Runbook Automation Reference Guide* for details on the command.



Information

If the default values are used for the size of the log files for Systemwalker Runbook Automation and the number of generations to be stored for each log file, up to about 100 MB of free space will be required.



Point

If the Management Server is running Windows, FJQSS (a data collection tool) can be used to obtain the same information as the `swrba_collectinfo` command for collecting data used to diagnose problems. Refer to the manual shown below for information on FJQSS.

- On the **Start** menu, click **FJQSS(a data collection tool) >> FJQSS User's Guide**.

1.1.2 Maintenance Information for Development Computers

Investigation data for Systemwalker Runbook Automation Studio

To collect investigation data for Interstage BPM Studio for Systemwalker Runbook Automation Studio, issue the `swrbacolinf` command (if the command fails, inform Fujitsu technical support of the message output):

```
<Installation directory for Systemwalker Runbook Automation Studio>\swrba\bin\swrbacolinf <output directory>
```



Refer to the *Systemwalker Runbook Automation Studio User's Guide* for details on the command.



FJQSS (a data collection tool) can be used to obtain the same information as the swrbacolinf command for collecting maintenance information. Refer to the manual shown below for information on FJQSS.

- On the **Start** menu, click **FJQSS(a data collection tool) >> FJQSS User's Guide**.

1.1.3 Maintenance Information for Linked Servers, Relay Servers and Business Servers

Investigation data for Agents

To collect investigation data for the Agent function, issue the swrba_collectinfo_agent command:

[Windows]

```
<Agent installation directory>\bin\swrba_collectinfo_agent <storage directory>
```

[Linux] [Solaris]

```
/opt/FJVSwrba/bin/swrba_collectinfo_agent <storage directory>
```



Refer to the *Systemwalker Runbook Automation Reference Guide* for details on the command.



If the Linked Server, Relay Server or Business Server is running Windows, FJQSS (a data collection tool) can be used to obtain the same information as the swrba_collectinfo_agent command for collecting data used to diagnose Agent problems. Refer to the manual shown below for information on FJQSS.

- On the **Start** menu, click **FJQSS(a data collection tool) >> FJQSS User's Guide**.

Investigation data for Configuration Management Agents

To collect investigation data for Configuration Management Agents, issue the cmdbgetinfo command:

[Windows]

```
<Agent installation directory>\CMDB\FJVScmdba\bin\cmdbgetinfo.bat -d <storage directory>
```

[Linux] [Solaris]

```
/opt/FJVScmdba/bin/cmdbgetinfo.sh -d <storage directory>
```




Refer to the *Systemwalker Runbook Automation Reference Guide* for details on the command.



If the default values are used for the size of the log files for Configuration Management Agents and the number of generations to be stored for each log file, up to about 150 MB of free space will be required.

1.2 Log Files

To collect information when an error occurs while Systemwalker Runbook Automation is operating, check the log file below:

- IBPMServer.log: Contains all errors that occur with the Systemwalker Runbook Automation Management Server. Valuable clues for solving errors can be obtained by referring to this file - for example, this file will tell you if the database server has stopped.

This file is stored in the following folder on the Systemwalker Runbook Automation Management Server:

<Installation directory for Systemwalker Runbook Automation>/IBPM/server/instance/default/logs

Chapter 2 Troubleshooting the Development Environment

2.1 Troubleshooting Starting

2.1.1 I Cannot Start Studio

Error message

Studio startup failed.

Studio has already been started or Studio terminating process is still running. Please restart this Studio after a while if other Studio is not running and the Studio terminating process is still running.

Applicable version and level

- Windows version: V14.1.0
- Linux version: V14.1.0

2.1.1.1 Action

Checkpoint

- Has Studio already been started?
- Has Studio been started soon after Studio has been stopped?

Action method

- It is not possible to start many Studio. Confirm that Studio has not been started.
- Please restart this Studio after a while if other Studio is not running and the Studio terminating process is still running.

2.2 Troubleshooting Relating to the Windows

2.2.1 I Cannot Open a Perspective

Applicable version and level

- Windows version: V14.1.0
- Linux version: V14.1.0

2.2.1.1 Action

Checkpoint

- Have all perspectives been closed?

Action method

- If all perspectives have been closed and a new one cannot be opened by selecting Open Perspective from the Window menu, perspectives can be opened by restarting Studio.

Chapter 3 Troubleshooting the Web Console

3.1 Troubleshooting upload file

3.1.1 If "Please enter a valid file path" is Displayed.

Error message

Please enter a valid file path

Applicable version and level

- Windows version: after V14.1.0
- Linux version: after V14.1.0

3.1.1.1 Action

Checkpoint

Has the Security settings of Internet Explorer been set High?

Action method

To be able to upload local file from Web console, set the following on Internet Explorer.

1. Select Internet Options from the Tools menu of the Web browser.
2. Click the Security tab and select Level Customize from security level of Trusted sites zone.
3. Insert the Web Console URL in Add this website to the zone: of the Trusted sites dialog box, and then click the Add button. If the Require server verification (https:) for all sites in this zone: check box has been selected, then clear this check box.

3.2 Troubleshooting about screen display

3.2.1 If Process Definition Details window or BPMN window of Process Instance Details window is not Displayed correctly.

Applicable version and level

- Windows version: after V14.1.0
- Linux version: after V14.1.0

3.2.1.1 Action

Checkpoint

Has the Adobe Flash Player been installed?

Action method

Install Adobe Flash Player to be able to display BPMN window correctly.

Chapter 4 Troubleshooting the Installation/Setup

4.1 Troubleshooting the Installation

4.1.1 If the Error Message "ERROR: Failed to install 'Interstage Application Server'" Displays when Installing the Management Server and the Installation Fails

Error message

```
ERROR: Failed to install 'Interstage Application Server'
```

Applicable version and level

- Linux: V15.0.0 or later

4.1.1.1 Action

Checkpoint

Check that all of the required software specified in "Installing required software" in the *Systemwalker Runbook Automation Installation Guide* has been installed.

Action method

Install any required software found to be missing.

4.1.2 If an Error Occurs during Installation

4.1.2.1 Action

Follow the steps below:

- Look up the message output to the window in the *Systemwalker Runbook Automation Message Guide*, and perform the checks and actions described.
- Look up the syslog (or the event log for Windows), and take action based on the messages there.

This product uses functions from Interstage Application Server, and so messages for that product may be output - refer to the *Interstage Application Server Messages* for details on those messages.

4.2 Troubleshooting the Setup

4.2.1 If the "The specified password not be found" is Displayed and the Command Does Not Execute When I Use the swncctrl Command (Agent Control Command) to Set up the Agent.

4.2.1.1 Action

Applicable version and level

- Windows version: V14.1.0 or later
- Linux version: V14.1.0 or later

Checkpoint

Are you executing the command from a command prompt that was started before the installation of the Agent completed?

Action method

Start a new command prompt and then execute the command again.

4.2.2 If the `swrba_setup` Command Displays the Error Message "Failed to setup the environment for the Interstage Business Process Manager" and Fails

Error message

```
Failed to setup the environment for the Interstage Business Process Manager
```

Applicable version and level

- Windows: V15.0.0 or later
- Linux: V15.0.0 or later

4.2.2.1 Action 1

Checkpoint

Check if the host name of the Management Server machine has been resolved to IPv4 address. The following format can be used to check to execute the ping command for the local host name (a host name that can be checked using the `hostname` or `uname -n` commands).

```
ping local host name
```

[Windows]

Below is a sample that it has been resolved to IPv6 address and not resolved to IPv4. The ping command will display IP address of IPv6 format.

```
>ping local host name

Pinging local host name [IP address of IPv6 format] with 32 bytes of data:
Reply from IP address of IPv6 format: time<1ms
Reply from IP address of IPv6 format: time<1ms
Reply from IP address of IPv6 format: time<1ms
Reply from IP address of IPv6 format: time<1ms

Ping statistics for IP address of IPv6 format:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

[Linux]

Below is a sample that it has been resolved to IPv6 address and not resolved to IPv4. The ping command will return "unknown host". In addition, the ping6 command will display information.

```
# ping local host name
ping: unknown host local host name

# ping6 local host name
PING local host name (local host name) 56 data bytes
64 bytes from local host name: icmp_seq=1 ttl=64 time=0.067 ms
64 bytes from local host name: icmp_seq=2 ttl=64 time=0.049 ms
```

```
64 bytes from local host name: icmp_seq=3 ttl=64 time=0.049 ms
--- local host name ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2390ms
rtt min/avg/max/mdev = 0.049/0.055/0.067/0.008 ms
```

Action method

Configure the hosts file so that the local host name is resolved to an IPv4 address.

Example

The following example shows when the IP address is "192.0.2.10" and the local host name is "remotel".

```
192.0.2.10 remotel
127.0.0.1 localhost.localdomain localhost
```

4.2.2.2 Action 2

Checkpoint

Check if the host name of the Management Server machine was changed using a procedure other than that specified in "Changing the Management Server's host name/IP address" in the *System Runbook Automation*

Action method

Uninstall Systemwalker Runbook Automation, change the host name of the Management Server machine to the desired name and then reinstall Systemwalker Runbook Automation.

4.2.3 If the swrba_setup Command Displays the Error Message "Failed to create the Process Management Database" and Fails

Error message

```
Failed to create the Process Management Database.
```

Applicable version and level

- Windows: V14.1.0 or later
- Linux: V14.1.0 or later

4.2.3.1 Action

Checkpoint

Check if the swrba_setup command has been executed by a domain user.

Alternatively, check if the following access permissions have been granted for the directory that will store the Process Management Database.

[Windows]

Ensure that the "Users" group to which the OS user "swrbadbuser" belongs has been granted "modification permissions".

Note that it is not possible to grant "modification permissions" to only the OS user "swrbadbuser". Ensure that "modification permissions" are granted to the entire "Users" group. If "modification permissions" are granted only to the OS user "swrbadbuser", the setup will end in an error.

[Linux]

Grant read and write permissions to the OS user "swrbadbuser".

Action method

If a domain user has executed the `swrba_setup` command, ensure the command is executed by a local computer with Administrator privileges.

Alternatively, if the directory storing the Process Management Database has inadequate access permissions, grant access permissions to any directories that have already been created and that are routed between the root directory and the directory that will actually store the Process Management Database, as indicated in the "Checkpoint" above.

4.2.4 If the `swrba_setup` Command Displays the Error Message "The startup processing for Systemwalker Runbook Automation has failed" and Fails

Error message

The startup processing for Systemwalker Runbook Automation has failed.

Applicable version and level

- Windows: V14.1.0 or later
- Linux: V14.1.0 or later

4.2.4.1 Action

Checkpoint

Check the LDAP for the following points:

- Check that the LDAP server has started up.
- Check that any groups required for the Systemwalker Runbook Automation environment build have been registered in the LDAP.
- Check that any users for process controls and schedule startup are configured as members of the Systemwalker Runbook Automation group.

Action method

Implement the actions listed below. Once complete, execute the `swrba_stop` command to stop Systemwalker Runbook Automation and then execute the `swrba_start` command to restart Systemwalker Runbook Automation.

- Start the LDAP server if not already started.
- If information is not correctly registered in the LDAP, refer to "Registering Users, Groups and Organizational Units" in the *Systemwalker Runbook Automation Installation Guide* and register the information for the required users, groups and organizational units in the LDAP.

4.2.5 If the `swrba_setup` Command Fails

4.2.5.1 Action

Follow the steps below:

- Look up the message output to the window in the *Systemwalker Runbook Automation Message Guide*, and perform the checks and actions described.
- Look up the syslog (or the event log for Windows), and take action based on the messages there.

This product uses functions from Interstage Application Server, and so messages for that product may be output - refer to the *Interstage Application Server Messages* for details on those messages.

4.2.6 If Organization or Group Creation Fails, or User Registration on the LDAP Directory Fails

4.2.6.1 Action

Look up the error message in the manual for the LDAP directory that you are using.

If the Interstage Directory Service is being used for the LDAP directory, then refer to the *Interstage Application Server Messages*.

4.2.7 If some tree view for the Interstage Management Console is displayed in Japanese

4.2.7.1 Action

Applicable version and level

- Windows version: V14.1.0 or later
- Linux version: V14.1.0 or later

Checkpoint

Are you accessing the Interstage Management Console using Web browser which is specified languages other than English in the encode?

Action method

Follow the steps below:

1. Restart service for the Interstage Management Console.
2. Access the Interstage Management Console using Web browser which is specified English in the encode.

Chapter 5 Troubleshooting the Startup

5.1 Troubleshooting Relating to Failure to Start the Systemwalker Runbook Automation Management Server

5.1.1 Error Messages Starting with "DbService: setConnection: Connection to database server failed."

Error messages

DbService : setConnection: Connection to database server failed. Is the database server running and reachable through the network? {ORA-01089: immediate shutdown in progress - no operations are permitted}.

Applicable version and level

- Windows version: after V14.1.0
- Linux version: after V14.1.0

5.1.1.1 Action

Checkpoint

Does *<Installation directory for Systemwalker Runbook Automation>/IBPM/server/instance/default/logs* directory have the file IBPMServer.log?

Action method

Make sure that the database is running. If it is running on a separate computer, then make sure that the database can be accessed from the computer where the Systemwalker Runbook Automation Management Server has been installed. Use telnet (specifying *<Database server hostname> <Port>*) from the server host computer to make sure that it is possible to establish a connection to the port on the database host.

5.1.2 Error Messages Starting with "LdapBroker : getContext: Could not create the directoryservices. {[LDAP: error code 49 - Invalid Credentials]}"

Error messages

LdapBroker: getContext: Could not create the directory services. {[LDAP: error code 49 - Invalid Credentials]}

LdapBroker: getGroupMembersByDN: Could not retrieve the user groups. {Could not create the directory services. {[LDAP: error code 49 - Invalid Credentials]}}

LdapBroker: Could not retrieve the user groups. {Could not create the directory services. {[LDAP: error code 49 - Invalid Credentials]}}

Applicable version and level

- Windows version: after V14.1.0
- Linux version: after V14.1.0

5.1.2.1 Action

Checkpoint

Does <Installation directory for Systemwalker Runbook Automation>/IBPM/server/instance/default/logs directory have the file IBPMServer.log?

Action method

Ensure that the correct user name and password have been specified for the LDAPAccessUserID and LDAPAccessUserPassword parameters on the Systemwalker Runbook Automation Management Server, and that it is possible to log in to the directory server using this user.

5.1.3 Error Messages Starting with "getContext: Could not create the directory services."

Error messages

getContext: Could not create the directory services.
LdapBroker: getGroupMembersByDN: Could not retrieve the user groups. {Could not create the directory services.
LdapBroker: Could not retrieve the user groups. {Could not create the directory services.

Applicable version and level

- Windows version: after V14.1.0
- Linux version: after V14.1.0

5.1.3.1 Action

Checkpoint

Does <Installation directory for Systemwalker Runbook Automation>/IBPM/server/instance/default/logs directory have the file IBPMServer.log?

Action method

Ensure that the LDAP server is running on the port specified by the LDAPServer parameter on the Systemwalker Runbook Automation Management Server. Use telnet (specifying <LDAP server hostname> <Port>) from the server host computer to ensure that it is possible to establish a connection to the port on the host.

5.2 Troubleshooting Errors when a Systemwalker Runbook Automation Management Server Starts

This section provides examples of errors that occur when a Systemwalker Runbook Automation Management Server starts, and describes its possible causes and solutions. Isolate the cause and take the appropriate action.

5.2.1 Errors Relating to Active Directory

Applicable version and level

- Windows version: V14.1.0, V15.0.0
- Linux version: V14.1.0, V15.0.0

5.2.1.1 Action

Cause

Active Directory has been not running.

Action method

Start Active Directory before starting the Systemwalker Runbook Automation Management Server.

Chapter 6 Troubleshooting Automatic Execution

6.1 Troubleshooting Operation Components

6.1.1 Action Required when the Management Server Crashes while the Automated Operation Process is Running

Applicable version and level

- Windows version: V14.1.0 or later
- Linux version: V14.1.0 or later

6.1.1.1 Action 1

Action method

If errors occur while an operation component is executing, the following logs will be output. Correct the error by checking the content of these logs.

- Operation component logs

Operation component logs

The operation components provided by Systemwalker Runbook Automation output logs to the following location. The file names for the logs output by operation components developed by users can be decided for each separate component.

[Windows]

```
<Installation directory for Systemwalker Runbook Automation>\swrbam\share\rbaope\work\log\swrba_standard.log
```

[Linux]

```
/etc/opt/FJSVswrbam/share/rbaope/work/log/swrba_standard.log
```

6.1.1.2 Action 2

Checkpoint

Has the Process Definition transitioned to the operation component node or a subsequent node?

Action method

If the Process Definition has not transitioned to the operation component node or a subsequent node, an error may have occurred on the Management Server.

Use the Web console to check Management Server errors.

6.1.2 Action Required when the "Transfer files" Operation Component Fails and Outputs the "connection closed by remote host" or "SCP did not finish successfully" Messages

Applicable version and level

- Windows version: V15.0.0 or later

6.1.2.1 Action

Action method

In the following cases, if SSH is used for communication with the Business Server and the "Transfer files" operation component is executed, this message will be set for operation component execution results: message, which may cause the 161 or 177 values to be returned and the operation component to end.

- Files are transferred using SSH multiple times consecutively
- While a big file is being transferred using SSH, another one is transferred using SSH or FTP

If this problem occurs, either resume the Automated Operation Process that ended abnormally from the "Transfer files" operation component, or re-execute the Process Definition that ended abnormally.

This problem also may occur when the number of ports that can be used in communication are temporarily reduced. To avoid this problem:

- If big files are transferred using SSH multiple times, wait for at least 4 minutes before the next transfer.
- Reduce the number of seconds until the port can be reused.
- Increase the highest port number that TCP can assign.
- "File transfer infrastructure" is used for communication with the Business Server.

The following explains how to reduce the number of seconds until the port can be reused, and how to increase the highest port number that TCP can assign.

Operation

1. How to reduce the number of seconds until the port can be reused

In the Management Server registry enter a value between 30 and 300 for the HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\TcpTimedWaitDelay key (default is 240) and restart the Management Server. Add the key as DWORD value if it does not exist.

2. How to increase the highest port number that TCP can assign.

For Windows Server 2008 and Windows Server 2012 the default value is 65535, therefore no action is required.

For Windows Server 2003, specify a value between 5000 and 65534 (default value is 5000). Increase the highest port number by the following procedure.

1. In the Management Server registry edit the HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\MaxUserPort
2. Add the key as DWORD value if it does not exist.
3. Specify a value between 5000 and 65534.

To be able to make use this key, restart the Management Server.



See

.....
Refer to the *Systemwalker Runbook Automation Operation Guide* for information on how to resume an Automated Operation Process that ended abnormally.
.....

6.1.3 Action Required when the Return Value 197 is Displayed in the "Install Operating System Updates" Operation Component

Applicable version and level

- Windows version: V15.0.0 or later
- Linux version: V15.0.0 or later

6.1.3.1 Action

Checkpoint

Is an operation process created in Systemwalker Runbook Automation Studio V15.1.0 being executed on a Management Server using V15.0.0 or later?

Action method

Till Systemwalker Runbook Automation V15.0.0, the operating system of target servers for the "Install operating system updates" operation component was Windows only. However, from V15.1.0, Linux is also supported as the operating system of target servers. For this reason, although the following options for Linux have been added for operation processes created in Systemwalker Runbook Automation Studio V15.1.0 or later, these options are not supported in Management Servers running V15.0.0. As a result, if the operating system of the target server is Linux and the following unsupported options are specified, the return value 197 is displayed.

- Basic options
 - Add "yum" to the available "patch_kind" options
- Advanced options
 - Add the "yum_packagename" option
 - Add Linux to the "ostype" option

If using the "Install operating system updates" operation component in an operation process created in Systemwalker Runbook Automation Studio V15.1.0 or later, take the following action:

- If the operating system of the target server is Linux, run on a Management Server using V15.1.0 or later.
- If running on a Management Server using V15.0.0, only execute if the target server operating system is Windows.

6.2 Troubleshooting Automatic Operation Processes

6.2.1 If an Automatic Operation Process is in the Error State

Applicable version and level

- Windows version: V14.1.0 or later
- Linux version: V14.1.0 or later

6.2.1.1 Action

Action method



.....
This action may affect the active system, so perform it only when testing an automatic operation process or when an error occurred on the Management Server during production operations.
.....

If an automatic operation process is in error state while it is running, it can be stopped. In this case, recover automatic operation process with using `swrba_recoverprocess` command (process instance recover command) after recovered from error state.

The automatic operation process has recorded the running history while it is running. The `swrba_recoverprocess` command restart automatically with following this running history. However, When the overflow of the system has been occurred while automatic operation is running and executing some processing to Business Server, that automatic operation will abend without restarting.

Follow the steps below in the following situations:

- When the Management Server has failed with any problems and the status of an automatic operation process is "running" even though it has stopped executing.
- When the Management Server has gone down on cluster system and the status of an automatic operation process is "running" even though it has stopped executing.

Action

The windows in the procedure are examples of V14.1.0.

1. Login to Management server after recovered from error state.
2. Confirm the Systemwalker Runbook Automation has been started normally with using swrba_status command.

[Windows]

```
[Systemwalker Runbook Automation Install Directory]\bin\swrba_status
```

[Linux]

```
/opt/FJSVswrbam/bin/swrba_status
```

3. Execute swrba_recoverprocess command and recover the error automatic operation process

[Windows]

```
[Systemwalker Runbook Automation Install Directory]\bin\swrba_recoverprocess
```

[Linux]

```
/opt/FJSVswrbam/bin/swrba_recoverprocess
```

The recovered automatic operation process instance id is output when command execute.

- The automatic operation will be recovered successful with swrba_recoverprocess command execute.

Example)

```
PROCESSID:1599523(ACTIVITYID:1599525) is recovered  
PROCESSID:1600057(ACTIVITYID:1600059) is recovered  
PROCESSID:1600595(ACTIVITYID:1600600) is recovered  
PROCESSID:1600595(ACTIVITYID:1600601) is recovered  
PROCESSID:1600595(ACTIVITYID:1600602) is recovered
```

- The automatic operation will be not recovered with swrba_recoverprocess command execute.

Example)

```
PROCESSID:1600071(ACTIVITYID:1600073) recovery failed  
FSP_SW/RB-A_BASE: ERROR: 03013: I/O error. : PROCESSID='1600071' ACTIVITYID='160  
0073' PATH='C:\Fujitsu\Systemwalker\SWRBAM\etc\share\rbaope\opeparts\output\1600  
071_1600073\status.dat' DETAIL='invalid stream header'
```

4. For the detail recovered automatic operation process, you can confirm to specify pi-list option or pi-get option on swrba_admin command based on value of PROCESSID which swrba_recoverprocess command output.

[Windows]

```
[Systemwalker Runbook Automation Install Directory]\bin\swrba_admin
```

[Linux]

```
/opt/FJSVswrbam/bin/swrba_admin
```

Example of command result:

If you Identify process instance of automatic operation process group name which PROCESSID is 12345

```
swrba_admin pi-list -piid 12345 -user swrbaadmin
```

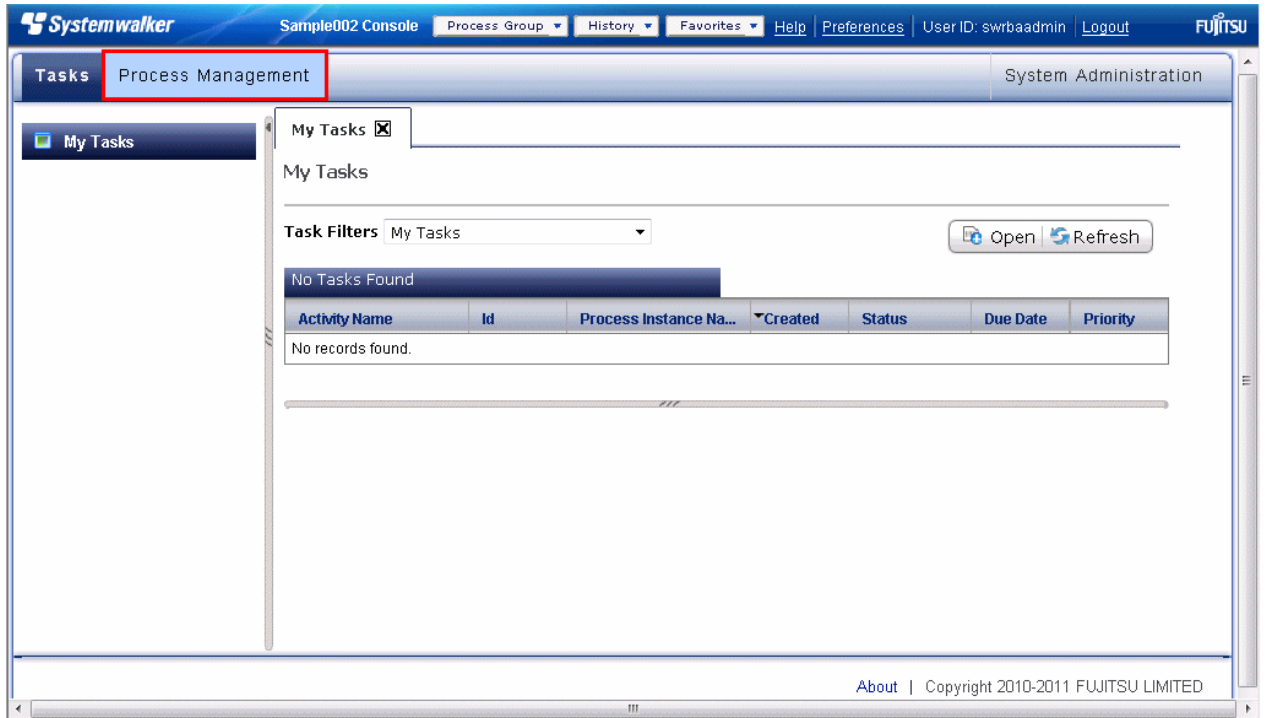
5. To confirm recovered automatic operation state on Web console, run the following procedure.

a. Log in to the Web console from the address below:

```
http://<Server name>:<Port number>/console/Default/
```

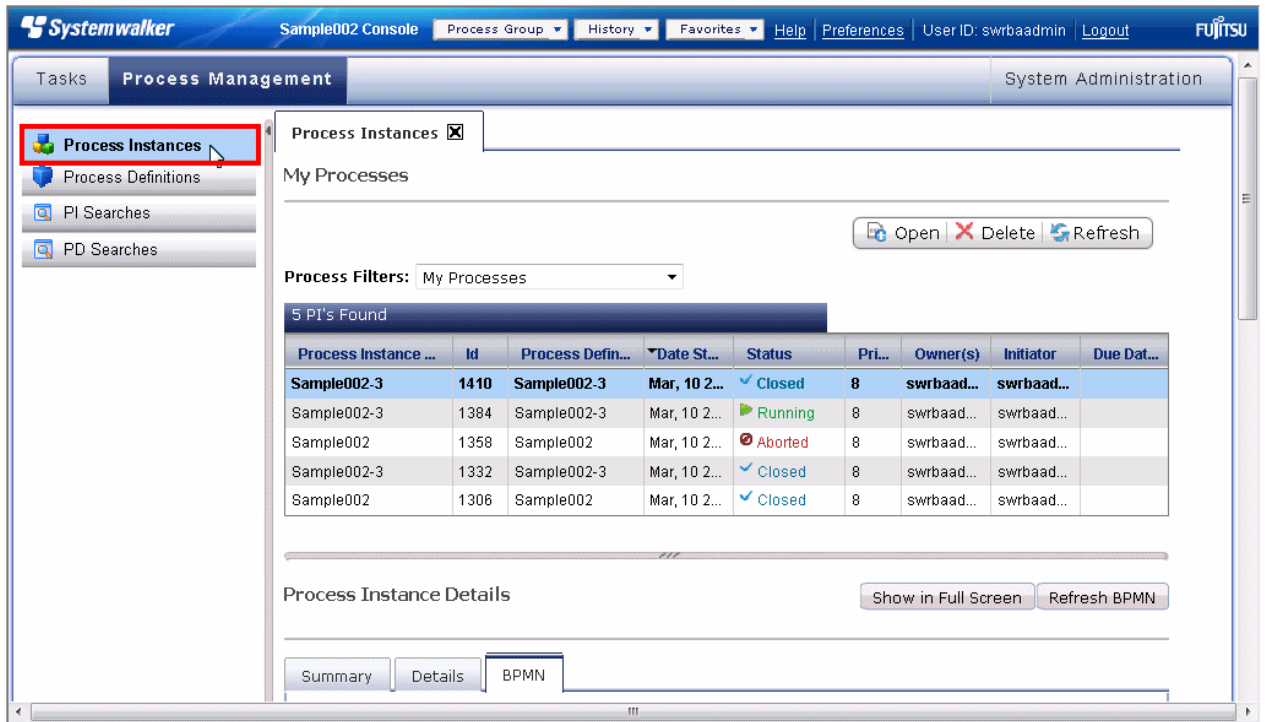
b. Select the automatic operation process to be operated on.

Select it in the Select Automated Operation Processes Group window, and then select Process Management from the menu.

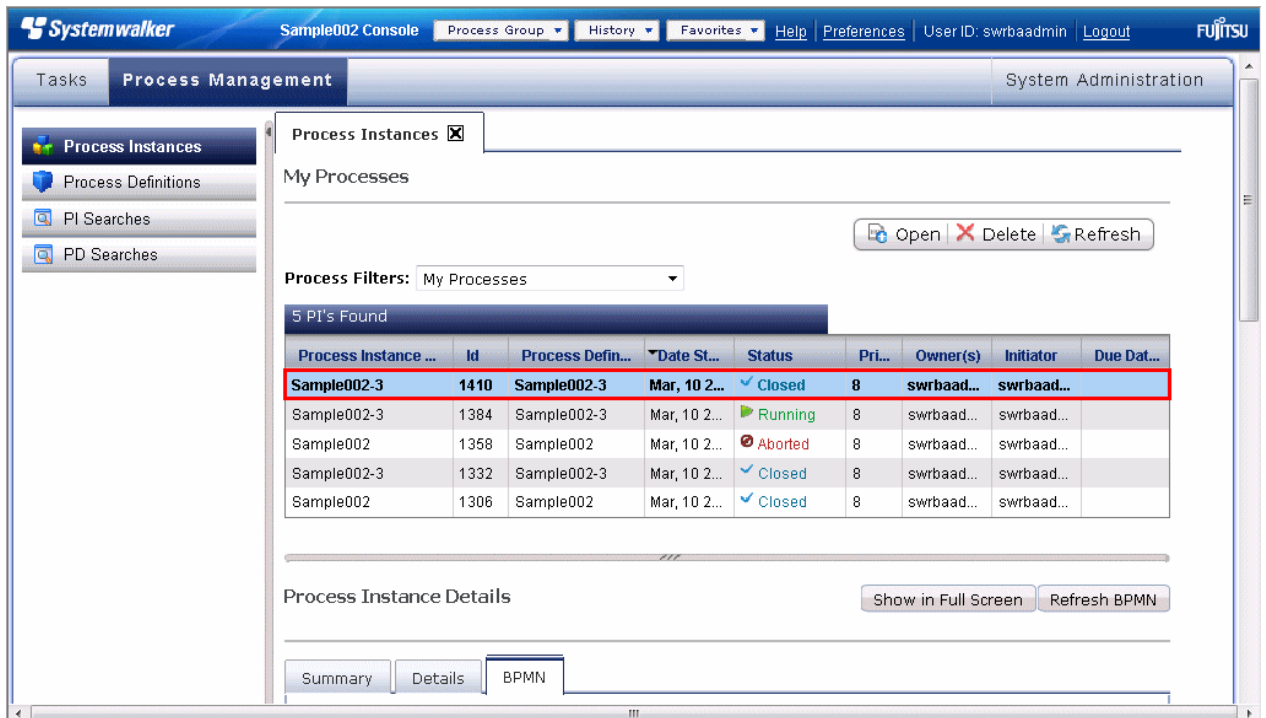


c. Display a list of Process Definitions

Click the Process Instances submenu to display a list of process instances that have been executed. Select the process to be operated on.



d. Confirm recovered process instance state.



Refer to the *Systemwalker Runbook Automation Reference Guide* for information on the `swrba_status`, `swrba_recoverprocess`, and `swrba_admin` commands.

6.2.1.2 Action when an Error is Recovered



Note

This action may affect the active system, so perform it only when swrba_recoverprocess command (process instance recovery command) executed and process instance state is abort

When swrba_recoverprocess command (process instance recovery command) executed and process instance state is abort, execute one of the following actions based on process instance processing.

- Restarting process instance

In the case that automatic operation process which each node processing must be executed continuously, to be restarted process instance, it remains automatic operation process order. Refer to the *Systemwalker Runbook Automation Studio User's Guide* for information on how to start process instance.

- Resuming process instance from Aborted node.

In the case that operation component is needed to execute again, to resume process instance from canceled node, the operation component can be executed again.

- Resuming process instance from the previous or next node which be aborted

To resume process instance from any node, the automatic operation can be operated continuously

Determine which node be resumed based on the processing of operation component.

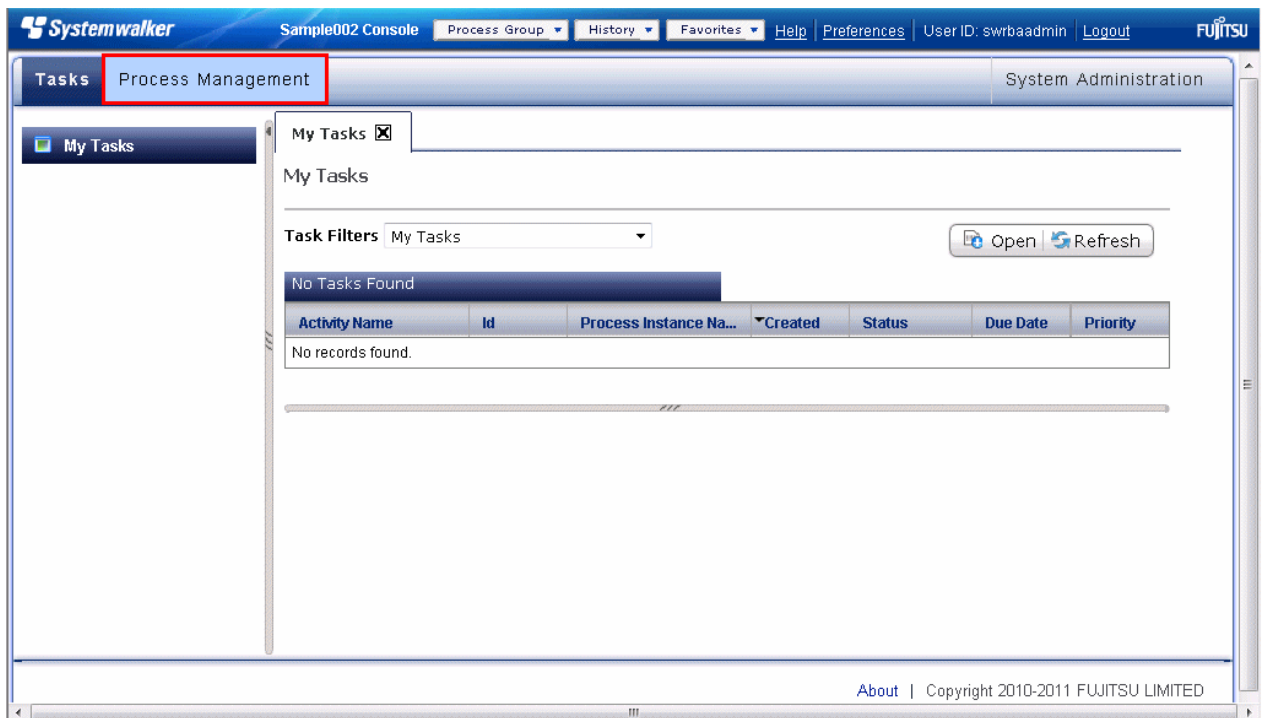
Action

The windows in the procedure are examples of V14.1.0.

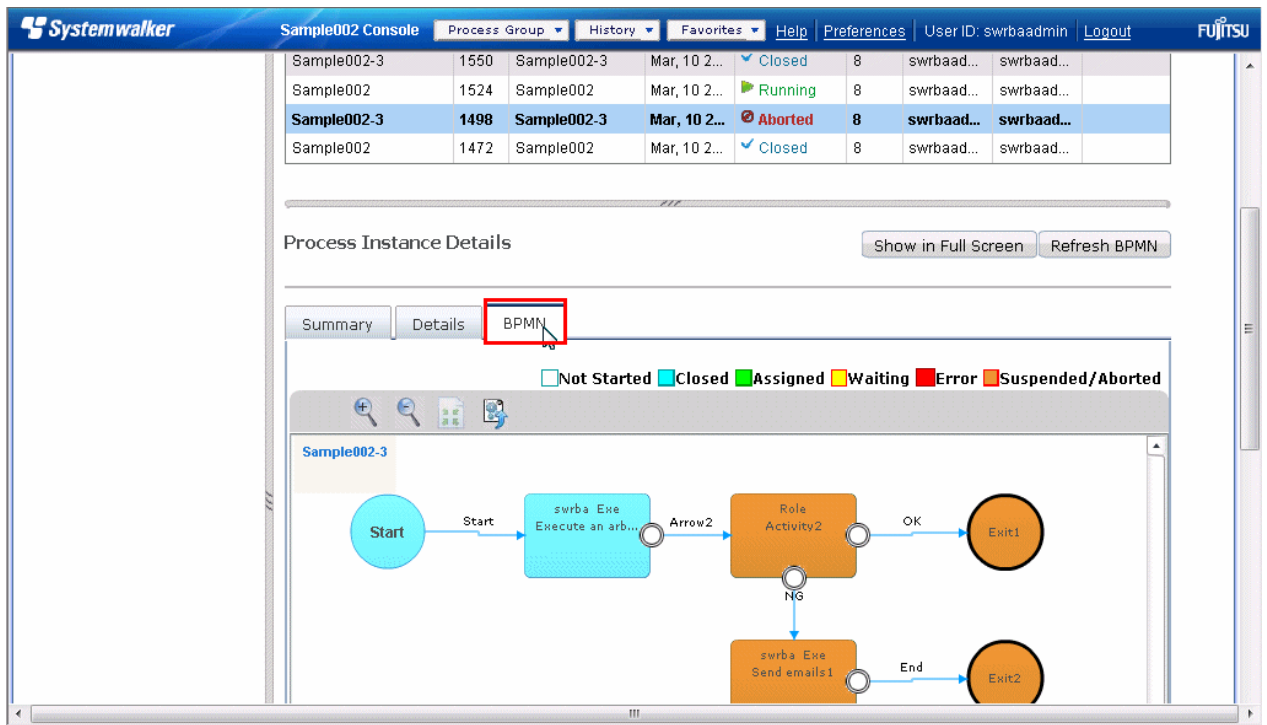
1. Login to Web console.

`http://<Server Name>:<Port Number>/console/Default/`

2. Click Process Management tab

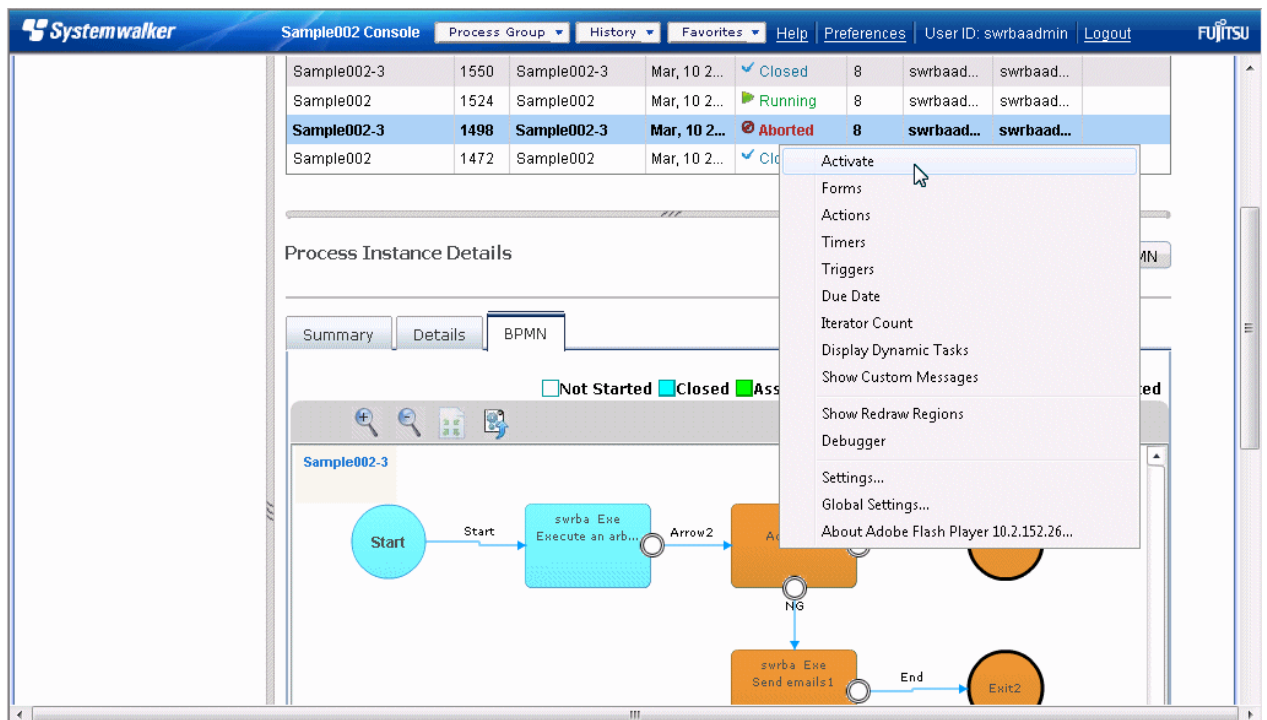


3. Click the Process Instances submenu, and select Aborted process instance. After select process instance, select **BPMN** tab.



4. Place cursor in node which resumed processing, click the right mouse button and select "Activate"

In the following window, it is selected active operation to canceled node



To be able to activate the previous or next node which be aborted.

Process Instance ...	Id	Process Defin...	Date St...	Status	Pri...	Owner(s)	Initiator	Due Dat...
Sample002-3	1576	Sample002-3	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	
Sample002-3	1550	Sample002-3	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	
Sample002	1524	Sample002	Mar, 10 2...	Running	8	swrbaad...	swrbaad...	
Sample002-3	1498	Sample002	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	
Sample002	1472	Sample002	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	

5. After to be reactive, confirm the process instance state is not canceled state.

Process Instance ...	Id	Process Defin...	Date St...	Status	Pri...	Owner(s)	Initiator	Due Dat...
Sample002-3	1576	Sample002-3	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	
Sample002-3	1550	Sample002-3	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	
Sample002	1524	Sample002	Mar, 10 2...	Running	8	swrbaad...	swrbaad...	
Sample002-3	1498	Sample002-3	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	
Sample002	1472	Sample002	Mar, 10 2...	Closed	8	swrbaad...	swrbaad...	

Note

In the case of success for reactive, the messages of result are not displayed on Web console, so confirm result as confirming process instance list state.

6.2.2 ISJEE_OM1018 is Output to the Syslog and the Process Instance Ends in an Error

Target version level

- Windows: V15.0 or later
- Linux: V15.0 or later

6.2.2.1 Action

Action method



There may be an effect on the system currently operating so this procedure should be performed when testing Automated Operation Processes or if there has been a failure in the Management Server during the actual operation.

If an ISJEE_OM1018 message is output to the syslog and the process instance that is running ends in an error, the Java heap space may be insufficient due to one or more of the following reasons.

Output message example

```
ISJEE: WARNING: ISJEE_OM1018: The process has stopped because JavaVM ran out of memory: CLUSTER=IJCLibpmsv KIND=1
INSTANCE=IJINibpmsv PID=xxxxxx
```

Possible cause

- Several users are logged in at the same time.
- The defined size (number of deployed nodes) of the Automated Operation Process is large.
- Several process instances are running simultaneously.

Use the following procedure to expand the Java heap space. When expanding the Java heap space, take into account the effect on the system and increase in 256 MB increments.

1. Log in to the Management Server, and check the current size of the Java heap space.

[Windows]

```
asadmin get IJCLibpmsv.java-config.jvm-options
```

[Linux]

```
/opt/FJSVisjee/bin/asadmin get IJCLibpmsv.java-config.jvm-options
```

The following message is displayed, so take note of the value displayed after `-Xmx`.

```
IJCLibpmsv.java-config.jvm-options=-Dcom.sun.appserv.pluggable.features=com.sun.
enterprise.ee.server.pluggable.EEPluggableFeatureImpl,-Dcom.sun.enterprise.confi
g.config_environment_factory_class=com.sun.enterprise.config.serverbeans.Appserv
erConfigEnvironmentFactory,-Dcom.sun.enterprise.taglibs=appserv-jstl.jar,jstl-imp
l.jar,-Dcom.sun.enterprise.taglisteners=jstl-impl.jar,-Djava.endorsed.dirs=${com.
sun.aas.installRoot}/lib/endorsed,-Djava.ext.dirs=${com.sun.aas.javaRoot}/lib/ex
t${path.separator}${com.sun.aas.javaRoot}/jre/lib/ext${path.separator}${com.sun.
aas.das.instanceRoot}/lib/ext${path.separator}${com.sun.aas.derbyRoot}/lib${path
.separator}${com.sun.aas.installRoot}/lib/jdbcdrivers,-Djava.security.auth.login
.config=${com.sun.aas.instanceRoot}/config/login.conf,-Djava.security.policy=${c
om.sun.aas.instanceRoot}/config/server.policy,-Djavax.management.builder.initial
=com.sun.enterprise.ee.admin.AppServerMBeanServerBuilder,-Djavax.net.ssl.keyStor
e=${com.sun.aas.instanceRoot}/config/keystore.jks,-Djavax.net.ssl.trustStore=${c
```

```
om.sun.aas.instanceRoot}/config/cacerts.jks,-Djdbc.drivers=org.apache.derby.jdbc
.ClientDriver,-Dsun.rmi.dgc.client.gcInterval=3600000,-Dsun.rmi.dgc.server.gcInt
erval=3600000,-XX:MaxPermSize=192m,-Xmx512m
```

In the above example, the current Java heap space is 512 MB.

In addition, the above is example that information on Java heap space is shown at the end of display information.

2. Stop the Systemwalker Runbook Automation Management Server.

[Windows]

```
<Installation directory for the Systemwalker Runbook Automation Management Server>\bin\swrba_stop
```

[Linux]

```
/opt/FJSVswrbam/bin/swrba_stop
```

3. Expand the Java heap space.

An example of expanding 512 MB of Java heap space to 768MB is shown below.

[Windows]

```
asadmin delete-jvm-options --target IJCLibpmsv \-Xmx512m
```

```
asadmin create-jvm-options --target IJCLibpmsv \-Xmx768m
```

[Linux]

```
/opt/FJSVisjee/bin/asadmin delete-jvm-options --target IJCLibpmsv \-Xmx512m
```

```
/opt/FJSVisjee/bin/asadmin create-jvm-options --target IJCLibpmsv \-Xmx768m
```

4. Start the Systemwalker Runbook Automation Management Server.

[Windows]

```
<Installation directory for the Systemwalker Runbook Automation>\bin\swrba_start
```

[Linux]

```
/opt/FJSVswrbam/bin/swrba_start
```