



Process Automation Guide for System Copy for SAP

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New and Changed Information

New and changed information for the most recent releases of the Cisco Process Orchestrator Process Automation Guide for System Copy for SAP is as follows:

- [Latest Release](#)
- [Previous Release](#)

Latest Release

Table 1 *December 2013—Process Automation Guide for System Copy for SAP 3.0 Changes*

| Feature | Location |
|--|----------------------|
| Renamed document and revised Text Part Number (-01 to -02) | Front cover, footers |
| Updated Trademark and Copyright date | Inside cover page |
| Renamed the Product Name | All Chapters |

Previous Release

Table 2 *April 2012—Cisco TEO Process Automation Guide for System Copy for SAP 2.3 Changes*

| Feature | Location |
|--|--|
| Revised Text Part Number (-01 to -02). | Front cover, footers |
| Updated Trademark and Copyright date | Inside cover page |
| Updated “Importing ABAP Transport or Cisco Add-On” section | Chapter 1, “Importing Automation Packs” |
| New feature for supporting duplicate SAP system IDs | Chapter 3, “Getting Started Using the Automation Pack” |



Preface

The SAP Automation Pack files are a collection of Cisco Process Orchestrator processes (workflows) authored by subject matter experts that work out-of-the-box to automate best practices for a particular technology. The automation pack files also include configuration objects that are used in the processes, such as variables, categories, target groups and knowledge base articles.

The SAP Automation Pack for System Copy for SAP provides content to automate the complex SAP system copy process. Automating this complex procedure simplifies and makes system copy execution consistent, thereby reducing time and the potential for errors. With this automation pack, the operational challenges associated with manual system copy procedures are eliminated with the workflow automation of the SAP system copy procedures.

This guide is intended to provide information on importing and using the System Copy for SAP automation pack in Cisco Process Orchestrator.

Organization

This guide includes the following sections:

| | | |
|------------|---|--|
| Chapter 1 | Importing the Automation Pack | Provides instructions for installing the automation pack. |
| Chapter 2 | Understanding the Automation Pack Content | Provides information on the objects included in the automation pack. |
| Chapter 3 | Getting Started Using the Automation Pack | Provides information on configuring the objects in Cisco Process Orchestrator that are referenced by the content in the automation pack—runtime users, targets, task rules, and global variables that are included in the automation pack. |
| Chapter 4 | Understanding the System Copy for SAP Processes | Provides information on using the System Copy for SAP process templates. |
| Appendix A | Understanding the Core Automation for SAP Content | Provides information on the content included in the Core Automation for SAP automation pack. |

Conventions

This guide uses the following conventions:

| Convention | Indication |
|---------------------------|---|
| bold font | Commands and keywords and user-entered text appear in bold font . |
| <i>italic font</i> | Document titles, new or emphasized terms, and arguments for which you supply values are in <i>italic font</i> . |
| [] | Elements in square brackets are optional. |
| { x y z } | Required alternative keywords are grouped in braces and separated by vertical bars. |
| [x y z] | Optional alternative keywords are grouped in brackets and separated by vertical bars. |
| string | A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks. |
| <code>courier font</code> | Terminal sessions and information the system displays appear in <code>courier font</code> . |
| < > | Nonprinting characters such as passwords are in angle brackets. |
| [] | Default responses to system prompts are in square brackets. |
| !, # | An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line. |



Note

Means *reader take note*.



Tip

Means *the following information will help you solve a problem*.



Caution

Means *reader be careful*. In this situation, you might perform an action that could result in equipment damage or loss of data.



Timesaver

Means *the described action saves time*. You can save time by performing the action described in the paragraph.



Warning

Means *reader be warned*. In this situation, you might perform an action that could result in **bodily injury**.

Product Documentation

Documentation Formats

Documentation is provided in the following electronic formats:

- Adobe® Acrobat® PDF files
- Online help

You must have Adobe® Reader® installed to read the PDF files. Adobe Reader installation programs for common operating systems are available for free download from the Adobe Web site at www.adobe.com.

Guides and Release Notes

You can download the Cisco Process Orchestrator product documentation from Cisco.com. Release Notes can be found on Cisco.com and the product CD.

Online Help

Online help is available and can be accessed using the following methods:

- Click the **Help** button on any dialog in the application to open the help topic in a pane to the right of the dialog.
- In the Cisco Process Orchestrator console:
 - Click the **Help Pane**  tool on the toolbar to open the help topic in a pane to the right of the console results pane.
 - Click **Help** on the menu bar.

Open Source License Acknowledgements

Licenses and notices for open source software used in Cisco Process Orchestrator can be found in the [Open Source License Acknowledgements](#) found on Cisco.com. If you have any questions about the open source contained in this product, please email external-opensource-requests@cisco.com.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.



CHAPTER 1

Importing the Automation Pack

The *Cisco Process Orchestrator Installation Guide* provides instructions for installing Cisco Process Orchestrator and the core components. During the initial installation of Cisco Process Orchestrator, you can choose to import the automation packs, or import them later from within the Console. This guide follows the assumption that you have already installed the Cisco Process Orchestrator client, server, web portal and Core automation pack.

The Cisco Process Orchestrator Automation Pack for System Copy for SAP has a dependency on the Cisco Process Orchestrator Automation Pack for Core Automation for SAP. Therefore, you must import this automation pack before you import the System Copy for SAP automation pack.

This chapter guides you through importing the automation packs. It contains the following sections:

- [Accessing the Automation Pack Import Wizard, page 1-2](#)
- [Importing the Core Automation for SAP.tap, page 1-3](#)
- [Importing the System Copy for SAP.tap, page 1-4](#)
- [Importing ABAP Transport or Cisco Add-On, page 1-5](#)



Note

It is recommended that you review the system requirements and prerequisites before importing automation packs. See the *Intelligent Automation for SAP 3.0 Installation Guide*.

Accessing the Automation Pack Import Wizard

You use the Automation Pack Import Wizard to import the automation packs (.tap files). You can open the wizard immediately after installing Cisco Process Orchestrator or from within the Console.

Opening the Import Wizard After Running Setup Wizard

Step 1 After running the Setup wizard to install the product, ensure that the **Launch automation pack import wizard now** check box is checked before closing the wizard.

The Select Automation Packs dialog box displays the available automation packs. All automation packs are checked by default.

Step 2 Ensure that the following check boxes are checked and then click **OK** to launch the Automation Pack Import Wizard:

- Core Automation for SAP
- System Copy for SAP



Note See the *Cisco Process Orchestrator Installation Guide* for instructions on importing and configuring the Core components for the product.

Proceed to [Importing the Core Automation for SAP.tap, page 1-3](#).

Opening the Import Wizard in Console

You can open the Automation Pack Import Wizard from within the Console after installing the product. When importing automation packs from within the Console, you must re-open the Automation Pack Import Wizard for each automation pack that you are importing.

Because the System Copy for SAP automation pack has dependencies on the Core Automation for SAP automation pack, you must first import this automation pack.

Step 1 In the Administration workspace on the Console, click **Automation Packs** in the navigation pane.

Step 2 Use one of the following methods to open the Automation Pack Import Wizard:

- In the navigation pane, right-click **Automation Packs** and choose **Import**.
- On the Menu bar, choose **Actions > Import**.

Step 3 On the Windows Open dialog box, select the **Core Automation for SAP.tap** file and click **Open** to launch the Automation Pack Import Wizard.

Proceed to [Importing the Core Automation for SAP.tap, page 1-3](#).

Importing the Core Automation for SAP.tap

You must first import the Core Automation for SAP automation pack (Core Automation for SAP.tap). If you opened the Automation Pack Import Wizard from the Setup Completed panel, the wizard will guide you through importing each automation pack.

Step 1 On the Automation Pack Import Wizard Welcome panel, click **Next**.



Note If you do not want to display the Welcome panel the next time the wizard is opened, check the **Do not show this page next time** check box.

Step 2 On the General Information panel, review the information about the automation pack.

Step 3 If you want to disable all the processes that are imported with the automation pack, check the **Disable all imported processes** check box.



Note If you disable all the imported processes, you will need to manually enable the processes in the Console before they can execute.

Step 4 Click **Next** to continue.

Use the Default Incidents Assignee Setup panel to specify the default person who should be assigned SAP-related incidents.

Step 5 Click the **Browse** button to specify the user.

Step 6 On the Select User or Group dialog box, click **Location** and choose the location from which the user will be selected.

Step 7 In the text box, enter the user name and click **Check Names**.

If the name is found, the box will be populated with the appropriate email address.

Step 8 Click **OK** to close the Select User or Group dialog box.

Step 9 On the Assignment of SAP Incidents panel, click **Next**.

The Review Prerequisites panel displays the prerequisites for the automation pack being imported. The green check mark indicates that the prerequisite was found on the computer.

The red X indicates that the prerequisite was not found on the computer. When this occurs, the import process is stopped and cannot continue until all prerequisites have been met.

If all prerequisites are passed, the wizard automatically continues to the next panel.



Note If you opened the Automation Pack Import Wizard from the Setup Completed panel, the wizard displays the General Information panel for the System Copy for SAP automation pack.

Step 10 After the objects have been imported, review the information on the Completing the Automation Pack Import Wizard panel to verify that it is correct and then click **Close** to exit the wizard.

Importing the System Copy for SAP.tap

If you are importing the automation packs from within the Console, you must re-open the Automation Pack Import Wizard to import the System Copy for SAP automation pack.

-
- Step 1** Use one of the following methods to open the Import Automation Pack Wizard:
- In the navigation pane, right-click **Automation Packs** and choose **Import**.
 - On the Menu bar, choose **Actions > Import**.
- Step 2** On the Windows Open dialog box, select the **System Copy for SAP.tap** file and click **Open** to launch the Automation Pack Import Wizard.



Note If you do not want to display the Welcome panel the next time the wizard is opened, check the **Do not show this page next time** check box.

- Step 3** On the Welcome panel, click **Next**.
- Step 4** On the General Information panel, review the information about the automation pack.
- Step 5** If you want to disable all the processes that are imported with the automation pack, check the **Disable all imported processes** check box.



Note If you disable all the imported processes, you will need to manually enable the processes in the Console before they can execute.

- Step 6** Click **Next** to continue.
- The Data Extraction panel is used to specify the destination where the ABAP Transport files will be extracted. The ABAP Transport files must be installed on the SAP systems on which some remote function calls that are used in this automation pack will be executed.



Note If you uncheck the ABAP Transport check box, the files will not be extracted.

- Step 7** Accept the default location or click the **Browse** button to specify a different location to extract the files and then click **Next**.
- The Review Prerequisites panel displays the prerequisites for the automation pack being imported. The green check mark indicates that the prerequisite was found on the computer.
- The red X indicates that the prerequisite was not found on the computer. When this occurs, the import process is stopped and cannot continue until all prerequisites have been met.
- If all prerequisites are passed, the wizard automatically continues to the next panel.

- Step 8** After the objects have been imported, review the information on the Completing panel to verify that everything imported successfully and then click **Close** to close the wizard.
-

Importing ABAP Transport or Cisco Add-On

The System Copy for SAP automation pack contains processes that execute RFC calls on the SAP system targets. These RFCs require that require either the *ABAP Transport files* or the *Cisco Add-On file* to be installed on the SAP system targets where the RFCs will be used.

After you have imported the System Copy for SAP automation pack, you must import *one* of the following on the SAP systems where the RFCs will be used:

- ABAP Transport Files (SAP 4.7, 7.0 and 7.1 systems)
- Cisco Add-On File (SAP 7.0 and 7.1 systems)

Importing the ABAP Transport Files On SAP Systems

You can use the ABAP Transport files that ship with the automation pack on SAP 4.7, 7.0 and 7.1 systems.

Perform the following procedure to import the ABAP Transport files on all the SAP System targets where the RFCs will be used.

-
- Step 1** Navigate to the location where the ABAP Transport data was extracted for the SAP version of the systems in your environment. The default location is:
- C:\user\[username]\Documents\Cisco\Cisco Process Orchestrator\Extracted Data\ABAP Transports\SAP System Copy\Transports\
4.7
7.0
7.1
- Step 2** Copy the files to the following locations on the SAP server:
- K files should be copied to usr\sap\trans\cofiles
 - R files should be copied to usr\sap\trans\data
- Step 3** Log onto the SAP system and run T-code STMS.
- Step 4** Follow SAP procedures for performing the transport.
-

Importing the Cisco Add-On On SAP Systems

Perform the following procedure to import the Cisco add-on file on all SAP System targets where the RFCs will be used.

-
- Step 1** Navigate to the location where the ABAP Transport data was extracted for the SAP version of the systems in your environment. The default location is:
- C:\user\[username]\Documents\Cisco\Cisco Process Orchestrator\Extracted Data\ABAP Transports\SAP System Copy\Add-on\
7.0
7.1
- Step 2** Copy the SAP Add-On Package file(s) to the following location on the SAP server:
usr\sap\trans\EPS\in
- Step 3** Log onto client 000 of the SAP system using an administrator account (DDIC or SAP* are not valid accounts) and run the SAP transaction code *SAINT*.
- Step 4** Follow the standard SAP procedures for performing an add-on product installation using *SAINT*.



Note To verify whether the add-on is on the SAP system, use the SAP menu path **System > Status** and review the software component versions for the Cisco software component add-on.

Error Handling, Logging and Tracing for ABAP Add-on

The ABAP Add-On contains API enabled ABAP function modules (RFC's) that are called by the Cisco Process Orchestrator application. This is performed in Cisco Process Orchestrator by defining an ABAP adapter step and specifying a method for the SAP Target system in a process. Cisco Process Orchestrator ABAP custom methods perform individual tasks such as updating RFC Destinations, configuring printers, and so on.

In the event the method encounters an error, such as attempting to modify an RFC destination that does not exist, an error result is returned to the Cisco Process Orchestrator process. This can then be modeled as an outcome to the activity, and then subsequent actions based on the error returned may be performed.

All RFC activity performed by Cisco Process Orchestrator may be traced through SAP Standard RFC tracing functionality. Refer to SAP online help for enabling the trace level for RFC communication on the SAP target system using SAP transaction SM59. The SAP methods that are called may either write log entries to the SAP System Log (SAP Transaction SM21) or to the Application log (SAP Transaction SLG1) depending on the SAP standard application functionality. For instance, the SAP Application log is updated during the BDLS process scenario as this part of the SAP standard application functionality.

Support Desk Management for ABAP Add-on

SAP Root Cause Analysis ABAP tools can be used to review the performance and execution of the RFC calls performed by the Cisco Process Orchestrator system. A read-only SAP Administrator user is used to review the functionality performed by the ABAP methods. The following roles are to be the basis for a composite role that can be adapted to the customer environment:

- SAP_BC_BASIS_MONITORING,
- SAP_BC_SEC_USER_DISPLAY,
- SAP_BC_BTC_DISPLAY,
- SAP_BC_MID_ALE_DISPLAY



CHAPTER 2

Understanding the Automation Pack Content

The System Copy for SAP automation pack includes the content to automate the complex SAP system copy process. This chapter provides information about the content included in the System Copy for SAP automation pack. It includes the following sections:

- [Accessing Automation Pack Properties, page 2-2](#)
- [Viewing Automation Pack Content and Dependencies, page 2-2](#)



Note

See [Appendix A, “Understanding the Core Automation for SAP Content”](#) for information on the content included in the Core Automation for SAP automation pack.

Accessing Automation Pack Properties

Users can access the automation pack properties from the Administration—Automation Packs view in the console. The automation pack properties dialog box displays general information about the content provided by the automation pack, version number, publish date, the provided objects, the dependencies of the automation pack, and the history of changes made to the automation pack.

- Step 1** On the Administration workspace, click **Automation Packs** in the navigation pane to display the installed automation packs in the Automation Packs pane.

Information about the automation packs display in the following columns:

| Column | Description |
|--------------|---|
| Company Name | Name of the company that releases the automation pack. |
| Publish Date | Date the automation pack was created or exported to a file. |
| Version | Version number of the automation pack. |
| Display Name | Name of the automation pack. |
| ID | Identification number of the automation pack. |
| Import Date | Date the automation pack was imported into the product. |
| Licensed | Indicates whether the automation is a licensed product in Cisco Process Orchestrator. |
| Description | Text description of the automation pack. |

- Step 2** Select the automation pack in the Automation Packs pane, right-click and choose **Properties**. On the Properties dialog box, select the appropriate tab to view the automation pack properties::

| Tab | Description |
|--------------|--|
| General | Displays general information about the automation pack. |
| Objects | Displays a list of objects contained in the automation pack. |
| Dependencies | Displays a list of automation packs and adapters referenced by the objects in the automation pack. |
| History | Displays when the automation pack was created or modified, and audit log entries that are relevant to the automation pack. |

- Step 3** Click **Close** to close the dialog.

Viewing Automation Pack Content and Dependencies

Use the automation pack Properties dialog box to view the content (objects) contained in the automation pack and the dependencies associated with the automation pack.

Viewing Automation Pack Content

Use the Objects tab to view a list of the content provided by the automation pack.

- Step 1** On the Administration—Automation Packs view, select **System Copy for SAP**, right-click and choose **Properties**.
- Step 2** On the System Copy for SAP Properties dialog box, click the **Objects** tab.
- Step 3** On the Objects tab, review the information about the content included in the System Copy for SAP automation pack.

| Columns | Description |
|-----------------|--|
| Display Name | Name of the object (processes, global variables, knowledge base) |
| Type | Object type |
| Action Required | Action required to successfully import or export the objects |
| Description | Text description of the object |
| Version | Object version |

- Step 4** Click **Close** to close the dialog box.

System Copy for SAP Processes

The following table contains the process templates that are imported by the System Copy for SAP automation pack. The template processes can be used to automate system copy for a SAP NetWeaver 7.0 SR3 system with both ABAP and Java stack.

| Process Template Name | Description |
|---|---|
| Example – BDLS Step1 – Optimizer | This process is one of the tasks to automate BDLS in a system copy process. It is an example to be customized. |
| Example – BDLS Step2 – Create Variants | This process is one of the tasks to automate BDLS in a system copy process. It is an example to be customized. |
| Example – BDLS Step3 – Jobs | This process is one of the tasks to automate BDLS in a system copy process. It is an example to be customized. |
| Example – SAPInst Windows Java Application Server | This process automates the unattended mode installation of SAP Java Application Servers. It is an example to be customized. |
| System Copy Template – Master Template | This is a template process to automate system copy for SAP NetWeaver 7.0 SR3. |
| System Copy Template – Database Copy Activities – Master | This is a master process for the database copy phase. It is an example to be customized based on customer needs. |
| System Copy Template – Database Copy Activities – Database Copy | This process is one of the tasks in the database copy phase. It is an example to be customized. |

| Process Template Name | Description |
|--|--|
| System Copy Template – Database Copy Activities – Start SAP | This process is one of the tasks in the database copy phase. It is an example to be customized. |
| System Copy Template – Database Copy Activities – Stop SAP | This process is one of the tasks in the database copy phase. It is an example to be customized. |
| System Copy Template – Source System Follow-Up Activities | This process is a master process for the source system follow-up phase. It is an example to be customized. |
| System Copy Template – Source System Preparation Activities – SICK | This process is one of the tasks in the preparation phase. It is an example to be customized. |
| System Copy Template – Source System Preparation Activities – Master | This is a master process for the preparation phase. It is an example to be customized based on customer needs. |
| System Copy Template – Target System Follow-Up Activities – SM37 – Delete Scheduled Jobs | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Follow-Up Activities – RZ10 – Import Profiles | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Follow-Up Activities – SE06 – Perform Post-Installation Actions | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Follow-Up Activities – SPAD – Assign Server | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Follow-Up Activities – Master | This is a master process for the follow-up phase. It is an example to be customized based on customer needs. |
| System Copy Template – Target System Follow-Up Activities – SM13 – Delete Pending Updates | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Follow-Up Activities – STMS Transport Routes – Client 000 | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Follow-Up Activities – SM59 – Update TCPIP Destinations | This process is one of the tasks in the follow-up phase. It is an example to be customized. |
| System Copy Template – Target System Preparations | This is a master process for the target system preparation phase. This process is an example to be customized. |

For information on using the processes, see [Chapter 4, “Understanding the System Copy for SAP Processes.”](#)

System Copy for SAP Extended Target Properties

The following table contains the extended target properties that are imported by the System Copy for SAP automation pack. The extended target properties that do not have a value defined must be configured by the user prior to using them in processes.



Note

For information on configuring extended target properties, see [Managing Extended Target Properties](#), page 3-6.

| Extended Target Properties | Description | Value Defined? |
|---|---|----------------|
| SAP.SystemCopy.SAPInst Java - Configuration | This property contains the settings for the unattended installation of SAP java application servers in Microsoft Windows machines. | No |
| SAP.SystemCopy.SAPInst Media Directory | This property contains the list of paths to update the start_dir.cd with the paths to all installation DVDs required for the SAP Java application server unattended installation (Medis directory). | No |
| SAP.SystemCopy.SAPInst XML Parameters | This property contains the values to be set in the inFile.xml for each one of the servers. | No |

System Copy for SAP Global Variables

The System Copy for SAP processes use global variables for information that is used on a regular basis to avoid having to specify the same information in several instances. The variables must be configured with values specific to your SAP system copy procedures.

The following table contains the global variables that are imported by the System Copy for SAP automation pack:

| Global Variable Name | Description |
|--|--|
| Example – BDLS – Number of Parallel Jobs | This variable contains the number of BDLS jobs to run in parallel. |
| Example – BLDS Logical Systems | This variable contains the logical systems to be updated by the BLDS processes. |
| SAP System Copy Template – Attach Database Statement | This variable contains the statement to be used to attach the SAP Database. An example statement is provided in the Value field but must be replaced by the user-specific statement. |
| SAP System Copy Template – Controller Information | This variable contains STMS controller information. |

| Global Variable Name | Description |
|---|--|
| SAP System Copy Template – SAP System Servers Information | This variable contains information about the target system that will be used in the database copy phase. The information will be used for commands startsap and stopsap, such as: <path>\startsap name=<SAP System> nr=<Instance Number> sapdiaghost=<sapdiaghost> |
| SAP System Copy Template – SM59 TCP/IP Destinations to Update | This variable contains the SM59 – TCP/IP Destinations to update. |
| SAP System Copy Template – SPAD Assign Server | This variable contains information to update spool servers (SPAD). |

For information on configuring global variables, see [Managing Global Variables, page 3-21](#).

System Copy for SAP Categories

The following categories are imported by the System Copy for SAP automation pack:

- System Copy for SAP Systems
- System Copy for SAP Systems – Source Preparation
- System Copy for SAP Systems – Target Follow Up

System Copy for SAP Task Rules

The following table contains the task rules are imported by the System Copy for SAP automation pack.

| Task Rule | Description |
|---|--|
| SAP System Copy Alerts and Incidents Assignment | Contains the user or group for the System Copy for SAP Operator that will receive the alerts and incidents related to System Copy. |
| SAP System Copy Complete Notification | Contains the email address for the user or group that will be notified when the system copy process completes successfully. |

For information on configuring Task Rules, see [Managing Extended Target Properties, page 3-6](#).

Viewing Automation Pack Dependencies

Use the Dependencies tab to view the automation packs and adapters referenced by the objects in the automation pack. These object must be installed prior to importing the System Copy for SAP automation pack.

- Step 1** On the Administration—Automation Packs view, select System Copy for SAP, right-click and choose **Properties**.
- Step 2** On the System Copy for SAP Properties dialog box, click the **Dependencies** tab.
- Step 3** Review the list of automation packs and adapters referenced by the automation pack. These objects must be installed prior to installing the System Copy for SAP automation pack.

| Object Type | Dependency |
|------------------|---|
| Automation Packs | <ul style="list-style-type: none"> • Core Automation for SAP |
| Adapters | <ul style="list-style-type: none"> • Core Functions Adapter • Microsoft Windows Adapter • SAP ABAP Adapter |

- Step 4** Click **Close** to close the dialog box.



CHAPTER 3

Getting Started Using the Automation Pack

Before you begin using the content that ships with the automation pack, you must create the objects in Process Orchestrator that are referenced in the processes. These objects include targets, runtime users, task rules for assignments and notifications, and global variables.

This chapter provides basic information on defining the objects. It includes the following sections:

- [Creating an SAP Users, page 3-2](#)
- [Creating SAP System Targets, page 3-3](#)
- [Managing Extended Target Properties, page 3-6](#)
- [Using Task Rules for Assignments and Notifications, page 3-7](#)
- [Managing Global Variables, page 3-21](#)

For additional information about the objects discussed in this chapter, refer to the following documentation:

| Document | Description |
|--|---|
| Cisco Process Orchestrator User Guide | General information about Core product features. |
| <i>Cisco Process Orchestrator Online Help</i> | Information about the objects specific to SAP ABAP Adapter (runtime user, target, and activities). |
| <i>Intelligent Automation for SAP 3.0 Installation Guide</i> | Information about configuring and managing the objects in Cisco Process Orchestrator specific to SAP. |

Creating an SAP Users

The SAP User is the type of runtime user account that will be used to connect to the targets on which the processes will execute.


Note

For additional information on creating and managing runtime users, see the *Process Orchestrator User Guide*.

Step 1 In the Definitions workspace, right-click **Runtime Users** and choose **New > SAP User** to open the New SAP User Properties dialog box.

Step 2 On the General tab, specify the following information:


Note

The **Required Value**  icon displayed on a tab or page indicates that the field is required and is either missing a value or contains an invalid value.

| Field | Description |
|--------------|--|
| Display name | Name for the user account. |
| User name | User name assigned to the SAP user account that connects to the SAP system or ABAP application server. |
| Password | Password assigned to the SAP user account that connects to the SAP system or ABAP application server. |
| Client | SAP client number assigned to the user account. |
| Description | A description of the user account. |


Note

The Used By tab displays objects used by the runtime user and will remain blank until used by an object.

The History tab displays the history of actions taken against the runtime user and will remain blank until after the initial creation.

Step 3 Click **OK** to close the dialog box.

Creating SAP System Targets

Before you can create or run processes, you must create the targets on which the processes will run. You use the New SAP System Wizard to create a target for an SAP system and the SAP database that is associated with the system.



Note Before you can configure an SAP ABAP system target, the dll files for SAP .NET 3.0 Connector for .NET 4.0 on x64 version 3.0.6.4 or higher must be copied to the Process Orchestrator server. See the *Cisco Process Orchestrator Online Help* for instructions on installing these files.

Step 1 In the Definitions view, right-click **Targets** and choose **New > SAP System** from the submenus to open the New SAP System Wizard Welcome panel.

Step 2 Click **Next**.



Note The **Required Value**  icon displayed on a tab or page indicates that the field is required and is either missing a value or contains an invalid value.



Note You can only create one target for each SAP system. However, for multi-tenant environments, you can create targets for different SAP systems with the same system ID (SID).

When using the same SID for different SAP systems, you must enter the organization for each SAP system so Process Orchestrator can differentiate the alerts and incidents for each system.

Step 3 On the System Setup panel, specify the following information:

| Field | Description |
|------------------------------|--|
| Display name | Enter a name for the SAP system. This is the name that will be displayed in the Targets pane. |
| System Components | |
| ABAP application servers | Check this check box if the SAP system uses an ABAP connection to the application servers. |
| Java application servers | <i>This option is not used for System Copy.</i> |
| SAP database | Check this check box if you want to configure the SAP database that is associated with the SAP system. |
| Monitor as production system | The check box is checked by default. Certain processes will run only on production systems. If you want to monitor the system as a non-production system (development or sandbox), uncheck the check box. |
| Organization | Enter the group or organization within the company that owns the target. Note If you are configuring multiple SAP systems with the same SID, you must specify the organization for each SAP system target. |

Step 4 Click **Next**.

Step 5 On the ABAP Connection panel, specify the connection information for connecting to the SAP ABAP application server.



Note The system information entered on this panel must be unique.

| Field | Description |
|--------------------------|---|
| Connection using | Choose the connection method from the drop-down list. The fields that display depend on the connection method selected. |
| Application server | Choose this option to connect to the SAP system using the SAP application server connection information. Specify the information in the following fields: <ul style="list-style-type: none"> • Server name—Name of the SAP application server. • System number—SAP system number. |
| Logon group | Choose this option to establish a connection using a logon group, which contains a group of SAP system instances. When a user logs on to a logon group, the message server directs the users to the server of this group that currently has the lightest load. Specify the information in the following fields: <ul style="list-style-type: none"> • System ID—SAP system ID (SID). • Message server—Determines which server a user logs on to and handles the communication between the application servers. For example, transport of update requests and lock requests. • Group name—Name of the Logon Group to be accessed. The name entered in this field is case-sensitive. |
| Router string (optional) | Enter the router string for accessing the SAP systems via SAPRouter. If you do not specify a router string, Process Orchestrator accesses the SAP system directly. The router string must be formatted as: /H/host01/H/host02/H/ where host01 and host02 are the SAP systems that you want to access through the SAPRouter. |
| Default runtime user | Choose the user account that contains the credentials to connect to the target from the drop-down list. <ul style="list-style-type: none"> • To view the properties for the selected runtime user, click the Properties  tool. • To create a new SAP User, click New > SAP User. See Creating an SAP Users, page 3-2 for instructions. |

Step 6 Click **Next**.

Step 7 On the Server Availability panel, specify the ABAP application servers that you want to monitor for availability and the ability to log in a user:

| Field | Description |
|----------------------------------|--|
| Servers available for monitoring | All detected servers are checked by default. Verify that the check box next to each server that you want to monitor is checked. |
| Add | If a server is offline during configuration, it will not be displayed in the list of available servers. To manually add the server, click Add and enter the name of the server. |
| Remove | If you want to remove a server from the list, select the server and click Remove . |
| Select All | If the check boxes have been unchecked and you want all servers to be monitored, click Select All . |
| Deselect All | If all the check boxes are checked and you want to uncheck all of them, click Deselect All . |

Step 8 Click **Next**.

Step 9 If you selected to monitor the SAP database, on the Database Connection panel, choose the Database type from the drop-down list and enter the information in the appropriate fields:

| Field | Description |
|---|--|
| Server | SAP application server where the database resides. |
| Database name | Name of the SAP database that is associated with the SAP system. |
| Database owner | User that owns the rights to the database. |
| Database source | Data source to connect to the database. |
| Port Number | Port number used to connect to the database. |
| Default timeout for Select activity (seconds) | Number of seconds before the activity times out. The default timeout period is 120 seconds. |
| Default runtime user | Choose the user account that contains the credentials to connect to the database from the drop-down list. <ul style="list-style-type: none"> To view the properties for the selected runtime user, click the Properties  tool. To create a new SAP User, click New > SAP User. See Creating an SAP Users, page 3-2 for instructions. |
| Connection string | If the database has a custom connection string label appended to the name, check the check box and modify the string in the text field. |

Step 10 Click **Next**.

- Step 11** On the Completing the New SAP System Wizard panel, verify that the information is correct and click **Finish** to complete the procedure.

Managing Extended Target Properties

The System Copy for SAP processes use extended target properties to override certain variable properties assigned to targets. For example, extended target properties can be used to specify a different target when certain conditions occur.

This section provides information on configuring extended target properties.

Accessing Extended Target Properties

The extended target properties that ship with the System Copy for SAP automation pack can be accessed from the Definitions—Extended Target Properties view.

- Step 1** On the Console, select the Definitions workspace and click **Extended Target Properties** in the navigation pane. By default, all the properties display in the Extended Target Properties pane.

The following information about the extended target properties displays by default:

| Column | Description |
|--------------------|---|
| Display Name | Name of the target property. |
| Description | Text description of the target property. |
| Value | Value assigned to the target property. |
| Data Type | Type of value being used for the target property (Boolean, Encrypted String, Identity, Numeric, String, Table). |
| Automation Pack | Name of the automation pack that provides the target property. |
| Customizable | Indicates the customization setting for the target property in the automation pack. |
| Target Types | Indicates the targets associated with the target property. |
| Last Modified Time | Date and time the variable was last modified. |
| Last Modified By | Name of the user who last modified the target property. |
| Id | Unique ID of the target property. |
| Owner | User name of the owner of the target property. This is typically the person who created the target property. |
| Created Time | Date and time the target property was created. |
| Created By | User name of the person who created the target property. |

- Step 2** Click the **Filter by** link and choose **Automation Pack > System Copy for SAP** to filter for only the extended target properties that ship with the specific automation pack.
-

Configuring Extended Target Properties

You use the Extended Target Properties Properties dialog box to view or modify the target property. You access the properties from the Definitions—Extended Target Properties view.

The following section provides information on configuring extended target properties that ship with the System Copy for SAP automation pack.

- Step 1** On the Extended Target Properties pane, right-click [**Extended Target Property**] and choose **Properties**.
- Step 2** On the General tab, review the information in the Description field to determine the values that need to be specified for the target property.
- Step 3** Click the **Value** tab to view or modify the default value for all targets.



Note The tab in the second position will depend on the variable type. See the *Process Orchestrator User Guide* for instructions on configuring the different types of target properties.

- Step 4** Click in the table cell and enter the required information and then click **OK** to close the dialog box.



Note For additional information on configuring extended target properties and target values, see the *Intelligent Automation for SAP 3.0 Installation Guide*.

Using Task Rules for Assignments and Notifications

Task rules are used to manage task assignments and notifications for tasks, such as incidents and alerts, that are generated from processes. When you import the Core Automation for SAP automation pack, you are prompted to specify the default user or group who should be assigned SAP incidents. By default, this person will receive all assignments unless task rules are created to specify alternate users or groups for specific tasks.

The System Copy for SAP automation pack ships with task rules for assignments and notifications. You must configure these task rules before alerts and incidents from the system copy processes will be assigned and notification emails sent.

This section guides you through configuring the task rules that ship with the Core Automation for SAP and System Copy for SAP automation packs and provides instructions for creating and managing task rules.

**Note**

If you do not want to create task rules for email notifications, you can use the default notification based on assignment processes that ship with the Core automation pack. These processes are disabled by default and must be enabled if you want notifications to be sent (see [Enabling Notification Based on Assignment Processes](#), page 3-20).

Accessing Task Rules View

The task rules that ship with the System Copy for SAP automation pack can be accessed from the Definitions—Task Rules view.

- Step 1** On the Console, select the Definitions workspace and click **Task Rules** in the navigation pane. By default, all the rules display in the Task Rules pane.
- Step 2** Click the **Filter by** link and choose **Automation Pack > [Automation Pack Name]** to filter for only the task rules that ship with the specific automation pack.

The following information about the task rules displays by default:

| Column | Description |
|--------------------|---|
| Display Name | The name assigned to the task rule. |
| Enabled | Indicates whether the task rule is enabled (<i>True</i>) or disabled (<i>False</i>). A disabled task rule is unavailable for execution. |
| Type | Type of task. |
| Owner | User name of the person or group who assigned the task rule. |
| Last Modified Time | The date and time the task rule was last modified. |
| Last Modified By | The object or user name that last modified the task rule. |
| Id | Unique ID of the task rule. |
| Description | Brief description of the task rule. |
| Type Description | Brief overview of the task rule type. |
| Created Time | Time at which the task rule was created. |
| Created Date | Date the task rule was created. |
| Automation Pack | Name of the automation pack associated with the task rule. |

Configuring Task Rules

Use the Task Rules view to configure the task rules that ship with the Core Automation for SAP and System Copy for SAP automation packs.

SAP Default Assignment

The Core Automation for SAP automation pack ships with the Default SAP Assignment task rule, which is used to specify the default user or group who will be assigned all SAP-related incidents unless otherwise specified in task rules. This task rule can be configured during the import process on the Default Incidents Assignee Setup panel or from the Task Rules view in the Console.

-
- Step 1** In the Definitions workspace, click **Task Rules** in the navigation pane to display the task rules in the results pane.
 - Step 2** Click the **Filter by** link and choose **Automation Pack**, and then choose **Core Automation for SAP** from the drop-down list to display the task rules that ship with the automation pack.
 - Step 3** Right-click the **SAP Default Assignment** task rule and choose **Properties** to open the SAP Default Assignment Properties dialog box.
 - Step 4** Click the **Assign** tab to specify the user or group that should receive assignments for incidents and alerts generated by the processes.
 - Step 5** On the Assign tab, click **Add** to open the Select Assignee to Add dialog box.
 - Step 6** On the Select Assignee to Add dialog box, specify the assignees using one of the following methods:
 - Click the **Reference**  tool to select the appropriate variable reference containing the assignee or list of assignees from the Insert Variable Reference dialog box.
 - Click the **Browse**  tool to launch the Select User or Group dialog box to add user to the list of assignees.
 - Step 7** Click **OK** to add the assignee to the task rule.
 - Step 8** When you have completed adding assignees to the task rule, click **OK** to close the dialog box.
-

SAP System Copy Alerts and Incidents Assignment

The SAP System Copy Alerts and Incidents Assignment task rule is used to assign users or groups to the alerts and incidents related to System Copy.

-
- Step 1** In the Definitions workspace, click **Task Rules** in the navigation pane to display the task rules in the results pane.
 - Step 2** Click the **Filter by** link and choose **Automation Pack**, and then choose **System Copy for SAP** from the drop-down list to display the task rules that ship with the automation pack.
 - Step 3** Right-click the **SAP System Copy Alerts and Incidents Assignment** task rule and choose **Properties** to open the SAP System Copy for Alerts and Incidents Assignment Properties dialog box.
 - Step 4** Click the **Assign** tab to specify the user or group that should receive assignments for incidents and alerts generated by the processes.
 - Step 5** On the Assign tab, click **Add** to open the Select Assignee to Add dialog box.

- Step 6** On the Select Assignee to Add dialog box, specify the assignees using one of the following methods:
- Click the **Reference**  tool to select the appropriate variable reference containing the assignee or list of assignees from the Insert Variable Reference dialog box.
 - Click the **Browse**  tool to launch the Select User or Group dialog box to add user to the list of assignees.
- Step 7** Click **OK** to add the assignee to the task rule.
- Step 8** When you have completed adding assignees to the task rule, click **OK** to close the dialog box.
-

SAP System Copy Complete Notification

The SAP System Copy Complete Notification task rule is used to assign users or groups who should receive an email notification when the System Copy process successfully completes.

- Step 1** In the Definitions workspace, click **Task Rules** in the navigation pane to display the task rules in the results pane.
- Step 2** Click the **Filter by** link and choose **Automation Pack**, and then choose **System Copy for SAP** from the drop-down list to display the task rules that ship with the automation pack.
- Step 3** Right-click the **SAP System Copy Complete Notification** task rule and choose **Properties** to open the SAP System Copy Complete Notification Properties dialog box.
- Step 4** Click the **Notify** tab to specify the user or group that should receive the email notification when the System Copy process successfully completes.
- Step 5** On the Notify tab, specify the notification recipients by either adding them to the Add notification recipients list box or by specifying a recipient list:

Adding notification recipients:

- a. Click **Add** to open the Select Notification Recipient to Add dialog box.
- b. On the Select Notification Recipient to Add dialog box, specify the email address for the notification recipient using one of the following methods:
 - Enter the email address in the Notification Recipient text field (*username@domain.com*).
 - Click the **Reference**  tool to select the appropriate variable reference containing the email address on the Insert Variable Reference dialog box.
- c. Click **OK** to add the notification recipient in the list box.

Adding notification recipient list:

- a. In the Add notification recipient list text field, click the **Reference**  tool to select the list of recipients from a different task or user identified in a table variable on the Insert Variable Reference dialog box.
 - b. Click **OK** to add the notification recipient to the task rule.
- Step 6** When you have completed adding notification recipients to the task rule, click **OK** to close the dialog box.
-

Creating a New Task Rule

Use the Task Rules view to create a new task rule. The procedure is the same for all types of task rules with the exception of the task-specific tab (Assign, Notify, Update) for the type of task rule you are creating.

**Note**

Only users with administrative rights can create task rules in Process Orchestrator.

You can create the following types of task rules:

| Task Rules | Description |
|------------------|--|
| Assign Task Rule | Assigns users to a task. |
| Notify Task Rule | Notifies users that a task has been created. |
| Update Task Rule | Specifies the properties to be updated in a task.. |

Step 1

In the Definitions workspace, right-click **Task Rules** and choose **New > [Task Rule Type]** to open the New Rule Properties dialog box.

Step 2 On the General tab, enter the following information:

| Field | Description |
|--------------|---|
| Display Name | Name of the task. |
| Type | <i>Display only.</i> Shows the type of object. |
| Trigger | <i>Display only.</i> Type of trigger associated with the task rule. |
| Owner | User name of the owner of the task rule. This is typically the person who created the task rule. Click the Browse <input type="button" value="..."/> tool to launch the Select User or Group dialog box to change the owner. |
| Description | A brief description of the task rule. |
| Enabled | The check box is checked by default to indicate that the task rule is available for execution. Uncheck the check box to disable the task rule. If the check box is unchecked, the task rule is disabled and will be unavailable for execution. |

Step 3 Click the **Task Types** tab to specify the types of tasks to be executed by the rule.

Step 4 Check the check box for the type of task that will execute the rule.

| Task Type | Description |
|------------------|--|
| Alert | Alerts reflect potential problems that a user may want to investigate and possibly diagnose the problem. |
| Approval Request | Specifies the message and choices for the assignee who is approving the task. |
| Guided Operation | Details the steps a user takes to complete an assigned task. |
| Incident | Task requires an operator to take action in order to resolve an issue. |
| Input Request | Task requires input from an individual or group. |
| Review | Task assigns a document for review. |

Step 5 Click the **Conditions** tab to specify the conditions of when the task rule action is to be taken based on an evaluation of the defined conditions.



Note The **Required Value**  icon displayed on a tab or page indicates that the field is required and is either missing a value or contains an invalid value.

Step 6 On the Conditions tab, define the conditions that must be met for the rule to execute.

Defining a Basic Condition:

- a. On the Basic page, click **New** to add a new property for the condition that must be met.
- b. In the Property text field, click the **Reference**  tool to choose a defined variable or reference an object on the Insert Variable Reference dialog box.
- c. Choose the condition expression from the drop-down list.
- d. Enter the condition description in the text box or click the **Reference**  tool to choose a defined variable or reference an object on the Insert Variable Reference dialog box.
- e. Click **New** to define additional properties, if necessary.

Defining an Advanced Condition:

- a. Click the **Advanced** tab to define a specific type of condition (Compound, Prior Process Instance, Time, or Variable).
- b. Click the link to modify the option for the condition equation.

| Option | Description |
|--|--|
| AND condition (all conditions must be met) | Click this option if an action is to be taken only when all conditions in the list are <i>true</i> . |
| OR condition (one condition must be met) | Click this option if an action is to be taken when one condition in the list is <i>true</i> . |

- c. Click **New** and choose the type of condition from the drop-down list.
- d. Specify the relevant information for the type of condition selected.



Note Click the **Reference**  tool to choose a defined variable or reference an object on the Insert Variable Reference dialog box.

- e. Click **New** to define additional properties, if necessary.

Step 7 Click the task rule specific tab (**Assign**, **Notify**, or **Update**) and specify the relevant information for the specific type of rule.

Assign Task Rule

If you are creating an Assign Task Rule, the Assign tab displays on the New Rule Properties dialog box. On the Assign tab, specify the assignees for task rule.

| Field | Description |
|------------|---|
| Add | <p>Click this button to launch the Select Assignee to Add dialog box to specify the assignees.</p> <p>On the Select Assignee to Add dialog box, use one of the following methods to specify the assignee:</p> <ul style="list-style-type: none"> • Click the Reference  tool to select the appropriate variable reference containing the assignee or list of assignees from the Insert Variable Reference dialog box. • Click the Browse  tool to launch the Select User or Group dialog box and add user to the list of assignees. |
| Edit | Select the appropriate assignee in the list and click this button to view or modify the assignee of the task rule. |
| Remove | Select the appropriate assignee and click this button to remove the assignee from the list. |
| Remove All | Click this button to remove all specified assignees from the list. |

Notify Task Rule

If you are creating a Notify Task Rule, the Notify tab displays on the New Rule Properties dialog box. On the Notify tab, specify the recipients of the notification that the task rule has executed. You can add individual recipients or include a notification recipient list.

| Field | Description |
|---------------------------------|--|
| Add notification recipients | <p>Displays list of users to be notified by the task rule.</p> <ul style="list-style-type: none"> • Add—Click this button to launch the Select Notification Recipient to Add dialog box to specify the recipients. <p>On the dialog box, enter the email address for the recipient or click the Reference  tool to select the appropriate variable reference containing the recipient or list of recipients from the Insert Variable Reference dialog box and then click OK.</p> <ul style="list-style-type: none"> • Edit—Select the appropriate recipient in the list and click this button to view or modify the recipient of the task rule. • Remove—Select the appropriate recipient in the list and click this button to remove the recipient from the list. • Remove All—Click this button to remove all specified recipients from the list. |
| Add notification recipient list | <p>Click the Reference  tool to select the appropriate variable reference containing list of recipients from the Insert Variable Reference dialog box.</p> |

Update Task Rule

If you are creating an Update Task Rule, the Update tab displays on the New Rule Properties dialog box. On the Update tab, specify the properties to be updated after the task rule has executed.

| Field | Description |
|-------------|---|
| Add | Click this button to add a new property to the Properties to update area. |
| Remove | Click this button to remove the last property added to the Properties to update area. |
| Property | From the Property drop-down list, choose the item to update within the task. The properties displayed depend on the selected item. |
| List action | <p>Choose the appropriate item from the drop-down list to determine which action to take with the selected property:</p> <ul style="list-style-type: none"> • Add Item—Adds item to task. • Remove item—Removes item from task. • Clear—Removes property value from task. |
| Value | Enter new value for the property. |

Step 8 Click **OK** to save the task rule definition and close the dialog box.

Managing Task Rule Definitions

This section provides instructions on modifying task rules in the Definitions—Task Rule view. Only users with administrative rights can modify task rules in Process Orchestrator.

**Note**

For additional information on managing task rules, see the *Process Orchestrator User Guide*.

Enabling a Task Rule

A task rule is enabled by default. If a task rule is manually disabled, the task rule must be enabled before it is available for execution.

On the Definitions—Task Rules view, select the task rule and then use one of the following methods to enable it:

- On the Results pane, right-click and choose **Enable**.
- or-
- On the Details pane, select **Click here to enable**.

The Enabled column on the Results pane changes to True. If necessary, click the **Refresh**  tool to update the view.

Disabling a Task Rule

Disabling a task rule prevents the item from being available for execution. The disabled task rule is not removed from the list of task rules on the Definitions—Task Rules Results pane.

On the Definitions—Task Rule view, select the task rule and then use one of the following methods to disable it:

- On the Results pane, right-click and choose **Disable**.
- or-
- On the Details pane, select **Click here to disable**.

The Enabled column on the results pane changes to False. If necessary, click the **Refresh**  tool to update the view.

Creating a Copy of a Task Rule

The copy option is used when the user wants to leverage an existing task rule to define a new task rule using existing properties.

-
- Step 1** On the Definitions—Task Rules view, select the appropriate task rule, right-click and choose **Copy**.
- Step 2** On the Results pane, right-click and choose **Paste**.
A copy of the defined task rule is pasted onto the Results pane.
- Step 3** To rename the copied task rule or other properties, right-click and choose **Properties**.
- Step 4** Modify the task rule name, as appropriate, and click **OK** to close the dialog box.
-

Sorting Task Rules

The task rules are executed according to the order they are listed on the Definitions—Task Rules view. You should sort the task rules based on the order in which you want them to execute.

**Note**

All task rules will execute even if there is more than one task rule assigned for the same condition. For example, if you have two assignment rules for the same incident, both rules will be executed in the order listed in the Task Rules view.

On the Definitions—Task Rules view, select the task rule and use one of the following methods to move it to the desired position in the list:

- Drag and drop the task rule into the appropriate position in the list.
- On the Actions toolbar, click **Move Up** or **Move Down**.
- Click the Actions menu and choose **Move Up** or **Move Down**.
- Right-click and choose **Move Up** or **Move Down**.

The list of task rules are sorted according to the selected action.

Deleting a Task Rule

Use the Definitions—Task Rules view to delete task rules that are no longer used.

-
- Step 1** On the Definitions—Task Rules view, select the task rule, right-click and choose **Delete**.
- Step 2** On the Confirm Delete dialog box, click **Yes** to confirm the deletion.
-

Enabling Notification Based on Assignment Processes

If you want to have emails sent to whoever is assigned to a task but do not want to create notification task rules, you can enable the processes that ship with the Core automation pack that send emails based on assignment.

When these processes are enabled, the user or user group who was assigned to tasks will receive the email notification.

-
- Step 1** In the Definitions workspace, click **Processes**.
- Step 2** Click the **Filter by** link and choose **Automation Pack > Core** to filter for the processes that ship with the Core automation pack.
- Step 3** Right-click the appropriate **Notification Based on Assignment** process and choose **Enable**.

The following processes are for notification based on assignment:

| Process Name | Description |
|---|--|
| Default Alert Notification Based on Assignment | Sends email when an alert gets assigned. |
| Default Approval Request Notification Based on Assignment | Sends email when an approval request gets assigned. |
| Default Change Request Notification Based on Assignment | Sends email when a change request gets assigned. |
| Default Guided Operation Request Notification Based on Assignment | Sends email when a guided operation request gets assigned. |
| Default Incident Notification Based on Assignment | Sends email when an incident gets assigned. |
| Default Input Request Notification Based on Assignment | Sends email when an input request gets assigned. |
| Default Review Request Notification Based on Assignment | Send email when a review request gets assigned. |

Managing Global Variables

The System Copy for SAP System Template processes use global variables for information that is used on a regular basis to avoid having to specify the same information in several processes or activities. The variables that ship with the automation pack are configured with default variables but can be modified to meet the requirements for your specific environment.

This section provides information on configuring global variables that ship with the System Copy for SAP automation pack.

Accessing Global Variables

The global variables that ship with the System Copy for SAP automation pack can be accessed from the Definitions—Global Variables view.

- Step 1** On the Console, select the Definitions workspace and click **Global Variables** in the navigation pane. By default, all the variables display in the Global Variables pane.

The following information about the variables displays by default:

| Column | Description |
|--------------------|--|
| Display Name | Name of the global variable. |
| Description | Text description of the global variable. |
| Value | Value assigned to the variable. |
| Data Type | Type of value being used for the variable (Boolean, Encrypted String, Identity, Numeric, String, Table). |
| Automation Pack | Name of the automation pack that provides the variable. |
| Last Modified Time | Date and time the variable was last modified. |
| Last Modified By | Name of the user who last modified the global variable. |

- Step 2** Click the **Filter by** link and choose **Automation Pack > System Copy for SAP** to filter for only the global variables that ship with the specific automation pack.

Viewing or Modifying Global Variable Properties

You use the Global Variables Properties dialog box to view or modify the global variables. You access the properties from the Definitions—Global Variables view.

- Step 1** On the Global Variables pane, right-click the global variable and choose **Properties**.
- Step 2** On the General tab, review the information in the Description field to determine the values that need to be specified for the variable.
- Step 3** Click the **Table** tab.



Note The tab in the second position will depend on the variable type. Refer to the *Process Orchestrator User Guide* for instructions on configuring the different types of variables.

- Step 4** Click in the appropriate cell to change the current information or create a new row to add new information.
- Step 5** Click **OK** to close the dialog box and save your changes.
-



CHAPTER 4

Understanding the System Copy for SAP Processes

This chapter provides information on using the product, specific to the System Copy for SAP automation pack. It includes information on accessing the System Copy for SAP processes and filtering for specific processes, managing the processes, starting a process, restarting a process using start points, and viewing a running process and its results.

It includes the following sections:

- [Accessing System Copy for SAP Process Templates, page 4-2](#)
- [Viewing Processes in Editor, page 4-3](#)
- [Running a Process, page 4-4](#)
- [Viewing Process Activity Results, page 4-6](#)

Accessing System Copy for SAP Process Templates

The System Copy for SAP automation pack ships with process templates that must be modified by Cisco Professional Services with your company-specific system copy activities and information. The process templates can be accessed from the Definitions—Processes view.

Step 1 On the Console, select the Definitions workspace and click **Processes** in the navigation pane. By default, all the processes display in the Processes pane.

If you have multiple automation packs installed, you can filter the processes to display the processes specific to the automation pack.

Step 2 In the upper portion of the Processes pane, click the **Filter by** link and choose **Automation Pack**.

Step 3 In the drop-down list, choose **System Copy for SAP**.

The processes display in the Processes pane.

Viewing Processes in Editor

You can view the processes in the Process Editor. The System Copy for SAP Systems Master Template process (parent process) includes child processes for each phase of the system copy procedure. This section guides you through viewing the parent and child processes in the Process Editor.

**Note**

The processes displayed in the screen captures in this chapter are only examples. The processes that are delivered with the System Copy for SAP automation pack are customized for each customer environment.

-
- Step 1** On the Definitions workspace, right-click **System Copy for SAP Systems Master Template** and choose **Edit** to open the Process Editor.
- The process opens in the Process Editor.
- Step 2** Navigate to a child process, right-click and choose **Process > Edit** to open the child process in a new Editor window and view the activities in the child process.
- The child process opens in a new Editor window.
- Step 3** When you have completed viewing the processes, close the Editor window(s).
-

Running a Process

The processes that ship with the automation pack are for adhoc execution. This section guides you through starting a process and viewing its progress as it runs.

Step 1 In the Processes view, right-click the process and choose **Start Process** from the shortcut menu.

The Confirm Start Process dialog displays.



Note The **Required Value**  icon displayed on a tab or page indicates that the field is required and is either missing a value or contains an invalid value.

Step 2 On the Confirm Start Process dialog box, select the **SID Source System** and click **Edit**.

Step 3 In the Value field, enter the system ID for the source system and click **OK**.

Step 4 On the Confirm Start Process dialog box, select the **SID Target System** and click **Edit**.

Step 5 In the Value field, enter the system ID for the target system and click **OK**.

Step 6 On the Confirm Start Process dialog box, you can specify whether to execute the process for a specific starting point and whether to execute on a target other than the process target:

- Check the **Start from start point** check box if you want to start the master process from a specific point in the workflow and choose the starting point from the drop-down list.
- Check the **Override target** check box if you want to execute the process on a target other than the process target and select the target or target group from the drop-down list.

Step 7 When you have completed the fields on the Confirm Start Process dialog box, click **OK** to start the process.

The Start Process Results dialog box displays. Proceed to [Viewing Process During Execution](#).

Viewing Process During Execution

After starting the process, you can use the Process Viewer to view the process as it runs through each activity.

Step 1 On the Start Process Results dialog box, right-click the process and choose **Observe**.

The Process Viewer displays the process workflow.

Step 2 View the process as it proceeds through the workflow.

The activities within the process workflow will change colors as they complete (succeed). When the process gets to an approval required step, it will stop until approval has been received to continue the process.

Using Start Points to Restart Master Process

In some cases, the Master process may need to be restarted in order for it to successfully complete. Instead of restarting the process from the beginning, you can now start another instance of the process from a different point in the process (child processes) using the Start Point logic.

-
- Step 1** In the Processes view, right-click the **System Copy Template – Master Template** process and choose **Start Process**.
 - Step 2** On the Confirm Start Process dialog box, specify the SID Source System and SID Target System.
 - Step 3** Check the **Start from start point** check box and choose the child process (phase) from which to restart the process from the drop-down list.
 - Step 4** Click **OK** to start the process.
-

Viewing Process Activity Results

You can also view the process as it runs from the Operations workspace on the Console. As the process runs, the status displays as each activity completes.

Step 1 On the Operations workspace, expand the **Process Views** folder and click the appropriate view based on how the process was executed. Since the process was started manually, click **View Adhoc** to filter the processes that are displayed.

Step 2 In the View Adhoc pane, select the process to display the details in the lower pane.

When a process gets to the point where an approval is required before continuing, an approval request will be generated and the process stops until an approval is received to continue.

Viewing Approval Requests

When the process reaches a point where an approval is required, an Approval Request is generated and displays in the Task Views.

-
- Step 1** In the Operations workspace, expand the **Task Views** folder in the navigation pane and click **View User Interactions**.
- Step 2** In the Task Assignee field, choose **View all tasks** from the drop-down list.
- Step 3** In the View Results pane, right-click the **Approval Request** task and choose **Select Choice**.
The Approval Request displays in the Web Console.
- Step 4** Click the radio button to indicate how the process should continue.
In the example above, you can choose to:
- Send a System Copy Complete Notification
 - Finish the Process
- Step 5** Click **Complete** and close the browser.
-



APPENDIX **A**

Understanding the Core Automation for SAP Content

The Automation Pack for Core Automation for SAP contains content that is used in the other SAP-related automation packs.

This appendix contains the content included in the Core Automation for SAP automation pack. It contains the following sections:

- [Automation Pack Content, page A-1](#)
- [Automation Pack Dependencies, page A-4](#)

Automation Pack Content

Use the automation pack Properties dialog box to view the content (objects) included in the automation pack. For instructions on accessing the automation pack properties, *see* [Accessing Automation Pack Properties, page 2-2](#).

Core Automation for SAP Task Rules

The following table contains the task rule that is imported by the Core Automation for SAP automation pack.

| Task Rule | Description |
|------------------------|---|
| SAP Default Assignment | Default user or group who will be assigned all SAP-related incidents. |

For information on configuring Task Rules, *see* [Managing Extended Target Properties, page 3-6](#).

Core Automation for SAP Global Variables

The following table contains the global variables that are imported by the Core Automation for SAP automation pack.

| Global Variable Name | Description |
|--------------------------------------|---|
| SAP Alert Suppression Time | Used to specify the time SAP alerts will be suppressed when duplicated. After this time, a new alert and incident will be created. Enter the time in seconds. |
| Transaction Analyzer Report Location | If you have Cisco Transaction Analyzer installed, you use this URL to access Transaction Analyzer reports folder. |

For instructions on configuring global variables, see [Managing Global Variables, page 3-21](#).

Core Automation for SAP Processes

The Core Automation for SAP automation pack contains support processes that may be triggered by alerts and incidents from processes in the other SAP automation packs. You must enable the processes that will be used in your environment before the other processes can be successfully executed.

For instructions on enabling processes, see [Chapter 4, “Understanding the System Copy for SAP Processes.”](#)

The following table contains the processes that are imported by the Core Automation for SAP automation pack.

| Process Name | Description |
|---|---|
| Disable SAP System Monitoring | Allows users to disable the SAP system in Process Orchestrator. This process can be used as an example to create custom processes to disable/enable SAP system monitoring during scheduled downtime. |
| Enable SAP System Monitoring | Allows users to enable the SAP system in Process Orchestrator. This process can be used as an example to create custom processes to disable/enable SAP system monitoring during scheduled downtime. |
| Example – Transaction Analyzer Link | Example process for linking to Transaction Analyzer. |
| Publish SAP Alerts on Windows Event Log | Alerts created by processes in the Automation for SAP BW and BWA automation pack will create events in the Windows event log in the Process Orchestrator server. This is necessary for integration with management frameworks such as Microsoft SCOM 2007 and HP OpenView for Windows. Note This process must be enabled if you have integrated Process Orchestrator with SCOM 2007 or HP OpenView. |
| Reset SAP System Alerts and Incidents | Closes all the alerts and incidents for the selected SAP system in Process Orchestrator. |

| Process Name | Description |
|------------------------------|---|
| SAP Adapter Connection Issue | Monitors the health of Process Orchestrator connection to SAP systems. |
| SAP Process Execution Error | Raises an incident when there are errors in activities executed in SAP processes. |

Core Automation for SAP Target Groups

The Core Automation for SAP automation pack provides the target groups that are used by the SAP processes. Most of the target groups are automatically populated with members when the targets are configured. For those that are not automatically populated, you must manually add the members. For information on adding members to target groups, see the *Process Orchestrator User Guide*.

The following table contains the target groups that are imported by the Core Automation for SAP automation pack.

| Target Group Name | Description | Automatically Populated with Members |
|---------------------------------------|---|--------------------------------------|
| All Cisco UCS Managers (SAP) | All UCS Managers. | Yes |
| All SAP ABAP | All SAP systems configured with component ABAP. | Yes |
| All SAP ABAP 46C | All SAP systems configured with component ABAP and version 46C. | Yes |
| All SAP ABAP non 46C | All SAP systems configured with component ABAP and not version 46C. | Yes |
| All SAP BI Warehouse | All SAP BI Warehouse targets. | Yes |
| All SAP Java | All SAP systems configured with component Java. | Yes |
| All SAP Systems | All SAP systems. | Yes |
| All SAP Systems – DB2 Mainframe | All SAP systems configured with database DB2 Mainframe. | Yes |
| All SAP Systems – DB2 UDB | All SAP systems configured with database DB2 UDB. | Yes |
| All SAP Systems – Oracle | All SAP systems configured with database Oracle. | Yes |
| All SAP Systems – SQL Server Database | All SAP systems configured with database SQL Server. | Yes |
| All Unix Servers (SAP) | All Unix servers. | Yes |
| All Windows Computers (SAP) | All Windows server. | Yes |
| Location Availability Monitors | Windows computers that have Availability Monitor Utility installed. Availability Monitor is used to monitor location availability. Contact Cisco Systems support to download the utility. | No |

Core Automation for SAP Categories

The Core Automation for SAP automation pack ships with categories that are used by the SAP processes. The following categories are imported by the Core Automation for SAP automation pack.

- SAP
- SAP APO
- SAP Application Layer
- SAP Availability
- SAP Background Processing
- SAP BW
- SAP Communication
- SAP Configuration
- SAP Database DB2
- SAP Database DB2 Mainframe
- SAP Database Informix
- SAP Database MS SQL Server
- SAP Database Oracle
- SAP Database SAP DB
- SAP Infrastructure ABAP
- SAP Infrastructure J2EE
- SAP Operating System
- SAP Performance Metrics
- SAP PI
- SAP Pool System
- SAP System Errors
- SAP Update
- **Cisco Process Orchestrator** SAP Examples
- **Cisco Process Orchestrator** SAP Operations
- **Cisco Process Orchestrator** SAP Self Monitoring

Automation Pack Dependencies

Use the Dependencies tab on the automation pack Properties dialog box to view the automation packs and adapters referenced by the objects in the automation pack. These objects must be installed prior to importing the Core Automation for SAP automation pack.

For instructions on accessing the automation pack properties, see [Accessing Automation Pack Properties, page 2-2](#).

| Object Type | Dependency |
|------------------|---|
| Automation Packs | <ul style="list-style-type: none"> • Core |
| Adapters | <ul style="list-style-type: none"> • Core Functions Adapter • Microsoft Windows Adapter |



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