EMC® Smarts®
Service Assurance Management Adapters Suite
Version 8.1 Service Pack 7

Installation Guide
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PREFACE

As part of an effort to improve its product lines, EMC periodically releases revisions of its software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

Contact your EMC representative if a product does not function properly or does not function as described in this document.

This document was accurate at publication time. New versions of this document might be released on the EMC online support website. Check the EMC online support website to ensure that you are using the latest version of this document.

Purpose

This document provides instructions for installing the EMC Smarts Service Assurance Management (SAM) Adapters Suite products on Windows platforms.

Audience

This guide is intended for administrators and integrators who are responsible for installing the SAM Adapters Suite products.

EMC Smarts Service Assurance Management Adapter Suite installation directory

In this document, the term BASEDIR represents the location where EMC Smarts software is installed:

- For Windows, this location is C:\InCharge\<product suite>.

The <product suite> represents the EMC Smarts product suite to which the product belongs. For example, on Windows operating systems, this product is, by default, installed to: C:\InCharge\SAM.Adapters\smarts. This location is referred to as BASEDIR/smarts.

Optionally, you can specify the root of BASEDIR to be something other than C:\InCharge (on Windows), but you cannot change the <product suite> location under the root directory.

EMC Ionix ITOps System Administration Guide provides information on the directory structure of EMC Smarts software.
EMC Smarts Service Assurance Management Adapter Suite products

The Service Assurance Management Adapter Suite offers the following products:

◆ EMC Smarts Adapter for Microsoft System Center Operations Manager 2016

EMC Smarts Service Assurance Management Adapter Suite documentation

The following documents are relevant to the Service Assurance Management Adapter Suite:

◆ EMC Smarts Service Assurance Management Adapters Suite Installation Guide
◆ EMC Smarts Service Assurance Management Adapters Suite Release Notes
◆ EMC Ionix Service Assurance Management Adapters Suite and Report Manager Third-Party Copyright Read Me
EMC Smarts Service Assurance Management Suite

The following documents are relevant to users of the Service Assurance Management Suite:

- EMC Ionix Service Assurance Manager Introduction
- EMC Ionix Service Assurance Management Suite Deployment Guide
- EMC Ionix Service Assurance Management Suite Installation and Migration Guide
- EMC Ionix Service Assurance Manager Operator Guide
- EMC Ionix Service Assurance Manager Configuration Guide
- EMC Ionix Service Assurance Manager Dashboard Configuration Guide
- EMC Ionix Business Impact Manager User Guide
- EMC Ionix Service Assurance Manager Failover System User Guide
- EMC Ionix Service Assurance Manager Adapter Platform User Guide
- EMC Smarts Service Assurance Manager Notification Adapters User Guide
- EMC Ionix XML Adapter User Guide

EMC Ionix ITOps Documentation Catalog provides information on documentation resources provided with other EMC Smarts product suites.

Related documentation

In addition to this document, EMC Corporation provides a Help system for command line programs as well as product documentation.

Help for command line programs

Descriptions of command line programs are available as HTML pages. The index.html file, which provides an index to the various commands, is located in the BASEDIR/smarts/doc/html/usage directory.

EMC Smarts documentation

Readers of this guide may find the following related documentation helpful. It can be found in the BASEDIR/smarts/doc/pdf directory:

- EMC Ionix ITOps Documentation Catalog
- EMC Ionix ITOps ICIM Reference
- EMC Ionix ITOps System Administration Guide
- EMC Ionix ITOps MODEL Reference Guide
- EMC Ionix ITOps ASL Reference Guide
- EMC Ionix ITOps Perl Reference Guide

These documents are updated periodically. Electronic versions of the updated manuals are available on EMC Online Support at: https://support.emc.com
Conventions used in this document

EMC uses the following conventions for special notices:

⚠️ **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ **CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE** is used to address practices not related to personal injury.

*Note:* A note presents information that is important, but not hazard-related.

**IMPORTANT**

An important notice contains information essential to software or hardware operation.

**Typographical conventions**

EMC uses the following type style conventions in this document:

- **Normal** Used in running (nonprocedural) text for:
  - Names of interface elements, such as names of windows, dialog boxes, buttons, fields, and menus
  - Names of resources, attributes, pools, Boolean expressions, buttons, DQL statements, keywords, clauses, environment variables, functions, and utilities
  - URLs, pathnames, filenames, directory names, computer names, links, groups, service keys, file systems, and notifications

- **Bold** Used in running (nonprocedural) text for names of commands, daemons, options, programs, processes, services, applications, utilities, kernels, notifications, system calls, and man pages
  - Names of interface elements, such as names of windows, dialog boxes, buttons, fields, and menus
  - What the user specifically selects, clicks, presses, or types

- **Italic** Used in all text (including procedures) for:
  - Full titles of publications referenced in text
  - Emphasis, for example, a new term
  - Variables
Preface

Courier Used for:
- System output, such as an error message or script
- URLs, complete paths, filenames, prompts, and syntax when shown outside of running text

Courier bold Used for specific user input, such as commands

Courier italic Used in procedures for:
- Variables on the command line
- User input variables

<> Angle brackets enclose parameter or variable values supplied by the user

[] Square brackets enclose optional values

| Vertical bar indicates alternate selections — the bar means “or”

{} Braces enclose content that the user must specify, such as x or y or z

... Ellipses indicate nonessential information omitted from the example
Where to get help

EMC support, product, and licensing information can be obtained as follows:

**Product information** — For documentation, release notes, software updates, or information about EMC products, licensing, and service, go to the EMC Online Support at:

[https://support.emc.com](https://support.emc.com)

**Technical support** — For technical support, go to EMC online support and select Support. On the Support page, you will see several options, including one to create a service request. Note that to open a service request, you must have a valid support agreement. Contact your EMC sales representative for details about obtaining a valid support agreement or with questions about your account.

Your comments

Your suggestions will help us continue to improve the accuracy, organization, and overall quality of the user publications. Send your opinions of this document to:

techpubcomments@emc.com
CHAPTER 1
Introduction

This chapter consists of the following topics:

◆ Suite contents ........................................................................................................ 12
◆ Product and release compatibility........................................................................... 12
◆ Installation or upgrade tasks................................................................................... 13
◆ Uninstallation tasks................................................................................................ 14
◆ Product licensing .................................................................................................... 14
Suite contents

This section describes the following SAM Adapters Suite products:

Adapter for Microsoft Systems Center Operations Manager 2016

The Adapter for Microsoft Systems Center Operations Manager 2016 can be configured to provide a management pack that automatically sends the following notifications and information from SAM to Microsoft Operations Manager 2016:

- Root-cause notifications
- Alert views
- Network device monitoring views
- Topology diagrams

The adapter also provides bidirectional synchronization of the following fields:

- Acknowledge
- Owner
- Custom fields from changes in both SAM and/or Microsoft Operations Management console

The adapter can also be configured to:

- Send Microsoft alerts to SAM for consolidation with all your notifications
- Retrieve topology data from Smarts IP and creates the topology in Microsoft Operations Manager

If an object does not exist in SAM, the adapter creates the object in the SAM Adapter Platform.

Product and release compatibility

The SAM Adapters Suite is compatible with the versions of the products listed in Table 1 on page 12.

<table>
<thead>
<tr>
<th>EMC Smarts product suite</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMC Smarts IP Management Suite</td>
<td>9.3, 9.4, 9.5, 9.5.1</td>
</tr>
<tr>
<td>EMC Smarts Service Assurance Management Suite</td>
<td>9.3, 9.4, 9.5, 9.5.1</td>
</tr>
</tbody>
</table>

Service Assurance Management Adapters 8.1.7 suite Services and Broker does not work when SAM 9.3.x and above, IP 9.3.x and above, and other EMC Smarts products are in FIPS 140 enabled mode.
# Installation or upgrade tasks

To install or upgrade the INSTALL_SUITE_S, you must satisfy the requirements listed in Table 2 on page 13.

## Table 2  INSTALL_SUITE_S installation or upgrade requirements

<table>
<thead>
<tr>
<th>Preinstall or pre-upgrade</th>
<th>Related information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that the Broker and FLEXnet license host are installed, configured, and operating.</td>
<td><em>EMC Ionix ITOps System Administration Guide</em> for license information</td>
</tr>
<tr>
<td>Review the important release issues for the INSTALL_SUITE_S.</td>
<td><em>EMC Ionix Service Assurance Management Suite Release Notes</em></td>
</tr>
<tr>
<td>Obtain an evaluation or permanent license for the products to be installed from the INSTALL_SUITE_S.</td>
<td><em>EMC Ionix ITOps System Administration Guide</em> for license information</td>
</tr>
<tr>
<td>Determine whether the products are supported on your platform.</td>
<td>“Operating system and third-party requirements” on page 16</td>
</tr>
<tr>
<td>Determine whether your system meets the hardware requirements.</td>
<td>“Hardware requirements” on page 17</td>
</tr>
</tbody>
</table>

## Install or upgrade

<table>
<thead>
<tr>
<th>Related information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install the INSTALL_SUITE_S.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

## Postinstall or postupgrade

<table>
<thead>
<tr>
<th>Related information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save your license in the proper location:</td>
</tr>
<tr>
<td>• Evaluation license—Save smarts.lic to the BASEDIR/smarts/local/conf directory. If your evaluation license has a different name, rename it to smarts.lic.</td>
</tr>
<tr>
<td>• Permanent license—Use the procedures described in the <em>EMC Ionix ITOps System Administration Guide</em>.</td>
</tr>
<tr>
<td>Configure the adapter product, as described in the relevant SAM Adapter Product User Guide.</td>
</tr>
</tbody>
</table>
Introduction

Uninstallation tasks

To uninstall a SAM Adapters Suite product, you must satisfy the following requirements:

- Review the prerequisites at “Detect and stop EMC Smarts programs” on page 31 before you start to uninstall the product.
- Use the following methods to uninstall the product:
  - “Uninstall by using wizard mode” on page 34

Product licensing

License files for features of EMC Smarts Service Assurance Management Adapter Suite 8.1.7 suite are not included with EMC Smarts software.

EMC uses a tool called Powerlink Licensing (PLL) to generate a License Authorization Code (LAC) for the software you have purchased. This code is required for you to obtain a permanent license file. The code will be sent to you through email, and you can then log into EMC Online Support at https://support.emc.com to obtain a valid software license.

For temporary (evaluation) licenses, open a service request on EMC Online Support at https://support.emc.com.

Refer to the EMC Ionix ITOps System Administration Guide for more information on the new process, and on how to rehost and regenerate licenses.
CHAPTER 2
Requirements

This chapter consists of the following topics:

◆ Operating system and third-party requirements ......................................................  16
◆ Hardware requirements...........................................................................................  17
◆ SAM Adapter configuration directories .................................................................... 17
◆ Deployment requirements....................................................................................... 18
◆ SAM Adapter configuration directories .................................................................... 17
◆ Deployment requirements....................................................................................... 18
Operating system and third-party requirements

Some of the SAM adapters have multiple components that can be deployed in a distributed installation. The adapter components that co-reside with the third-party vendor product are supported on the platform versions listed in Table 3 on page 16. The SAM Adapters can be installed on the same platforms as the Service Assurance Manager.

All the requirements for the adapters are in addition to the requirements for the Service Assurance Management Suite. The Service Assurance Management Suite installation must meet all requirements. The *EMC Ionix Service Assurance Management Suite Installation and Migration Guide* provides detailed information.

Table 3 on page 16 summarizes the supported operating system platforms and third-party versions for each SAM Adapters Suite product.

<table>
<thead>
<tr>
<th>EMC Smarts product</th>
<th>Supported third-party product and version</th>
<th>Operating system for co-resident installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapter for Microsoft Systems Center Operations Manager 2016</td>
<td>Microsoft Operations Manager 2016</td>
<td>• Microsoft Windows 2012 R2, SE and EE (Native/Virtual*)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Microsoft Windows 2016, SE and DE (Native/Virtual*)</td>
</tr>
</tbody>
</table>
Hardware requirements

Hardware and software requirements summarized here represent the minimum levels.

Table 4 on page 17 lists minimum requirements for CPUs, memory, and disk space used by the software for writeable files such as logs, repository files, and output files. The total disk space for installing all the adapters is approximately 500 MB.

**NOTICE**

CPU means the number of physical CPU cores and not the number of CPUs displayed when hyperthreading is activated.

If you are installing more than one product on a system, the system must meet the aggregated disk space, memory (RAM), and data disk space requirements for those products.

**Table 4** Minimum CPU, memory, and data disk space requirements

<table>
<thead>
<tr>
<th>Smarts product</th>
<th>CPUs</th>
<th>Memory (RAM)</th>
<th>Data disk space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapter for Microsoft Systems Center Operations Manager 2016</td>
<td>1</td>
<td>512 MB</td>
<td>100 MB each</td>
</tr>
</tbody>
</table>

**Table 5** Operating system requirements

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Supported version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows 2016</td>
<td>Microsoft Windows Server 2016</td>
</tr>
</tbody>
</table>

**Table 6** Configuration directories of SAM Adapters

<table>
<thead>
<tr>
<th>Adapter</th>
<th>Configuration directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapter for Microsoft Operations Manager 2016</td>
<td>BASEDIR/smarts/conf/OpsMgr2007</td>
</tr>
</tbody>
</table>
Deployment requirements

The following sections list deployment requirements for these products.

Adapter for Microsoft Systems Center Operations Manager 2016

The following EMC Smarts components are required for the Adapter for Microsoft Operations Manager 2016:

- EMC Smarts Adapter for Microsoft Systems Center Operations Manager 2016. Supports deployment on the same host as Microsoft Operations Manager 2016 or on a different host
- EMC Smarts Service Assurance Manager
- EMC Smarts Service Assurance Management Suite Adapter Platform
- EMC Smarts IP Availability Manager version 9.x, or higher
- TCP port 5724 must be open between SAM/ and the SAM Adapter Platform and/or Adapter for OpsMgr 2016 and the OpsMgr 2016 Server or Root Management Server

The following Microsoft components are required for the Adapter for Microsoft Systems Center Operations Manager 2016:

- .Net Framework 2.0 RTM
- DotNet Framework 3.0 July CTP
- Microsoft SDK binaries (by installing the Operations Manager console)

The EMC Ionix Adapter for Microsoft Systems Center Operations Manager 2007 R2 User Guide provides configuration and operation information.

**NOTICE**

To verify versions of Smarts products, refer to “Product and release compatibility” on page 12. The EMC Smarts Global Console and EMC Smarts Service Assurance Manager should have the same version.
CHAPTER 3
Installing SAM Adapter Suite

This chapter consists of the following topics:

◆ Preinstallation ................................................................. 20
◆ Install the EMC Smarts Service Assurance Management Adapter Suite ......... 21
Installing SAM Adapter Suite

Preinstallation

Before installing the Smarts SAM Adapter Suite, determine the location of the EMC Smarts Broker as described in “Determine the location of the EMC Smarts Broker” on page 20.

The user who performs the installation must have administrative privileges on Windows platforms. The installation program shuts down if the user does not have the appropriate privileges.

Determine the location of the EMC Smarts Broker

You must specify the location of the EMC Smarts Broker during installation of the EMC Smarts software. Typically, this location is chosen during the design of the EMC Smarts software deployment and before any installation begins.

Consult with your deployment planner or check the build guide that documents your deployment to determine the name of the host where the Broker was installed and the port that the Broker uses.

If the location is the same host where you are installing this suite, then the installation program will automatically install the Broker if it is not already on the host.
Install the EMC Smarts Service Assurance Management Adapter Suite

This section describes how to install Service Assurance Management Adapter Suite into a new directory structure. The Service Assurance Management Adapter Suite are distributed on CD and is also available for download from EMC Online Support.

Before starting the installation, do one of the following:

- Insert the CD into the optical drive of the host system. “Mounting and Loading CDs” on page 41 describes how to access the optical drive for various operating systems.
- Copy the download to the host system where you will perform the installation.

**Note:** When you insert the installation CD, there may be a delay of several minutes between the InstallShield preparation screen and the EMC Smarts splash screen and installation dialog boxes. During this time, the java.exe process is running. Do not eject or reinsert the CD to start a second install process.

Install using Wizard mode

Wizard mode provides a graphical user interface to the installation program for Windows platforms.

Running Wizard mode

1. Run the Setup command appropriate for the operating system:

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Setup command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>setup-SAMADP-8_1_7_0-win.exe</td>
</tr>
</tbody>
</table>

   The InstallShield wizard dialog box displays and closes. The **Shutdown EMC Smarts Programs** dialog box and the **Welcome** screen appear.

2. Click **OK** in the **Warning** dialog box.
   
   If stopping services is necessary, you will be prompted with specific instructions later in the installation process.

3. Click **Next** in the **Welcome** screen.
   
   **Next** is disabled if you do not have administrative privileges and a message also appears. To install, you must restart the installation with the appropriate privileges.

4. Read and accept the EMC Corporation end user license agreement and click **Next**.

5. If the installation program detects an existing installation of the same suite, the **Installation Type** screen displays. Select **Install the product to a new directory**.

   **NOTICE**

   The **Installation Type** screen does not display if you are installing the suite for the first time on the system.
6. Click **Next** to accept the default installation directory or type your preferred directory and click **Next**.

The default installation directory is:

- C:\InCharge (on Windows)

If you specify a directory, the directory name cannot contain spaces. If the specified directory does not exist, it will be created. If you do not have write privileges, an error message displays.

7. Click **Next** to specify the type of installation product you want to install:

   - **Complete** to install all available products in the suite.
   - **Custom** to choose the product you want to install.

   Click **Next** to continue.

8. The **Services Selection** screen displays. Select the products that you want to install as services and click **Next**. If you do not install services at this point, you will need to install them manually later.

   If you have an older version of a service running on the host, the installer will stop the services and will reconfigure them to point to a new installation directory.

   **NOTICE**

   When installed as services, EMC Smarts products start automatically when the system starts up. If the system is stopped and restarted, the EMC Smarts products restart automatically. EMC Corporation recommends that EMC Smarts products be installed as services whenever possible. If any of the products being installed can be started as services, these products are displayed in the services selection screen.

9. Specify the EMC Smarts Broker.

   - If you are installing the Broker as a service, specify the port. The hostname defaults to localhost.
   - If the Broker is already running on this host, keep the default values.
   - If the Broker is running on another host, specify the hostname of that system and the port the Broker uses.

   Click **Next** to continue.

10. Review the list of products that will be installed and the target installation directory. At the bottom of the list, the total amount of disk space required for the selected products is provided so that you can verify that adequate disk space is available. To install the products, click **Next** and the **Installation Progress** screen displays.

11. Upon completion, the **Installation Summary** displays informational messages such as successful confirmations, error messages, and warnings. Click **Finish** to exit the installation.

   Investigate any errors or warnings. The log file is a text file with the naming convention Install.<suite>.<productversionNumber>.log. It is located in the BASEDIR/smarts/setup/logs directory. If the installation process fails, the log files are located in the /tmp directory.
NOTICE

The installer will prompt to restart the host if any of the following tasks are pending on the host:
- If a system protected file is replaced.
- If there is a pending restart triggered by another application or if there is an Operating System patch installation on the host.

12. “Next Steps” on page 24 provides postinstallation task information.

Install using unattended mode

Unattended mode is supported for all operating system but separate response files are needed for Windows systems. This method reads the selections and settings for the installation from a user-modifiable file, which enables users to easily duplicate the installation on many computer systems. Manual intervention is not necessary after you execute the setup command.

NOTICE

The unattended install mode does not automatically copy repository files if you are migrating from a previous version of the software. You must manually copy the repository and configuration files after installation to complete the migration.

Running unattended mode

Run the Setup command from a command line shell.

Table 8 Setup command syntax for unattended mode

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Executable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>setup-&lt;os&gt; -options \home\SAM_ADAPTERS_SUITE-response.txt</td>
</tr>
</tbody>
</table>

For example, to start the unattended installation of the install suite on Windows when the response file is located in C:\RESPONSE_FILE_NAME-response.txt, run:

```bash
INSTALL_setup-<os> -options C:\RESPONSE_FILE_NAME-response.txt
```
Modifying the response file

Each suite has a response file located on the CD in the /utils directory. Its naming convention is `<suite>-response.txt`.

The response file provides instructions and examples of command line options that are passed to the program in unattended mode. The command line options are organized by process flow. The process flow is almost identical to that of the wizard mode.

By default, the response file includes settings that support the installation of all products from the CD and configure the Broker location as localhost at port 426. You must edit the response file to change settings to:

- Support Windows operating systems
- Specify a different Broker location

To modify the response file:

1. Copy the response file from the CD /utils directory to a directory on your system, for example, the /tmp directory.
2. Using a text editor, modify the values for the command line options in the response file:
   a. Specify the target directory.
   b. Select a directory for the process log file.
   c. Select the products to install. Ensure that the property value for the product is set to true.
   d. Select the products to start as services. Ensure that the property value for the product is set to true.
   e. Specify the location of the Broker.
3. Save the file.

Next Steps

After the installation is finished, you may need to complete the following tasks:

- “Verifying the Installation” on page 25 describes tasks for verifying the proper installation of the software and starting services.
CHAPTER 4
Verifying the Installation

This chapter consists of the following topics:

◆ Verification process ................................................................................................ 26
◆ Verification process ................................................................................................ 26
◆ EMC Smarts services............................................................................................... 26
◆ Start EMC Smarts programs..................................................................................... 26
◆ Verify the EMC Smarts product status...................................................................... 27
◆ Next steps .............................................................................................................. 28
Verifying the Installation

Verification process

This chapter describes tasks that confirm proper installation of SAM Adapters Suite products. The tasks include the following:

- Determine the location of the third-party system installation for the adapter.
- Ensure that the third-party system is properly installed and configured, and is running.
- Obtain a temporary license for the adapter, if needed.
- Start the adapter product as a service. If the product is not installed as a service, commands are provided to install the products as services and to start the service in native mode. “Start EMC Smarts programs” on page 26 provides additional information.
- Verify the operational status of the adapter product. “Next steps” on page 28 provides additional information.

EMC Smarts services

The following sections describe methods for starting EMC Smarts services.

The Smarts Managers should have been installed as services. If you installed the products as services, you must start them for the first time. These services start automatically upon system restart, but the following sections describe additional methods to start EMC Smarts services.

Start services on Windows

To start an EMC Smarts service from the Windows desktop:

2. Select Services.
3. Right-click the EMC Smarts service to select it and display a menu.
4. Select Start from the menu.

**Note:** Start the Broker service first if it is not running.

Start EMC Smarts programs

You can start EMC Smarts programs from the terminal when the program is not intended to be long-running, or testing is to be performed. However, do not use this method in a production environment.

The *EMC Ionix ITOps System Administration Guide* provides a complete description of the command syntax.
Starting programs on Windows

To start a program on Windows, invoke the command with the appropriate options from the C:\BASEDIR\smarts\bin directory.

Starting the EMC Smarts Broker

brstart --port=426 --output

Starting a Manager

\[ sm\_server --name=<server\_name> --config=<config\_directory> --port=0 --ignore-restore-errors --output ▲ \]

\textbf{Note: The ▼▲ symbols indicates the command must be typed on one line.}

Verify the EMC Smarts product status

You can determine the current state of the products in the suite that register with the Broker by typing the following command from the BASEDIR/smarts/bin directory:

```
./brcontrol
```

This command displays a list of EMC Smarts Managers and adapters registered with the Broker, their states (RUNNING, DEAD, UNKNOWN), process IDs, port numbers, and the last time that their states changed.

Also check any log files for the products. Typically, these log files are in BASEDIR/smarts/local/logs.

Verify the software version

Your newly installed SAM Adapters Suite must be at the appropriate version. To determine your version level:

From the SAM Adapters Suite BASEDIR/smarts/bin/, type the following command:

```
sm_server --version
```

The results should include SAM_ADAPTER_SUITE V8.1.7.0.

For example,

```
sm_server.exe:
winnt-x86-32/206200
SAM_ADAPTERS_SUITE: V8.1.7.0/32(168017), 03-May-2018 06:30:20
Copyright 1995-2018, EMC Corporation - Build 7
Foundation V9.0.4.1/32(158135), 17-Mar-2017 11:55:14 Copyright
1995-2017, EMC Corporation - Build 10
```
Verifying FIPS 140

To know the FIPS 140 status, type the following command in dmctl mode:

dmctl -s <server name> get SM_System::SM-System::FIPS

The output should be TRUE.

- TRUE implies that FIPS140 is enabled
- FALSE implies that FIPS140 is disabled

Notice

Service Assurance Management Adapters 8.1.7 suite Services and Broker does not work when SAM 9.3.x and above, IP 9.3.x and above, and other EMC Smarts products are in FIPS 140 enabled mode.

Next steps

This section summarizes the tasks for completing an installation including the EMC Smarts Service Assurance Management Suite, a SAM Adapters Suite product, and, depending on the deployment, the EMC Smarts IP Performance Manager, and/or the Adapter Platform.

EMC Smarts products must be configured before they can perform useful analysis and provide information to operators. To continue the deployment, perform the following tasks, as appropriate:

1. Configure the EMC Smarts IP Availability Manager, as described in the *EMC Ionix IP Availability Manager User Guide*.

2. Configure the EMC Smarts IP Performance Manager, if used, as described in the *EMC Ionix IP Performance Manager and Server Performance Manager User Guide*.

3. Configure the Adapter Platform, as described in the *EMC Ionix Service Assurance Manager Adapter Platform User Guide*.

4. Configure third-party adapters, as described in the guide for the specific adapter.

5. Install permanent licenses, as described in the *EMC Ionix System Administration Guide*.

6. Configure security, as described in the *EMC Ionix System Administration Guide*.

7. Start the Global Console, as described in the *EMC Ionix Service Assurance Manager Operator Guide*.

8. Configure SAM to receive notifications from the Domain Managers, as described in the *EMC Ionix Service Assurance Manager Configuration Guide*.

9. Discover the network, as described in the *EMC Ionix IP Management Suite Discovery Guide*.
CHAPTER 5
Uninstalling SAM Adapter Suite

This chapter consists of the following topics:

◆ Before you uninstall ................................................................. 30
◆ Uninstalling SAM Adapter Suite ............................................. 34
Uninstalling SAM Adapter Suite

Before you uninstall

This section describes tasks to be completed before uninstalling EMC Smarts software.

- “Remove manually installed services” on page 30
- “Uninstall when the same product suite is installed twice on Windows” on page 31
- “Detect and stop EMC Smarts programs” on page 31
- “Uninstall the FLEXnet License Server” on page 33

Remove manually installed services

Services that you manually installed with sm_service command are not removed by the uninstallation program. You must remove these services manually before uninstalling the product suite.

To remove a service, invoke sm_service from the BASEDIR/smarts/bin directory:

1. Use `sm_service` to list the installed services.
   ```
   ./sm_service show
   ```

2. Remove the manually installed service.
   ```
   ./sm_service remove ic-<service_name>
   ```
   where `<service_name>` is the name of the service. For example, `ic-am-server` or `ic-sam-server`.
Uninstall when the same product suite is installed twice on Windows

If you installed the same product suite to different locations on the same host system, do not use Add/Remove Programs to uninstall. Uninstall the EMC Smarts product suite as follows:

1. Use the command prompt to invoke the wizard mode for uninstallation program.

   BASEDIR\_uninst\uninstaller.exe

   where BASEDIR is the location of the EMC Smarts product suite to uninstall.

2. Complete the uninstallation beginning with step 2 as described in “Uninstall by using wizard mode” on page 34.

Detect and stop EMC Smarts programs

Before upgrading or uninstalling your suite, stop all EMC Smarts services, EMC Smarts scheduled jobs, and any other process that uses programs or libraries that run for the EMC Smarts suite.

Detecting EMC Smarts programs

The sm_plist utility identifies all EMC Smarts programs that are running for any product suite on your machine. You can use the sm_plist utility whenever you need to identify EMC Smarts programs that are running, for example, before applying a service pack or patch and uninstalling the product suite.

To use the utility, invoke it from the BASEDIR/smarts/script directory. The utility displays active programs in a window:

1. Go to the BASEDIR/smarts/script directory.

2. Start the sm_plist utility.

   • For Windows, type:

     cscript sm_plist.vbs BASEDIR2

   where <BASEDIR> is the directory where the sm_plist utility is installed and <BASEDIR2> represents the location of any EMC Smarts product suite.

Stopping active EMC Smarts programs on Windows

To stop a service from the Windows desktop, use the Microsoft Management Console:

1. Select Settings > Control Panel.

2. At the Control Panel, select Administrative Tools.

3. At the Administrative Tools folder, select Services.

4. At the Services window, locate EMC Smarts services that are running. These services start with the words “EMC Smarts.” For each service running from the suite to be upgraded, right-click the service and select Stop.

   **Note:** Do not stop the Broker service.

5. Repeat step 4 until all EMC Smarts services are stopped.
6. Open a command prompt and determine if any Managers are running by using the brcontrol utility from BASEDIR/smarts/bin:

   `brcontrol -b <host>:<port>`

7. Stop any EMC Smarts server that is still running by using the dmquit utility from BASEDIR/smarts/bin:

   `dmquit --server=<servername>`

8. If the Broker is installed on the same host, use the brquit utility from BASEDIR/smarts/bin to stop it:

   `brquit --broker=localhost:<port>`


10. Click Task Manager. The Windows Task Manager appears.

11. Click the Processes tab.

   ![CAUTION]

   Allow up to 30 minutes before performing the next step. EMC Smarts servers with large topologies can take considerable time to stop while saving the topology to the repository. Stopping processes prematurely may corrupt your repository file.

12. In the Processes tab, look in the column labeled Image Name for sm_server. Right-click each sm_server, and then select End Process.

13. In the Processes tab, look for other Image Names that start with sm_, for example, sm_notify, sm_adapter, sm_beacon, and so on. Right-click each instance, and then select End Process.

   **Note:** Do not shut down any sm_authority or sm_logger processes. The sm_authority and sm_logger processes are child processes of a EMC Smarts server. The child processes will stop when the parent process stops.
Uninstall the FLEXnet License Server

When uninstalling all of your EMC Smarts products and suites that use a specific FLEXnet License Server, you must also uninstall the FLEXnet License Server.

**Note:** If any EMC Smarts products will remain in your network and use the FLEXnet License Server, do not uninstall either the license server or the EMC Smarts product suite where the permanent license file resides.

If you uninstall EMC Smarts products without uninstalling the FLEXnet License Server, a message displays that the FLEXnet (lmgrd) service is still running. Keep in mind that an EMC Smarts application will not start if it is unable to contact the license server.

To stop and uninstall the FLEXnet License Server:

1. **Stop the FLEXnet License Server.**
   - Windows
   - To manually start the license server on Windows, do the following as administrator:
     - Select **Start > Settings > Control Panel > Administrative Tools.**
     - Select **Services.**
     - Select the FLEXnet License Server service.
     - Right-click and choose **Stop.**

2. **Run the install_license script with the uninstall command from the BASEDIR/smarts/script directory.**
   - In Windows, type:
     ```
     BASEDIR\smarts\script>install_license.cmd uninstall
     ```
Uninstalling SAM Adapter Suite

EMC Smarts product suites use InstallShield software to install and uninstall product suites.

- For Windows, you use the Add/Remove Programs, except when the same product suite is installed in multiple locations on the same host system.

Failure to use the appropriate method will result in an unstable system and/or inconsistent product directories. Do not manually delete the installed product directories.

In SAM Adapters 8.1.7, the uninstall log is created under <BASEDIR> and not in smarts/setup/logs. This design has been implemented in order to clean the smarts directory during uninstall. BASEDIR refers to the default installation directory which is:

- C:\InCharge\SAM.Adapters in Windows OS

Uninstall by using wizard mode

The wizard mode provides a graphical user interface to the uninstallation program for Windows platforms.

1. Invoke the the uninstaller program:
   - For Windows, use Add/Remove Programs:
     a. Select Start > Settings > Control Panel.
     b. Double-click Add/Remove Programs.
     c. From the Add/Remove Programs window, select the appropriate service for your product suite.
     d. Click Change/Remove.

2. Click Next in the Welcome screen to continue.

3. In the Product Selection screen, click Next to uninstall the entire suite of products (by default, all products are selected) or clear selection of products that should remain installed.

4. Review the list of products that will be uninstalled and the target installation directory. Once you click Next, you cannot cancel the uninstallation process.

   If necessary, click Back to return to the Product Selection screen to revise your selections.

   To uninstall the products, click Next.

   The Uninstallation Progress screen appears.

5. Upon completion, the Uninstallation Summary displays informational messages such as successful confirmations, error messages, and warnings. If Next appears, your system needs to be restarted. Click Next and then restart your system. Otherwise, click Finish to exit the uninstallation.

   The log file is a text file with the naming convention Uninstall.<suite>.<productversionNumber>.log It is located in BASEDIR/ directory.
6. Examine any remaining directories if you plan to reinstall EMC Smarts and save customized files located in the /local directory. Depending upon the suite, some or all of the following subdirectories will remain in the BASEDIR/smarts directory after uninstallation because they contain user-modified files:

- /local
- /bin
- /setup
Uninstalling SAM Adapter Suite
Reasons to install services manually

If you did not install services when you installed the EMC Smarts products suite, you may install services manually. Services are programs that, once started, are generally intended to run continuously. Components installed as services start automatically upon system restart. Those not installed as services (manual processes or disabled processes) require that you issue commands to start and stop them as necessary.

Install Smarts products as services whenever possible. Typical reasons to install products as services include the following conditions:

- During installation of the suite, you choose to start product components manually and run the components as services.
- Multiple instances of a single product component that runs as a service are required. During installation, you can install only a single instance of a product component as a service.

To manually install a product as a service, use the sm_service install command with the appropriate set of options.

The *EMC Ionix ITOps System Administration Guide* provides a complete description of the command syntax.

Service parameters

This section provides default service parameters for the SAM Adapters Suite services.

**EMC Smarts Broker**

```
C:\InCharge\SAM\smarts\bin\sm_service.exe install
--force
--startmode=runonce
--name=ic-broker
--description="EMC Smarts Broker"
--env=SM_CLIENTCONNECT=brokerConnect.conf
C:\InCharge\SAM\smarts\bin\brstart.exe
--port=426
--restore=C:\InCharge\SAM\smarts\local\repos\broker\broker.rps
```

Note: The ▼▲ symbol indicates the command must be typed as one line.

**Adapter for Microsoft Systems Center Operations Manager 2016**

Adapter for Microsoft Systems Center Operations Manager 2016 receives events and alerts from the Microsoft Operations Manager 2016 and creates notifications for display in the Global Console.

```
C:\InCharge\SAM.Adapters\smarts\bin\sm_service install
--name=OpsMgr2016
--description=SMARITS Adapter OpsMgr2016
--startmode=manual
C:\InCharge\SAM.Adapters\smarts\bin\sm_server.exe
--name=OpsMgr2016
--output=OpsMgr2016
```
Manually Installing Services

"--nonpriv"
"--ignore-restore-errors"
"--config=OpsMgr2016"

**Note:** The ▼▲ symbol indicates the command must be typed as one line.
APPENDIX B
Mounting and Loading CDs

As a reference, this chapter includes commands and examples for working with a CD to install or upgrade the INSTALL_SUITE_L.

This chapter consists of the following sections:

- Loading a CD on Windows

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Mounting and Loading CDs

Loading a CD on Windows

The installation program starts automatically on Windows systems when AutoPlay or AutoRun is enabled.

1. Insert the CD into the optical drive. If AutoPlay or AutoRun is enabled, the installation program starts automatically using the wizard mode.

2. If the installation program does not start, use Windows Explorer to locate the CD.

3. Locate the \suite directory on the CD and double-click the setup executable.
APPENDIX C
Understanding the sm_edit utility

This appendix contains the following information:

- Overview ........................................................................................................ 44
- Modify ics.conf ............................................................................................ 44
- Granting Windows UAC write permissions ........................................... 44
- Modify serverConnect.conf ........................................................................ 46
- Edit a configuration file ............................................................................... 47
Understanding the sm_edit utility

Overview

As part of the EMC Smarts deployment and configuration process, you need to modify certain files. User modifiable files include configuration files, rule set files, templates, and seed files that contain encrypted passwords. Original versions of these files are installed into appropriate subdirectories under the $BASEDIR$/smarts/ directory.

The original versions of files should not be altered. If a file must be modified, a new version should be created and then stored as a local copy of the file in $BASEDIR$/smarts/local or one of its subdirectories.

When EMC Smarts software requires one of these files, it is designed to first search for a modified file in $BASEDIR$/smarts/local or one of its subdirectories. If a modified version of a file is not found in the local area, EMC Smarts software then searches corresponding $BASEDIR$/smarts directories for the original version of the file.

To ease file editing and storage, the sm_edit utility is provided with every EMC Ionix product suite. When invoked, sm_edit opens the specified file in a text editor. This utility ensures that modified files are always saved to the appropriate local area and that non-local copies of all files remain unchanged. If an appropriate subdirectory does not exist for the file you are modifying, sm_edit creates the appropriate subdirectory before saving the modified file to that location. For files with header information set for encryption, sm_edit encrypts certain fields in the file. In addition, sm_edit preserves the file permissions of modified files, which helps ensure that important configuration files are not altered by unauthorized users.

In Windows, you can configure sm_edit so that your favorite text editor is automatically invoked when user-modifiable files are double-clicked in Windows Explorer.

### Notice

If your EMC Smarts software is installed on Windows Server 2016, you must grant permission to edit files. “Granting Windows UAC write permissions” on page 44 provides more information.

Modify ics.conf

To use sm_edit from the command line, specify the filename and include the subdirectory under /local where the file resides. For example, to edit the ics.conf file:

```bash
# <BASEDIR>/smarts/bin> sm_edit conf/ics/ics.conf
```

In this example, sm_edit searches in the BASEDIR/smarts/local/conf/ics directory for the ics.conf file. If it finds the ics.conf file, it opens the file in a text editor. If sm_edit does not find the ics.conf file in the BASEDIR/smarts/local/conf/ics directory, it creates a local copy of the ics.conf file and writes it to the BASEDIR/smarts/local/conf/ics directory.

The EMC Ionix System Administration Guide provides additional information about the sm_edit utility, including how to configure the utility to use a specific editor.

Granting Windows UAC write permissions

With Windows Server 2016, User Account Control (UAC) does not allow editing configuration files unless specific permissions are granted. This is not necessary if:
◆ UAC is disabled, or
◆ The built-in administrator is performing the configuration

After the installation, any member of the administration group that performs configuration must have write permission to the following four files:

◆ brokerConnect.conf
◆ clientConnect.conf
◆ serverConnect.conf
◆ runcmd_env.sh files

These files are in the BASEDIR\smarts\local\conf directory. Note: Do not edit the files in BASEDIR\smarts\conf. They must remain as installed. An administration group user must also have write permission granted for any other files that need to be edited for configuration. To grant write permission:

1. Navigate to BASEDIR\smarts\local\conf.
2. Right-click on the file that you wish to grant access.
3. From the menu, select Properties.
5. Click Advanced.
6. In the Advanced dialog box, add Write permission.
7. Click OK.

Repeat steps 2–7 for each file in the earlier list and for all other configuration files to be edited.
Understanding the sm_edit utility

Modify serverConnect.conf

In Windows:

- The original version of the server connect (serverConnect.conf) security configuration file on Windows is installed to:
  
  C:<BASEDIR>\smarts\conf

- A modified serverConnect.conf security configuration file on Windows should be saved to:
  
  C:<BASEDIR>\smarts\local\conf

EMC Smarts software is designed to first search for user modifiable files in BASEDIR/smarts/local or one of its subdirectories. If a modified version of a file is not found in the local area, Smarts software then searches appropriate nonlocal directories.

To facilitate proper file editing, EMC Corporation provides the sm_edit utility with every Smarts product suite. When used to modify an original version of a file, this utility automatically creates a local copy of the file and places it in the appropriate location under BASEDIR/smarts/local. This ensures that the original version of the file remains unchanged. You can invoke sm_edit from the command line. Optionally, you can configure Windows so that sm_edit is automatically invoked when user-modifiable files are double-clicked in Windows Explorer.

To invoke the sm_edit utility from the command line, specify the path and the name of the file to edit under BASEDIR/smarts. If multiple Smarts products are running on the same host, invoke sm_edit from the bin directory of the product suite with the files to edit.
Edit a configuration file

To edit the configuration file for connecting to a server (serverConnect.conf), invoke the sm_edit utility as follows:

`<BASEDIR>/smarts/bin>sm_edit conf/serverConnect.conf`

In this example, the sm_edit utility automatically creates a local copy of the serverConnect.conf file in the `<BASEDIR>/smarts/local/conf` directory and opens the file in a text editor. If a local version of the file already exists, the sm_edit utility opens the local version in a text editor. In addition, sm_edit creates any necessary subdirectories.

The *EMC Ionix ITOps System Administration Guide* provides additional information about the sm_edit utility.
Understanding the sm_edit utility
This appendix contains the following information:

- Detect and stop EMC Smarts programs ......................................... 50
Detect and stop EMC Smarts programs

Before upgrading an EMC Smarts product suite, you must stop all services, scheduled jobs, and other processes that use programs or libraries running from the EMC Smarts product suite you intend to upgrade.

You must also stop the EMC Smarts service daemon, sm_serviced, if it is running from the product suite to be upgraded.

Detecting EMC Smarts programs

The sm_plist utility identifies all EMC Smarts programs that are running for any product suite on your machine. You can use the sm_plist utility whenever you need to identify EMC Smarts programs that are running (for example, before applying a service pack or patch and uninstalling the product suite).

To use the utility, run it from the BASEDIR/smarts/script directory. The utility displays active programs in a window:

1. Go to the BASEDIR/smarts/script directory.
2. Start the sm_plist utility:
   
   \[ \text{For Windows, type} \]
   
   \[ \text{cscript sm_plist.vbs } \langle \text{BASEDIR} \rangle \]
   
   where \( \langle \text{BASEDIR} \rangle \) is the directory where the sm_plist utility is installed and \( \langle \text{BASEDIR2} \rangle \) represents the location of any EMC Smarts product suite.

Stopping active EMC Smarts programs (Windows)

To stop a service from the Windows desktop, use the Microsoft Management Console:

1. Select **Settings > Control Panel**.
2. At the **Control Panel**, select **Administrative Tools**.
3. At the **Administrative Tools** folder, select **Services**.
4. At the **Services** window, locate running EMC Smarts services. These services start with the words “EMC Smarts.” For each service running from the suite to be upgraded, right-click the service and select **Stop**.

   **Note:** Do not stop the Broker service.

5. Open a command prompt and determine if any Managers are running by using the brcontrol utility from BASEDIR/smarts/bin:

   \[ \text{brcontrol} \]

6. Stop any Manager that is still running from the suite using the dmquit utility from BASEDIR/smarts/bin:

   \[ \text{dmquit --server=}<\text{servername}>\]

7. If the Broker is running from the suite to be upgraded, use the brquit utility from BASEDIR/smarts/bin to stop it:
brquit --broker=localhost:<port>
Detect and Stop EMC Smarts Programs