



Application Connectivity Monitor
2.0

INSTALLATION GUIDE

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Preface

This document provides instructions for installing Application Connectivity Monitor.

Intended Audience

This document is intended for administrators who are responsible for installing Application Connectivity Monitor.

Prerequisites

You must have root or administrative privileges on the local server to perform the installation.

Document Organization

This document consists of the following chapters and appendixes.

Table 1: Document Organization

CHAPTER/APPENDIX	DESCRIPTION
1. OVERVIEW	Describes Application Connectivity Monitor, product compatibility, and installation tasks.
2. INSTALLING APPLICATION CONNECTIVITY MONITOR	Explains how to install Application Connectivity Monitor.
3. STARTING AND VERIFYING THE PRODUCT INSTALLATION	Describes how to start Application Connectivity Monitor, verify its proper installation, and how to stop the product.

Table 1: Document Organization (*continued*)

CHAPTER/APPENDIX	DESCRIPTION
4. UNINSTALLING APPLICATION CONNECTIVITY MONITOR	Describes how to remove Application Connectivity Monitor from your system.
A. REQUIREMENTS FOR APPLICATION CONNECTIVITY MONITOR	Summarizes hardware and third-party product requirements for Application Connectivity Monitor.
B. UNIX PROCEDURES FOR CD-ROMS	Summarizes UNIX commands related to CD-ROMs.

Documentation Conventions

Several conventions may be used in this document as shown in Table 2.

Table 2: Documentation Conventions

CONVENTION	EXPLANATION
<code>sample code</code>	Indicates code fragments and examples in Courier font
keyword	Indicates commands, keywords, literals, and operators in bold
<code>%</code>	Indicates C shell prompt
<code>#</code>	Indicates C shell superuser prompt
<code><parameter></code>	Indicates a user-supplied value or a list of non-terminal items in angle brackets
<code>[option]</code>	Indicates optional terms in brackets
<code>/InCharge</code>	Indicates directory path names in italics
<i>yourDomain</i>	Indicates a user-specific or user-supplied value in bold, italics
<code>File > Open</code>	Indicates a menu path in italics
▼▲	Indicates a command is wrapped over one or more lines. The command must be typed as one line.

Directory path names are shown with forward slashes (/). Users of the Windows operating systems should substitute back slashes (\) for forward slashes.

Also, if there are figures illustrating consoles in this document, they represent the consoles as they appear in Windows. Under UNIX, the consoles appear with slight differences. For example, in views that display items in a tree hierarchy such as the Topology Browser, a plus sign displays for Windows and an open circle displays for UNIX.

Finally, unless otherwise specified, the term InCharge Manager is used to refer to EMC Smarts programs such as Domain Managers, Global Managers, and adapters.

Application Connectivity Monitor Installation Directory

In this document, the term **BASEDIR** represents the location where the Application Connectivity Monitor software is installed.

- For UNIX, this location is: `/opt/InCharge<n>/<product>`.
- For Windows, this location is: `C:\InCharge<n>\<product>`.

The `<n>` represents the software platform version number. The `<product>` represents the product name. For example, on UNIX operating systems, Application Connectivity Monitor is, by default, installed to: `/opt/InCharge6/ACM/smarts`. On Windows operating systems, this product is, by default, installed to: `C:\InCharge6\ACM\smarts`. This location is referred to as **BASEDIR**/`smarts`.

Optionally, you can specify the root of **BASEDIR** to be something other than `/opt/InCharge6` (on UNIX) or `C:\InCharge6` (on Windows), but you cannot change the `<product>` location under the root directory.

For more information about the software directory structure, refer to the *EMC Smarts System Administration Guide*.

Application Connectivity Monitor Products

Application Connectivity Monitor includes the following products:

- Application Connectivity Monitor

Additional Resources

In addition to this document, EMC Smarts provides the following resources.

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.

Documentation

Readers of this document may find other documentation (also available in the **BASEDIR**/*smarts/doc/pdf* directory) helpful.

EMC Smarts Documentation

The following documents are product independent and thus relevant to users of all EMC Smarts products:

- *EMC Smarts System Administration Guide*
- *EMC Smarts ASL Reference Guide*
- *EMC Smarts Perl Reference Guide*

Application Connectivity Monitor Documentation

The following documents are relevant to users of Application Connectivity Monitor:

- *EMC Smarts Application Connectivity Monitor Release Notes*
- *EMC Smarts Application Connectivity Monitor Installation Guide*
- *EMC Smarts Application Connectivity Monitor Configuration Guide*
- *EMC Smarts Application Connectivity Monitor User's Guide*

Technical Support

For questions about technical support, call your local sales office or service provider. For service, call one of the following numbers:

United States: 800.782.4362 (SVC.4EMC)

Canada: 800.543.4782 (543.4SVC)

Worldwide: 508.497.7901

EMC Powerlink

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<http://powerlink.emc.com>

Overview

This chapter briefly describes the Application Connectivity Monitor and its compatibility with other EMC Smarts products. In addition, the chapter provides checklists for installation and uninstallation tasks.

About Application Connectivity Monitor

Application Connectivity Monitor (ACM) is a software package that automatically discovers TCP-based applications on the network, and monitors application connectivity to pinpoint the root cause of application availability problems.

Application Connectivity Monitor operates in conjunction with Availability Manager and Service Assurance Manager. Availability Manager provides the network topology for Application Connectivity Monitor. Service Assurance Manager collects the results of the deployment's root-cause analysis, and presents those results to network operations personnel through its Global Console.

Compatibility

Application Connectivity Monitor is compatible with EMC Smarts products listed in Table 3.

Table 3: Application Connectivity Monitor Compatibility with EMC Smarts Products

APPLICATION CONNECTIVITY MONITOR PRODUCTS	COMPATIBLE PRODUCT VERSIONS	
	SERVICE ASSURANCE MANAGEMENT SUITE	IP MANAGEMENT SUITE
Application Connectivity Monitor	6.2, SP2	6.2, SP2 or later

Installation Tasks

To install the Application Connectivity Monitor, satisfy the requirements and perform the tasks listed in Table 4.

Note: The tasks in Table 4 are for a new installation, not an upgrade.

Table 4: Application Connectivity Monitor Installation Requirements and Tasks

TASKS	GO TO:
BEFORE YOU INSTALL APPLICATION CONNECTIVITY MONITOR	
Satisfy all requirements to install the product.	Satisfy All Requirements to Install the Product on page 6
Choose an operating mode for the installation program.	Choose an Operating Mode for the Installation Program on page 7
Check the Broker configuration.	Check the Broker Configuration on page 8
Detect and stop EMC Smarts programs.	Detect and Stop EMC Smarts Programs on page 8
INSTALLATION METHOD:	
Mount the CD-ROM.	Mount the CD-ROM on page 9
Install using your chosen mode of operation: <ul style="list-style-type: none"> • Wizard Mode • CLI Mode • Unattended (Silent) Mode 	<ul style="list-style-type: none"> • Install Using Wizard Mode on page 10 • Install Using CLI-Mode on page 12 • Install Using Unattended (Silent) Mode on page 13

Table 4: Application Connectivity Monitor Installation Requirements and Tasks
(continued)

TASKS	Go To:
AFTER YOU INSTALL:	
Save your EMC Smarts evaluation license, <i>trial.dat</i> , to the BASEDIR /smarts/local/conf directory. Edit the SM_LICENSE variable in the <i>runcmd_env.sh</i> file so that the variable specifies the full path name to the <i>trial.dat</i> file.	Obtaining and Installing a Temporary License for EMC Smarts Software on page 15
Start the suite product for the first time.	Starting EMC Smarts Products on page 16
Verify the current state of the product and Broker.	Verifying the EMC Smarts Product Status on page 18
Install your permanent EMC Smarts license.	<i>EMC Smarts System Administration Guide</i>
Configure the installations with your desired level of security. Although default encryption is enabled during the 6.2 installation process, EMC SMARTS highly recommends that you configure a greater level of security for your deployment.	<i>EMC Smarts System Administration Guide</i>
Configure the Global Manager and Application Connectivity Monitor.	<i>EMC Smarts Application Connectivity Monitor Configuration Guide</i>
Configure Availability Manager for communication with Application Connectivity Monitor.	<i>EMC Smarts Application Connectivity Monitor Configuration Guide</i>

Uninstallation Tasks

To uninstall the Application Connectivity Monitor, satisfy the requirements and perform the tasks listed in Table 5.

Table 5: Application Connectivity Monitor Uninstallation Requirements and Tasks

TASKS	GO TO:
BEFORE YOU UNINSTALL APPLICATION CONNECTIVITY MONITOR	
Detect and Stop EMC Smarts Programs	Detect and Stop EMC Smarts Services on page 21
UNINSTALLATION METHOD:	
Uninstall Application Connectivity Monitor using one of these methods or modes: <ul style="list-style-type: none"> • Windows Control Panel method • Wizard Mode • CLI Mode • Unattended (Silent) Mode 	<ul style="list-style-type: none"> • Uninstalling From the Control Panel (Windows Only) on page 23 • Running the Wizard-Mode Uninstallation on page 23 • Running the CLI-Mode Uninstallation on page 24 • Running the Unattended Uninstallation on page 26

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Installing Application Connectivity Monitor

This chapter describes how to install Application Connectivity Monitor.

Note: The procedures in this chapter are for a new installation, not an upgrade.

Before Installation

Before running the installation program, perform the following tasks:

- Ensure that the host satisfies all requirements for installing the product.
- Check the Broker configuration.
- Choose the mode to run the installation program.
- Detect and stop any EMC Smarts programs that are running.

Satisfy All Requirements to Install the Product

Before beginning, you must satisfy the following requirements:

- Platform requirements: These are defined by the products that will be installed and by the network environment that the products must support. Individuals who have EMC Smarts design experience must define the type of operating system and hardware needed. This task is not normally performed by administrators installing the software. The minimum platform requirements are included for reference in [Requirements for Application Connectivity Monitor](#) on page 27.
- Operating system patch requirement: The operating system must be patched to the level that is currently recommended by the operating system vendor.
- Access requirement: The user performing the installation must either be a superuser (User ID 0) on UNIX platforms, or have administrative privileges on Windows platforms. The installation program will halt if the user does not have the appropriate privileges.
- JRE requirement: Java Runtime Environment of Java 2 Platform Standard Edition (J2SE JRE) version 1.4.2_06 or later must be installed on the system to run the installation program. The installation program attempts to detect that a compatible JRE version has been installed on your system. If necessary, download the required J2SE JRE version:
 - Solaris: <http://java.sun.com>.
 - Windows: <http://java.sun.com>.

For UNIX or Windows, if a compatible JRE version is installed and the installation program cannot locate it, you must specify the location when you execute the installation program. For Windows, you must also open a command-line shell and execute the installation program from the directory where it is installed. The syntax is:

```
setup-winnt.exe -is:javahome <local_java_dir>
```

where **<local_java_dir>** is the directory path to the local Java home directory; for example, `/opt/java/j2sdk1.4.2_06` or `C:\Program Files\Java\j2re1.4.2_06`.

Based on the program mode that is used when installing the product, there may be additional requirements. These requirements are included in the procedures for the particular program modes.

Choose an Operating Mode for the Installation Program

Use one of the following modes supported by the installation program:

- Wizard mode is a Java-based Graphical User Interface (GUI) method intended for both UNIX and Windows platforms.
- Command Line Interface (CLI) mode (UNIX only) is a text-based method intended to support systems with non-graphics consoles.
- Unattended (Silent) mode is intended for both UNIX and Windows platforms. 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.

Use the following decision tree to choose the appropriate mode for an upgrade or installation.

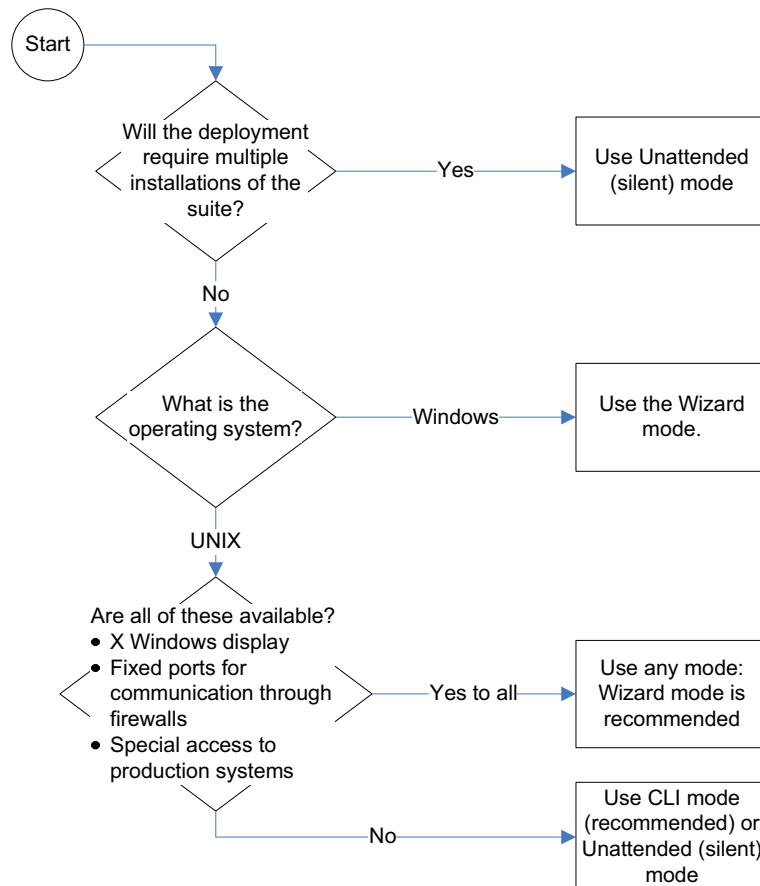


Figure 1: Choose an Operating Mode for the Installation Program

Check the Broker Configuration

The location for the EMC Smarts Broker should be established during the design of the EMC Smarts deployment and before installation begins. The installation program will request the location. If the location is the same host, then the Broker will automatically be installed with the product if it is not already on the host.

Detect and Stop EMC Smarts Programs

Before installing your suite, you must stop all EMC Smarts services (except for the service daemon process), EMC Smarts *cron* jobs, and any other process that uses programs or libraries in any EMC Smarts installation area. The *sm_plist* utility identifies all EMC Smarts programs that are running for any product suite on your machine.

1 Ensure that you have the *sm_plist* utility:

- For UNIX, check the **BASEDIR**/*smarts/script* directory for *sm_plist.sh*
- For Windows, check the **BASEDIR**\smarts\script directory for *sm_plist.vbs*

2 Start the *sm_plist* utility:

- For UNIX, enter

```
# BASEDIR/smarts/script/sm_plist.sh BASEDIR2
```
- For Windows, enter

```
cscript BASEDIR\smarts\script\sm_plist.vbs BASEDIR2
```

Where **BASEDIR** is the directory where suite with the *sm_plist* utility is installed and **BASEDIR2** represents the location of any EMC Smarts product suite.

For example, to identify programs running from the default Application Connectivity Monitor installation directory, enter the following at the Windows command prompt:

```
▼cscript C:\InCharge6\IP\smarts\script\sm_plist.vbs  
C:\InCharge6\ACM ▲
```

▼▲ Indicates the command must be typed as one line.

- 3 Review the results and stop any programs detected by the `sm_plist` utility except for the EMC Smarts service daemon process, `sm_serviced`:

- UNIX: to stop a service manually, use the `sm_service` utility:

```
sm_service stop <service_name> [<service_name> ...]
```

For example, to stop the Application Connectivity Monitor service:

```
# BASEDIR/smarts/bin/sm_service stop ic-acm-server
```

- Windows: to stop a service from the Windows desktop, use the Microsoft Management Console. Select *Settings > Control Panel > Administrative Tools*. Select *Services*. Right click the EMC Smarts service to select it and display a menu. Choose **Stop** from the menu.

Install the Suite

Installing the suite includes the following tasks:

- Mount the CD-ROM.
- Perform the installation.

Mount the CD-ROM

The procedure for mounting the CD-ROM differs based on the operating system.

UNIX

See Appendix B for the procedure.

Windows

- 1 Insert the CD-ROM into the CD-ROM drive. If autoplay is enabled, the installation program starts automatically using the Wizard mode: Go to the next section.

- 2 If necessary, change the directory to the CD-ROM. Use Windows Explorer to access the CD-ROM drive and locate the `/suite` directory.

Next Step

Go to the section for the installation program mode that you have selected:

- For Wizard mode, go to [Install Using Wizard Mode](#) on page 10.
- For CLI mode, go to [Install Using CLI-Mode](#) on page 12.
- For Unattended (Silent) mode, go to [Install Using Unattended \(Silent\) Mode](#) on page 13.

Install Using Wizard Mode

Satisfy Wizard Mode Requirements

Before starting the installation program using the Wizard mode, satisfy the following requirements for X Server Settings (UNIX Only): Wizard mode is an X11 application and the host on which you install the EMC Smarts software and the host on which you log on must be configured to run X11.

Run Wizard Mode

- 1 Execute the **Setup** command from Table 6. The InstallShield Wizard dialog box displays and closes. The Shutdown Programs dialog box and the Welcome screen then display.

Table 6: The Setup Command Syntax for Wizard-Mode

OPERATING SYSTEM	EXECUTE:
Solaris	# <code>./setup-solaris.bin</code>
Windows	<code>setup-winnt.exe</code>
If the installation program cannot find a suitable JVM, use the option <code>-is:javahome <local_java_dir></code> to indicate the path to the Java home directory (<code><local_java_dir></code>).	

- 2 Ensure that all services are stopped except for the service daemon process, `sm_serviced`. If you have not already done so, use the `sm_plist` utility to find the active EMC Smarts services as described in [Detect and Stop EMC Smarts Programs](#) on page 8. Click **OK** in the Warning dialog box when you have stopped all EMC Smarts services.
- 3 Click **Next** in the Welcome screen to continue.

Next is disabled if:

- You do not have administrative privileges for the products you are attempting to install. An error message also displays.

4 Read and accept the EMC Smarts 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**.

Note that this screen does not display if you are installing the suite for the first time on the server.

6 Click **Next** to accept the default installation directory or type your preferred directory and click **Next**.

The default installation directory is `/opt/InCharge6` (on UNIX) or `C:\InCharge6` (on Windows).

If you specify a directory, be sure to use forward slashes ("/") for both UNIX and Windows directories. Directory names 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 In the Setup screen, select whether to install the **Complete** suite or individual products (**Custom**):

- **Custom** to install a specific product, click **Next**. Then, in the Product Selection screen, deselect products that you do not wish to install (by default, all products are selected). Click **Next**.
- **Complete** to install the entire suite, click **Next** and go to Step 10.

8 Select the products that you wish to install as services and click **Next**. If a product is not selectable (displays as gray text), click **Back** to return to the Product Selection screen and select the product.

EMC Smarts recommends installing all products as services.

9 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.

- 10** Upon completion, the Installation Summary displays informational messages such as successful confirmations, error messages, and warnings. Click **Finish** to exit the installation. It is not necessary to re-boot the system after 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.

- 11** Unmount the CD-ROM after completing the installation.
- For UNIX, see Appendix B for the procedure.
 - For Windows, eject the CD-ROM from the machine.

Install Using CLI-Mode

CLI-Mode installation is the text-based method of executing the Installation program. This mode is intended for UNIX platforms with non-graphics consoles. The CLI Mode follows the same process as the Wizard Mode but uses text rather than graphics.

Run CLI-Mode

To start the CLI Mode, execute the **Setup** command with the `-console` option as shown in Table 7.

Table 7: The Setup Command Syntax for CLI-Mode

OPERATING SYSTEM	EXECUTABLE
Solaris	# <code>./setup-solaris.bin -console</code>
If the installation program cannot find a suitable jvm, use the option <code>-is:javahome <local_java_dir></code> to indicate the path to the Java home directory (<local_java_dir>).	

User Selections and Navigation in CLI Mode

During the installation, upgrade, and uninstallation processes, you are prompted with a series of steps and menus. You can either accept the default value or select another choice. The default values are indicated in brackets or as pre-defined selections (check marks) in menus. To accept the default value, press **Enter**.

When replying to a prompt, you can either accept the default value or select another choice. To reply "yes," enter y or Y; to reply "no," enter n or N. Do not press **Delete**; this causes the process to terminate with an error message.

For selections in menus, you can accept default selections or type the number of the item and press **Enter**. A check mark (X) displays next to the item. When you are finished making selections, type zero (0) and press **Enter**.

If you incorrectly type an entry, press **4** to repeat the prompt and select the correct value. Arrow keys and the Backspace key are not supported.

To navigate between the steps, use the keys listed in Table 8.

Table 8: Navigation Keys

KEY	OPERATION
1	Next, continue to the next step
2	Previous, go back to the previous step
3	Cancel, terminates the program
4	Redisplay, repeats the step

Install Using Unattended (Silent) Mode

Unattended mode reads the commands and settings for your installation or upgrade from a user-modifiable file that you create prior to beginning the process. Manual intervention is not necessary after you execute the setup command.

Modify the Response File

Each suite has a response file located on the CD-ROM 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 UNIX operating systems, install or upgrade all products from the CD-ROM, and configure the Broker location as localhost at port 426. You must edit the response file to change any of these settings: for example, to support the Windows operating systems or specify a different Broker location.

For unattended operation, modify a response file:

- 1 Copy the response file from the CD-ROM `/utils` directory to a directory on your system, for example, the `/tmp` directory.
- 2 Modify the values for the command line options in the response file:
 - Specify the target directory. For an upgrade, ensure that the target directory is same as the one where you originally installed the product.
 - Select a directory for the process log file.
 - Select the products to install. Ensure the property value for the product is set to true.
 - Select the products to start as services. Ensure the property value for the product is set to true.
 - Configure the location of the Broker.
- 3 Save the file.

Running Unattended Mode

Execute the **Setup** command from a command-line shell using the syntax in Table 9.

Table 9: The Setup Command Syntax for Unattended Mode

OPERATING SYSTEM	EXECUTABLE
Solaris	# ./setup-solaris.bin -options <code><path>/<suite>-response.txt</code>
Windows	setup-winnt.exe -options <code><path>/<suite>-response.txt</code>
Where: <code><path></code> is the fully qualified path to the response file and <code><suite></code> is the product suite, for example, NPM, IP, MPLS, or SAM. If the installation program cannot find a suitable JVM, use the option <code>-is:javahome <local_java_dir></code> to indicate the path to the Java home directory (<code><local_java_dir></code>).	

Start and verify the installation of the suite. See [Starting and Verifying the Product Installation](#) on page 15

3

Starting and Verifying the Product Installation

This chapter describes tasks for confirming proper installation for Application Connectivity Monitor. The tasks include the following:

- Obtain a temporary license for the suite.
- Start the product as a service. If the product is not installed as a service, commands are provided to install the product as a service and to start the service in native mode.
- Verify the operational status of the product.

Obtaining and Installing a Temporary License for EMC Smarts Software

A temporary license for EMC Smarts software is time-limited. It enables you to use all of the features for a limited period of time. At the end of the trial period, the software will no longer start.

Copy the license file, *trial.dat*, to the **BASEDIR**/*smarts/local/conf* directory. Once license is in place, you can start the EMC Smarts software.

If you installed EMC Smarts software on multiple systems, you can do one of the following to license the software on each system:

- Copy the *trial.dat* file to each system where EMC Smarts software is installed.

- Edit the `SM_LICENSE` variable in `runcmd_env.sh` on each system where EMC Smarts software is installed so that it specifies the full path name of a single `trial.dat` file (by default `runcmd_env.sh` specifies a path to a local copy of `trial.dat`). When multiple EMC Smarts products or suites are installed on the same system, each product or suite will include a `runcmd_env.sh` in its **BASEDIR**/`smarts/local/conf`.

If you have a permanent license, see the *EMC Smarts System Administration Guide* for configuration instructions.

Starting EMC Smarts Products

EMC Smarts recommends installing managers and adapters as services. If you installed the products as services, you must start them for the first time. These services start automatically upon system reboot, but the following sections describe additional methods to start EMC Smarts services.

If you did not install products as services, you can install them now using the procedure in [Manually Installing Services](#) on page 17 or you can start them as described in [Starting Products in Native Mode \(UNIX only\)](#) on page 18.

Starting All EMC Smarts Services on UNIX

Starting the `sm_serviced` process will start the EMC Smarts services. Check the status of `sm_serviced` by issuing the command:

```
# <system-dependent path>/ic-serviced status
```

If the `sm_serviced` process is not responding, issue the command:

```
# <system-dependent path>/ic-serviced start
```

The script is stored in a system-specific location:

- Solaris: `/etc/init.d`

Starting All EMC Smarts Services on Windows

To restart all of the EMC Smarts services, reboot your system.

Starting Individual EMC Smarts Services on UNIX Systems

To start or stop a service manually, use the `sm_service` utility. Issue the command:

```
sm_service start <service_name> [<service_name> ...]
```

For example, to start the Application Connectivity Monitor service named `ic-acm-server`:

```
# BASEDIR/smarts/bin/sm_service start ic-acm-server
```

Starting Individual EMC Smarts Services on Windows

Programs that are installed as services can also be started and/or stopped from the Windows desktop.

To start an EMC Smarts service from the Windows desktop, follow these steps:

- 1 Select *Settings > Control Panel > Administrative Tools*.
- 2 Select *Services*.
- 3 Right click the EMC Smarts service to select it and display a menu.
- 4 Choose **Start** from the menu.

Note: To stop a service, choose **Stop** instead of **Start** from the menu.

Manually Installing Services

If any products were not installed as services, you can manually install products as services. Typical reasons for this include the following conditions:

- During installation of the suite, you choose to start products manually and now want to run the products as services.
- Multiple instances of a single product running as a service are required. During installation, you can install only a single instance of a product as a service.

To install a product as a service, enter the appropriate **sm_service install** command as described in the following sections. For a complete description of the command syntax, see the *EMC Smarts System Administration Guide*.

Application Connectivity Monitor

For the Application Connectivity Monitor Domain Manager, enter the following command (which includes default parameters) on a single line:

```
▼ # BASEDIR/smarts/bin/sm_service install --startmode=runonce
--name=ic-acm-server
BASEDIR/smarts/bin/sm_server
--name=IC-ACM
--config=asm-ntier
--port=0
--subscribe=default
--ignore-restore-errors
--output ▲
```

Starting Products in Native Mode (UNIX only)

If any products were not installed as services in UNIX, you can manually start them. EMC Smarts does not recommend using this method in a production environment, but it can be useful for testing. To start a product, enter the appropriate **sm_server** command from the following table. For a complete description of the command syntax, see the *EMC Smarts System Administration Guide*.

Table 10: Starting Application Connectivity Monitor in Native Mode

COMMANDS FOR STARTING APPLICATION CONNECTIVITY MONITOR IN NATIVE MODE	
PRODUCT	COMMAND (▼▲ INDICATES THE COMMAND MUST BE TYPED ON ONE LINE.)
Application Connectivity Monitor	▼ # BASEDIR /smarts/bin/sm_server --name=<acm name> --config=asm-ntier --output ▲

Verifying the EMC Smarts Product Status

After installation or upgrade, the main purpose in starting EMC Smarts products is to verify that they operate properly. Determine the current state of the products that register with the Broker by issuing the following command:

```
# BASEDIR/smarts/bin/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.

If you notice any issues, consider uninstalling and reinstalling the suite. Once you have verified operation, stop any newly installed or upgraded products.

4

Uninstalling Application Connectivity Monitor

This chapter describes uninstalling a product suite or individual products. After uninstalling, your customized files remain saved in **BASEDIR**/*smarts/local*.

WARNING: EMC Smarts uses standard installation software to install and uninstall product suites. You must use either the **uninstaller** command or, for Windows, Add/Remove Programs to uninstall EMC Smarts software. Failure to use either this method will result in an unstable system and/or inconsistent product directories. Do not manually delete the installed product directories.

Detect and Stop EMC Smarts Services

EMC Smarts requires that you stop all EMC Smarts services that are running (including the FLEXlm License Server) from the install area.

Before uninstalling an EMC Smarts product, stop all processes, consoles, and any adapters that connect to the product, but do not stop *sm_serviced*.

- 1 Ensure that you have the *sm_plist* utility:
 - For UNIX, check the **BASEDIR**/*smarts/script* directory for *sm_plist.sh*

- For Windows, check the **BASEDIR**\smarts\script directory for *sm_plist.vbs*

2 Start the *sm_plist* utility:

- For UNIX, enter

```
# BASEDIR/smarts/script/sm_plist.sh BASEDIR2
```

- For Windows, enter

```
cscript BASEDIR\smarts\script\sm_plist.vbs BASEDIR2
```

Where **BASEDIR** is the directory where suite with the *sm_plist* utility is installed and **BASEDIR2** represents the location of any EMC Smarts product suite.

For Windows, to identify programs running for Application Connectivity Monitor in the default installation directory, enter the following at the command prompt:

```
▼cscript C:\InCharge6\IP\smarts\script\sm_plist.vbs  
C:\InCharge6\ACM ▲
```

▼▲ Indicates the command must be typed as one line.

3 Review the results and stop any programs detected by the *sm_plist* utility except for the EMC Smarts service daemon process, *sm_serviced*. Use the appropriate command from the following sections.

- UNIX: to stop a service manually, use the *sm_service* utility:

```
sm_service stop <service_name> [<service_name> ...]
```

For example, to stop the Application Connectivity Monitor service:

```
# BASEDIR/smarts/bin/sm_service stop ic-acm-server
```

- Windows: to stop a service from the Windows desktop, use the Microsoft Management Console.

Select *Settings > Control Panel > Administrative Tools*.

Select *Services*.

Right click the service to select it and display a menu.

Choose **Stop** from the menu.

Uninstalling From the Control Panel (Windows Only)

Note: If you installed the same suite in two or more directories on your system, do not use Add/Remove Programs; use the **uninstaller** command instead. Add/Remove Programs does not support multiple instances of the same suite.

To use the Windows Control Panel to uninstall a product suite, perform these steps:

- 1 Click *Start > Settings > Control Panel*.
- 2 Double-click **Add/Remove Programs**.
- 3 From the Add/Remove Programs window, select the appropriate service for your product suite.
- 4 Click **Change/Remove**.

Running the Wizard-Mode Uninstallation

WARNING: For UNIX only, when uninstalling EMC Smarts software from the same server, the suite or product that was installed first should be uninstalled last. During the installation of the first EMC Smarts suite, the EMC Smarts Service Database is also installed and the other suites subsequently access it. Uninstalling the Service Database prior to uninstalling other suites will disable the **sm_service** command for those products and prevent their proper operation and uninstallation and interrupt products running as services. To identify which suite or product was installed first, examine the directory path listed in the `init.d` table. The Service Database resides in the `/var/smarts` directory.

You can uninstall a suite or individual products from the local server.

- 1 Execute the **uninstaller.bin** command for UNIX or the **uninstaller.exe** command for Windows. For example:

```
# BASEDIR/_uninst/uninstaller.bin
```

- 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 deselect 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 displays.

- 5 Upon completion, the Uninstallation Summary displays informational messages such as successful confirmations, error messages, and warnings. If **Next** displays, your system needs to be rebooted. Click it and then reboot 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 the **BASEDIR**/*smarts/setup/logs* directory. If the uninstallation process fails, the log files are located in the */tmp* directory.

- 6 Examine any remaining directories if you plan to re-install EMC Smarts software 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:
 - */classes*
 - */local*
 - */bin*
 - */setup*

Running the CLI-Mode Uninstallation

To uninstall an EMC Smarts product or product suite using CLI-Mode, perform the following procedure:

- 1 Execute the following command:

```
# BASEDIR/_uninst/uninstaller.bin -console
```

During the uninstallation processes, you are prompted with a series of steps and menus. You can either accept the default value or select another choice. The default values are indicated in brackets or as pre-defined selections (check marks) in menus. To accept the default value, press **Enter**.

When replying to a prompt, you can either accept the default value or select another choice. To reply “yes,” enter y or Y; to reply “no,” enter n or N. Do not press **Delete**; this causes the process to terminate with an error message.

For selections in menus, you can accept default selections or type the number of the item and press **Enter**. A check mark (X) displays next to the item. When you are finished making selections, type zero (0) and press **Enter**.

If you incorrectly type an entry, press **4** to repeat the prompt and select the correct value. Arrow keys and the Backspace key are not supported.

- 2** Upon completion, the Uninstallation Summary displays informational messages such as successful confirmations, error messages, and warnings. Press **Enter** to continue.
- 3** If necessary, the Installation Program will prompt to restart your computer. Press **1** to restart immediately or press **2** to restart later.
- 4** If you chose not to restart your computer, press **3** to finish.
- 5** Examine any remaining directories if you plan to re-install the suite 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*

The installation log file is a text file with the naming convention *Uninstall.<suite>.<productversionNumber>.log*. It is located in the **BASEDIR**/*smarts/setup/logs* directory. If the uninstallation process fails, the log files are located in the */tmp* directory.

Running the Unattended Uninstallation

For unattended operation: To uninstall, stop EMC Smarts services including the service for the FLEXlm License Server.

The log files are located in the **BASEDIR**/*smarts/setup/logs* directory. If the installation process fails, the log files are located in the */tmp* directory. A non-zero status indicates a failure.

To uninstall all of the products for a suite using the unattended uninstallation, execute the **uninstaller.bin** command with the `-silent` option. The syntax is:

```
BASEDIR/_uninst/uninstaller.bin -silent ▼  
▲-G replaceNewerResponse="Yes to All"
```

▼▲ Indicates the command must be typed as one line.

Uninstalling the FLEXlm Server

When uninstalling *all* your EMC Smarts products, you must also uninstall the FLEXlm License Server. If any EMC Smarts products will remain in your network and use the FLEXlm License Server, do *not* uninstall it.

The FLEXlm License Server runs as a daemon on UNIX and as a service on Windows. These automatically start the license server. If you uninstall EMC Smarts products without uninstalling the FLEXlm License Server, a message displays that the FLEXlm (*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 FLEXlm License Server, execute the *install_license* script with the **uninstall** command from the **BASEDIR**/*smarts/script* directory.

UNIX

```
# BASEDIR/smarts/script/install_license.sh uninstall
```

Windows

```
BASEDIR\smarts\script\install_license.cmd uninstall
```

A

Requirements for Application Connectivity Monitor

Before an installation or upgrade, network architects design a solution that includes specific configurations of operating system and hardware to support your particular environment. This is typically not a task for the software installer, but this appendix includes the minimum levels required as a reference.

Supported Platforms

Table 11 summarizes the operating systems supported for Application Connectivity Monitor.

Table 11: Supported Platforms for Application Connectivity Monitor

OPERATING SYSTEM	VERSION
Solaris	9
Windows	Windows 2000 Server and Advanced Server with SP4 or later

Hardware Requirements

The minimum hardware levels for installation of Application Connectivity Monitor are summarized in the following tables:

- Table 12 lists disk space requirements for installing the product.
- Table 13 lists minimum requirements for CPUs, memory, and data disk space used by the software for writable files such as logs, repository files, and output files. If you are installing more than one product, your system must meet the products' total memory and data disk space requirements.
- Table 14 lists minimum hardware platform requirements.

These requirements are in addition to the requirements for any products from the Service Assurance Management Suite and the IP Management Suite that are also installed on the same computer system.

Table 12: Required Disk Space for Application Connectivity Monitor

PLATFORM	DISK SPACE
Solaris	350 MB
Windows	150 MB

Table 13: CPU, Memory, and Data Disk Space Requirements

PRODUCT	CPUS	MEMORY (RAM)	DATA DISK SPACE
Application Connectivity Monitor	2	512 MB	100 MB for each instance of Application Connectivity Monitor

Table 14: Platform Requirements for Application Connectivity Monitor

PLATFORM	PLATFORM HARDWARE (MINIMUM)
Solaris	Sun Fire 280
Windows	2xPentium4, 2GHz

B

UNIX Procedures for CD-ROMs

As a reference, this appendix includes UNIX commands and examples used when installing or upgrading a suite or product.

Mounting the CD-ROM

- 1 Insert the CD-ROM into the CD-ROM drive.
- 2 Mount the CD-ROM by entering the command for your operating system as shown in [Mounting the CD-ROM for UNIX Operating Systems](#) on page 29.
- 3 Change directory to the CD-ROM by entering a command for your operating system as shown in [Changing to the CD-ROM Directory in Unix Operating Systems](#) on page 30.

Table 15: Mounting the CD-ROM for UNIX Operating Systems

OPERATING SYSTEM	COMMANDS AND EXAMPLES
Solaris	Syntax: # mount -o ro -F hsfs <DEVICE> /mnt Example: # mount -o ro -F hsfs /dev/dsk/c0t6d0s0 /mnt
Where <DEVICE> is the mount point for your CD-ROM drive.	

Changing to the CD-ROM Directory

Change to the CD-ROM directory by entering a command from the following table:

Table 16: Changing to the CD-ROM Directory in Unix Operating Systems

OPERATING SYSTEM	COMMAND
Solaris	If Volume Manager (VM) is running: # cd /cdrom/<suite>_<version>_<build>/suite If VM is not running: # cd /mnt/suite
Where: <suite> is the product suite, for example, IP, ACM, or SAM. <version> is the release version, for example, 6_2_0. <build> is a build number, for example, 6219 or 23922.	

Unmounting the CD-ROM

Unmount the CD-ROM after completing an installation or upgrade. Be sure that no processes are currently accessing the drive.

Type the following commands:

```
# cd /  
# umount /mnt/incharge  
# eject
```