



# Installing Cisco Secure ACS

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This chapter provides information about installing, reinstalling, and upgrading to Cisco Secure Access Control Server Release 4.0 for Windows, hereafter referred to as ACS.

This chapter contains:

- [Preparation for Installing or Upgrading ACS, page 1-1](#)
- [What You Can Do, page 1-6](#)
- [Creating an ACS Installation, page 1-7](#)
- [Reinstalling or Upgrading ACS, page 1-11](#)

## Preparation for Installing or Upgrading ACS

Before performing an installation or upgrade procedure, read this section and perform the recommended actions.

This section contains:

- [Understanding your ACS System, page 1-1](#)
- [System Requirements, page 1-2](#)
- [Network and Port Requirements, page 1-4](#)
- [Back Up Data, page 1-5](#)
- [Gathering Answers for the Installation Questions, page 1-6](#)



**Note**

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ACS will not install properly if Sybase server is installed on the same machine.

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## Understanding your ACS System

You can use ACS network security software to help you authenticate users by controlling access to a AAA client—any one of many network devices that can be configured to defer authentication and authorization of network users to a AAA server. ACS operates as a set of Windows services that control the authentication, authorization, and accounting of user access to networks.

ACS operates on Windows 2000 Server and Windows Server 2003. ACS can run on a domain controller or a member server. For information about supported operating systems, see [Server, Web Client, and Agent Requirements, page 1-2](#) or the latest version of the Release Notes, which are accessible from:

[http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod_release_notes_list.html)

**Note**

If you want to authenticate users with a Windows Security Account Manager user database or an Active Directory user database, additional Windows configuration is required after you have installed ACS. For more information, see [Windows Authentication Configuration, page 2-1](#).

For additional information about ACS, refer to the *User Guide for Cisco Secure ACS for Windows 4.0*.

## System Requirements

Your ACS server must meet certain minimum hardware, operating system, and third-party software requirements. Additionally, if you are upgrading from a previous version of ACS, refer to [ACS Upgrade Requirements, page 1-2](#).

This section contains:

- [ACS Upgrade Requirements, page 1-2](#)
- [Server, Web Client, and Agent Requirements, page 1-2](#)

## ACS Upgrade Requirements

The setup program supports upgrades from previous versions of ACS. For information about the versions of ACS that we used to test the upgrade process, see the Release Notes. The latest version of the Release Notes are on Cisco.com, accessible from:

[http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod_release_notes_list.html)

## Server, Web Client, and Agent Requirements

This section contains details on server, web client, and agent requirements:

- [ACS for Windows Server Requirements, Table 1-1 on page 1-3](#)
- [ACS for Windows Web Client Requirements, Table 1-2 on page 1-3](#)
- [ACS for Windows Server UCP Requirements, Table 1-3 on page 1-4](#)


**Note**

ACS for Windows is not designed to use the multiprocessor feature of any supported operating system; however, we did test ACS by using dual-processor computers.

The Windows 2000 Datacenter Server is not a supported operating system.

Windows service packs can be applied before or after installing ACS. If you do not install a required service pack before installing ACS, the ACS installation program may warn you that the required service pack is not present. If you receive a service pack error message, continue the installation, and then install the required service pack before starting user authentication with ACS.


**Table 1-1 ACS for Windows Server Requirements**

Component	Minimum Requirement
Hardware	<ul style="list-style-type: none"> <li>• IBM PC-compatible with Pentium IV processor, 1.8 GHz or faster</li> <li>• Color monitor with minimum graphics resolution of 256 colors at 800 x 600 resolution</li> <li>• CD-ROM drive</li> <li>• 100BaseT or faster connection</li> </ul>
Operating System	<ul style="list-style-type: none"> <li>• Windows 2000 Server</li> <li>• Windows 2000 Advanced Server (Service Pack 4) without features specific to Windows 2000 Advanced Server enabled or without Microsoft clustering service installed</li> <li>• Windows Server 2003, Enterprise Edition or Standard Edition (Service Pack 1)</li> </ul>
File System	NTFS
Memory	1 Gigabyte, minimum
Virtual Memory	1 Gigabyte, minimum
Hard Drive Space	At least 1 GB of free hard drive space, minimum
	 <p><b>Note</b> The actual amount of hard drive space required depends on several factors, including log file growth, and replication or backup purposes.</p>

**Table 1-2 ACS for Windows Web Client Requirements**

Component	Minimum Requirement
Hardware/Software	IBM PC-compatible computer with Pentium IV processor running: <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 Server, or Advanced Server (Service Pack 4)</li> <li>• Microsoft Windows 2000 (Service Pack 4)</li> <li>• Microsoft Windows XP (Service Pack 2)</li> <li>• Microsoft Windows 2003 (Service Pack 1) (Enterprise or Standard Edition)</li> </ul>
Hard Drive Space	400 MB virtual memory
Memory	256 MB minimum

**Table 1-2 ACS for Windows Web Client Requirements**

Browser	You must also install one of the following HTML browsers: <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer 6 Service Pack 1 and 5.5 for Windows–English and Japanese version</li> <li>• Netscape Web Browser 7.0, 7.1, and 7.2 for Windows–English and Japanese version<sup>1</sup></li> </ul>
Java Run-time Environment (JRE)	Sun JRE 1.4.2_04 or Microsoft Java Virtual Machine (JVM) <p> <b>Note</b> Microsoft does not include JVM in Windows Server 2003. Instead, use the Sun Java Plug-in which is previously listed. For more information about Microsoft plans regarding its JVM, see <a href="http://www.microsoft.com/mscorp/java/">http://www.microsoft.com/mscorp/java/</a>.</p>

1. Several known problems are related to using Netscape Communicator with ACS. For more information, see the *Release Notes for Cisco Secure ACS for Windows* on Cisco.com.

**Table 1-3 ACS for Windows Server UCP Requirements**

Component	Minimum Requirement
<b>User Changeable Password (UCP) Web Server</b>	<ul style="list-style-type: none"> <li>• Microsoft IIS 6.0</li> <li>• Apache 1.3 web server</li> </ul>

## Third-Party Software Requirements

The Release Notes provide information about third-party software products that we tested with ACS and support, including applications such as:

- Web browsers and Java virtual machines
- Novell Directory Server (NDS) clients
- Token-card clients

Other than the software products described in the Release Notes, we have not tested the interoperability of ACS and other software products on the same computer. We only support the interoperability issues of software products that are mentioned in the Release Notes.

The most recent version of the Release Notes is posted on Cisco.com, accessible from:

[http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod_release_notes_list.html)

## Network and Port Requirements

Your network should meet the following requirements before you begin deploying ACS:

- For full TACACS+ and RADIUS support on Cisco IOS devices, AAA clients must run Cisco IOS Release 11.1 or later.
- Non-Cisco IOS AAA clients must be configured with TACACS+, RADIUS, or both.
- Dial-in, VPN, or wireless clients must be able to connect to the applicable AAA clients.

- The computer that is running ACS must be able to ping all AAA clients.
- Gateway devices between ACS and other network devices must permit communication over the ports needed to support the applicable feature or protocol. For information about ports to which ACS listens, see [Table 1-4](#).
- A supported web browser must be installed on the computer that is running ACS. For the most recent information about tested browsers, see the Release Notes, available on Cisco.com: [http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/secursw/ps2086/prod_release_notes_list.html)
- All network cards in the computer that is running ACS must be enabled. If a disabled network card is present on the computer that is running ACS, installing ACS may proceed slowly, due to delays caused by Microsoft CryptoAPI.



**Note** We tested ACS on computers that have only one network interface card.

- If you want ACS to use the Grant Dial-in Permission to User feature in Windows when authorizing network users, you must select this option in the Windows User Manager or Active Directory Users and Computers for the applicable user accounts.

[Table 1-4](#) lists the ports to which ACS listens for communications with AAA clients, other ACS machines and applications, and web browsers. ACS uses other ports to communicate with external user databases; however, it initiates those communications rather than listening to specific ports. For example, if ACS initiates communications with LDAP or RADIUS token server databases, you can configure these destination ports in ACS. For more information about ports to which a particular external user database listens, see the documentation for that database.

**Table 1-4** *Ports that ACS Listens To*

Feature/Protocol	UDP or TCP	Ports
RADIUS authentication and authorization	UDP	1645, 1812
RADIUS accounting	UDP	1646, 1813
TACACS+	TCP	49
Cisco Secure Database Replication	TCP	2000
RDBMS Synchronization with synchronization partners	TCP	2000
User-Changeable Password web application	TCP	2000
Logging	TCP	2001
Administrative HTTP port for new sessions	TCP	2002
Administrative HTTP port range	TCP	Configurable; default 1024 through 65535

## Back Up Data

Before you install or upgrade ACS, we strongly recommend that you back up the computer on which you install ACS by using a Windows backup utility of your choice. Include the Windows Registry in the backup.

If you are upgrading or reinstalling ACS, use the ACS Backup feature to back up the ACS configuration and database, and then copy the backup file to a drive that is not local to the computer running ACS.

**Caution**

If you are upgrading ACS rather than reinstalling, the backups that you create cannot be used after the upgrade is successful. The backups provide for recovery if you need to restore your previous installation of ACS.

For information about backing up ACS, see the *User Guide for Cisco Secure ACS for Windows*.

## Gathering Answers for the Installation Questions

During new installations, or upgrades and reinstallations that do not preserve the existing configuration, the installation requires specific information about the computer on which you want to install ACS. To facilitate the installation, collect the applicable information before you begin the installation.

**Note**

If you are upgrading or reinstalling ACS and intend to keep the existing configuration and database, you do not need to perform the following procedure, which requires information that is already recorded in your ACS installation.

To collect information that is required during the installation of ACS:

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- Step 1** Determine whether the computer on which you will install ACS is a domain controller or a member server. If you want ACS to authenticate users with a Windows domain user database, after you install ACS, you must perform the additional Windows configuration, which is discussed in [Windows Authentication Configuration, page 2-1](#).
- Step 2** Confirm that these items are completed:
- End user clients can successfully connect to AAA clients.
  - This Windows Server can ping the AAA clients.
  - Any Cisco IOS clients are running Cisco IOS release 11.1 or later.
  - Microsoft Internet Explorer 6.0 Service Pack 1 or Netscape 7.02 is installed.
- Step 3** Create a password for your database access. You will need this password to manage your database information. Keep this password in a safe, accessible place so that technical support can gain access to the database.

## What You Can Do

This document provides detailed procedures for installing, reinstalling, and upgrading ACS. You must select the right procedure for your situation.

[Table 1-5](#) lists the five possible installation and upgrade scenarios. See [Table 1-5](#) to determine which procedure applies to your situation.

**Note**

Before you perform any installation or upgrade procedure, we strongly recommend that you read [Preparation for Installing or Upgrading ACS, page 1-1](#), and perform the applicable tasks in that section.

**Table 1-5** Installation and Upgrade Scenarios

If your installation scenario is a:	Refer to . . .
First-time installation	<a href="#">Creating an ACS Installation, page 1-7</a>
Reinstallation, <i>preserving</i> the ACS internal database and ACS configuration	<a href="#">Reinstalling or Upgrading an Existing Configuration, page 1-11</a>
Reinstallation, <i>overwriting</i> the ACS internal database and ACS configuration	<a href="#">Reinstalling or Upgrading ACS without Data Preservation, page 1-14</a>
Upgrade, <i>preserving</i> the ACS internal database and ACS configuration	<a href="#">Reinstalling or Upgrading an Existing Configuration, page 1-11</a>
Upgrade, <i>overwriting</i> the ACS internal database and ACS configuration	<a href="#">Reinstalling or Upgrading ACS without Data Preservation, page 1-14</a>

## Creating an ACS Installation

This section contains information on how to install ACS for the first time.



### Note

For information about upgrading or reinstalling an existing ACS installation, see [Table 1-5](#).

### Before You Begin

For information about what must be completed before installing ACS, see [Preparation for Installing or Upgrading ACS, page 1-1](#).

If you want ACS to authenticate users with a Windows domain user database, after you install ACS you must perform additional Windows configuration, which is discussed in [Windows Authentication Configuration, page 2-1](#).

To install ACS:

**Step 1** Using a local administrator account, log in to the computer on which you want to install ACS.



### Note

Remote installations performed by using Windows Terminal Services are not tested and are not supported. We recommend that you disable Terminal Services while performing any installation or upgrade. Virtual Network Computing (VNC) has been tested successfully.

**Step 2** Insert the ACS CD into a CD-ROM drive on the computer.

If the CD-ROM drive supports the Windows **autorun** feature, the ACS for Windows dialog box appears.



### Note

If the computer does not have the minimum system requirements, a dialog box appears. You can apply these requirements before or after installing ACS. You can continue with the installation, but you must apply the minimum requirements after the installation is complete; otherwise, ACS may not function reliably.

- Step 3** If:
- a. The Cisco Secure ACS for Windows dialog box appears, click **Install**.
  - b. The Cisco Secure ACS for Windows dialog box does not appear, run *setup.exe*, located in the root directory of the ACS CD.




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**Note** If the computer does not have a required service pack installed, a dialog box appears. You can apply Windows service packs before or after installing ACS. You can continue with the installation, but the required service pack must be installed after the installation is complete; otherwise, ACS may not function reliably.

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The Cisco Secure ACS Setup dialog box displays the software license agreement.

- Step 4** Read the software license agreement. If you accept the software license agreement, click **ACCEPT**.

The Welcome dialog box displays basic information about the setup program.

- Step 5** After you have read the information in the Welcome dialog box, click **Next**.

The Before You Begin dialog box lists items that you must complete before continuing with the installation. The same items are discussed in [Gathering Answers for the Installation Questions, page 1-6](#).

- Step 6** If you have completed all items in the Before You Begin dialog box, check the corresponding check box for each item, and then click **Next**.




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**Note** If you have not completed all items in the Before You Begin dialog box, click **Cancel**, and then click **Exit Setup**. After completing all items in the Before You Begin dialog box, restart the installation. For more information, see [Preparation for Installing or Upgrading ACS, page 1-1](#).

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The Choose Destination Location dialog box appears. Under Destination Folder, the installation location appears. This is the drive and path where the setup program installs ACS.

- Step 7** If you want to change the installation location:

- a. Click **Browse**.

The Choose Folder dialog box appears. The Path box contains the installation location.

- b. Change the installation location. You can type the new location in the **Path** box, or use the Drives and Directories lists to select a new drive and directory. The installation location must be on a drive local to the computer.




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**Note** Do not specify a path that contains a percent symbol (%). If you do so, installation may appear to continue properly but will fail before it ends.

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- c. Click **OK**.




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**Note** If you specified a folder that does not exist, the setup program displays a dialog box to confirm the creation of the folder. To continue, click **Yes**.

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In the Choose Destination Location dialog box, the new installation location appears under Destination Folder.

- Step 8** Click **Next**.

The Authentication Database Configuration dialog box lists options for authenticating users. You can authenticate with the ACS internal database only, or with a Windows user database.



**Note** After you have installed ACS, you can configure authentication support for all external user database types in addition to Windows user databases.

**Step 9** If you want to authenticate users with the ACS internal database only, click **Check the Cisco Secure ACS database only**.

**Step 10** If you want to authenticate users with a Windows Security Access Manager (SAM) user database or Active Directory user database in addition to the ACS internal database:

- a. Click **Also check the Windows User Database**.

The **Yes, refer to “Grant dial-in permission to user” setting** check box becomes available.



**Note** The **Yes, refer to “Grant dial-in permission to user” setting** check box applies to all forms of access that ACS controls; not just dial-in access. For example, a user accessing your network through a VPN tunnel is not dialing in to a network access server; however, if the **Yes, refer to “Grant dial-in permission to user” setting** check box is selected, ACS applies the Windows user dial-in permissions to determine whether to grant the user access to your network.

- b. If you want to allow access by users who are authenticated by a Windows domain user database only when they have dial-in permission in their Windows account, click **Yes, refer to “Grant dial-in permission to user” setting**.

**Step 11** Click **Next**.

The setup program installs ACS and updates its configuration.

The Advanced Options dialog box displays several features of ACS that are not enabled by default. For more information about these features, see the *User Guide for Cisco Secure ACS for Windows 4.0*.



**Note** The features appear in the ACS HTML interface only if you enable them. After installation, you can enable or disable them on **Interface Configuration > Advanced Options**.

**Step 12** For each feature that you want to enable, check the corresponding check box.

**Step 13** Click **Next**.

The Active Service Monitoring dialog box appears.



**Note** After installation, you can configure active service monitoring features on the Active Service Management page in the System Configuration section.

**Step 14** If you want ACS to monitor user authentication services, click **Enable Log-in Monitoring**. From the **Script to execute** list, select the option that you want applied in the event of authentication service failure:

- **No Remedial Action**—ACS does not run a script.



**Note** This option is useful if you enable event e-mail notifications.

- **Reboot**—ACS runs a script that reboots the computer that runs ACS.
- **Restart All**—ACS restarts all ACS services.
- **Restart RADIUS/TACACS+**—ACS restarts only the RADIUS and TACACS+ services.

**Step 15** If you want ACS to send an e-mail message when service monitoring detects an event, click **Mail Notification**.

**Step 16** Click **Next**.

The Database Encryption Password dialog box appears.



**Note**

The Database Encryption Password is encrypted and stored in the ACS registry. You might have to reuse this password when critical problems arise and the database needs to be accessed manually. Keep this password in a safe, accessible place so that technical support can gain access to the database.

**Step 17** Enter a password for database encryption. The password should be at least 8 characters long and should contain characters and digits. There are no invalid characters. Click **Next**.

The setup program ends and the Cisco Secure ACS Service Initiation dialog box appears.

**Step 18** For each option that you require, check the corresponding check box. The actions that are associated with the options occur after the setup program ends:

- **Yes, I want to start the Cisco Secure ACS Service now**—Starts the Windows services that ACS comprises. If you do not select this option, the ACS HTML interface is not available; unless you reboot the computer or start the CSAdmin service.
- **Yes, I want Setup to launch the Cisco Secure ACS Administrator from my browser following installation**—Opens the ACS HTML interface in the default web browser for the current Windows user account.
- **Yes, I want to view the Readme file**—Opens *README.TXT* in Windows Notepad.

**Step 19** Click **Next**.

If you so chose, the ACS services start. The Setup Complete dialog box displays information about the ACS HTML interface.

**Step 20** Click **Finish**.

The setup program exits. If, in [Step 18](#), you chose the options to view the HTML interface or *README.TXT* file, those options occur now.

On the computer that is running ACS, you can access the ACS HTML interface by using the ACS Admin desktop icon; or you can use this URL in a supported web browser:

```
http://127.0.0.1:2002
```



**Note**

The ACS HTML interface is available only if you chose to start ACS services in [Step 18](#). If you did not, to make the HTML interface available, you can reboot the computer or type **net start csadmin** at a DOS prompt.

**Step 21** If you want ACS to authenticate users with a Windows domain user database, you must perform additional Windows configuration. For procedures, see [Windows Authentication Configuration, page 2-1](#).

# Reinstalling or Upgrading ACS

The two choices for upgrading or reinstalling ACS software are:

- [Reinstalling or Upgrading an Existing Configuration, page 1-11](#)
- [Reinstalling or Upgrading ACS without Data Preservation, page 1-14](#)

If you are installing ACS for the first time, see [Creating an ACS Installation, page 1-7](#).

## Reinstalling or Upgrading an Existing Configuration

Use this procedure to reinstall or upgrade ACS if you want to preserve all existing configuration and database information.

**Note**

For information about installing ACS the first time, see [Table 1-5](#).

**Before You Begin**

For information about what you must complete before reinstalling or upgrading ACS, see [Preparation for Installing or Upgrading ACS, page 1-1](#).

Close all applications or command windows that are accessing any directory in the ACS directory. The installation cannot succeed if another process is using the ACS directory or any of its subdirectories. For example, if Windows Explorer is displaying the contents of a ACS directory, installation fails.

If you want ACS to authenticate users with a Windows domain user database, you must perform additional Windows configuration. For the appropriate procedures, see [Windows Authentication Configuration, page 2-1](#).

To reinstall or upgrade ACS, and preserve the existing configuration and ACS internal database:

**Step 1** Using a local administrator account, log in to the computer on which you want to install ACS.

**Note**

Remote installations that you perform by using Windows Terminal Services are not tested and are not supported. We recommend that you disable Terminal Services while performing any installation or upgrade. Virtual Network Computing (VNC) has been tested successfully.

**Step 2** Insert the ACS CD into a CD-ROM drive on the computer.

If the CD-ROM drive supports the Windows **autorun** feature, the Cisco Secure ACS for Windows dialog box appears.

**Note**

If the computer does not have the minimum system requirements, a dialog box appears. You can apply these requirements before or after installing ACS. You can continue with the installation, but you must apply the minimum requirements after the installation is complete; otherwise, ACS may not function reliably.

**Step 3** If:

- a. The Cisco Secure ACS for Windows Server dialog box appears, click **Install**.

- b. The Cisco Secure ACS for Windows Server dialog box does not appear, run `setup.exe`, located in the root directory of the ACS CD.



**Note** If the computer does not have a required service pack installed, a dialog box appears. You can apply Windows service packs before or after installing ACS. You can continue with the installation, but the required service pack must be applied after the installation is complete; otherwise, ACS may not function reliably.

An information dialog box displays some details about Windows authentication. Click **OK**.

The Cisco Secure ACS Setup dialog box displays the software license agreement.

- Step 4** Read the software license agreement. If you accept the software license agreement, click **ACCEPT**.

The Welcome dialog box displays basic information about the setup program.

- Step 5** After you have read the information in the Welcome dialog box, click **Next**.

A dialog box displays any warnings if your machine will not run ACS without action on your part. Respond to the warning by performing any corrective action that is required. You may install the software without exiting the install; but you will see a reminder to fix any minimum system requirements that are not met after the setup program has run. Click **Next**.

If no warnings appear, the Before You Begin dialog box lists items that you must complete before continuing with the installation. The same items are discussed in [Gathering Answers for the Installation Questions, page 1-6](#).

- Step 6** If you have completed all items in the Before You Begin dialog box, check the corresponding check box for each item; then click **Next**.



**Note** If you have not completed all items in the Before You Begin dialog box, click **Cancel**, and then click **Exit Setup**. After completing all items in the Before You Begin dialog box, restart the installation. For more information, see [Preparation for Installing or Upgrading ACS, page 1-1](#).

The Previous Installation dialog box appears.

- Step 7** Click **Yes, keep the existing configuration**.



**Caution**

Ensure that you check the Yes, import the existing configuration check box; it should not be unchecked. If you proceed without checking the **Yes, keep the existing configuration** check box, the setup program deletes all existing AAA client, user, and group information.

If you are uncertain about keeping the configuration, click **Explain** to see details on keeping the existing configuration.

- Step 8** Click **Next**.

The Choose Destination Location dialog box appears. Under Destination Folder, the installation location appears. The setup program installs ACS on this drive and path.

- Step 9** If you want to change the installation location:

- a. Click **Browse**.

The Choose Folder dialog box appears. The Path box contains the installation location.

- b. Change the installation location. You can type the new location in the **Path** box, or select a new drive and directory from the Drives and Directories lists.



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**Note** The installation location must be on a drive that is local to the computer.

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- c. Click **OK**.



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**Note** If you specified a folder that does not exist, the setup program displays a dialog box to confirm the creation of the folder. To continue, click **Yes**.

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In the Choose Destination Location dialog box, the new installation location appears under Destination Folder.

- Step 10** Click **Next**.

The setup program installs ACS and updates its configuration.

The Cisco Secure ACS Service Initiation dialog box appears.

Enter a password for database encryption, click **Next**.



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**Note** The Database Encryption Password is encrypted and stored in the ACS configuration. You might have to reuse this password when critical problems arise and the database needs to be accessed manually. Keep this password in a safe, accessible place so that technical support can gain access to the database.

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- Step 11** The installation is finished. For each option that you require, check the corresponding check box. The actions that are associated with each option occur after the setup program ends:

- **Yes, I want to start the Cisco Secure ACS Service now**—Starts the Windows services that ACS comprises. If you do not select this option, the HTML interface is not available; unless you reboot the computer or start the CSAdmin service.
- **Yes, I want Setup to launch the Cisco Secure ACS Administrator from my browser following installation**—Opens the ACS HTML interface in the default web browser for the current Windows user account.
- **Yes, I want to view the Readme file**—Opens *README.TXT* in Windows Notepad.

- Step 12** Click **Next**.

If you so chose, the ACS services start. The Setup Complete dialog box displays information about the ACS HTML interface.

- Step 13** Click **Finish**.

The setup program exits. If, in [Step 11](#), you chose the options to view the HTML interface or *README.TXT* file, those options occur now.

- Step 14** If minimum system requirements were not met, a message might appear warning you to remedy the problem. Click **OK** to continue and resolve the problem where possible.

On the computer that is running ACS, you can access the ACS HTML interface by using the ACS Admin desktop icon; or you can use this URL in a supported web browser:

`http://127.0.0.1:2002`



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**Note** The ACS HTML interface is available only if you chose to start ACS services in [Step 11](#). If you did not and you want to make the HTML interface available, you can reboot the computer or type **net start csadmin** at a DOS prompt.

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- Step 15** If you want ACS to authenticate users with a Windows domain user database, you must perform additional Windows configuration. For the appropriate procedures, see [Windows Authentication Configuration, page 2-1](#).



**Note** If you previously configured ACS services to run by using a specific username, that configuration was lost during the reinstallation.

## Reinstalling or Upgrading ACS without Data Preservation

Use this procedure to reinstall or upgrade ACS if you do not intend to preserve the existing configuration and database information.



### Caution

Performing this procedure deletes the existing configuration of ACS, including all AAA client, user, and group information. Unless you have backed up your ACS data and the Windows Registry, you cannot recover the previous configuration and database.

### Before You Begin

For information about what must be completed before reinstalling or upgrading ACS, see [Preparation for Installing or Upgrading ACS, page 1-1](#).

Close all applications or command windows that are accessing any directory in the ACS directory. The installation cannot succeed if another process is using the ACS directory or any of its subdirectories. For example, if Windows Explorer is displaying the contents of an ACS directory, installation fails.

If you want ACS to authenticate users with a Windows domain user database, after you install ACS you must perform additional Windows configuration, discussed in [Windows Authentication Configuration, page 2-1](#).

To reinstall or upgrade ACS without preserving the existing configuration or ACS internal database:

- Step 1** Using a local administrator account, log in to the computer on which you want to install ACS.



**Note** Remote installations that are performed by using Windows Terminal Services are not tested and are not supported. We recommend that you disable Terminal Services while performing any installation or upgrade. Virtual Network Computing (VNC) has been tested successfully.

- Step 2** Insert the ACS CD into a CD-ROM drive on the computer.

If the CD-ROM drive supports the Windows **autorun** feature, the ACS for Windows dialog box appears.



### Note

If the computer does not have the minimum system requirements, a dialog box appears. You can apply these requirements before or after installing ACS. You can continue with the installation, but the minimum requirements must be applied after the installation is complete; otherwise, ACS may not function reliably.

- Step 3** If:
- The Cisco Secure ACS for Windows dialog box appears, click **Install**.
  - The Cisco Secure ACS for Windows dialog box does not appear, run `setup.exe`, located in the root directory of the ACS CD.



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**Note** If the computer does not have a required service pack installed, a dialog box appears. You can apply Windows service packs before or after installing ACS. You can continue with the installation, but the required service pack must be applied after the installation is complete; otherwise, ACS may not function reliably.

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The Cisco Secure ACS Setup dialog box displays the software license agreement.

- Step 4** Read the software license agreement. If you accept the software license agreement, click **ACCEPT**.

The Welcome dialog box displays basic information about the setup program.

- Step 5** After you have read the information in the Welcome dialog box, click **Next**.

The Before You Begin dialog box lists items that you must complete before continuing with the installation. The same items are discussed in [Gathering Answers for the Installation Questions, page 1-6](#).

- Step 6** If you have completed all items in the Before You Begin dialog box, check the corresponding check box for each item, and then click **Next**.



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**Note** If you have not completed all items in the Before You Begin dialog box, click **Cancel**, and then click **Exit Setup**. After completing all items in the Before You Begin dialog box, restart the installation. For more information, see [Preparation for Installing or Upgrading ACS, page 1-1](#).

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The Existing Installation of Cisco Secure ACS v $x.x$  dialog box appears.

- Step 7** Click **Next**.

The setup program removes the previous installation of ACS.

If ACS services are running, the Cisco Secure ACS Uninstall dialog box appears.

- Step 8** If the Cisco Secure ACS Uninstall dialog box appears. Click **Continue**.

The setup program ends, removing the previous installation of ACS.

The Choose Destination Location dialog box appears. Under Destination Folder, the installation location appears. The setup program installs ACS on this drive and path.

- Step 9** If you want to change the installation location:

- Click **Browse**.

The Choose Folder dialog box appears. The Path box contains the installation location.

- Change the installation location. You can type the new location in the **Path** box; or you can use the Drives and Directories lists to select a new drive and directory. The installation location must be on a drive that is local to the computer.



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**Note** Do not specify a path that contains a percent symbol (%). If you do, installation may appear to continue properly; but will fail before it ends.

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- Click **OK**.




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**Note** If you specified a folder that does not exist, the setup program displays a dialog box to confirm the creation of the folder. To continue, click **Yes**.

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In the Choose Destination Location dialog box, the new installation location appears under Destination Folder.

**Step 10** During the installation ACS checks for previous instances of the application. If it detects a previous uninstallation, a dialog box appears with the message: Setup has detected an existing ACS internal database. You may keep the existing ACS internal database if you wish. Click **Yes** to install the existing dump file that was saved from your previous uninstall. If you click **No**, the database dump file will remain; but will not be installed.

If you clicked **Yes**, the previous database is installed. If you clicked **No**, the following installation continues without installing the database file.

The Authentication Database Configuration dialog box lists options for authenticating users. You can authenticate with the ACS internal database only; or with a Windows user database.




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**Note** After you install ACS, you can configure authentication support for all external user database types in addition to Windows user databases.

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**Step 11** If you want to authenticate users with the ACS internal database only, click **Check the Cisco Secure ACS database only**.

**Step 12** If you want to authenticate users with a Windows Security Access Manager (SAM) user database or Active Directory user database in addition to the ACS internal database:

a. Click **Also check the Windows User Database**.

The **Yes, refer to “Grant dial-in permission to user” setting** check box becomes available.




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**Note** The **Yes, refer to “Grant dial-in permission to user” setting** check box applies to all forms of access that ACS controls; not just dial-in access. For example, a user accessing your network through a VPN tunnel is not dialing in to a network access server; however, if the **Yes, refer to “Grant dial-in permission to user” setting** check box is checked, ACS applies the Windows user dial-in permissions to determine whether to grant the user access to your network.

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b. If you want to allow access to users who are authenticated by a Windows domain user database only when they have dial-in permission in their Windows account, click **Yes, refer to “Grant dial-in permission to user” setting**.

**Step 13** Click **Next**.

The setup program installs ACS and updates its configuration.

The Advanced Options dialog box lists several ACS features that are not enabled by default. For more information about these features, refer to the *User Guide for Cisco Secure ACS for Windows 4.0*.




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**Note** The features appear in the ACS HTML interface only if you enable them. After installation, you can enable or disable them by choosing **Interface Configuration > Advanced Options**.

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**Step 14** For each feature that you want to enable, check the corresponding check box. Click **Next**.

The Active Service Monitoring dialog box appears.



**Note** After installation, you can configure active service-monitoring features on the Active Service Management page in the System Configuration section.

**Step 15** If you want ACS to monitor user authentication services, click **Enable Log-in Monitoring**. From the **Script to execute** list, select the option that you want applied in the event of authentication service failure:

- **No Remedial Action**—ACS does not run a script.



**Note** This option is useful if you enable event e-mail notifications.

- **Reboot**—ACS runs a script that reboots the computer that runs ACS.
- **Restart All**—ACS restarts all ACS services.
- **Restart RADIUS/TACACS+**—ACS restarts only the RADIUS and TACACS+ services.

**Step 16** If you want ACS to send an e-mail message when service monitoring detects an event, click **Mail Notification**.

If you chose to save the previous instance of the database, the Cisco Secure ACS Service Initiation dialog box appears.

**Step 17** Enter the password that you created during the uninstall procedure to save the database. Click **Next**.

**Step 18** For each option that you require, check the corresponding check box. The actions that are associated with each option occur after the setup program ends:

- **Yes, I want to start the Cisco Secure ACS Service now**—Starts the Windows services that ACS comprises. If you do not select this option, the ACS HTML interface is not available; unless you reboot the computer or start the CSAdmin service.
- **Yes, I want Setup to launch the Cisco Secure ACS Administrator from my browser following installation**—Opens the ACS HTML interface in the default web browser for the current Windows user account.
- **Yes, I want to view the Readme file**—Opens *README.TXT* in Windows Notepad.

**Step 19** Click **Next**.

If you so chose, the ACS services start. The Setup Complete dialog box displays information about the ACS HTML interface.

**Step 20** Click **Finish**.

The setup program exits. If, in [Step 18](#), you chose the options to view the HTML interface or *README.TXT* file, those options occur now.

On the computer that is running ACS, you can access the ACS HTML interface by using the ACS Admin desktop icon or you can use this URL in a supported web browser:

`http://127.0.0.1:2002`



**Note** The ACS HTML interface is available only if you chose to start ACS services in [Step 18](#). If you did not, to make the HTML interface available, you can reboot the computer or type **net start csadmin** at a DOS prompt.

**Step 21** If you want ACS to authenticate users with a Windows domain user database, you must perform additional Windows configuration. For the appropriate procedures, see [Windows Authentication Configuration, page 2-1](#).



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**Note** If you previously configured ACS services to run by using a specific username, that configuration was lost during the reinstallation.

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