RSA SecurID® Software Token with Automation 4.1.2 for Windows and Mac OS X Administrator's Guide

Contact Information

See the RSA corporate web site for regional Customer Support telephone and fax numbers: **www.emc.com/domains/rsa/index.htm**

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Preface

About This Guide

This guide describes how to prepare for and deploy RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application) and how to import software tokens to Windows and Mac OS X desktops and laptops. This guide is intended for RSA Authentication Manager administrators and other personnel who are responsible for deploying and administering the SecurID desktop application. It assumes that these personnel have experience using RSA Authentication Manager. Do not make this guide available to the general user population.

RSA SecurID Software Token Documentation

For more information about the SecurID desktop application, see the following documentation:

Administrator's Guide. (This guide.) Provides information for security administrators on deploying and provisioning the application.

Release Notes. Provides information about what is new and changed in this release, as well as workarounds for known issues. The latest version of the *Release Notes* is available on RSA SecurCare Online at **https://knowledge.rsasecurity.com**.

Help. Contains user topics associated with the application screens. It is installed automatically with the SecurID desktop application.

Quick Start. Helps users install the SecurID desktop application and import a software token. Also describes how to use the token to access resources protected by RSA SecurID.

Provisioning Software Tokens with RSA Authentication Manager 8.0. Describes procedures for provisioning software tokens using Authentication Manager 8.0, including RSA Self-Service.

Related Documentation

For more information related to the SecurID desktop application or software tokens, see the following:

Secured by RSA® Certified Partner Solutions directory. RSA has worked with a number of manufacturers to qualify products that work with RSA products. Qualified third-party products include virtual private network (VPN) and remote access servers (RAS), routers, web servers, and many more. To access the directory, go to **https://gallery.emc.com/community/marketplace/rsa?view=overview**.

RSA Authentication Manager 8.0 Administrator's Guide. Provides information about how to administer users and security policy in RSA Authentication Manager 8.0.

RSA Authentication Manager 7.1 Administrator's Guide. Provides information about how to administer users and security policy in RSA Authentication Manager 7.1.

RSA Security Console Help. Describes day-to-day administration tasks performed in the RSA Security Console (RSA Authentication Manager 7.1 user interface). To view Help, click the **Help** tab in the Security Console.

RSA Authentication Manager 6.1 Administrator's Guide. Provides information about how to administer users and security policy in RSA Authentication Manager 6.1.

Database Administration application Help. Describes day-to-day administration tasks performed in the Database Administration application used with RSA Authentication Manager 6.1.

RSA SecurID Authentication Engine 2.8.1 for Java Developer's Guide. Provides a detailed description of the Authentication Engine API for Java.

RSA SecurID Authentication Engine 2.3 for C Developer's Guide. Provides a detailed description of the Authentication Engine API for C.

RSA SecurID Security Best Practices guides. RSA provides Security Best Practices guides to help identify configuration options and best practices designed to ensure secure operation of RSA SecurID software token applications and provisioning servers. To download Security Best Practices guides from RSA SecurCare Online, go to: **https://knowledge.rsasecurity.com/scolcms/sets.aspx?search=best+practice&_v=search&scope=products**.

Support and Service

RSA SecurCare Online	**https://knowledge.rsasecurity.com**
Customer Support Information	**www.emc.com/support/rsa/index.htm**
RSA Solution Gallery	**https://gallery.emc.com/community/marketplace/rsa?view=overview**

RSA SecurCare Online offers a knowledgebase that contains answers to common questions and solutions to known problems. It also offers information on new releases, technical news, and software downloads.

Before You Call Customer Support

Make sure that you have direct access to the computer running the RSA SecurID Software Token software.

Please have the following information available when you call:

- Your RSA Customer/License ID.
- RSA SecurID Software Token software version number.
- The make and model of the machine on which the problem occurs.
- The name and version of the operating system under which the problem occurs.

1 Overview and Requirements

This chapter introduces RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application) and provides system requirements and other general information.

About RSA SecurID Software Token with Automation

RSA SecurID Software Token with Automation is authentication software that runs on 64-bit Windows and OS X operating systems and allows users to verify their identity to resources protected by RSA SecurID. The application must be installed on desktops and laptops, along with a separately installed software-based security token. SecurID software tokens generate one-time passwords (OTPs) at regular intervals. With the SecurID desktop application, users can enter the current OTP, along with other security information, to gain access to Virtual Private Networks (VPNs) and web applications. The application provides strong two-factor authentication and eliminates the need for the user to carry a separate hardware token.

Note: When necessary to distinguish between the Windows and OS X versions of the application, this document refers to "RSA SecurID Software Token for Windows" or "RSA SecurID Software Token for Max OS X."

Changes in This Release

RSA SecurID Software Token with Automation 4.1.2 supports 64-bit Windows and OS X operating systems, making it possible for 64-bit VPN applications to integrate with the 64-bit SecurID desktop application.

Important: Version 4.1.2 runs only on 64-bit operating systems. Customers with existing deployments on 32-bit operating systems should continue to use Version 4.1.1.

The following features are not provided with this release:

- The Standard version of the application (without Automation)
- Web browser plug-in for Firefox (FirefoxPlugin)
- RSA SecurID Trusted Platform Module/Smart Card Plug-In 1.0
- VpnMode custom policy
- STOPVISTABROWSER command line property

System Requirements

The SecurID desktop application runs on Microsoft Windows and OS X operating systems. The following table lists additional requirements.

Windows System Requirements

Operating system	One of the following: • Windows 2008 Server or Windows 2008 Server R2 (64-bit) • Windows 7 (64-bit)
Browser for optional web browser plug-in	Internet Explorer 8.0 or 9.0 (64-bit)
Disk space	1 KB available space for each software token installed

OS X System Requirements

Operating system	OS X Lion (version 10.7, 64-bit) OS X Mountain Lion (version 10.8, 64-bit)
Disk space	1 KB available space for each software token installed

Supported Provisioning Servers

This release of the SecurID desktop application supports the following provisioning servers:

- RSA Authentication Manager 8.0, including RSA Self-Service (requires Enterprise Server license). Self-Service allows users to request software tokens and manage their SecurID PINs. For more information, see *Provisioning Software Tokens with RSA Authentication Manager 8.0* in the version 4.1.2 documentation package.
- RSA Authentication Manager 7.1, including RSA Credential Manager, the self-service and provisioning component (requires Enterprise Server license). Allows users to request software tokens and manage their SecurID PINs.
- RSA SecurID Appliance 3.0.
- RSA Authentication Manager 6.1.
- RSA SecurID Authentication Engine (SAE), including SAE 2.8.1 for Java and SAE 2.3 for C.

  SAE is an Application Programming Interface (API) that allows you to easily integrate RSA SecurID strong authentication directly into a homegrown SecurID desktop application. After integrating the APIs, your organization can easily authenticate RSA SecurID users. For more information go to **http://www.emc.com/security/rsa-securid/rsa-securid-authentication-engine.htm**.

Supported Software Token Configurations

The SecurID desktop application is designed to support a maximum of 20 software tokens for each user. With the software token API, however, you can import a substantially larger number of tokens.

The following table lists the software token configurations that are supported with RSA Authentication Manager. A blue check mark indicates that the Authentication Manager version supports the attribute. A red X indicates that the version does not support the attribute.

Note: For information on software token configurations supported with RSA Authentication Manager 8.0, see *Provisioning Software Tokens with RSA Authentication Manager 8.0*. For information on configurations supported with SAE, see the SAE Developer's Guide for Java or the SAE Developer's Guide for C.

For more information on configuring software token attributes, see Chapter 3, "Provisioning Software Tokens."

Token Attributes	Authentication Manager 7.1	Authentication Manager 6.1	Credential Manager
128-bit tokens	✓	✓	✓
64-bit tokens	X	X	X
Time-based	✓	✓	✓
8-digit tokencode	✓	✓	✓
6-digit tokencode	✓	X	X
60-second tokencode duration	✓	✓	✓
30-second tokencode duration	✓	X	X
PINPad style tokens (PIN entry in the desktop application)	✓	✓	✓
Fob-style tokens (PIN entry in the protected resource)	✓	X	X
Tokens that do not require a PIN (user authenticates with user name and tokencode)	✓	✓	✓
Token file password	✓	✓	✓

Token Attributes	Authentication Manager 7.1	Authentication Manager 6.1	Credential Manager
Device serial number used to bind a token to a device	✓	✓	✓
Device GUID used to bind a token to a device	✓	✓	✓
User security identifier (SID) used to bind a token to a device. Windows only.	✓	✓	X

Token Storage Devices

A token storage "device" is a logical storage container for tokens. The SecurID desktop application can store tokens on the user's hard drive, a Trusted Platform Module (TPM), a biometric device, a flash drive, or another supported device. By default, the application stores tokens on the user's local hard drive. For more information, see "Token Storage Devices and Device Binding" on page 43.

Support for Visually Impaired Users (Windows)

RSA SecurID Software Token for Windows supports the use of screen readers for visually impaired users. RSA has tested the application with the JAWS for Windows Screen Reading Software. You can download JAWS from the Freedom Scientific web site. Once you install JAWS, no additional configuration is required to use the software with the SecurID desktop application.

Coexistence with RSA SecurID Toolbar 1.4 (Windows)

RSA SecurID Software Token for Windows can coexist with RSA SecurID Toolbar 1.4, a web add-on and software-based security token installed into a user's web browser. The two products work independently and do not share the same RSA token database. However, both applications support automatic token import from either the **Desktop** or **My Documents** folder.

If a user copies a token file (SDTID file) to either folder, as long as the token file is not bound to a specific device, the first application that is started imports the token. For example, if the user opens Internet Explorer before starting the desktop application, a token stored in **Desktop** or **My Documents** is imported to the token database associated with the Toolbar application and can be used only with the Toolbar. If a user imports a token by double-clicking a token file located in a directory other than **Desktop** or **My Documents**, the token is always imported to the desktop application.

The optional web browser plug-in feature of the SecurID desktop application is incompatible with RSA SecurID Toolbar. If the browser plug-in and the Toolbar are installed on the same computer, the browser plug-in takes precedence. When you access a web site that requires authentication with a Toolbar token, the browser plug-in authentication window opens, and you must use a token associated with the desktop application to authenticate.

Virtualized Environments

The SecurID desktop application has not been fully tested and qualified in virtualized environments. RSA Customer Support will initially assist you with issues that occur on virtualized machines, but may eventually request that you reproduce the issue on a supported physical machine before they proceed further with the case.

Clock Settings

The SecurID desktop application and RSA Authentication Manager rely on Coordinated Universal Time (UTC). The time, date, and time zone settings on the local computer and on the computer running Authentication Manager must always be correct in relation to UTC. If the time settings on a user's computer change significantly, they will no longer be synchronized with the time settings on the Authentication Manager host, and the user may not be able to authenticate. If this happens, the user must contact the server administrator to have the token resynchronized.

Instruct users to verify that the time, time zone, and Daylight Saving Time (DST) settings on their computer are correct before they use the SecurID desktop application. Users crossing time zones with their computer need to change only the time zone in order to reflect the correct local time.

2 Installing the Application

This chapter describes installing RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application), upgrading from a previous version, and transferring tokens from a previous version.

Important: You must have administrator privileges to install or uninstall the application.

Before You Begin

Before you install the SecurID desktop application, use the information in the following sections to help you decide whether to:

- Install the optional Internet Explorer browser plug-in (Windows only).
- Customize the behavior of the application using policy settings. For example, install the database that will contain the user's software tokens (token database) to a location other than the default directory.
- Change the database that contains tokens stored on the local hard drive from the default per-user database to a single database (Windows only).
- Disable the default copy protection on the token database.

Internet Explorer Plug-In

RSA SecurID Software Token for Windows provides an optional Internet Explorer plug-in that allows users to authenticate to protected web pages without manually entering a one-time password. The Internet Explorer plug-in works with 64-bit Internet Explorer 8 or 9 only. No plug-in is available for 32-bit Internet Explorer.

Note: RSA SecurID Software Token for Mac OS X does not support web browser plug-ins.

To authenticate with the Internet Explorer plug-in, the user opens Internet Explorer and enters the URL of the protected web page. The page displays an RSA SecurID authentication dialog box. The user selects the token nickname, enters the user name, and enters a PIN, if one is required. (If no PIN is required, the PIN field is unavailable.) The SecurID desktop application then transparently submits the tokencode.

Note: The SecurID desktop application does not support running multiple instances of the Internet Explorer plug-in within the same browser process. As a result, you cannot use the Internet Explorer plug-in to authenticate simultaneously to multiple sites that are protected by SecurID.

The Internet Explorer plug-in is a custom feature of the desktop application installation program. To install the plug-in, see "Install the Application Using the InstallShield Program" on page 23.

Configuration of the Web Agent

The Internet Explorer plug-in requires the RSA Authentication Agent for Web. The Authentication Agent for Web includes template pages, HTML pages containing HTML and JavaScript that allow authentication using the Internet Explorer plug-in. The Authentication Agent for Web is configured to work with the Internet Explorer plug-in. For more information, see **http://www.emc.com/security/rsa-securid/rsa-authentication-agents/iis-7-1.htm**

Using a Connected RSA SecurID 800 Authenticator (Windows)

You can use an RSA SecurID 800 Authenticator (SecurID 800) connected to a USB port with RSA SecurID Software Token for Windows for automatic tokencode retrieval by a VPN client application. You can also use a connected SecurID 800 with the optional Internet Explorer plug-in for automatic tokencode retrieval by web resources that are protected by RSA SecurID.

To use a connected SecurID 800 with the SecurID desktop application, you must install RSA Smart Card Middleware 3.6. The Hardware Authenticator Plug-In, which is installed automatically with the SecurID desktop application, allows the Smart Card Middleware and the desktop application to communicate with the SecurID 800.

You install the Middleware from the RSA Authentication Client 3.6 product kit at **https://knowledge.rsasecurity.com/scolcms/set.aspx?id=9588**. Install the Middleware, as documented in the *RSA Authentication Client 3.6 Installation and Administration Guide*.

If the SecurID 800 is the only token used with the desktop application, it is automatically the active token (the token from which tokencodes are retrieved). However, if software tokens have been imported to the desktop application, the SecurID 800 does not become the active token until the user opens the application and selects the SecurID 800 serial number (or nickname) from the list of tokens. For details, see the SecurID desktop application Help.

Note: You cannot import software tokens to a SecurID 800. Only the built-in token can be used to generate tokencodes.

Customization Policies

You can set policies to customize the behavior of the SecurID desktop application on users' computers.

The following table summarizes the customization policies. For details and instructions, see Appendix A, "Customizing the Application."

Important: RSA recommends that you set customization policies before you install the application.

Policy	Description	Platform Support
ActivationCode	Specifies that the Windows user security identifier (user SID) should be used as the activation code for a token provisioned using dynamic seed provisioning (CT-KIP). To allow a token to be imported automatically the first time that the user launches the application, you must set both ActivationCode and CtkipUrl.	Windows
CtkipUrl	Prefills the **Enter URL** field in the application so that the user does not have to enter the URL when importing a token provisioned using dynamic seed provisioning (CT-KIP).	Windows and OS X The CtkipUrl policy can be used with the ActivationCode policy to auto-import a token on Windows only.
DisableChangeTokenName	Specifies whether or not users can change the nicknames assigned to their tokens.	Windows and OS X
DisableDeleteToken	Specifies whether or not users can delete their tokens.	Windows and OS X
DisableSetDevicePassword	Specifies whether or not users are permitted to set a device password. Applies only to the Local Hard Drive (RSA) plug-in.	Windows and OS X
OnlyOneToken	Specifies that users can have only one token installed.	Windows and OS X

Policy	Description	Platform Support
TokenExpirationNotification	Changes the number of days before the application displays a notification informing the user that a token is nearing its expiration date. If you do not set this policy, the notification is displayed 30 days before the token expires. If used with TokenRenewalURL, this policy adds a link in the token expiration notification to a URL where the user can request a replacement token.	Windows and OS X
TokenRenewalURL	Used with the TokenExpirationNotification policy. Specifies a URL link to display in the token expiration notification. For example, the link could be the URL of the RSA Credential Manager portal where the user can request a replacement token.	Windows and OS X
ValidDevices	Specifies a whitelist of storage devices to which tokens can be imported.	Windows and OS X

Token Storage Database Options for VPN Client Applications (Windows)

The first time a user runs the SecurID desktop application, a token storage database is created on the user's computer. This database is a container for the tokens imported to the local hard drive. When a user performs a SecurID authentication, the application retrieves the tokencode from the token in the database.

The default token storage database is a per-user database, meaning that it contains only those tokens that belong to a specific user of the computer. The per-user database is intended to be used by VPN client applications that are running in the user context. (To run in the user context, the user must start the VPN client application.)

If your users log on to the VPN client before logging on to Windows (referred to as "prelogon" or "start before logon") or you run your VPN client as a service, you cannot use the default per-user database. You must instead configure your installation to create a single database that contains all of the tokens stored on the hard drive.

This is required for the following reasons:

- When a user logs on to the VPN client before logging on to Windows, the user context is not known (the user cannot be identified), because the user has not yet logged on to Windows. Therefore, the SecurID desktop application cannot locate the user's token.
- When a VPN client is running as a service, a specific user cannot be identified and that user's token cannot be located because the VPN client is running as System instead of as a user.

Important: Due to the user context issues, the RSA SecurID Software Token for Windows supports prelogon VPN authentication and running the VPN client as a service for only one user who has been issued only one software token. However, the application supports a single user with multiple tokens if the VPN client application provides the option of selecting a token from a list.

To create a single database, you must install the desktop application from the **msiexec** command line, using the SETSINGLEDATABASE property. This property creates a single database in the **All Users** directory. When the user starts prelogon to the VPN client, for example, the VPN client retrieves a token from **All Users**.

If necessary, you can create the single database in a location other than the default location. For more information, see "Command Line Properties" on page 26.

Important: Use the SETSINGLEDATABASE property only on single-user machines. Do not use this property if multiple users share a computer, because doing so gives all users access to all tokens stored in the single database.

Token Database Copy Protection (Windows)

RSA SecurID Software Token for Windows uses the following data protection mechanisms to tie the token database to a specific computer:

- Binding the database to the computer's primary hard disk drive
- Implementing the Windows Data Protection API (DPAPI)

These mechanisms ensure that an intruder cannot move the token database to another computer and access the tokens.

If you replace a hard disk drive on a computer, the token database installed on that computer cannot be recovered, and you must issue new tokens to users of that computer. If you back up users' hard disk drives on a daily basis, and you are concerned about possibly having to replace hard disk drives, you can preserve users' software tokens by disabling copy protection when you install the SecurID desktop application. To do so, you must install the application from the command line and set the SETCOPYPROTECTION property to FALSE. This disables binding the database to the hard disk drive on all computers on which you install the application. (For a command example, see "Command Line Examples" on page 28.)

Even if you disable copy protection, the database is still protected by DPAPI. You can further protect the database by having the user set a device password, as described in "Set a Device Password" on page 74.

Installing RSA SecurID Software Token for Windows

RSA SecurID Software Token for Windows uses a Windows Installer MSI file that contains a database of information on the elements of the installation, uninstallation, and upgrades for the application and its components. If you do not want to customize the product, you can double-click the MSI file to start an interactive installation. To customize the product, you must invoke the MSI file from the command line, specifying the features and properties that you want to install.

Note: RSA recommends that you set any customization policies before you install the application. For more information, see "Customizing the Application" on page 83.

Enterprise-Wide Installations

You can install RSA SecurID Software Token for Windows on a large number of computers using a third-party deployment tool, such as Microsoft System Center Configuration Manager. If you specify a silent installation, the application is installed on all computers without requiring users to interact with the installation program. A silent installation is ideal for organizations that do not allow non-administrators to install software.

With Configuration Manager or another third-party deployment tool, you can include token files (SDTID files) in your deployment package. Configure the distribution package so that tokens will be installed to **Desktop** or to **My Documents**. This ensures that tokens will be imported automatically when a user starts the application.

When you create the distribution package, you must use a specific script so that each user receives a unique token. For example, use a script that contains logic such as the following to ensure that only the target user receives the token.

> "if systemresource.name=LAPTOP-LAP, copy *username*.sdtid c:\Users\usernme\Desktop"

Windows Installation Package

The RSA SecurID Software Token for Windows installation kit, **RSASecurIDToken412.zip**, contains the following:

- An installation package, **RSASecurIDTokenAuto412x64.msi**.
- A device definition file, **def\Desktop-Windows-4.x-swtd.xml**. For more information, see "Device Definition Files" on page 48.
- An administrative template, **template\RSASecurIDToken.adm**. For more information, see "Customizing the Application" on page 83.

Install the Application Using the InstallShield Program

This section describes how to install RSA SecurID Software Token for Windows using the InstallShield installation program.

Before You Begin

- You must have administrator privileges to install RSA SecurID Software Token for Windows.
- The Internet Explorer plug-in requires 64-bit Internet Explorer 8 or 9. Before installing this plug-in, make sure users have the correct version installed.

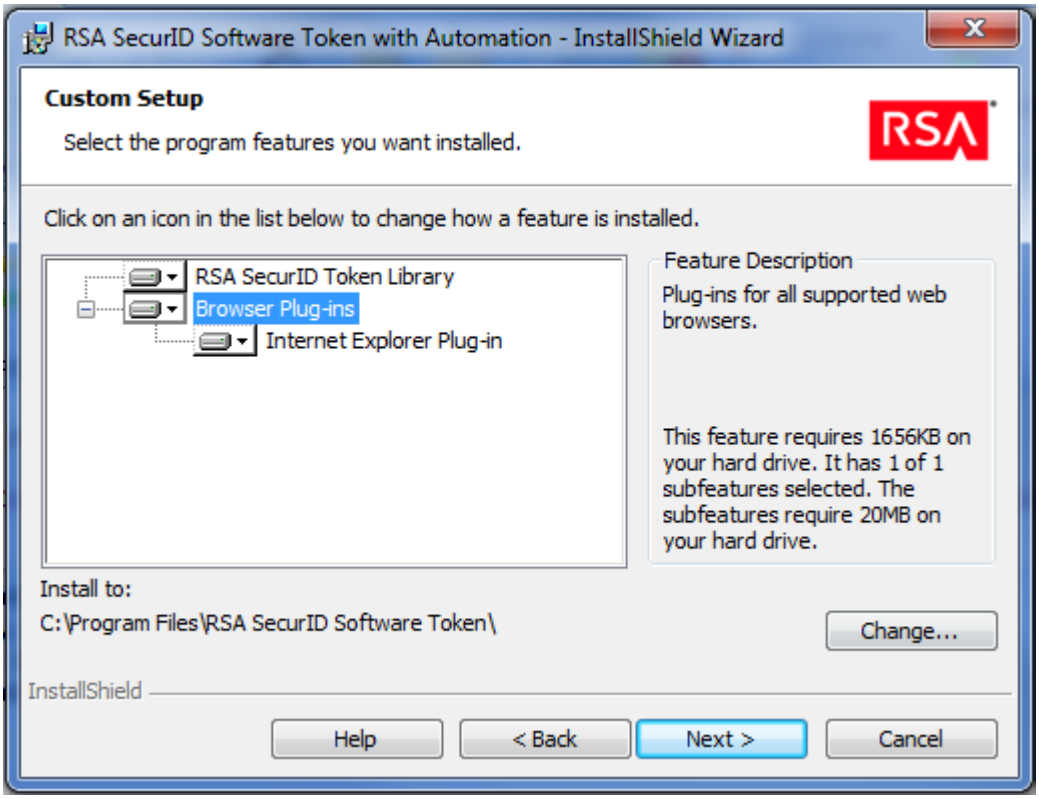
To install the application using the InstallShield program:

1. Open the installation kit.
2. In the root directory, double-click **RSASecurIDTokenAuto412x64.msi**.
3. On the Welcome screen, click **Next**.
4. On the License Agreement screen, read the terms of the license agreement, and then select **I accept the terms in the license agreement**. You must accept the terms in the license agreement to continue the installation. To print the license agreement, click **Print**. Click **Next**.

   The Setup Type screen is displayed.
5. Do one of the following.
   - To install the application to the default location without installing the Internet Explorer plug-in, select **Typical**, click **Next**, and click **Install**. When the installation is complete, select the option to launch the application or click **Finish**.
   - To install the Internet Explorer plug-in, or to install the application to a location other than the default, select **Custom**.

     The Custom Setup screen is displayed. The RSA SecurID Token Library is installed by default. You cannot remove this feature.

6. Do one of the following:
   - To install the application to a directory other than the default, click **Change**. Change the destination directory, and click **OK**.
   - To install the Internet Explorer plug-in, click the plus sign to display the plug-in option, select the plug-in, and select **This feature will be installed on local hard drive**.



7. Click **Next**.
8. On the Ready to Install the Program screen, click **Install**.
   When the installation is complete, you are prompted to launch the application.
9. Do one of the following:
   - To start the application, select **Launch RSA SecurID Token**, and click **Finish**.
   - If you do not want to start the application, click **Finish**.
     You do not need to restart your computer.

Command Line Installation

A Windows Installer command line installation allows you to install product features to meet your specific requirements. For example, if you use the software token library with a supported third-party plug-in that has its own user interface, you can exclude the desktop application executable ("DesktopClient") from the installation. The installation package also provides command line properties that allow you to change the location where specific components are installed on the user's system.

Note: To run a command line installation on Windows 7, you must run the command shell as Administrator.

Features That Can Be Installed or Uninstalled from the Command Line

The following table describes the product features that you can install or uninstall from the command line.

Feature Name	Description	Installed by Default?
DesktopClient	The client components of the application, including the application user interface.	Yes
InternetExplorerPlugin	Internet Explorer plug-in	No
HDDPlugin	Local Hard Drive (RSA) plug-in. This is the default storage device plug-in.	Yes
HWAuthenticatorPlugin	RSA Hardware Authenticator Plug-In 4.1, which supports using a connected SecurID 800 authenticator with the desktop application. For more information, see "Using a Connected RSA SecurID 800 Authenticator (Windows)" on page 18. **Note:** You can leave this plug-in installed even if you do not use connected SecurID 800 devices.	Yes

Command Line Properties

The following table describes the properties that you can set using the command line. Once you set a command property, you cannot change it unless you first uninstall the application.

Property	Description	Values
COPYTOSYSTEM32	Installs a copy of the software token library, **stauto32.dll**, and its dependent DLLs (**QtCore4.dll** and **QtGui4.dll**) into the **system32** directory. Does not add the application path to the system PATH environment variable, because the application will find **stauto32.dll** in the **system32** directory. You may want to use this option if adding the application path to the System path causes the System path to exceed the Windows length limit.	TRUE or FALSE. If set to TRUE, the installation program does not modify the system PATH environment variable, and copies DLLs to the system32 directory. Default is FALSE.
SETCOPYPROTECTION	Sets copy protection on the token database by binding the token database to the primary hard disk drive on the computer. For more information, see "Token Database Copy Protection (Windows)" on page 21.	TRUE or FALSE. If set to TRUE, copy protection is enabled. If set to FALSE, copy protection is disabled. Default is TRUE.
SETDATABASEDIR	Installs the database containing the user's software tokens (token database) to a location other than the default directory. Allows enterprises that do not allow Write access to the default installation directory, or that have other drives that are set up for encryption, to configure the location of the token database directory during a silent installation. The total length of the database name combined with the database directory cannot exceed the maximum pathname length for the platform. **Important:** You must give nonadministrative users Read, Write, and Modify privileges to the database directory. Otherwise, they might not be able to use the application. The database should not be installed in protected directories such as **Program Files** and the **C:** root directory.	Set the database directory path as follows. **For a Per-User Database:** The path must begin with ~/ or ~\, making it relative to the user directory and applicable to multiple users. The user directory on Windows 7 and Windows Server 2008 is **C:\Users*username***. **For a Single Database:** You must specify an absolute path beginning with the drive letter and a backslash: *drive*:\. The database will be owned by the first user to use the application. The default directory on Windows 7 and Windows Server 2008 is **~\AppData\Local\RSA\RSASecurID Software Token Library**. Directory path elements are created if they do not exist. The /../ characters are not allowed.

Property	Description	Values
SETSINGLEDATABASE	Creates a single token database. Set this property to TRUE to allow prelogon to a VPN client application. Because the VPN client cannot identify the user prior to Windows logon, the user's tokens must be stored in a single database that is not associated with the specific user. This property is intended for users who do not share a computer. This property is not supported if multiple SecurID users share a computer.	TRUE or FALSE. If set to TRUE, changes the default database location from the specific user location to **C:\ProgramData\RSA\…** on Windows 7 and Windows Server 2008. Default is FALSE.

Command Line Syntax

To install RSA SecurID Software Token for Windows from the command line, use the Windows Installer command, **msiexec**, with appropriate options.

Follow these guidelines for a command line installation:

- All properties entered on the command line are interpreted as uppercase, but the value retains case sensitivity. For example, you can enter the SETSINGLEDATABASE property in uppercase or lowercase, but you must enter the value (TRUE or FALSE) in uppercase.
- By default, the application is installed to the **Program Files** directory. To change the location of the destination directory, use the Windows Installer INSTALLDIR property.
- To install specific features, and exclude others, you must use the **msiexec** command with the ADDLOCAL property. You must specify each feature that you want to install. The ADDLOCAL property takes the form ADDLOCAL=*PropertyValue*. Separate each value with a comma. See "Command Line Examples" on page 28.
- To add or remove a feature after performing an installation, you must reinstall the software. To remove a feature, use the REMOVE property. To add a feature that you did not initially install, use the ADDLOCAL property. See "Modify an Installation Using the Command Line" on page 31.
- If pathnames or properties contain spaces, enclose the entire path in quotation marks.
- Enter command line options (for example, /i) in either lowercase or uppercase. Windows Installer command line options are case insensitive.
- To review the results of the installation, use the /lv option (verbose logging). Store the log file, for example, install.log, in a known location, such as %USERPROFILE%.

Note: For more information on Windows Installer command line options, open a command line, and type **msiexec**. This displays **msiexec** command options. For additional details, access the Microsoft Developer Network Library (MSDN Library) and search on "Windows Installer Command Line Options."

Command Line Examples

The following sections contain examples of installations performed using the Windows Installer **msiexec** command line. The /i option, with the MSI filename, installs the application. The examples use the /qn option, which specifies a silent, or quiet installation (no user prompts), and the /lv option, which creates a verbose installation log.

Install the Application Silently

The following command installs the application, the default storage device plug-in (hard drive plug-in), and the RSA Hardware Authenticator Plug-In.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log
```

Install the Application, Internet Explorer Plug-In, and Hard Drive Plug-In

The following command uses the ADDLOCAL property to silently install the application, the Internet Explorer plug-in, and the default storage device plug-in (HDDPlugin).

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log ADDLOCAL=DesktopClient,InternetExplorerPlugin,
HDDPlugin
```

Install a Copy of the Software Token API to the system32 Directory

The following command uses the COPYTOSYSTEM32 property to install a copy of the software token API into the **system32** directory. Use a command similar to this one if adding the application path to the System path will cause the System path to exceed the Windows length limit.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log COPYTOSYSTEM32=TRUE
```

Set Copy Protection

The following command uses the SETCOPYPROTECTION property to remove token binding from the local hard drive. Use a command similar to this one to avoid having to reissue new tokens if you replace users' hard disk drives. This command does not affect copy protection provided by the DPAPI implementation.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log SETCOPYPROTECTION=FALSE
```

Install the Token Database to a Non-Default Location

The following command silently installs the application and installs the token storage database to a non-default location. Use a command similar to this one to install the token database in a custom directory if your company does not allow Write access to the default installation directory or if you have other drives that are set up for encryption.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log SETDATABASEDIR=~\rsatokens
```

Install a Single Token Database to the Default Location

The following command silently installs the application and creates a single token storage database that is not associated with a specific user. The database resides in the **All Users** directory. Use a command similar to this one if you are using an application that has integrated SecurID functionality.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log SETSINGLEDATABASE=TRUE
```

Install a Single Token Database to a Non-Default Location

The following command silently installs the application and creates a single token storage database that is not associated with a specific user. Using an absolute path with the SETDATABASEDIR property creates a single database instance that is owned by the first user to use the application.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log SETSINGLEDATABASE=TRUE SETDATABASEDIR=c:\LocalDir
```

Note: You cannot install a single database specifying a relative path, as a relative path assumes multiple databases.

Modify an Installation

You can modify an existing installation to add or remove installable features.

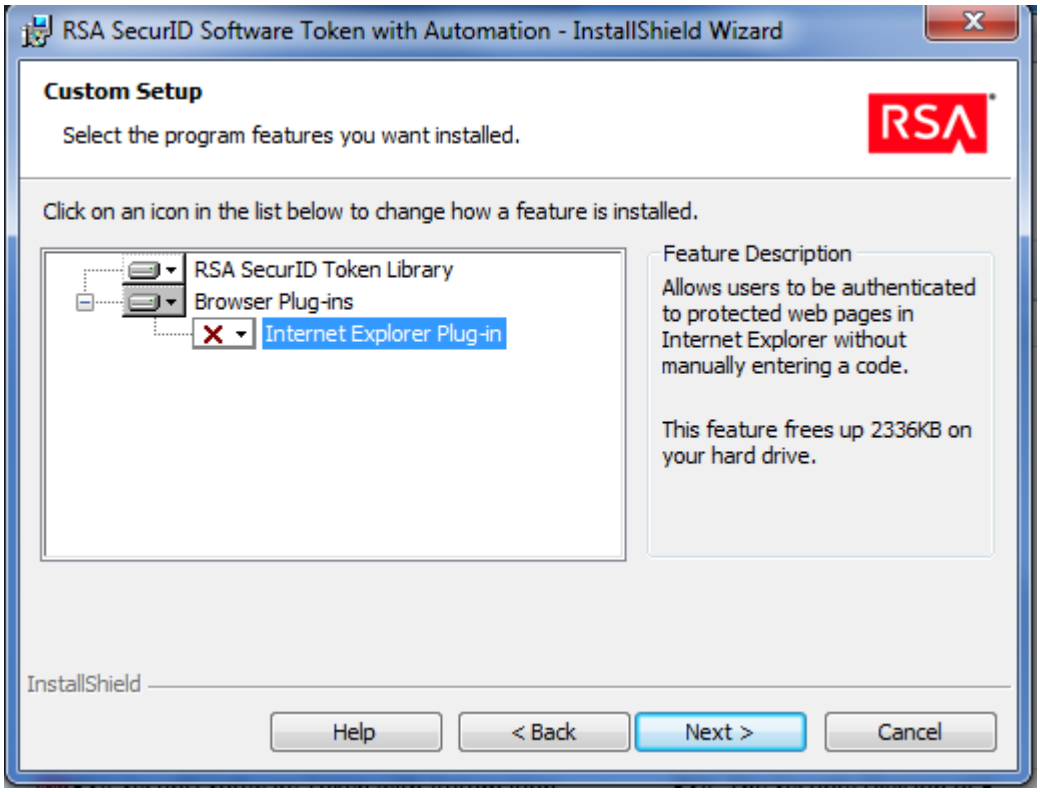
Modify a Single Installation Using the Program List

You can add or remove the Internet Explorer plug-in from a single installation using the Windows program list.

Note: You cannot use the program list to install or remove the hard drive plug-in (HDDPlugin) or the RSA Hardware Authenticator Plug-In (HWAuthenticatorPlugin). You must use the **msiexec** command line.

To install or remove the Internet Explorer plug-in using the program list:

1. In the Control Panel, click **Programs > Programs and Features**, and then select **RSA SecurID Software Token with Automation**.
2. Click **Change** and click **Next**.
3. Do one of the following:
   - To install the Internet Explorer-plug-in, select **This feature will be installed on local hard drive**.
   - To remove the Internet Explorer plug-in, select **This feature will not be available**.



4. Click **Next**, and click **Install**.
5. Click **Finish**.

Modify an Installation Using the Command Line

You can modify an installation on multiple computers using the **msiexec** command. You can use the **msiexec** command to add or remove the Internet Explorer plug-in or to remove the local hard drive plug-in or the Hardware Authenticator Plug-In.

To add the Internet Explorer plug-in using the command line:

Use the **msiexec** command with the ADDLOCAL property, and specify the value of the Internet Explorer plug-in.

This example silently installs the application and default device plug-in, adds the Internet Explorer plug-in, and logs the results to a file.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log ADDLOCAL=DesktopClient,HDDPlugin,
InternetExplorerPlugin
```

To remove the Internet Explorer plug-in using the command line:

Use the **msiexec** command with the REMOVE property, and specify the value of the Internet Explorer plug-in.

This example silently removes the Internet Explorer plug-in and logs the results to a file.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log REMOVE=InternetExplorerPlugin
```

To remove the local hard drive plug-in using the command line:

Use the **msiexec** command with the REMOVE property, and specify the value of the local hard drive plug-in.

This example silently removes the local hard drive plug-in and logs the results to a file.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log REMOVE=HDDPlugin
```

To remove the RSA Hardware Authenticator Plug-In using the command line:

Use the **msiexec** command with the REMOVE property, and specify the value of the Hardware Authenticator Plug-In.

This example silently removes the Hardware Authenticator Plug-In and logs the results to a file.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log REMOVE=HWAuthenticatorPlugin
```

Repair an Installation

You can repair errors in the existing installation. The repair process rewrites required registry entries, reinstalls missing files, replaces old files, and reinstalls shortcuts. Repairing the installation does not affect tokens that you have imported unless the token database has become corrupted. In that case, you must import new tokens.

Repair a Single Installation Using the Program List

You can repair a single installation using the program list.

To repair a single installation using the program list:

1. In the Control Panel, click **Programs > Programs and Features**, and then select **RSA SecurID Software Token with Automation**.
2. Click **Change**, and click **Next**.
3. On the Ready to Repair the Program screen, click **Install**.
4. When the repair is complete, click **Finish**.

Repair an Installation on Multiple Computers Using the Command Line

You can repair an installation on multiple computers using the **msiexec** command line.

To repair an installation using the command line:

Use the **msiexec** command with the /f option. The following command silently repairs an installation and logs the results to a file.

```
msiexec /qn /f pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log
```

Upgrading RSA SecurID Software Token for Windows

RSA SecurID Software Token 4.1.2 for Windows supports upgrading from versions 4.1 and 4.1.1 with Automation only. Upgrading overwrites the existing version and copies the existing token database to the 4.1.2 token database.

Note: If you installed a previous version to a directory other than the default, and you want to install version 4.1.2 to that directory, you must select a Custom setup and change the destination directory to match your previous installation.

Upgrade Procedures

You can upgrade using the MSI file or the msiexec command line.

To upgrade using the MSI file:

Run the RSA SecurID Software Token 4.1.2 MSI file, **RSASecurIDTokenAuto412x64.msi**.

To upgrade using the command line:

Enter the **msiexec** installation command with your preferred options. If you installed the Internet Explorer plug-in, and you want to use it with version 4.1.2, specify ADDLOCAL=InternetExplorerPlugin.

For example, the following command silently upgrades to RSA SecurID Software Token 4.1.2, installs the default per-user token database, reinstalls the default features, and adds the Internet Explorer plug-in and Local Hard Drive Plug-In.

```
msiexec /qn /i pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log ADDLOCAL=DesktopClient,HDDPlugin,InternetExplorerPlugin
```

Uninstalling RSA SecurID Software Token for Windows

You can uninstall RSA SecurID Software Token for Windows using the program list or from the command line. Uninstalling the application also removes the software token database of the user performing the uninstall. It does not remove the token databases of other users who share the same system.

Note: You must have administrator privileges to uninstall the application on Windows.

Uninstall the Application Using the Program List

Use the following procedure to uninstall the application using the program list.

To uninstall the application using the program list:

1. In the Windows Control Panel, click the program list (for example, **Programs**).
2. Click **RSA SecurID Software Token with Automation**, and click **Remove**.
3. When prompted to verify that you want to remove the program, click the appropriate removal option.

Uninstall the Application Using the Command Line

Use the following procedure to uninstall the application using the command line.

To uninstall the application using the msiexec command:

Use the **msiexec** command with the /x (uninstall) option. The following example uninstalls the application silently and logs the results to a file.

```
msiexec /qn /x pathname\RSASecurIDTokenAuto412x64.msi /lv
c:\install.log
```

Installing RSA SecurID Software Token for Mac OS X

You can deploy RSA SecurID Software Token for Mac OS X from the RSA web site or stage the application on your own web site. Alternatively, you can use deployment tools provided by Apple Computer or third-party vendors.

Note: RSA recommends that you set any customization policies before you install the application. For more information, see "Customizing the Application" on page 83.

OS X Installation Package

The RSA SecurID Software Token for Mac OS X installation package, **RSASecurIDMac412.dmg**, contains the following:

- An installation file, **RSASecurIDTokenAutoMac412x64.pkg**.
- A device definition file, **def\Desktop-Mac-4.x-swtd.xml**. For more information, see "Device Definition Files" on page 48.
- An administrative template, **template\com.rsa.SoftwareToken.Policies.plist**. For more information, see "Customizing RSA SecurID Software Token for Mac OS X" on page 92.

Customize the Token Database Location (Optional)

By default, software tokens used with the application are stored in **~/.RSA/RSA/RSA SecurID Software Token Library**. To change the location of the token database, you must modify a property list (plist) file that is created when you install the product. For instructions, see "Customize the Token Database Location" on page 93.

Install the Application

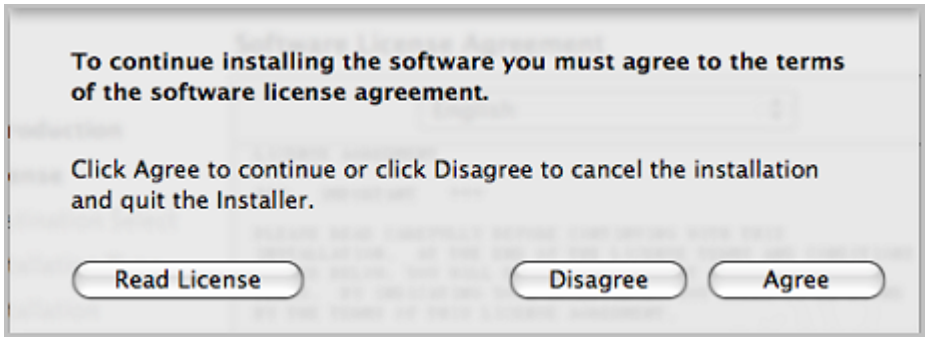
This section describes how to install RSA SecurID Software Token for Mac OS X. The following instructions assume that you have downloaded the dmg file to your computer.

Note: You must have administrator privileges to install the application.

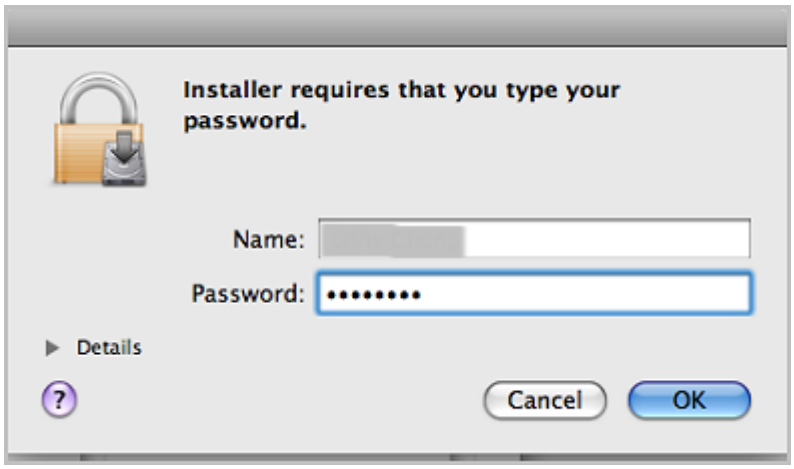
To install the application on OS X:

1. On the Dock, click the **Downloads** icon.
2. Click **RSASecurIDMac412.dmg**.
   The Finder opens and displays the RSA SecurID Software Token installer.
3. When prompted whether to continue, click **Continue**.

4. On the Welcome screen, click **Continue**.
5. On the Software License Agreement screen, do one of the following:
   - Use the scroll bar to scroll through the contents of the license agreement.
   - To print the license agreement, click **Print**.
   - To save the license agreement to a file, click **Save**.
6. Click **Continue**.
   A license agreement dialog box opens, as shown in the following figure.



7. To read the license agreement if you did not do so previously, click **Read License**. When you are ready to continue installing the software, click **Agree**.
8. Click **Install**.
   A password dialog box opens. In the **Name** field, enter your administrator user name.
9. In the **Password** field, enter your administrator password, and click **OK**.



   The software is installed, and the Summary screen displays a success message.
10. Click **Close**.
11. To delete the installation files, drag the mounted image ("RSA SecurID") to the Trash, and then drag **RSASecurIDMac412.dmg** to the Trash.

Upgrading RSA SecurID Software Token for Mac OS X

RSA SecurID Software Token with Automation 4.1.2 for Mac OS X supports upgrading from version 4.1.1 with Software Token Automation. Upgrades are not supported from OS X Mountain Lion.

Upgrade Procedure

Use the following procedure to upgrade the application. Upgrading overwrites the existing version and copies the existing token database to the version 4.1.2 token database.

To upgrade from version 4.1.1:

Run the RSA SecurID Software Token 4.1.2 installation file, **RSASecurIDTokenAutoMac412x64.pkg**.

Uninstall RSA SecurID Software Token for Mac OS X

RSA provides a script for uninstalling RSA SecurID Software Token for Mac OS X. Running the script removes all application files and the software token database of the user performing the uninstall. It does not remove the token databases of other users who share the same system.

Note: You must have administrator privileges to run the uninstall script.

To uninstall the application:

1. Open the Terminal application by navigating to **Applications/Utilities/Terminal**.
2. Navigate to the directory that contains the uninstall script. Type:
   ```
   >>>cd /Library/Application\ Support/SecurID
   ```
3. Run the uninstall script. Type:
   ```
   sudo ./uninstall-rsasecurid.py
   ```
4. When prompted, enter your administrator password.

Note: Uninstalling the application by dragging it to the Trash does not remove the token database. To remove the token database, you must run the uninstall script.

3 Provisioning Software Tokens

This chapter provides the key steps for issuing software tokens in RSA Authentication Manager and describes the supported methods for provisioning tokens to use with RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application).

Prerequisites

Before provisioning tokens for use with the SecurID desktop application, you must:

- Understand how to issue software tokens in RSA Authentication Manager:
  - To provision tokens using RSA Authentication Manager 8.0, see *Provisioning Software Tokens with RSA Authentication Manager 8.0* in the SecurID desktop token documentation package.
  - To provision tokens using RSA Authentication Manager 7.1 or RSA SecurID Appliance 3.0, use the RSA Security Console. For detailed instructions, see the RSA Security Console Help.
  - To provision tokens using RSA Authentication Manager 6.1, use the Database Administration application. For detailed instructions, see the Database Administration application Help.
  - To configure RSA Credential Manager so that users can obtain tokens through the RSA Self-Service Console, use the Security Console. For detailed instructions, see the Security Console Help.
- Issue 128-bit (AES) tokens. The application does not support 64-bit (SID) tokens.
- Plan your authentication requirement, as described in the following section.

For supported token configurations, see "Supported Software Token Configurations" on page 13.

Planning the RSA SecurID Authentication Requirement

RSA SecurID authentication normally requires using a PIN with the software token. The PIN and the tokencode displayed on the device form a passcode, which serves as the user's one-time password (OTP). Entering a PIN in addition to the tokencode is known as two-factor authentication. The two factors are something you have (the token) and something you know (the PIN). Using two factors delivers a higher level of authentication assurance than using a single factor.

RSA Authentication Manager also supports tokens that do not require entering a PIN. If you issue this token type, the user authenticates with the currently displayed tokencode (something you have). This option is best used when a system other than RSA SecurID is responsible for managing the second factor (something you know), such as an existing user name and password. In this scenario, the first factor (user name/password) is validated by the external system and the second factor (tokencode) is validated by Authentication Manager.

With RSA Authentication Manager 7.1 and RSA SecurID Appliance 3.0, you can issue software tokens that require a PIN: PINPad-style tokens and fob-style tokens. Each token type offers strong two-factor authentication assurance. The SecurID desktop application recognizes the installed token type and displays appropriate screens.

Note: If you are making a transition from hardware tokens to software tokens, and you are using RSA Authentication Manager 7.1, you might want to issue fob-style software tokens, which resemble the user experience with fob-style hardware tokens, such as the SID700. For more information, see "Fob-Style Software Tokens" on page 41.

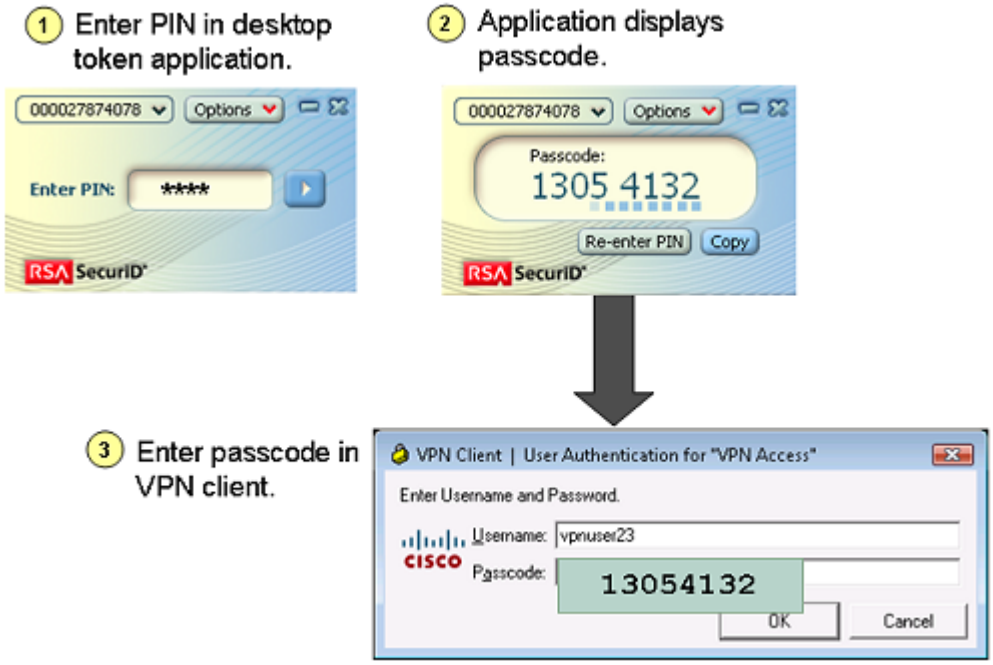
PINPad-Style Software Tokens

Note: RSA Authentication Manager 8.0, RSA Authentication Manager 7.1, RSA SecurID Appliance 3.0, RSA Credential Manager, RSA Authentication Manager 6.1, and RSA SecurID Authentication Engine support PINPad-style software tokens.

With PINPad-style software tokens, the user enters his or her SecurID PIN into the SecurID desktop application to generate a one-time password (OTP), or passcode. To authenticate, the user enters his or her user name and the OTP into the application that is protected by SecurID (for example, a VPN client application).

This authentication experience is similar to using an RSA SecurID PINPad-style hardware token, such as the SD520, where the user enters the PIN on the token's numeric keypad and then enters the displayed OTP (passcode) in the protected resource. PINPad-style software tokens used with the application require a numeric PIN of 4 to 8 digits.

The following figure shows the user authentication experience.



Fob-Style Software Tokens

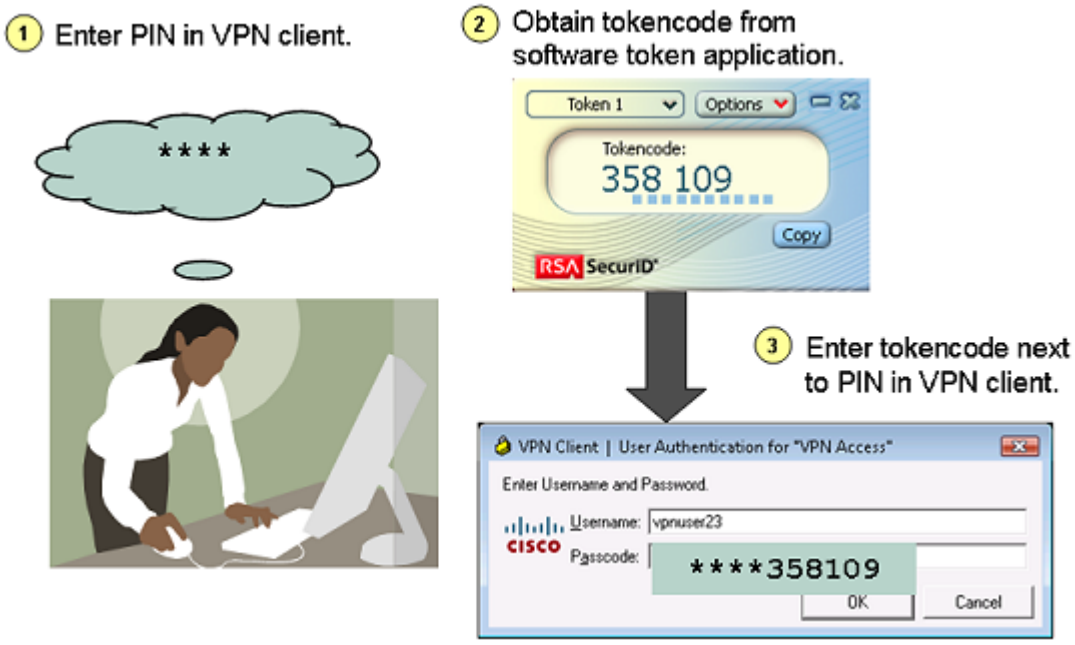
Note: RSA Authentication Manager 8.0, RSA Authentication Manager 7.1, RSA SecurID Appliance 3.0, and RSA SecurID Authentication Engine support fob-style software tokens. RSA Credential Manager and RSA Authentication Manager 6.1 do not support fob-style software tokens.

With fob-style software tokens, the user reads the SecurID tokencode from the software token application. To authenticate, the user enters his or her user name and the SecurID PIN into the SecurID protected application (for example, the VPN client), followed by the SecurID tokencode. The combination of the PIN and tokencode forms the OTP (passcode).

This authentication experience is similar to using an RSA SecurID hardware fob, such as the SID700, where the user types the PIN in the protected resource, followed by the current tokencode displayed on the fob. Because many users are familiar with RSA hardware fobs, issuing fob-style software tokens can simplify the transition from using a hardware fob to using a software token.

Fob-style software tokens used with the application can have a numeric PIN of 4 to 8 digits or an alphanumeric PIN of 4 to 8 characters.

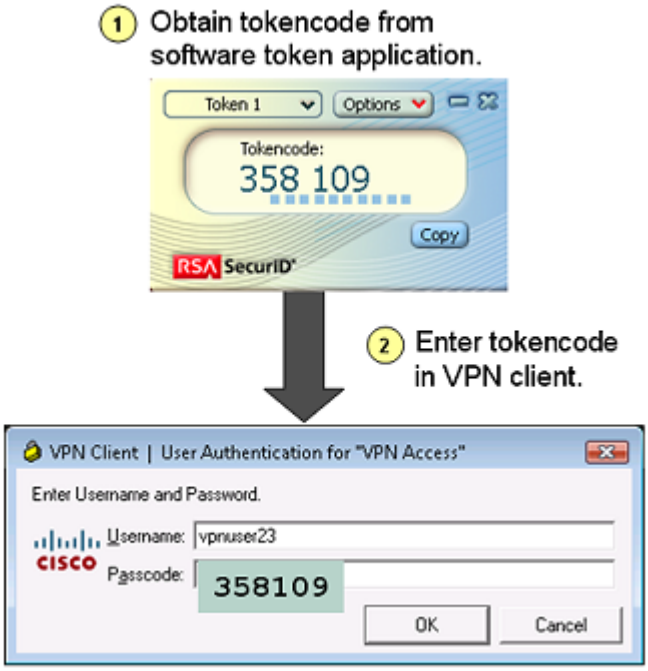
The following figure shows the user authentication experience.



Tokens That Do Not Require a PIN

With tokens that do not require a PIN, the VPN client prompts for a user name and passcode. (Some VPN clients prompt for a user name, PIN, and tokencode.) Instead of a PIN, the user enters four zeros (0000). To complete the authentication, the user enters the current tokencode displayed in the SecurID desktop application

The following figure shows the user authentication experience.



Token Storage Devices and Device Binding

RSA SecurID software tokens support device binding. Before the software token is issued by RSA Authentication Manager, an additional extension attribute (<DeviceSerialNumber/>) can be added to the software token record to bind the software token to a specific device. Binding a token provides the means for verifying that a token is imported to and stored on the intended storage device. If the user attempts to import the token to a different device, or if an unauthorized user gains access to the token in transit, the token import fails.

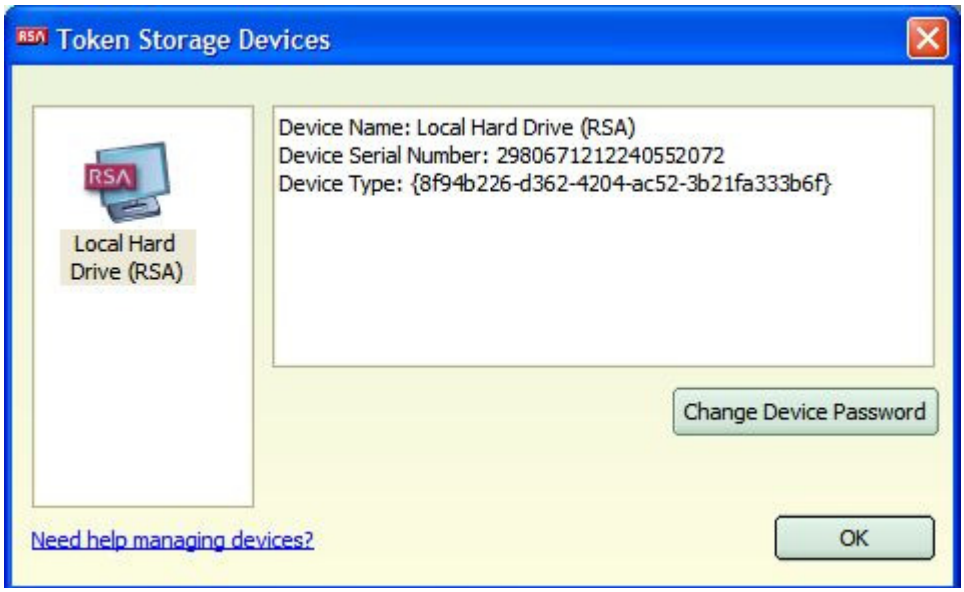
With the SecurID desktop application, you can bind a token to a device type, a device serial number, or a Windows user security identifier (user SID), as described in the following sections.

Device Type

If you want to require users to import tokens only to a specific type of supported storage device, you can bind their tokens to a device type. The device type can be the local hard drive, a Trusted Platform Module (TPM), a biometric device, or another supported storage device plug-in.

For example, if your token storage device is a TPM, you can bind tokens to the TPM to prevent users from importing a token to a different storage device, such as the computer's local hard drive.

The device type is represented in the SecurID desktop application as a globally unique identifier (GUID). The GUID of the selected device type is displayed in the **Device Type** field on the Token Storage Devices screen. In the following example, the device type is the local hard drive, which is the default device type.



Each type of supported storage device plug-in has a unique device GUID. For example, all Windows systems share a common device GUID for the local hard drive. Similarly, all OS X systems share a common device GUID for the local hard drive. These GUIDs are as follows:

Windows hard drive GUID	{8f94b226-d362-4204-ac52-3b21fa333b6f}
Mac OS X hard drive GUID	{d0955a53-569b-4ecc-9cf7-6c2a59d4e775}

Note: If you plan to deploy tokens to a large number of users, binding individual tokens to a device type may be inconvenient. For RSA SecurID Software Token for Windows, you can create a device whitelist (a list of supported devices) using the ValidDevices policy. This allows users to store tokens only on the devices specified in the list. For more information, see "ValidDevices" on page 88.

For instructions on binding a token to a device type, see one of the following sections:

- For RSA Authentication Manager 7.1, see "Step 4: Bind the Token" on page 50.
- For RSA Authentication Manager 6.1, see "Bind the Token" on page 57.

Device Serial Number

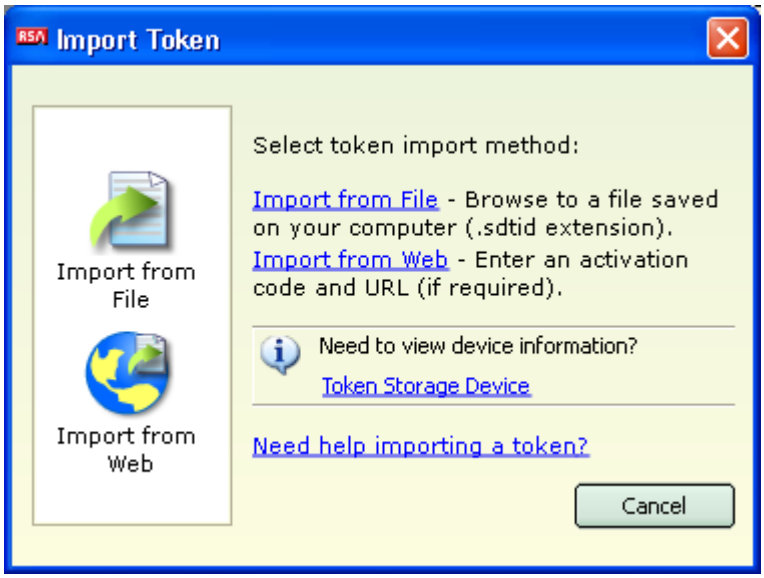
A device serial number uniquely identifies a specific device rather than a class of devices. Every instance of the installed SecurID desktop application contains a hard drive plug-in that has a unique device serial number. You can use the device serial number to bind a token to a specific device. If the same user installs the application on a different computer, the user cannot import software tokens into the application because the hard drive plug-in on the second computer has a different device serial number from the one to which the user's tokens are bound.

Obtain a Device Serial Number

Before you bind a token to a device serial number, the desktop application must be installed on the user's computer, and the user must launch the application and provide you with the device serial number. The device serial number is displayed on the Token Storage Devices screen. Instruct the user to obtain the device serial number as follows.

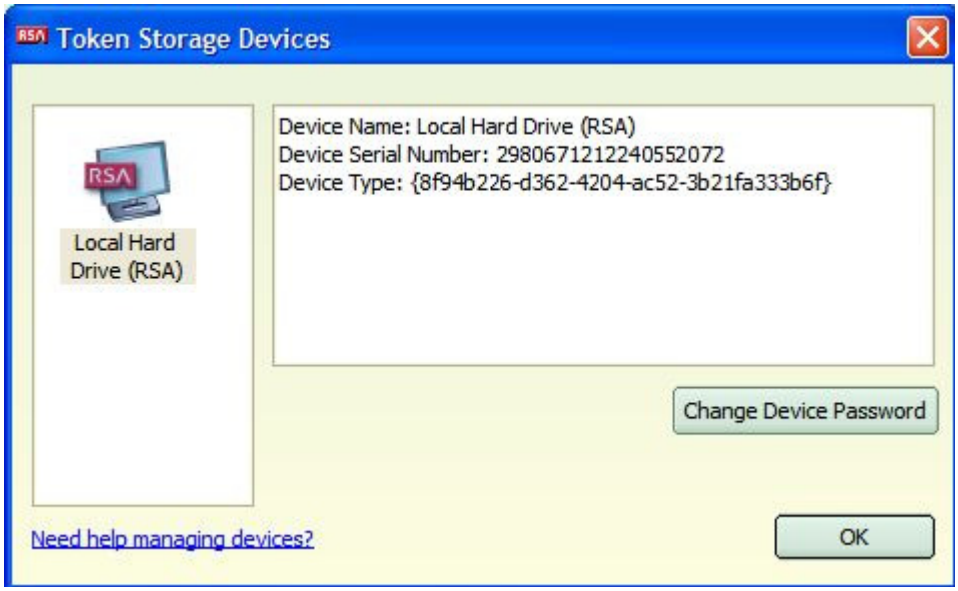
To obtain a device serial number:

1. Start the SecurID desktop application.
   The Import Token screen is displayed.



2. Click the **Token Storage Device** link just below the middle of the screen.

3. On the left side of the Token Storage Devices screen, click the name of the device. In this example, there is only one storage device, "Local Hard Drive (RSA)."



4. Copy or record the value displayed next to **Device Serial Number**.
5. Click **OK**.

For instructions on binding a token to a device serial number, see one of the following sections:

- For RSA Authentication Manager 7.1, see step 4 of "Step 4: Bind the Token" on page 50.
- For RSA Authentication Manager 6.1, see "Bind the Token" on page 57.

Windows User SID

With RSA SecurID Software Token for Windows, you can bind a token to a Windows user security identifier (user SID). This allows the user to import a token to a supported token storage device on any computer in the domain. Unlike binding a token to a device serial number, no interaction with the desktop application is required to obtain the binding information.

You can use a third-party utility to obtain the SIDs of user accounts. For example, the Microsoft Sysinternals suite includes PsTools, which contains the PsGetSid utility. PsGetSid allows you to display the SIDs of user accounts. To download PsTools, access Microsoft TechNet and search on "Sysinternals suite."

For instructions on binding a token to a user SID, see one of the following sections:

- For RSA Authentication Manager 7.1, see "Step 4: Bind the Token" on page 50.
- For RSA Authentication Manager 6.1, see "Bind the Token" on page 57.

Provisioning Overview

You can provision tokens for the SecurID desktop application using dynamic seed provisioning or file-based provisioning.

Use the information in the following table to become familiar with authentication server requirements for token provisioning, and then click the link to see more information on the provisioning method that you plan to use.

For information on provisioning with RSA Authentication Manager 8.0, see the document Provisioning Software Tokens with RSA Authentication Manager 8.0.

Provisioning Method	Server Requirement	Reference
Dynamic seed provisioning	RSA Authentication Manager 7.1 RSA SecurID Appliance 3.0	"Provisioning Tokens Using Dynamic Seed Provisioning" on page 47
File-based provisioning (SDTID files)	RSA Authentication Manager 6.1 RSA Authentication Manager 7.1 RSA SecurID Appliance 3.0	"Provisioning Tokens Using RSA Authentication Manager 6.1" on page 53 "Using File-Based Provisioning in RSA Authentication Manager 7.1" on page 59
Dynamic seed provisioning or file-based provisioning	RSA Credential Manager	"Provisioning Tokens Using RSA Credential Manager" on page 60

Provisioning Tokens Using Dynamic Seed Provisioning

Dynamic seed provisioning uses the RSA Cryptographic Token Key Initialization Protocol (CT-KIP) for the secure initialization and configuration of cryptographic tokens. When the protocol is executed, it results in the generation of the same shared secret on both the server and the token. You do not need to send a token file over the network to the remote user.

To use dynamic seed provisioning, you distribute a token in RSA Authentication Manager 7.1, selecting CT-KIP as the distribution method. You must also specify a one-time activation code, that the user must enter to allow the CT-KIP process to proceed. The activation code can contain up to 25 characters. For more information, see "Distribute the Token" on page 52.

For infomation on using dynamic seed provisioning with Authentication Manager 8.0, see *Provisioning Software Tokens with RSA Authentication Manager 8.0* in the SecurID desktop token documentation package.

The following table lists the provisioning steps and the following sections describe each step.

Task	Reference
1. Add the desktop device definition file to the Authentication Manager server.	"Add the Device Definition File" in the following section.
2. Configure the software token record.	"Configure the Software Token Record Using RSA Authentication Manager 7.1" on page 49
3. Distribute the token.	"Distribute the Token" on page 52

Device Definition Files

Software tokens issued using RSA Authentication Manager 7.1 or RSA SecurID Appliance 3.0 must be associated with a device definition file. This is an XML file that specifies the supported capabilities and attributes of tokens used with a specific software token application. The device definition file specifies the supported tokencode characteristics, token PIN type (PINPad-style, fob-style, or PINless), whether the token is CT-KIP capable, and the supported binding attributes.

RSA provides the following device definition files for RSA SecurID Software Token 4.1.2 in the **def** folder of the installation kit for your platform:

- **Desktop-Windows-4.x-swtd.xml**
- **Desktop-Mac-4.x-swtd.xml**.

Add the Device Definition File

Note: If you used the desktop device definition file provided with RSA SecurID Software Token 4.1, you can continue to use that file with RSA SecurID Software Token 4.1.2.

Before you issue software tokens to use with the SecurID desktop application, you must add the device definition file to RSA Authentication Manager 7.1. This adds the **Desktop PC 4.x** or **Desktop Mac 4.x** entry to the **Software Token Device Type** drop-down list on the Edit Token page. When you select the entry from the device type list, the page displays the software token attributes that you can configure.

To add the device definition file:

1. Save the device definition file provided in the installation kit for your platform to a folder on the computer running the RSA Security Console.
2. In the RSA Security Console, click **Authentication > Software Token Device Types > Import Token Device Type**.
3. Click **Browse** to locate the desktop device definition file for your platform. Select the file, and click **Submit**.

Configure the Software Token Record Using RSA Authentication Manager 7.1

This guide assumes that you have imported software tokens into Authentication Manager, assigned them to users, and are ready to configure them in the Security Console. The following sections highlight key steps for configuring token records for use with the SecurID desktop application. For more information, see the Security Console Help.

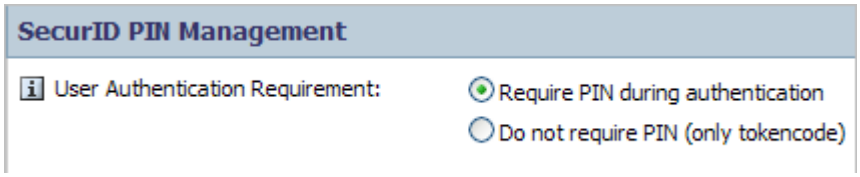
Step 1: Access the Edit Token page

1. Log on to the Security Console.
2. Click **Authentication > SecurID Tokens > Manage Existing**.
3. Select the token that you want to edit.
4. Click the drop-down arrow next to the token serial number, and select **Edit**.

Step 2: Select the User Authentication Requirement

In the **SecurID PIN Management** section, do one of the following:

- Select **Require PIN during authentication** if you want the user to authenticate with a passcode (PIN plus tokencode).
- Select **Do not require PIN (only tokencode)** if you want the user to authenticate with a tokencode only (no PIN).

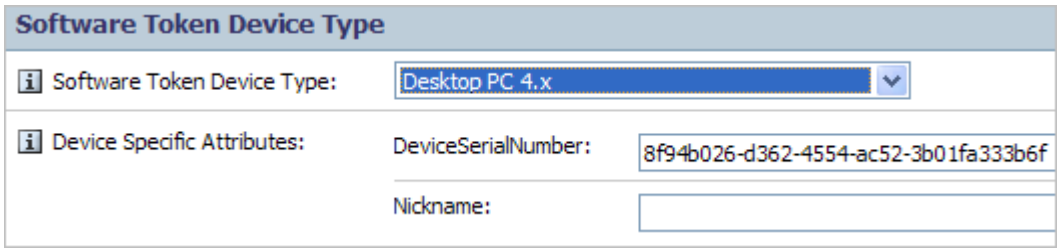


Step 3: Select the Software Token Device Type

From the **Software Token Device Type** drop-down list, select one of the following:

- For the Windows application, select **Desktop PC 4.x**.
- For the Mac OS X application, select **Desktop Mac 4.x**.

Selecting the device type displays the **Device Specific Attributes** section, which contains the **DeviceSerialNumber** field and the **Nickname** field.



Step 4: Bind the Token

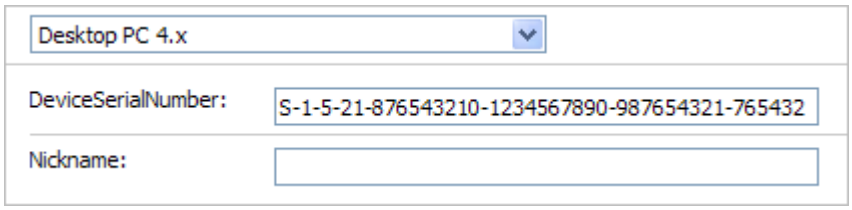
In the **DeviceSerialNumber** field, do one of the following:

- To bind the token to the local hard drive, leave the default entry.
- To bind the token to a device serial number, clear the **DeviceSerialNumber** field, and enter the device serial number that you obtained from the user.
- To bind the token to a Windows user SID, use a utility such as PsGetSid to obtain the user SID. For example:

  ```
  psgetsid.exe user1
  S-1-5-21-876543210-1234567890-987654321-765432
  ```

  Note: To download PsTools, which contains the PsGetSid utility, access Microsoft TechNet and search on "Sysinternals suite."

  Clear the **DeviceSerialNumber** field, and enter the user SID.



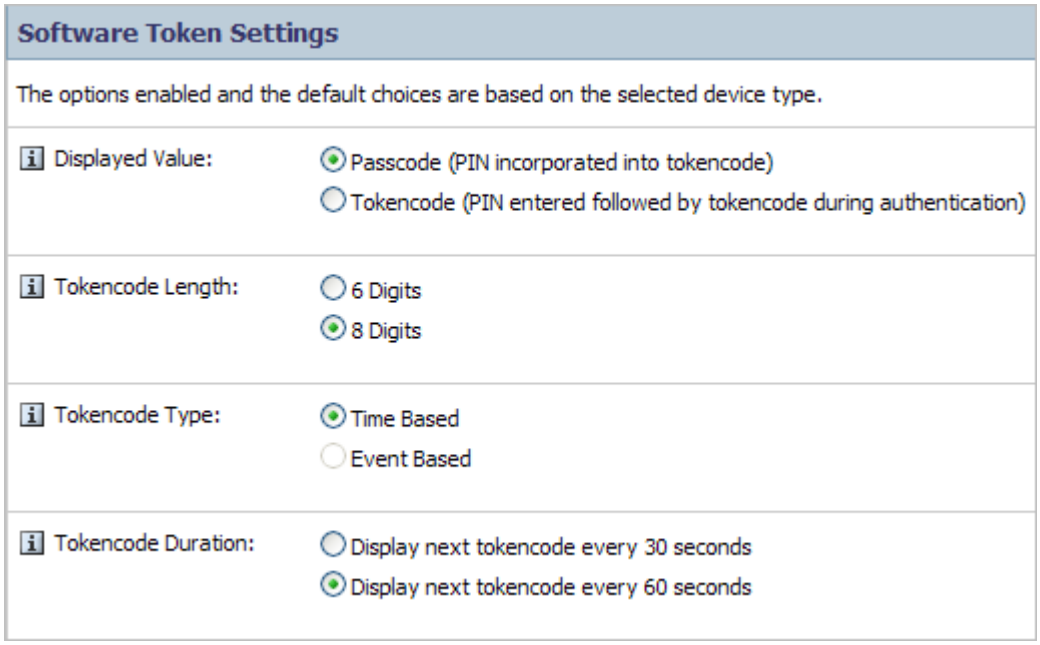
Step 5: Assign a Nickname

You can optionally assign the token a user-friendly name by entering a name in the **Nickname** field. The nickname can contain 1 to 24 case-sensitive, alphanumeric characters. By default, the user can change the nickname after importing the token. If you do not enter a nickname, the SecurID desktop application displays the token serial number.

If you do not want users to change the nickname you assign, you can set the DisableChangeTokenName policy. For more information, see Appendix A, "Customizing the Application."

Step 6: Select the Software Token Settings

In the **Software Token Settings** section, select the software token settings. The following figure shows the settings available for the SecurID desktop application, and the table explains each setting.



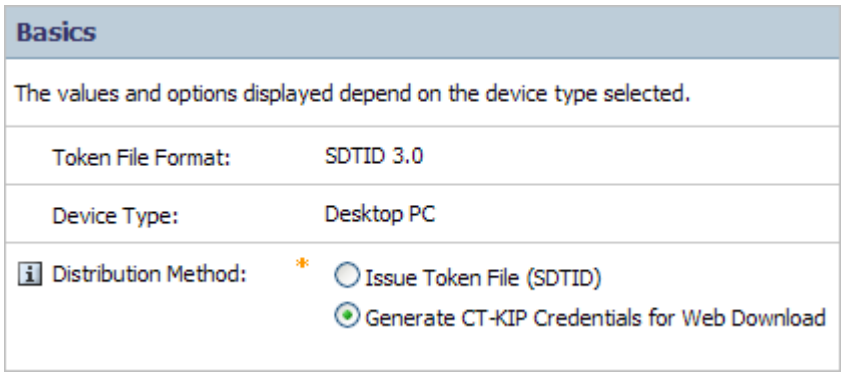
Option	Explanation
Displayed Value	**Displayed Value** options are available if you selected "Require PIN during authentication" as the user authentication requirement. Select **Passcode (PIN incorporated into tokencode)** to issue a PINPad-style software token. Select **Tokencode (PIN entered followed by tokencode during authentication)** to issue a fob-style software token. For more information on these token types, see "Planning the RSA SecurID Authentication Requirement" on page 39. If you selected **Do not require PIN** (only tokencode) as the user authentication requirement, the default displayed value is always set to Tokencode. The displayed value options do not affect the behavior of tokens that do not require a PIN.
Tokencode Length	Select either **6 Digits** or **8 Digits**.
Tokencode Type	Time Based is automatically selected, indicating that the tokencode changes at a regular interval. The application does not support event-based tokens.
Tokencode Duration	Select either **Display next tokencode every 30 seconds** or **Display next tokencode every 60 seconds**.

Distribute the Token

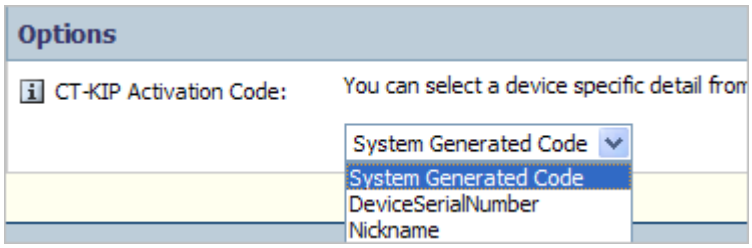
To use dynamic seed provisioning to distribute tokens, you must specify CT-KIP as the distribution method, and select the option that you want to use as the activation code.

To distribute the token:

1. In the Security Console, click **Authentication > SecurID Tokens > Manage Existing**.
2. Use the search fields to find the token that you want to distribute.
3. From the search results, click the token that you want to distribute.
4. From the Context menu, click **Edit**.
5. From the **Software Token Device Type** drop-down menu, select **Desktop PC 4.x** or **Desktop Mac 4.x**.
6. Click **Save & Distribute Token**.
7. In the **Basics** section, next to **Distribution Method**, select **Generate CT-KIP Credentials for Web Download**.



A list of options from which you can select an activation code is displayed. If you bound the token and assigned a token nickname, the list contains the options shown in the following figure.



8. Do one of the following:
   - If you did not bind the token to the user SID, select **System Generated Code**. The user will be prompted to enter the system-generated code in the SecurID desktop application when importing the token.
   - If you bound the token to the user SID, and you want to use the user SID as the activation code, select **DeviceSerialNumber**. You must also set the ActivationCode policy to 1 (true) and the CtkipUrl policy to the CT-KIP URL to allow auto-import of the token. Auto-import is required because the user SID exceeds the maximum number of characters that can be entered in the application's **Enter Activation Code** field. To set the ActivationCode policy, see Appendix A, "Customizing the Application."
9. Click **Next** to view the token delivery details.

   The **Service Address** field lists the URL of the CT-KIP provisioning server.
10. Do one of the following:
    - If you selected a system-generated activation code, communicate the code to the assigned user.
    - If you did not set the CtkipUrl policy and ActivationCode policy, communicate the activation code and the URL **(Service Address)** to the assigned user.

Provisioning Tokens Using RSA Authentication Manager 6.1

RSA Authentication Manager 6.1 supports file-based provisioning. With file-based provisioning, an XML-format file (SDTID file) containing token data is generated by Authentication Manager when you configure a software token for an end user. RSA recommends assigning a password to each SDTID file to protect the file in transit. Password protection prevents an unauthorized person from using the token even if that person is able to intercept the token file. You can distribute token files as attachments to e-mail messages, or make the files available on a network directory or web site.

You can optionally use file-based provisioning in RSA Authentication Manager 7.1. See "Using File-Based Provisioning in RSA Authentication Manager 7.1" on page 59. To use RSA Credential Manager for file-based provisioning, see "Provisioning Tokens Using RSA Credential Manager" on page 60.

The following table lists the provisioning steps, and the following sections describe each step.

Task	Reference
1. Configure the software token record.	"Configure the Software Token Record" on page 54
2. Bind the token.	"Bind the Token" on page 57
3. (Optional) Assign a token nickname.	"Assign a Token Nickname" on page 59
4. Distribute the SDTID file.	"Distribute the SDTID File" on page 59

Configure the Software Token Record

This guide assumes that you have imported software token records into Authentication Manager, assigned them to users, and are ready to configure them using the Database Administration application.

This section highlights key steps in using RSA Authentication Manager 6.1 to configure token records for use with the SecurID desktop application. For more information, see the Database Administration application Help.

Supported Token Attributes

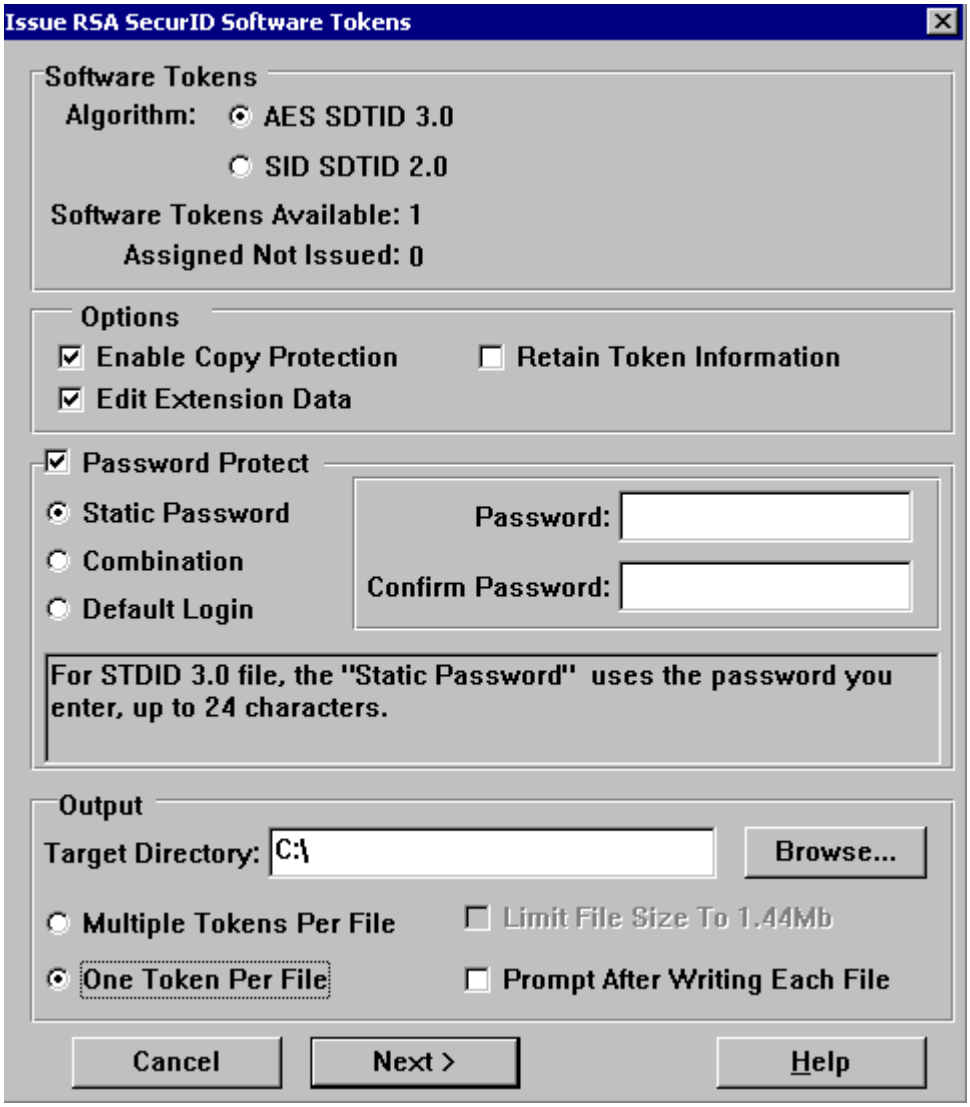
RSA Authentication Manager 6.1 supports the following software token attributes:

- 8-digit tokencode length
- 60-second, time-based tokencode
- Passcode authentication (PIN plus tokencode)
- Tokencode authentication (no PIN required)

Note: RSA Authentication Manager 6.1 does not support fob-style tokens (PIN and tokencode entered in the protected resource).

To configure a token record in RSA Authentication Manager 6.1:

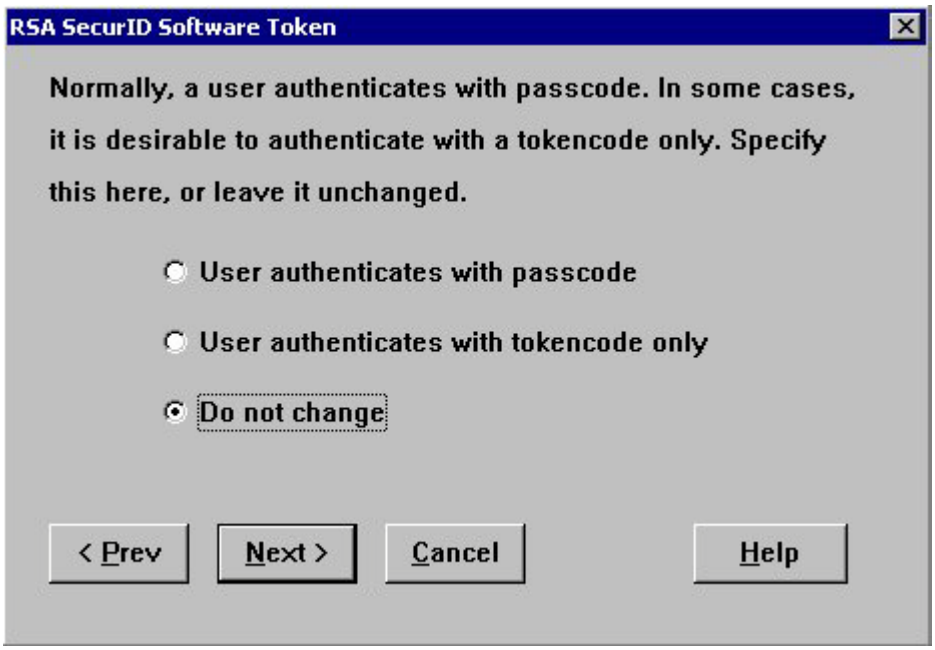
1. Open the Database Administration application, and select **Tokens > Issue Software Tokens**.



2. Accept the default algorithm (AES SDTID 3.0).
3. Under **Options**, leave **Enable Copy Protection** selected, and select **Edit Extension Data**.
4. If you want to protect the SDTID file with a password, select **Password Protect**, and then enter and confirm a static password of 1 to 24 case-sensitive characters, or select another password protection option. For information on other password protection options, click the **Help** button at the bottom right of the screen.

Note: The user must enter the password when importing the token. The password is not used again.

5. Under **Output**, in the **Target Directory** field, browse to the directory on your system to which you want the token file to be exported.
6. Under **Output**, select **One Token Per File**.
7. Click **Next**, and select **One user**.
8. Click **Next**, and select the user for whom you want to issue the token. Click **OK**, and click **Next**.
9. Do one of the following:
   - To require passcode authentication, leave **Do not change** selected or select **User authenticates with passcode**.
   - To issue a token that does not require a PIN, select **User authenticates with tokencode only**.



10. Click **Next**, and then click **Yes**.
    The Edit Token Extension Data screen is displayed. Use the instructions in the following section to bind the token to a device attribute.

Bind the Token

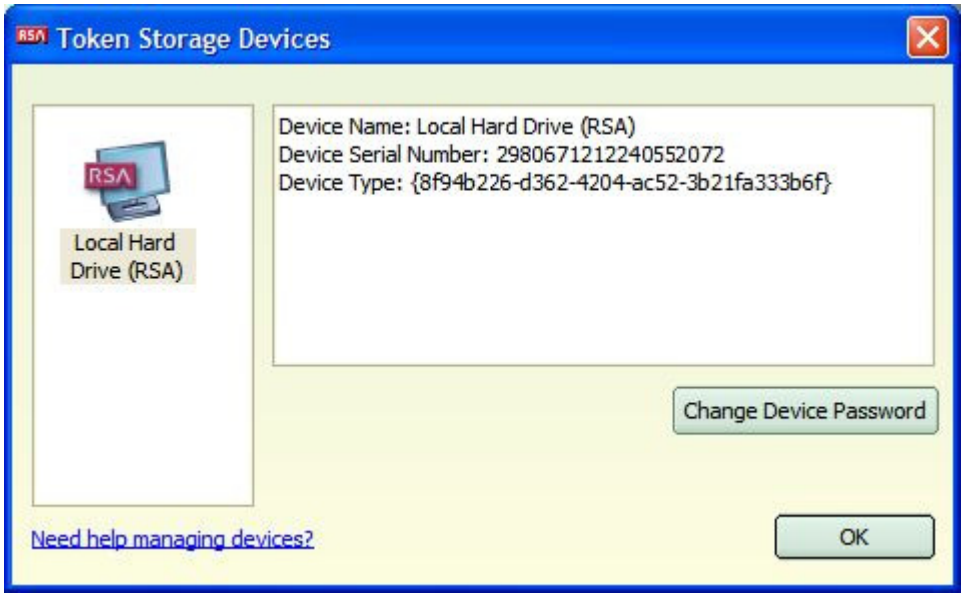
To bind a token using RSA Authentication Manager 6.1, you must create token extension data. You can bind the token to a device type, a device serial number, or a user SID (Windows systems only). For details of these device binding options, see "Token Storage Devices and Device Binding" on page 43.

Bind a Token to a Device Type

Use the following procedure to bind a token to a device type.

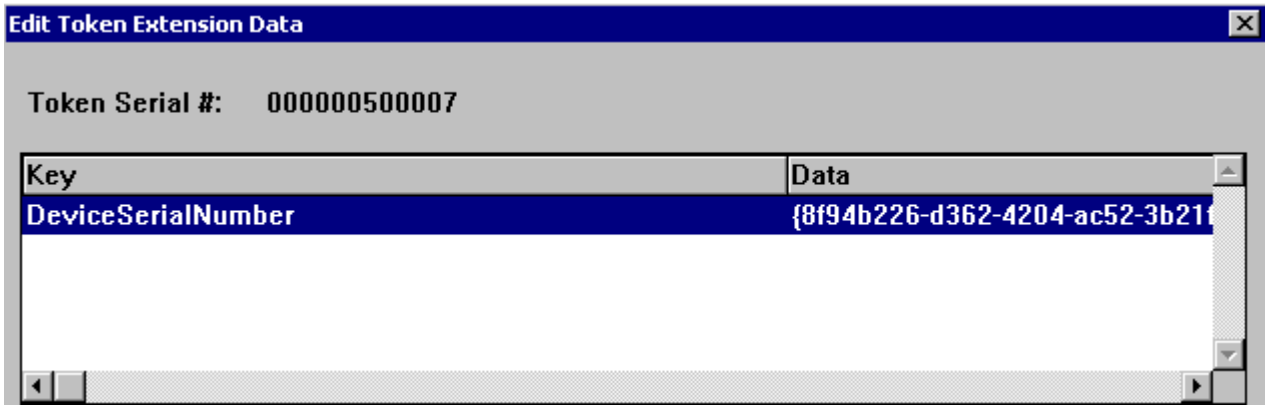
To bind a token to a device type:

1. Open the SecurID desktop application and access the Token Storage Devices screen.
2. Click a token storage device in the left pane to display device information, and copy the device type (GUID) from the **Device Type** field.



3. On the Edit Token Extension Data page, in the **Key** field, enter **DeviceSerialNumber**.

4. In the **Data** field, paste the GUID, enclosed in brackets.



Bind a Token to a Device Serial Number

Use the following procedure to bind a token to a device serial number.

To bind a token to a device serial number:

1. Obtain the device serial number from the user, as described in "Obtain a Device Serial Number" on page 45.
2. On the Edit Token Extension Data page, in the **Key** field, enter **DeviceSerialNumber**.
3. In the **Data** field, paste the device serial number. Click **Save**.

Bind a Token to a User SID

Use the following procedure to bind a token to a user SID. This option is supported only with RSA SecurID Software Token for Windows.

To bind a token to a user SID:

1. Use a third-party utility such as **PsGetSid.exe** to obtain the user SID. For example:

```
psgetsid.exe user1
S-1-5-21-876543210-1234567890-987654321-765432
```

Note: To download PsTools, which contains the PsGetSid utility, access Microsoft TechNet and search on "Sysinternals suite."

2. On the Edit Token Extension Data page, in the **Key** field, enter **DeviceSerialNumber**.
3. In the **Data** field, paste the user SID. Click **Save**.

Assign a Token Nickname

By default, the SecurID desktop application displays the serial number of an installed token. If you assign the token a user-friendly nickname in Authentication Manager, the application displays the nickname instead of the token serial number. The nickname can contain from 1 to 24 case-sensitive, alphanumeric characters.

The user can change the nickname after importing the token. If you do not want users to change the nickname, set the DisableChangeTokenName policy. For more information, see Appendix A, "Customizing the Application."

To assign a token nickname using RSA Authentication Manager 6.1:

1. On the Edit Token Extension Data page, in the **Key** field, enter **Nickname**.
2. In the **Data** field, enter a user-friendly name, for example, **MyVPN1**.
3. Click **Save**.

Distribute the SDTID File

You can distribute SDTID files through secure e-mail as attachments to e-mail messages, or make the token files available on a network directory or web site.

Before distributing SDTID files:

- Verify that the SecurID desktop application has been installed on the user's computer.
- Deliver the token file password, if any, through secure e-mail or another secure method.

Using File-Based Provisioning in RSA Authentication Manager 7.1

You can issue XML files (STDID files) containing token data using RSA Authentication Manager 7.1. To configure the token record, see "Configure the Software Token Record Using RSA Authentication Manager 7.1" on page 49. You can then issue an SDTID file and, optionally, protect it with a token password, as described in the following section.

Select the Distribution Method and Assign a Password

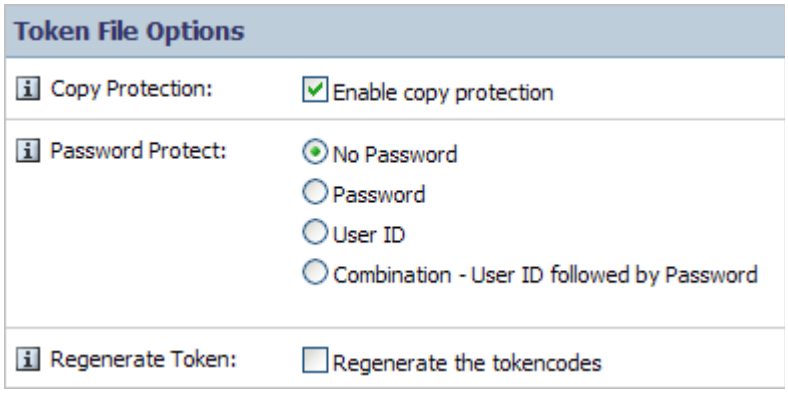
You can protect the SDTID file in transit by setting a password of 1 to 24 case-sensitive, alphanumeric characters. The user must enter the password to complete the token import. The password is not used again.

To select the distribution method and assign a password:

1. In the Security Console, click **Authentication > SecurID Tokens > Manage Existing**.
2. Use the search fields to find the token that you want to distribute.
3. From the search results, click the token that you want to distribute.
4. From the Context menu, click **Edit**.

5. From the **Software Token Device Type** drop-down menu, select **Desktop PC 4.x** or **Desktop Mac 4.x**.
6. Click **Save & Distribute Token**.
7. In the **Basics** section, next to **Distribution Method**, select **Issue Token File (SDTID)**.

   This enables the **Token File Options** section.
8. In the **Password Protect** section, select **Password** or another password protection option. For information on the other password options, click **Help on this page** at the top of the screen.



Note: The **Enable copy protection** field is automatically enabled. However, disabling this setting does not affect the copy protection mechanisms used in the SecurID desktop application.

9. Enter and confirm the password, and click **Next** to display the results.
10. Communicate the password to the user.

Provisioning Tokens Using RSA Credential Manager

You can use RSA Credential Manager to provision software tokens for the SecurID desktop application. Credential Manager is the self-service and provisioning component of RSA Authentication Manager 7.1 Enterprise Edition and shares the RSA Security Console. Users must request an account in the Self-Service Console before they can request a token. You can configure Credential Manager to distribute tokens using either dynamic seed provisioning or file-based provisioning.

Credential Manager supports standard token configurations (PINPad-style, 8-digit, 60-second, with or without a PIN). If you want to issue tokens with different configurations (for example, fob-style tokens), you must use RSA Authentication Manager 7.1. For more information, see "Configure the Software Token Record Using RSA Authentication Manager 7.1" on page 49.

Before You Begin

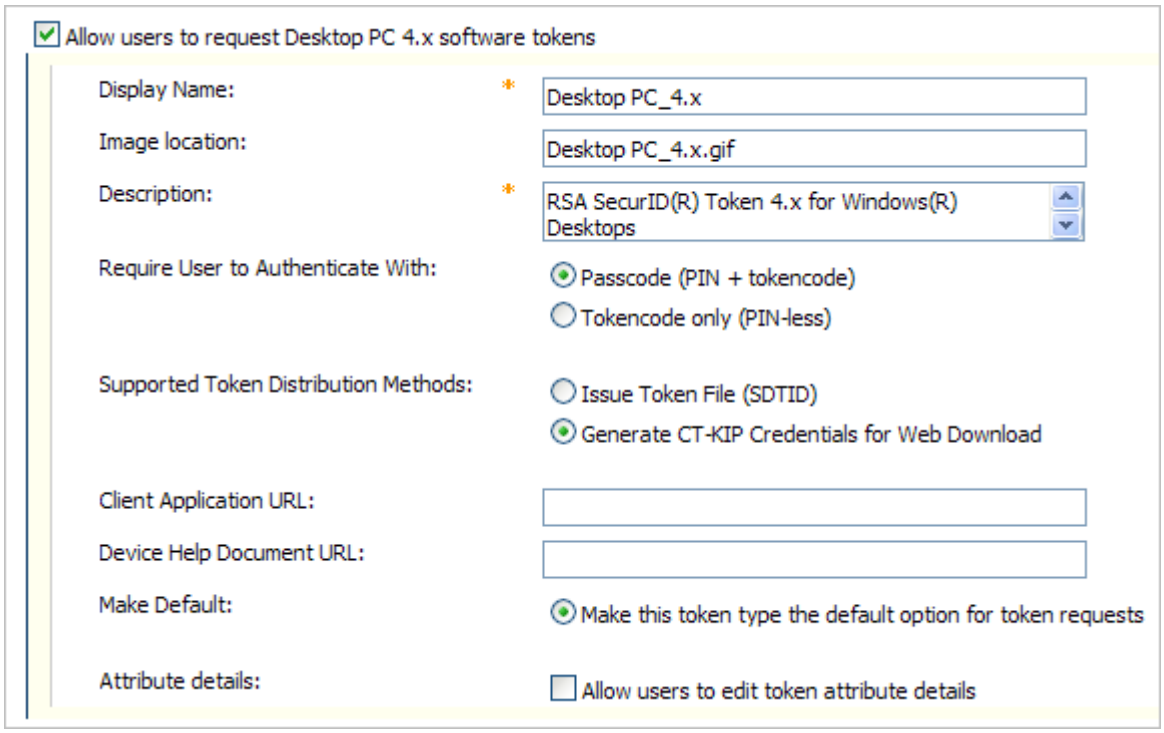
Before you provision tokens using Credential Manager, a device definition file for the SecurID desktop application must be installed. If you used the device definition file for RSA SecurID Software Token 4.1, you do not need to add the file provided with version 4.1.2. To install the version 4.1.2 file for your platform, see "Add the Device Definition File" on page 48.

You can allow users to bind a token to their device serial number when they fill out the token request form. Before they initiate a request using the Self-Service Console, they must obtain the device serial number from the Token Storage Devices screen in the SecurID desktop application.

Important: RSA does not recommend allowing users to use Credential Manager to bind a token to a device GUID or a user SID. If the user enters the characters incorrectly during the request, the token will not be imported.

Configure RSA Credential Manager

The following figure shows sample Console configuration settings for the SecurID desktop application in RSA Credential Manager. Use the following procedure to configure the software token settings that you want.



To configure Credential Manager to allow users to request a token:

1. On the Credential Manager Home page, under **Token Provisioning**, click **Manage Tokens**.
2. On the Manage Tokens page, under **Software Token Types Available for Request**, click **Allow users to request Desktop PC 4.x software tokens** or **Allow users to request Desktop Mac 4.x software tokens**, as needed.

   The **Display Name**, **Image location**, and **Description** fields are automatically populated with the application name, device image, and application description that will be displayed to the user in the Self-Service Console.
3. In the **Require User to Authenticate With** field, do one of the following:
   - Click **Passcode (PIN + tokencode)** to require passcode authentication.
   - Click **Tokencode only (PIN-less)** to require tokencode authentication (no PIN entry).
4. In the **Supported Token Distribution Methods** field, do one of the following:
   - To distribute tokens using dynamic seed provisioning, click **Generate CT-KIP Credentials for Web Download**. Leave the **Client Application URL** field blank. Credential Manager automatically uses the CT-KIP URL associated with RSA Authentication Manager 7.1.
   - To distribute tokens using SDTID files, click **Issue Token File (SDTID)**.
5. In the **Make Default** field, click **Make this token type the default option for token requests**.
6. Leave the **Device Help Document URL** field blank.

   The SecurID desktop application contains a built-in Help file.
7. (Optional) If you want the user to bind the token to a device attribute when the user requests a token, in the **Attribute Details** field, select **Allow users to edit token attribute details**.

   If you selected the option to distribute tokens using SDTID files, you can require the user to create a password to protect the token file.
8. (Optional) In the **Token File Password** field, select **The user needs to provide the password, to protect the token file**.

   If you select this option, when requesting a token using the Self-Service Console, the user must create a password to protect the token file.

9. In the **File Format of Software Token** field, do one of the following:
   - Select **SDTID** to have the token file delivered by your e-mail server as an e-mail attachment with the .sdtid extension (for example, 000000293958.sdtid).
   - Select **ZIP** to have the token file delivered by your e-mail server within a ZIP file attachment.

   Note: If your corporate e-mail server does not allow sending certain file types as e-mail attachments, you must select **ZIP**.

10. At the bottom of the screen, click **Save**.

Request a Token Using the RSA Self-Service Console

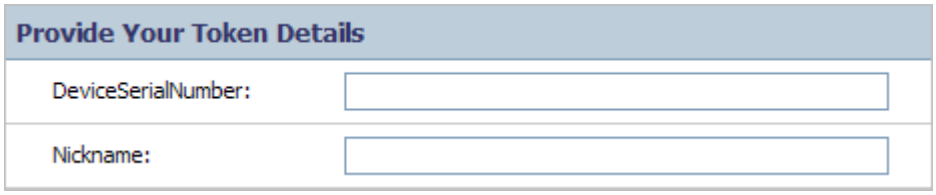
To allow a user to request a token using the RSA Self-Service Console, provide a URL link to the Self-Service Console, and instruct the user to request an account. Approve the account request, and instruct the user to create an account. When the user is ready to request a token, provide the following instructions.

To request a software token using the RSA Self-Service Console:

1. Log on to the Self-Service Console URL.
2. In the **My SecurID Tokens** section, click **Request a Token**.
3. From the **Request a Token** drop-down menu, select **Software**, and then select **I need a specific software token**.
   The **Token Type** section is displayed.
4. Scroll to and select **Desktop PC_4.x** or **Desktop Mac_4.x**, as appropriate.

Note: If you do not see an option for Desktop 4.x, select **Desktop PC_4.0** or **Desktop Mac_4.0**, as appropriate.

5. Under **Provide Your Token Details**, in the **DeviceSerialNumber** field, do one of the following, as instructed by your administrator:
   - Leave the default setting.
   - Clear the **DeviceSerialNumber** field. Launch the SecurID desktop application, and obtain your device serial number from the Token Storage Devices screen. Enter your serial number in the **DeviceSerialNumber** field.

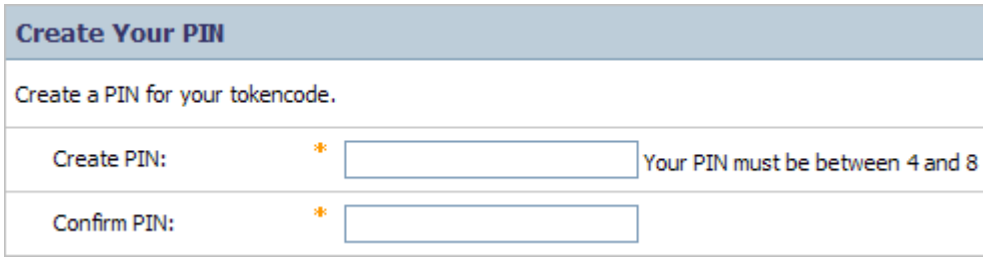


6. (Optional) In the **Nickname** field, enter a user-friendly name for your token. The nickname can contain up to 24 alphanumeric characters.

   If you do not enter a nickname, your token will be identified by its serial number in the SecurID desktop application.

   If your token requires a PIN, the **Create Your PIN** section is displayed.

7. Under **Create Your PIN**, create and confirm a PIN containing 4 to 8 digits.



   Be sure to create a PIN that you can remember. If you forget your PIN, you will need to access the Self-Service Console to reset it before you can continue using your token.

8. Do one of the following:
   - If the **Create Your Token File Password** section is displayed, enter and confirm a password to protect the token file. The password can contain 1 to 24 case-sensitive, alphanumeric characters. Memorize the password. You will be prompted for your token password when you import your token into the SecurID desktop application.
   - If the **Create Your Token File Password** section is not displayed, continue to the next step.

9. In the **Reason for Token Request** field, enter the reason for your request. For example: "To access the corporate VPN client."

10. Click **Submit Request**.

Approve the Request

Before the user can import the token, you must approve the token request.

To approve the token request:

1. In the Security Console, click **Administration > Provisioning**.
2. Click **Approve Requests**.

Next Steps

If you provision tokens in Credential Manager using dynamic seed provisioning, after you approve the user's token request, the user receives an approval notification by e-mail. The CT-KIP URL is displayed in the **Link** field. The token activation code that the user must enter is displayed in the **Activation Code** field. Instruct the user to copy the URL and activation code from the e-mail and paste this information into the required fields in the desktop application.

Note: If you have set the CtkipUrl policy, when the user imports the token, the **Enter URL** field is prefilled, and the user only needs to enter the activation code to complete the token import. For more information, see Appendix A, "Customizing the Application."

4 User Options for Managing Tokens and Devices

This chapter provides an overview of how users can manage tokens stored on their hard drive or on another supported device plug-in. Use the information in this chapter to familiarize yourself with the RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application) user interface.

From the application user interface, users can:

- Import tokens
- Change a token name
- Select a token if multiple tokens have been imported
- Set a password to protect tokens stored on the local hard drive
- Set a password or enter other credentials to protect tokens stored on a supported third-party device
- View information about a token
- View information about installed token storage devices
- Delete a token
- Obtain the next tokencode

Importing Tokens

RSA provides the following mechanisms for importing tokens to the application:

- (Windows only) Import a token automatically using CT-KIP. (The administrator must have set the ActivationCode policy to 1 and the CtkipUrl policy to the URL of the CT-KIP server.)
- Import a token from the web (CT-KIP) using the SecurID desktop application.
- Import a token from an e-mail attachment.
- Import a token automatically from a default directory.
- Import a token from a non-default directory.

When importing a token, the user is prompted to select the device that will store the token if more than one supported device plug-in is installed (for example, a biometric device and the local hard drive) and you did not bind the token to a device.

Import a Token Automatically Using CT-KIP (Windows)

If you provision tokens using Dynamic Seed Provisioning (CT-KIP), you can customize RSA SecurID Software Token for Windows to automatically import a token the first time the user starts the application, as long as either of the following conditions is met:

- The user does not already have a token.
- All of the tokens in the user's token database have expired.

Auto-import requires setting the ActivationCode and CtkipUrl policies. For more information, see "Customizing the Application" on page 83.

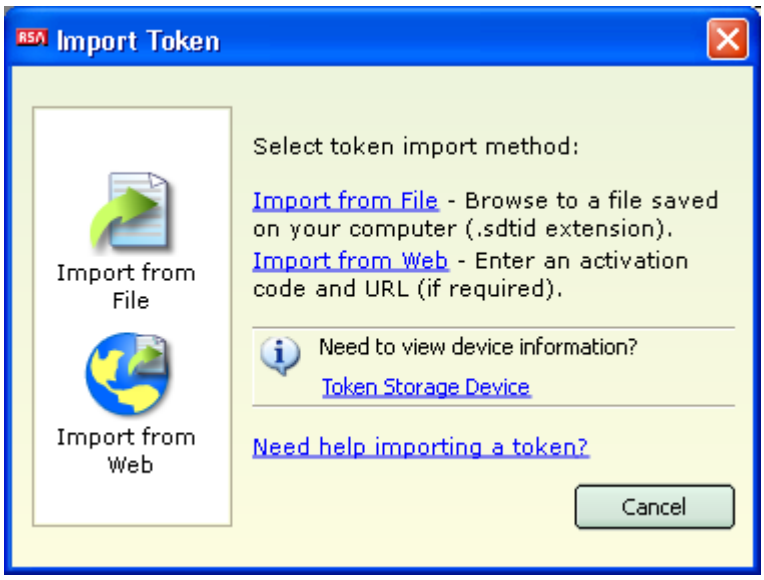
Note: You cannot automatically import a token using CT-KIP to RSA SecurID Software Token for Mac OS X.

Import a Token from the Web Using the Desktop Application

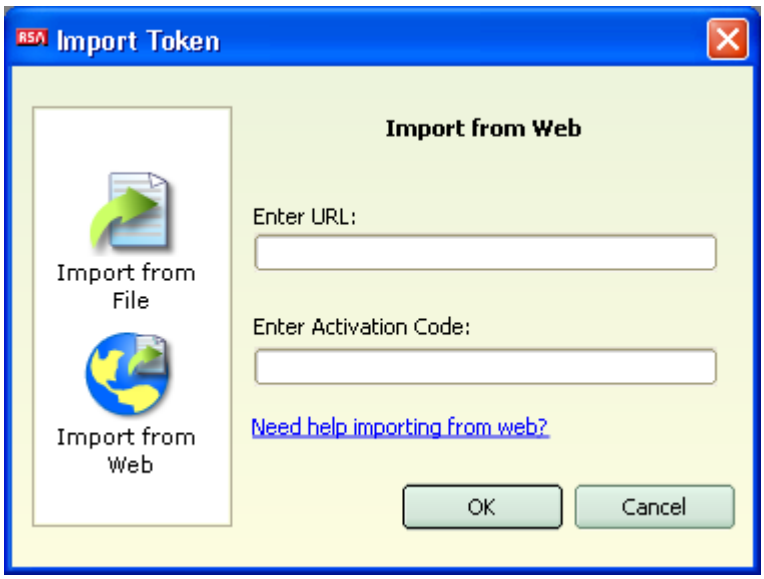
If you provisioned a token using CT-KIP, the user must import it using the SecurID desktop application if you did not set policies to auto-import the token or if the user already has a token.

To import a token from the web:

1. Start the SecurID desktop application.
   The Import Token screen is displayed.



2. Click **Import from Web**.
   The Import from Web screen is displayed.



3. In the **Enter URL** field, enter the CT-KIP URL.

   Note: If you configured the CtkipUrl policy, the **Enter URL** field is prefilled.

4. In the **Enter Activation Code** field, enter the activation code. Click **OK**.
5. If prompted to select a device, click the name of the device where the token will be stored, for example, "Local hard drive (RSA)."
6. Click **OK**.
   A success message is displayed.
7. If prompted to rename your token, do one of the following:
   - To change the token name, click **Change Name**. Enter a name of 1 to 24 characters (for example, "VPN Token"). Click **OK**.
   - If you do not want to change the name, click **OK** to close the screen.

Import a Token from an E-mail Attachment

If you distribute a token as an SDTID file, a user can import the token from an e-mail attachment. After the token has been imported, the application deletes the SDTID file.

To import a token from an e-mail attachment:

1. Double-click the file attachment, for example, "token1.sdtid."
2. When prompted to open or save the attachment, click **Open**.
   The SecurID desktop application detects the token file and starts up.

Note: On some Windows machines, you may be prompted to select the application that you want to use to open the file. In that case, you must manually select the SecurID desktop application.

3. If prompted, enter the file password, and click **OK**.
4. If prompted to select a device, click the name of the device where the token will be stored, for example, "Local hard drive (RSA)."
5. Click **OK**.

   A success message is displayed.
6. If prompted to rename your token, do one of the following:
   - To change the token name, click **Change Name**. Enter a name of 1 to 24 characters (for example, "My VPN Token"). Click **OK**.
   - If you do not want to change the name, click **OK** to close the screen.

Import a Token Automatically from a Default Directory

If you distribute a token as an SDTID file, a user can save it to a default directory where the application can automatically locate it. You can optionally use a deployment tool to push the file to a default directory. If you provision multiple tokens to a single user, the application imports the files one at a time. The application then deletes each token file, as long as the file is not marked read-only or otherwise protected.

The default directories are:

- On Windows: **Desktop** or **My Documents**
- On OS X: **Desktop** or **Documents**

To import a token from a default directory:

1. Save the SDTID file attachment to one of the default directories.
2. Start the application.

   The application automatically detects the token file and imports the token.

   If you, as administrator, use a deployment tool to push the file to one of the default directories, the token is imported automatically the next time the user starts the application.
3. If prompted, enter the file password, and click **OK**.
4. If prompted to select a device, click the name of the device where the token will be stored, for example, "Local hard drive (RSA)."
5. Click **OK**.

   A success message is displayed.
6. If prompted to rename your token, do one of the following:
   - To change the token name, click **Change Name**. Enter a name of 1 to 24 characters (for example, "My VPN Token"). Click **OK**.
   - If you do not want to change the name, click **OK** to close the screen.

Import a Token from a Non-Default Directory

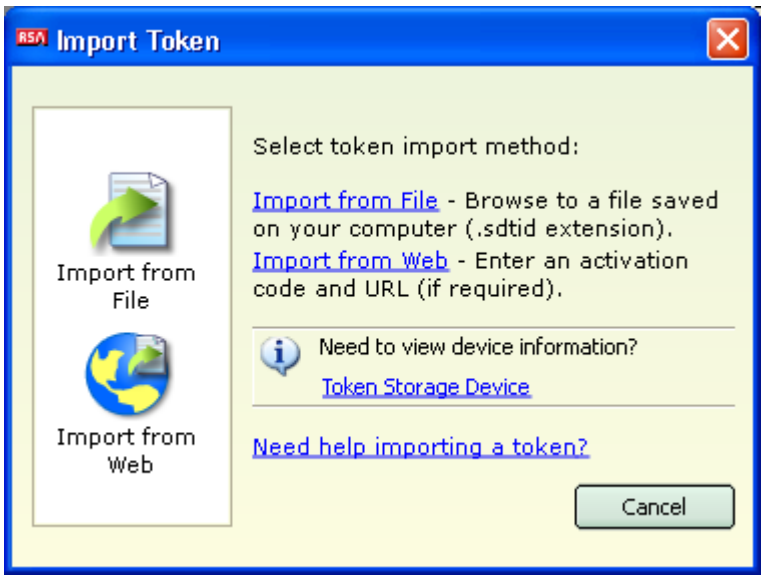
If a user saves a token file to a directory other than one of the default directories, the user can import the token using either of the following methods:

- Navigate to the token file and double-click the file.
- Import the token using the desktop application.

After the token has been imported, the application deletes the SDTID file.

To import a token from a non-default directory, using the application:

1. Start the SecurID desktop application.
   The Import Token screen is displayed.



2. Click **Import from File**.
3. Browse to the folder that contains the SDTID file, and double-click the file.
4. If prompted, enter the token file password, and click **OK**.
5. If prompted to select a device, click the name of the device where the token will be stored, for example, "Local hard drive (RSA)."
6. Click **OK**.
   A success message is displayed.
7. If prompted to rename your token, do one of the following:
   - To change the token name, click **Change Name**. Enter a name of 1 to 24 characters (for example, "My VPN Token"). Click **OK**.
   - If you do not want to change the name, click **OK** to close the screen.

Change a Token Name

If you assign a nickname to a token in Authentication Manager, the token is imported with that nickname. Otherwise, the application displays the token serial number, for example, 000027874079. When a user imports a token, the application prompts the user to change the token name.

The user can change the token name immediately, dismiss the dialog box and retain the existing name, or change the name later.

Note: If you do not want users to change the nickname that you assigned, you can set the DisableChangeTokenName policy. For more information, see Appendix A, "Customizing the Application."

To change a token name:

1. Click **Options > Manage Token**, and select **Change Token Name** from the list.
2. In the **Change Name** field, type the new name.
   The token name can contain from 1 to 24 characters and must be unique.
3. Click **OK**.
4. If prompted, enter the device password.
5. Click **OK**.

Select a Token

The application displays the name of the active token, which is either the token that a user is currently using to obtain tokencodes or the last token imported to the application. A user who has more than one token can select a different token, if required.

To select a token:

Click the down arrow to the right of the active token name and select a different token. The selected token becomes the active token.

Device Passwords

Users can set a device password to protect all tokens stored on the local hard drive. The device password can contain from 1 to 20 characters. Setting a device password helps ensure that only the user for whom the tokens are intended can access the tokens. The following figure shows the Change Device Password screen.

Once a device password is set, the application prompts for the device password the first time that a user performs a protected operation with a token. For example, the user must enter the device password after entering a PIN, renaming a token, or when attempting to delete a token. The user is prompted for the device password only once per session.

Set a Device Password

Use the following instructions to set a device password for the first time.

To set a device password:

1. Click **Options > Token Storage Devices**, and click **Change Device Password**.
2. In the **New Password** field, enter a password.
3. In the **Confirm Password** field, reenter the password, and click **OK**.

Change a Device Password

Use the following instructions to change an existing device password.

To change a device password:

1. Click **Options > Token Storage Devices**, and click **Change Device Password**.
2. In the **Current Password** field, enter the existing password.
3. In the **New Password** field, enter a new password.
4. In the **Confirm Password** field, reenter the new password, and click **OK**.

Remove a Device Password

Use the following instructions to remove a device password. Keep in mind that this removes the additional protection from the tokens stored on the local hard drive.

To remove a device password:

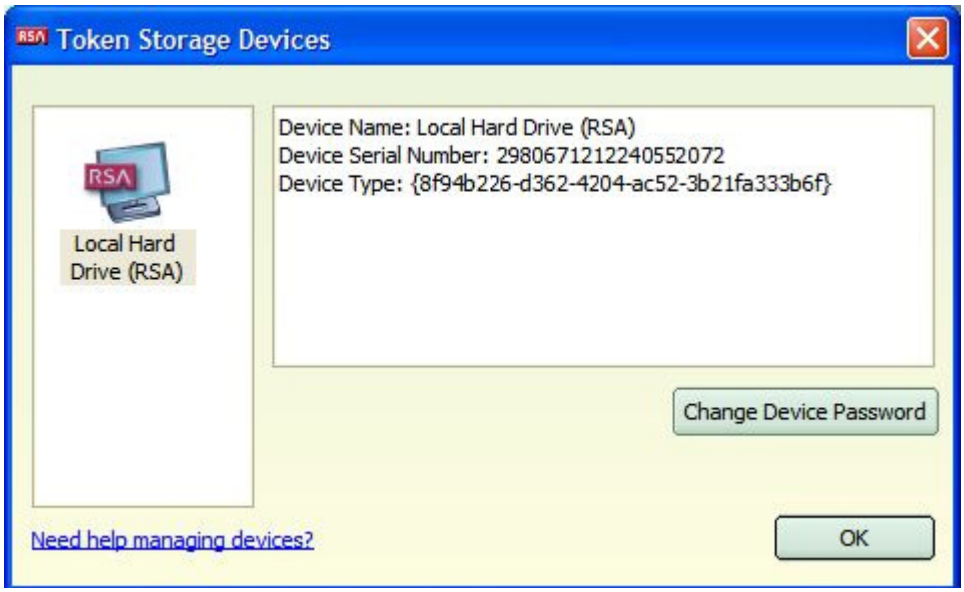
1. Click **Options > Token Storage Devices**, and then **Change Device Password**.
2. In the **Current Password** field, enter your existing password.
3. Leave the **New Password** and **Confirm Password** fields empty, and click **OK**.

Reset the Device (Local Hard Drive)

If a user forgets the device password, the user must reset the device. Resetting the device causes the existing tokens to be deleted. After resetting the device, the user must request new tokens.

To reset the device:

1. Click **Options > Token Storage Devices**.
2. In the left pane of the Token Storage Devices screen, click **Local Hard Drive (RSA)**.



3. Click **Change Device Password**.

4. In the **Forgot your password?** section, click **Reset Device**.

The following warning is displayed:

```
Warning: By proceeding, all tokens on the selected device
will be deleted and the device password will be reset.
```

5. Click **OK**.

   The following message is displayed:

```
Successfully deleted tokens and removed password.
```

6. Click **OK**.

Device Passwords for Third-Party Plug-Ins

Depending on your implementation, users can import tokens to a supported third-party device, for example, a TPM or biometric device. If the device supports passwords, the user can set a device password or enter other credentials.

To set a device password for a third-party device plug-in:

1. Click **Options > Token Storage Devices**.
2. Select the device on which your tokens are stored.

   If the device supports passwords, the **Change Device Password** button is displayed.
3. Click **Change Device Password**, and follow the instructions in the third-party plug-in.

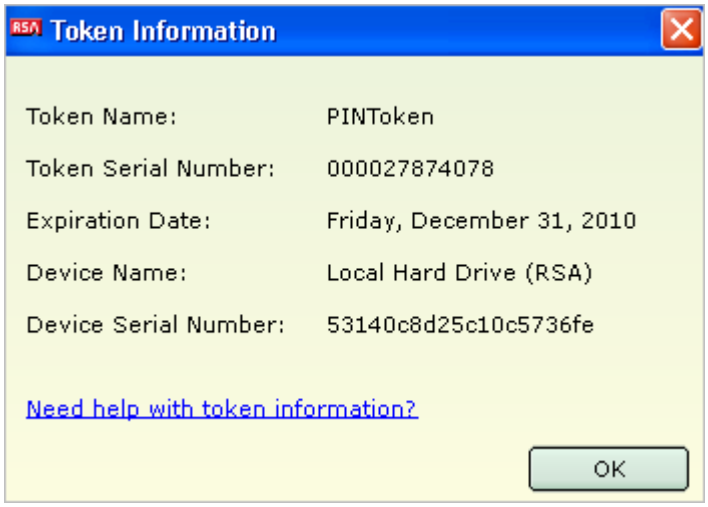
View Token Information

Users can view information about the active token.

To view token information:

Click **Options > Manage Token**, and select **Token Information**.

The Token Information dialog box opens.



The following table lists the token information that is displayed.

Field	Description
Token Name	The user-friendly name of the token, if one has been assigned. For example, "VPN Token."
Token Serial Number	The serial number that identifies the token to Authentication Manager.
Expiration Date	The date when the installed token will expire. Software tokens expire on the expiration date at 00:00:01 GMT.
Device Name	The device on which the token is stored. This can be the local hard drive, a supported biometric device, a supported TPM, or another supported device plug-in.
Device Serial Number	The serial number of the device on which the token is stored.

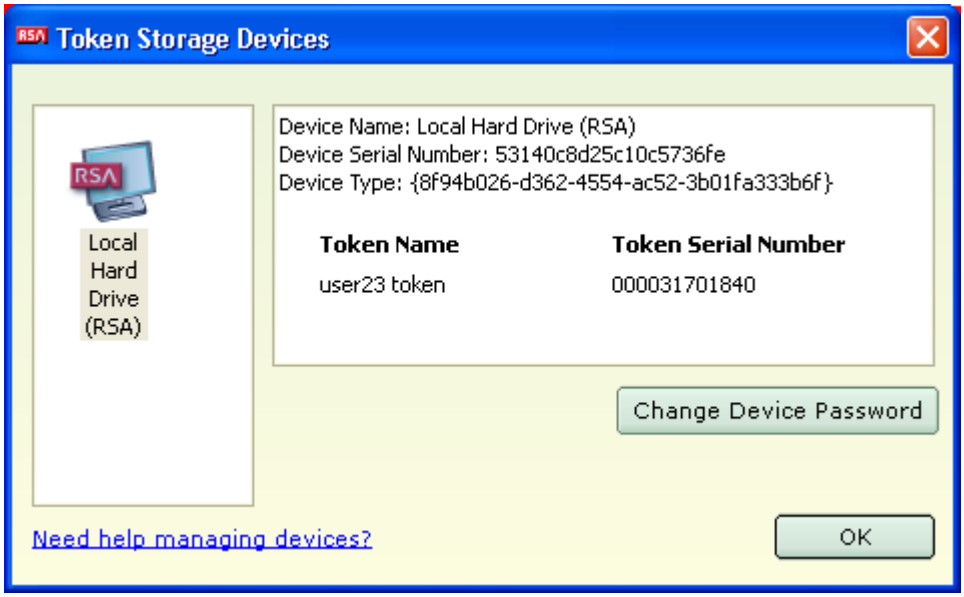
View Token Storage Device Information

Users can view information about the device on which they have stored their tokens.

To view storage device information:

Click **Options > Manage Token**, and select **Token Storage Devices**.

The Token Storage Devices dialog box opens.



The following table lists the storage device information that is displayed.

Field	Description
Device Name	The name of the storage device on which the token is stored. The default device is the local hard drive of the computer, which is labeled Local Hard Drive (RSA).
Device Serial Number	The serial number of the token storage device.
Device Type	A globally unique identifier (GUID) that identifies the specific type of device. Each type of storage device has a unique GUID.
Token Name	The user-friendly name of the token, if it exists. Otherwise, the column displays the token's serial number.
Token Serial Number	The serial number of the token.

Delete a Token

A user does not need to delete a token unless it has expired or the user is instructed to do so by the administrator. If a user deletes the last remaining token, the application prompts the user to import a new token.

When deleting tokens from a password-protected database, the user is prompted for the password if the user has not entered it previously during the session. If the user has forgotten the password, the user must delete all of the tokens and contact the administrator to request replacement tokens. For more information, see "Reset the Device (Local Hard Drive)" on page 75.

Note: You can set the DisableDeleteToken policy to prevent users from deleting tokens. For more information, see Appendix A, "Customizing the Application."

To delete a token:

1. Click **Options > Manage Token**, and select **Delete Token** from the drop-down list.

   You are prompted to confirm that you want to delete the token.

2. Click **Yes**.

   If prompted, enter the device password.

3. Click **OK**.

Obtaining the Next Tokencode

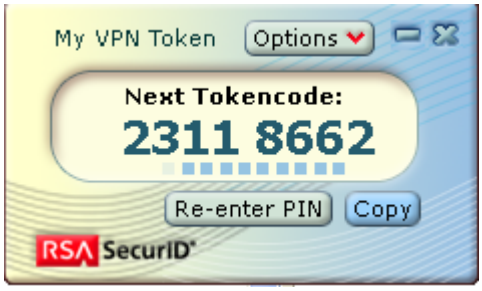
Under some conditions, an application that is protected by RSA SecurID may prompt the user to enter the next tokencode to provide additional verification. The user can obtain the next tokencode from the SecurID desktop application.

Enter the Next Tokencode

Use the following procedure to obtain and enter the next tokencode.

To enter the next tokencode:

1. Click **Options**, and click **Next Tokencode**.
   The next tokencode is displayed.



2. Click the **Copy** button beneath the tokencode display.
3. Paste the tokencode into the required field in the requesting application.

Disable Next Tokencode Mode

After a user submits the next tokencode, the desktop application remains in Next Tokencode mode until the user closes the application, selects a different token, or disables Next Tokencode mode.

To disable Next Tokencode mode:

Click **Options**, and click **Next Tokencode**.

5 Troubleshooting

The following tables describes possible issues that might occur with RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application), their possible causes, and corresponding solutions.

Platform-Independent Issues

Issue	Description
Token import failed.	The cause is likely to be one of the following. In most cases the user receives an error message indicating the reason for the failure and the action to take. **Failure when importing a token from a file** • The user specified the wrong file path and clicked OK, or did not specify a file path and clicked OK. • If the user is attempting to import a token to the RSA token database on the local hard drive, verify that the user has Write permission to the directory where the SecurID desktop application is installed. If not, grant Write permission to the directory. **Failure when downloading a token from the web** • The user typed the URL incorrectly or did not enter the URL. • The user entered a URL that does not start with http:// or https://. • The user entered a blank or invalid activation code. For example, the user omitted or mistyped characters. • The web service cannot access the Internet resource. **Other Possible Causes** • The user provided an incorrect device serial number for binding the token, or the administrator bound the token to an incorrect value. • The user tried to import a token that had already been imported. • The user already imported the maximum number of tokens that the enterprise allows. • The user entered an incorrect token file password. If the user forgot the password, communicate the password again. • The token is not intended to be used on the selected device. • The token is invalid.
User cannot be authenticated by RSA Authentication Manager.	• Verify that the time, date, and time zone settings on the user's computer are accurate. • Check the Authentication Manager logs to determine whether the user's token has been disabled because of failed logon attempts. If the token is not disabled (or expired), ask the user for the tokencode being displayed and resynchronize the token. • The user may have entered an incorrect PIN. Instruct the user to enter the PIN again and retry the authentication.

A Customizing the Application

Use the information in this appendix to customize RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application).

Customization Policies

You can set customization policies to change default behaviors of the application. RSA recommends that you set any customization policies before you deploy the application to users.

Policies for RSA SecurID Software Token for Windows

Note the following when setting policies for RSA SecurID Software Token for Windows:

- The value for TokenRenewalURL must be a complete URL that contains the protocol identifier "http" or "https."
- For Boolean policies, 0 (zero) is interpreted as "false," and 1 (one) or any other nonzero value is interpreted as "true."

Registry Location: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\RSA\Software Token

Name	Type	Values	Description
ActivationCode	DWORD	0x00000000 (default) 0x00000001	Specifies that the user SID should be used as the CT-KIP activation code. To auto-import a token, you must set ActivationCode to 1, and you must also set a URL link for CtkipUrl.
CtkipUrl	REG_SZ	URL link Empty by default.	Prefills the **Enter URL** field in the application so that the user does not have to enter the URL when manually importing a token provisioned using dynamic seed provisioning (CT-KIP). To auto-import a token, you must set both CtkipUrl and ActivationCode.
DisableChangeTokenName	DWORD	0x00000000 (default) 0x00000001	Prevents users from changing a token nickname assigned in Authentication Manager.
DisableDeleteToken	DWORD	0x00000000 (default) 0x00000001	Prevents users from deleting their tokens. Removes the Delete Token option from the Options menu.

Registry Location: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\RSA\Software Token			
Name	**Type**	**Values**	**Description**
DisableSetDevicePassword	DWORD	0x00000000 (default) 0x00000001	Prevents users from setting a device password on tokens stored on the local hard drive. Removes the Change Device Password option from the Token Storage Devices screen.
OnlyOneToken	DWORD	0x00000000 (default) 0x00000001	Prevents users from having more than one token.
TokenExpirationNotification	DWORD	0x0000001e (default) Maximum of 0x0000003c (60) or 0x000000000	Changes the number of days before the application displays a notification informing the user that a token is nearing its expiration date. If you do not set this policy, the notification is displayed 30 days before the token expires. If used with TokenRenewalURL, adds a link in the notification to a URL where the user can request a replacement token.
TokenRenewalURL	REG_SZ	URL link. Default is empty string.	Used with TokenExpirationNotification. Displays a URL link in the Token Expiration Notification dialog box. For example, this could be the URL of the RSA Credential Manager portal where the user can request a replacement token.
ValidDevices	REG_MULTI_SZ	Comma-separated string list of valid device GUIDs. Default is empty string.	Specifies a whitelist of devices to which tokens can be imported.

Policies for RSA SecurID Software Token for Mac OS X

Note the following when setting policies for RSA SecurID Software Token for Mac OS X:

- The value for TokenRenewalURL must be a complete URL that contains the protocol identifier "http" or "https."
- For Boolean policies, 0 (zero) is interpreted as "false," and 1 (one) or any other nonzero value is interpreted as "true."
- Policy names are case sensitive.
- Automatic token import using CT-KIP is not supported. You can prefill the CT-KIP URL field in the application, using the CtkipUrl policy, but the ActivationCode policy is not supported. The user must still enter the activation code to complete the import.

OS X Location: /Library/Preferences/com.rsa.Software Token.Policies.plist

Name	Type	Values	Description
CtkipUrl	string	URL link Default should be empty string.	Prefills the **Enter URL** field in the application.
DisableChangeTokenName	number	1 or 0 Default should be 0	Prevents users from changing a token nickname assigned in Authentication Manager.
DisableDeleteToken	number	1 or 0 Default should be 0	Prevents users from deleting their tokens. Removes the Delete Token option from the Options menu.
DisableSetDevicePassword	number	1 or 0 Default should be 0	Prevents users from setting a device password on tokens stored on the local hard drive. Removes the Change Device Password option from the Token Storage Devices screen.
OnlyOneToken	number	1 or 0 Default should be 0	Prevents users from having more than one token.
TokenExpirationNotification	number	0 to 60. Default is 30.	Changes the number of days before the application displays a notification informing the user that a token is nearing its expiration date. If you do not set this policy, the notification is displayed 30 days before the token expires. If used with TokenRenewalURL, adds a link in the notification to a URL where the user can request a replacement token.

OS X Location: /Library/Preferences/com.rsa.Software Token.Policies.plist			
Name	**Type**	**Values**	**Description**
TokenRenewalURL	string	URL link. Default is empty string.	Used with TokenExpirationNotification. Displays a URL link in the Token Expiration Notification dialog box. For example, this could be the URL of the RSA Credential Manager portal where the user can request a replacement token.
ValidDevices	string	Comma-separated string list of valid device GUIDs. Default should be empty string.	Specifies a whitelist of devices to which tokens can be imported.

Policy Details

The following sections provide additional details about the customization policies.

ActivationCode (Windows Only)

With RSA SecurID Software Token for Windows, the ActivationCode policy allows you to import or replace tokens using dynamic seed provisioning (CT-KIP) without requiring the user to manually enter an activation code. Before setting this policy, you must bind the user's token to the user SID in RSA Authentication Manager 7.1, as described in "Step 4: Bind the Token" on page 50.

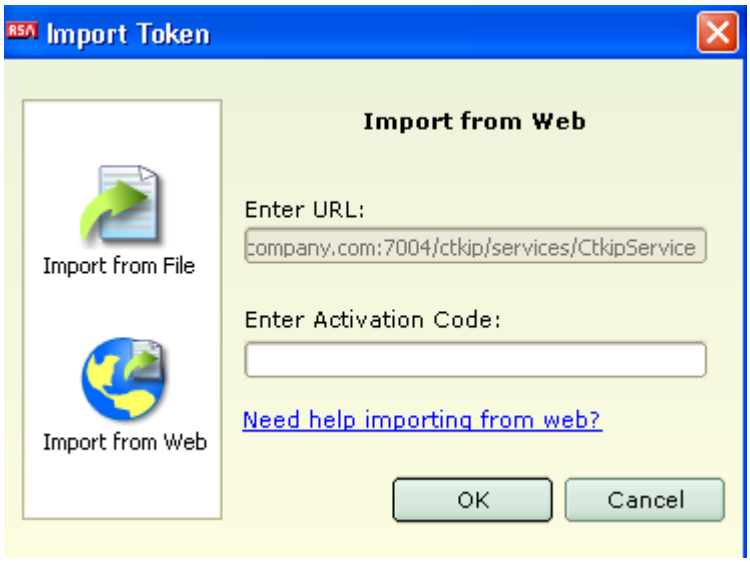
You can automate the provisioning of one token to a user using CT-KIP by setting both the ActivationCode and the CtkipUrl policies. Set ActivationCode to 1, and set CtkipUrl to the URL of your CT-KIP server. The first time that the user starts the desktop application, the token is automatically imported, as long as one of the following conditions is met:

- The user does not already have a token.
- All of the tokens in the user's token database have expired.

Note: Because the ActivationCode policy does not apply to OS X desktops, you cannot automatically import a token using CT-KIP in an OS X implementation.

CtkipUrl

By default, when importing a token using CT-KIP, the user must enter the URL of the CT-KIP server and must enter the activation code on the Import from Web screen. If you do not want the user to have to enter the URL, set the CtkipUrl policy. This prefills the **Enter URL** field, and the user then needs to enter only the activation code.



On Windows desktops, you can automate the provisioning of one token to a user by setting both the CtkipUrl policy and the ActivationCode policy, as described in the previous section.

DisableChangeTokenName

By default, users can change the nicknames of their tokens. If you set nicknames on users' tokens when you issue them in Authentication Manager, and you do not want users to change the nicknames, set the DisableChangeTokenName policy. This removes the Change Name option from application user interface.

DisableDeleteToken

By default, all users can delete their tokens. However, users normally do not need to delete a token unless the token has expired or you instruct them to delete a token. If you do not want users to be able to delete tokens, set the DisableDeleteToken policy. This removes the Delete Token option from the application user interface.

DisableSetDevicePassword

By default, users can set a device password to protect all tokens stored in the token database on the local hard drive. This provides added protection for the tokens. If a user forgets the device password, the user must reset the device, which deletes all of the tokens in the database. The user must then request replacement tokens, which can increase administrative overhead. If you want to prevent users from setting a device password, set the DisableSetDevicePassword policy. This removes the Change Device Password option from the Token Storage Devices screen.

OnlyOneToken

By default, users can have multiple tokens. If your implementation does not require users to have multiple tokens, you can use the OnlyOneToken policy to allow each user to import only one token. If you set this policy and a user attempts to import a second token, the application informs the user that only one taken can be installed. If the user chooses to import the new token, the application overwrites the existing token. If the user has stored more than one token when you enable the policy, importing a new token overwrites all of the user's tokens.

TokenExpirationNotification

The TokenExpirationNotification policy allows you to change the number of days before the application displays a notification informing the user that a token is nearing its expiration date. By default, the user is notified 30 days before token expiration. You can set the policy to display the notification 1 to 60 days before token expiration.

If the active token has already expired, the notification is not displayed. Instead, the Tokencode or Passcode screen displays "Token Expired."

If you set the TokenRenewalURL policy with the TokenExpirationNotification policy, the notification dialog box displays a link that the user can click to request a replacement token. This opens a web URL, for example, the RSA Credential Manager portal, where the user can request a replacement token.

TokenRenewalURL

The TokenRenewalURL policy is used with the TokenExpirationNotification policy. To set the TokenRenewalURL policy, you enter a URL link that will be displayed in the token expiration notification. The user can click the link to open a URL, such as the RSA Credential Manager portal, where the user can request a replacement token. If you do not set this policy, the token expiration notification does not display a URL link, and the user must contact the administrator to request a replacement token.

ValidDevices

The SecurID desktop application supports storing tokens in the RSA token database on the local hard drive or on a supported TPM, biometric device, or another supported device plug-in.

To control which devices users can access, you can create a device whitelist (a list of supported devices). Using a whitelist ensures that users can import, view, change the name of, and delete only those tokens that are stored in the devices specified in the whitelist. If a user connects a device that is not in the whitelist, the device is not displayed in the Token Storage Devices screen.

If you do not use a device whitelist, the user can import tokens to any device that is recognized by the system and allowed by the token's device binding settings.

Create a Device Whitelist

Use the ValidDevices policy to create a device whitelist. The values must be comma-separated Globally Unique Identifiers (GUIDs), as shown in the following example. Angle brackets are not required.

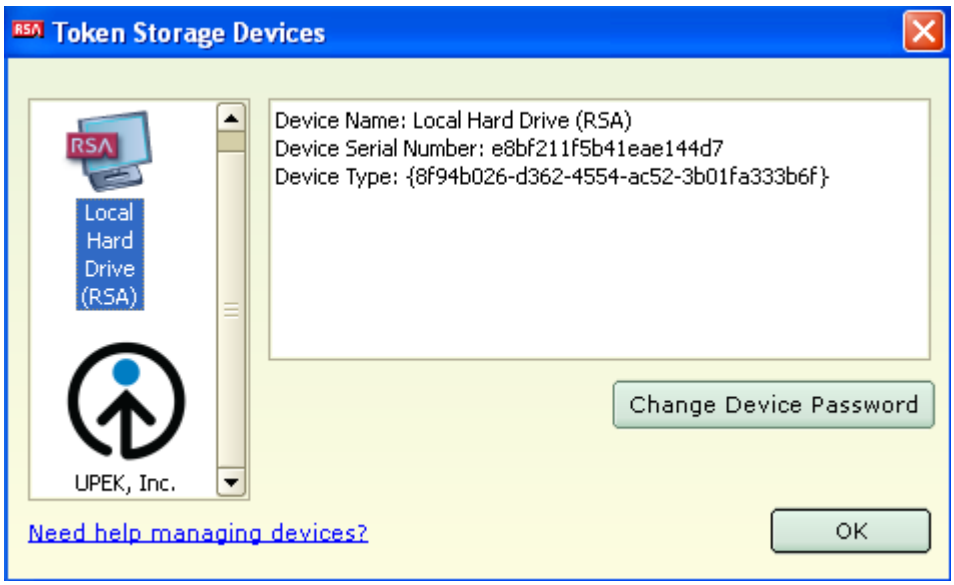
```
8f94b026-d362-4554-ac52-3b01fa33b6f,7484g337...
```

Obtain the device GUIDs from the application.

To obtain device GUIDs:

1. Click **Options > Token Storage Devices**.
2. In the left pane, click the device icon for the first device that you want to include in the whitelist.

   For example, the following figure shows two installed devices. The Local Hard Drive (RSA) device is selected, and the associated GUID is displayed in the **Device Type** field.



3. Click the device icon for the next device that you want to add to the whitelist.
4. Click **OK**.

Customizing RSA SecurID Software Token for Windows

You customize RSA SecurID Software Token for Windows using Windows Group Policy. Setting Group Policy for the SecurID desktop application adds registry keys under **HKEY_LOCAL_MACHINE\Software\Policies\RSA\Software Token**.

RSA provides an administrative template (**RSASecurIDToken.adm)** in the installation kit (**RSASecurIDToken412.zip**). The template describes where the registry-based policy settings are stored in the Windows registry. SecurID desktop application policies are applied on a per computer (per-machine) basis. That is, the policies that you set apply to all users of a particular computer rather than to individual users.

You create Group Policy settings on a domain controller using the Microsoft Management Console (MMC). The groups that you want the policies to affect must exist in Active Directory. For more information, go to **www.microsoft.com** and search on "Group Policy."

Add the RSA Administrative Template

Before you configure Group Policy settings for the desktop application, you must add the RSA administrative template to the Microsoft Management Console (MMC).

To add the RSASecurIDToken.adm policy template to MMC:

1. From the Start menu, click **Run**.
2. In the Open dialog box, type **gpedit.msc**, and click **OK** to start the Microsoft Management Console (MMC).
3. Under **Computer Configuration**, click **Administrative Templates**.
4. In the Console menu bar, click **Action > Add/Remove Templates**.
5. Click **Add**, and browse to the location of the **RSASecurIDToken.adm** file.
6. Click the **RSASecurIDToken.adm** file, and click **Open**.
   The template is added to the Add/Remove templates dialog box.
7. Click **Close**.

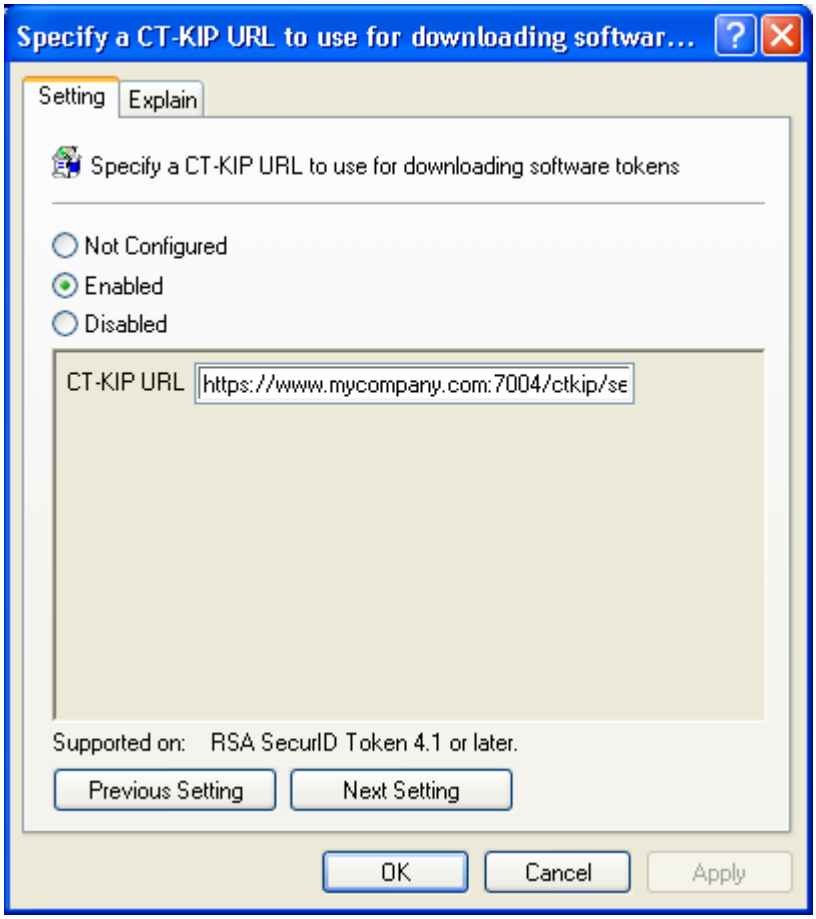
Configure Group Policy Settings

You can configure Group Policy settings for the desktop application using the RSA administrative template.

To configure RSA SecurID Token policy settings:

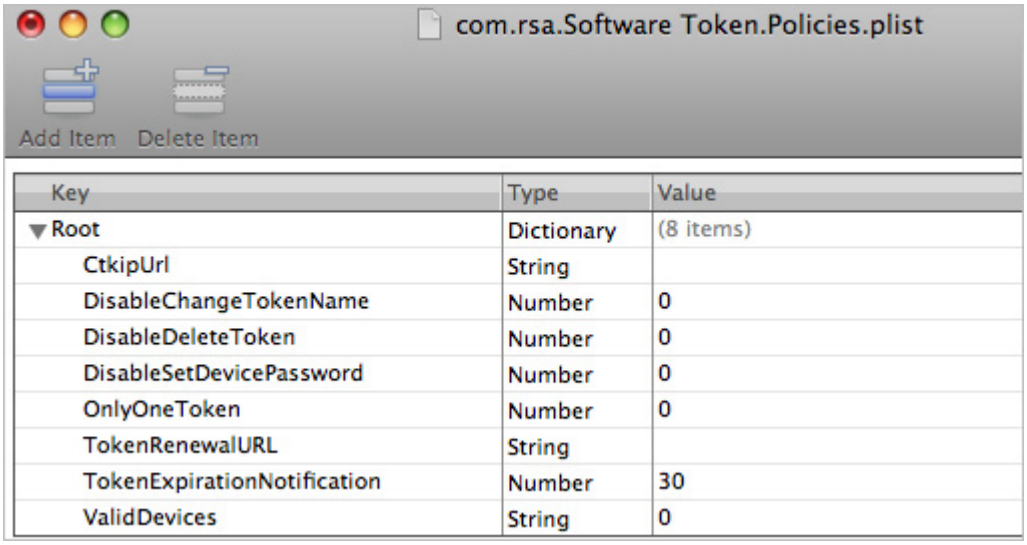
1. From the Start menu, click **Run**.
2. In the Open dialog box, type **gpedit.msc**, and click **OK** to start the Microsoft Management Console (MMC).
3. Navigate to the RSA administrative template by clicking **Computer Configuration > Administrative Templates > Classic Administrative Templates (ADM) > Software Settings > RSA SecurID Token**.

4. In the right pane, double-click the name of the setting that you want to configure.
5. To configure all settings, double-click the first setting. After configuring the first policy, click **Next Setting** to continue.
   The following figure shows the CtkipUrl policy enabled.

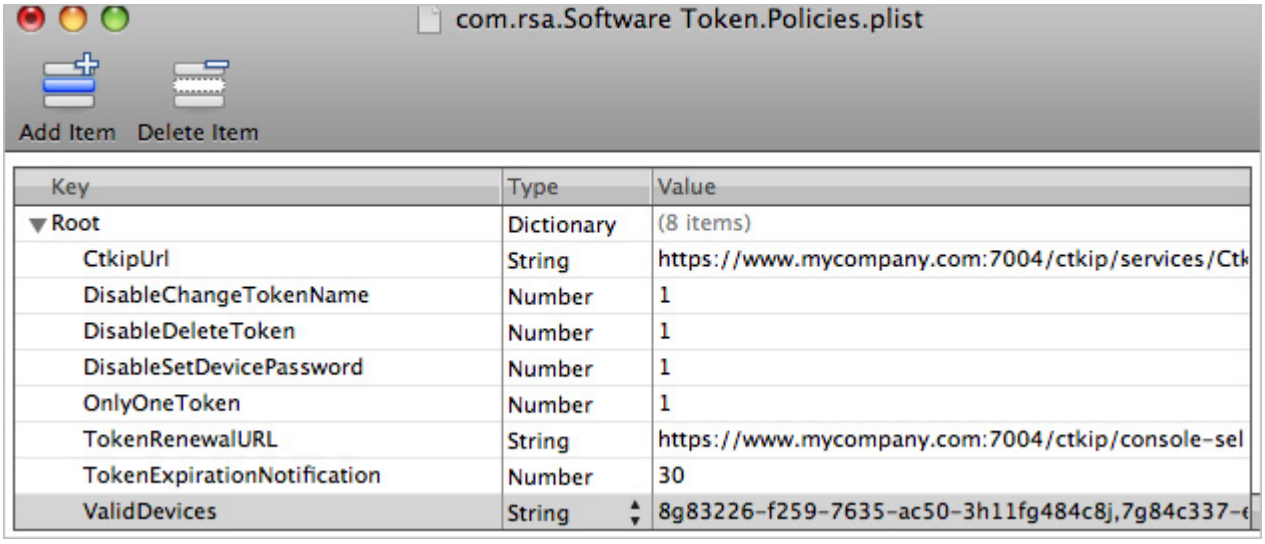


Customizing RSA SecurID Software Token for Mac OS X

You customize RSA SecurID Software Token for Mac OS X using a property list (plist) file. RSA provides a plist template (**com.rsa.Software Token.Policies.plist)** in the **template** folder of the OS X installation package (**RSASecurIDMac412.dmg**). The template contains the customization policies with their default settings, as shown in the following figure.



Copy the plist file to **/Library/Preferences/**, and set the values according to your requirements. The following figure shows the property list with all customization settings enabled.



Customize the Token Database Location

You can optionally customize the location of the token database by modifying **com.rsa.Software Token\library.plist**, located in **/Library/Preferences**. This file will be created when the product is installed.

Consider the following when customizing the location:

- You must modify **library.plist** to specify the custom location of the token database before you distribute tokens. Otherwise, the tokens will be imported into the default database location.
- If you customized the location of the token database in version 4.1.1, you must modify **library.plist** to point to the same database path so users can continue using the tokens they imported into version 4.1.1.
- If the token database is in a location where users do not have read/write permission, when a user imports a token, the application will prompt the user to select the device on which to store the token.

B Logging

This appendix describes logging in RSA SecurID Software Token with Automation 4.1.2 (the SecurID desktop application), including how to control the amount of information logged, where to find log output files, the log message format, and sample log messages.

Setting the Logging Level

You can control the amount of information logged by the SecurID desktop application by setting a registry key (Windows) or creating a plist (OS X) in the following location:

- (Windows) **HKLM/RSA/Software Token/Library/LogLevel**
- (OS X) **/Library/Preferences/com.rsa.SoftwareToken/Library.plist/LogLevel**

The following table lists the possible string values.

Note: If you specify any other string value, the logger uses the default value (INFO).

Value	Meaning
DEBUG	Logs messages that are useful for debugging purposes.
INFO	Logs important application information, in addition to errors. (Default)
ERROR	Logs only application errors.
OFF	No information is logged.

Location of Log Output Files

The logger is configured programmatically to output a rolling file named **RSA_Software_Token_Log.txt** in the following location:

- ***Drive:*\ProgramData\RSA** (Windows)
- **~/Library/Logs/RSA** (OS X)

The maximum size of the log file is set to 1 MB. When this size limit is reached, a backup log file named *filename*.1 (for example, "RSA_Software_token_log.txt.1") is created, and messages are once again logged to the original log file. When the log file again reaches its size limit, the backup log file is replaced.

Log Message Format

The format of the output log file is as follows:

```
[time stamp] [severity level] [thread name] [logging
component] - [message]
```

Format Component	Meaning
Time stamp	The date and time that the message was logged. The date and time are displayed in 24-hour format. The time stamp format is dd mmm yyyy hh::mm::ss, for example, 10 Feb 2010 09:14:21.
Severity level	Indicates whether the message has been logged as an error that occurred in the application (ERROR), as an informational message (INFO), or as a message to aid in debugging (DEBUG).
Thread name	Identifies the thread that was responsible for logging the message.
Logging component	The SecurID desktop application specifies numerous components that have the capability of logging messages. These components are designated by their architectural significance within the application, and include the following: **Desktop Client.** Represents a log message generated from the main application, but not from within the stauto32 library or the Local Hard Drive (RSA) Plug-In. **Software Token Library.** Represents a log message generated from within the stauto32 library. The stauto32 library integrates third-party applications, such as VPN clients, and facilitates seamless integration with RSA SecurID. **Local Hard Drive (RSA) Plug-in.** Represents a log message generated from within the local hard drive plug-in. The user's tokens are stored on the local hard drive (unless you use a third-party plug-in, such as a TPM). **Software Token Migrator.** Represents a log message generated during migration of tokens from a previous version of the application. Migration occurs when users upgrade to a newer version of the application.
Message	The logged message.

Sample Log Messages

This section contains examples and explanations of messages logged by the SecurID desktop application.

05 Sep 2010 10:14:21 ERROR 0x0000c754 RSA Plugin - 217 RSA database corruption detected

Explanation (this is not logged):

Severity Level = ERROR

Thread Name = 0x0000c754

Logging Component = Local Hard Drive Plug-in

Message = 217 RSA database corruption detected

17 Jul 2010 13:23:42 ERROR 0x00005733 Software Token Library - 57 General Error

Explanation:

Severity Level = ERROR

Thread Name = 0x00005733

Logging Component = Software Token Library

Message = 57 General Error

29 May 2010 02:30:54 ERROR 0x0000a537 Software Token Migrator - 217 Old password incorrect

Explanation:

Severity Level = ERROR

Thread Name = 0x0000a537

Logging Component = Software Token Migrator

Message = 217 Error: Old password incorrect

25 Aug 2010 16:16:05 INFO 0x0000161c Software Token Client - Application Settings:

<key>\HKEY_LOCAL_MACHINE\Software\RSA\Software Token\Desktop/InstallDir

<value>C:\p4\dev\sw-authenticators\src\softwaretokenlib\debug

Explanation:

Severity Level = INFO

Thread Name = 0x0000161c

Logging Component = Software Token Client

Message = Application Settings:
<key>\HKEY_LOCAL_MACHINE\Software\RSA\Software Token\Desktop/InstallDir

<value>C:\p4\dev\sw-authenticators\src\softwaretokenlib\debug

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