

# How to: Two-Factor Authentication with ClearPass and RSA SecureID

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## Introduction

This Guide will show you how to configure two-factor authentication using ClearPass, RSA SecurID Authentication Manager<sup>[1]</sup> and the Windows 802.1X supplicant with the Aruba EAP-GTC plug-in.

## Configuring ClearPass Policy Manager

This section provides instructions for configuring ClearPass Policy Manager with RSA SecurID Authentication. This document is not intended to suggest optimum installations or configurations.

### Create an RSA Authentication Source

Go to **Configuration > Authentication > Sources** and click **Add**. Select **Token Server** as the **Type**. This will expose the remainder of the configuration options for this authentication source. Provide a **Name** for the source, and optionally a **Description**. It's suggested that you uncheck the **Use for Authorization** option, as it's unlikely that the RSA authentication source is providing any additional authorization information. If you have replica (redundant) RSA Authentication Manager servers, click the **Add Backup** button for each backup server you want to add. This will expose additional tabs for configuring the backup servers.

Configuration » Authentication » Sources » Add

#### Authentication Sources

General	Primary	Attributes	Backup 1	Backup 2	Summary
<b>Name:</b> RSA Authentication Manager					
<b>Description:</b>					
<b>Type:</b> Token Server					
<b>Use for Authorization:</b> <input type="checkbox"/> Enable to use this Authentication Source to also fetch role mapping attributes					
<b>Authorization Sources:</b> <div><div></div><div>Remove</div><div>View Details</div><div>-- Select --</div></div>					
<b>Server Timeout:</b> 10 seconds					
<b>Backup Servers Priority:</b> <div><div>Backup 1</div><div>Backup 2</div><div>Move Up</div><div>Move Down</div></div> <div>Add Backup Remove</div>					

Go to the **Primary** tab, and enter the FQDN or IP Address of the primary RSA Authentication Manager as the **Server Name**. The default **Port** of 1812 should be appropriate for most applications. Then enter the RADIUS shared secret as the **Secret**. If you have added backup servers, complete the same configuration under the **Backup** tabs.

Configuration » Authentication » Sources » Add

## Authentication Sources

General	Primary	Attributes	Backup 1	Backup 2	Summary
Connection Details					
Server Name:	pe081.pe-lab.com				
Port:	1812				
Secret:	.....				

On the **Summary** tab, verify that the configuration is what you want and then click **Save**.

Configuration » Authentication » Sources » Add

## Authentication Sources

Authentication Source has not been saved

General	Primary	Attributes	Backup 1	Backup 2	Summary
<b>General:</b>					
Name:	RSA Authentication Manager				
Description:					
Type:	TokenServer				
Use for Authorization:	Disabled				
Authorization Sources:	-				
<b>Primary:</b>					
Server Name:	pe081.pe-lab.com				
Port:	1812				
Secret:	*****				
<b>Backup 1:</b>					
Server Name:	pe082.pe-lab.com				
Port:	1812				
Secret:	*****				
<b>Backup 2:</b>					
Server Name:	pe083.pe-lab.com				
Port:	1812				
Secret:	*****				
<b>Attributes:</b>					
Type	Name				Enabled as Role
<a href="#">Back to Authentication Sources</a>					
					Next <b>Save</b> Cancel

## Create a Service for RSA Authentications

**NOTE:** The following instructions assume the use of Aruba Wireless infrastructure. If your network infrastructure is different, these instructions may need to be altered.

Go to **Configuration > Services** and click **Add**. Select **Aruba 802.1X Wireless** as the service **Type**. Provide a **Name** for the service.

Configuration » Services » Add

Services

Service

Authentication

Roles

Enforcement

Summary

Type:

Aruba 802.1X Wireless

Name:

RSA Authentication Service

Description:

Aruba 802.1X Wireless Access Service

Monitor Mode:

☐ Enable to monitor network access without enforcement

More Options:

☐ Authorization ☐ Posture Compliance ☐ Audit End-hosts ☐ Profile Endpoints

Service Rule

Matches ☐ ANY or ☒ ALL of the following conditions:

Type	Name	Operator	Value	
1. Radius:IETF	NAS-Port-Type	EQUALS	Wireless-802.11 (19)	
2. Radius:IETF	Service-Type	BELONGS_TO	Login-User (1), Framed-User (2), Authenticate-Only (8)	
3. Radius:Aruba	Aruba-Essid-Name	EXISTS		
4. Click to add...				

Click **Next** to move to the **Authentication** tab. Under **Authentication Sources**, select the RSA authentication source you created in the previous section.

Configuration » Services » Add

Services

Service

Authentication

Roles

Enforcement

Summary

Authentication Methods:

[EAP PEAP]  
[EAP FAST]  
[EAP TLS]  
[EAP TTLS]

--Select to Add--

Move Up

Move Down

Remove

View Details

Modify

Authentication Sources:

RSA Authentication Manager [Token Server]

--Select to Add--

Move Up

Move Down

Remove

View Details

Modify

Strip Username Rules:

☐ Enable to specify a comma-separated list of rules to strip username prefixes or suffixes

On the **Roles** and **Enforcement** tabs, make changes to suit your environment. On the **Summary** tab, verify that the configuration is what you want, then click **Save**.

Configuration » Services » Add

## Services

Service	Authentication	Roles	Enforcement	Summary
<b>Service:</b>				
Type:	Aruba 802.1X Wireless			
Name:	RSA Authentication Service			
Description:	Aruba 802.1X Wireless Access Service			
Monitor Mode:	Disabled			
More Options:	-			
<b>Service Rule</b>				
Match ALL of the following conditions:				
Type	Name	Operator	Value	
1. Radius:IETF	NAS-Port-Type	EQUALS	Wireless-802.11 (19)	
2. Radius:IETF	Service-Type	BELONGS_TO	Login-User (1), Framed-User (2), Authenticate-Only (8)	
3. Radius:Aruba	Aruba-Essid-Name	EXISTS		
<b>Authentication:</b>				
Authentication Methods:	1. [EAP PEAP] 2. [EAP FAST] 3. [EAP TLS] 4. [EAP TTLS]			
Authentication Sources:	RSA Authentication Manager [Token Server]			
Strip Username Rules:	-			
<b>Roles:</b>				
Role Mapping Policy:	-			
<b>Enforcement:</b>				
Use Cached Results:	Disabled			
Enforcement Policy:	[Sample Allow Access Policy]			
<a href="#">Back to Services</a> <span>Next &gt;</span> <span><b>Save</b></span> <span>Cancel</span>				

## Configuring the Network Supplicant

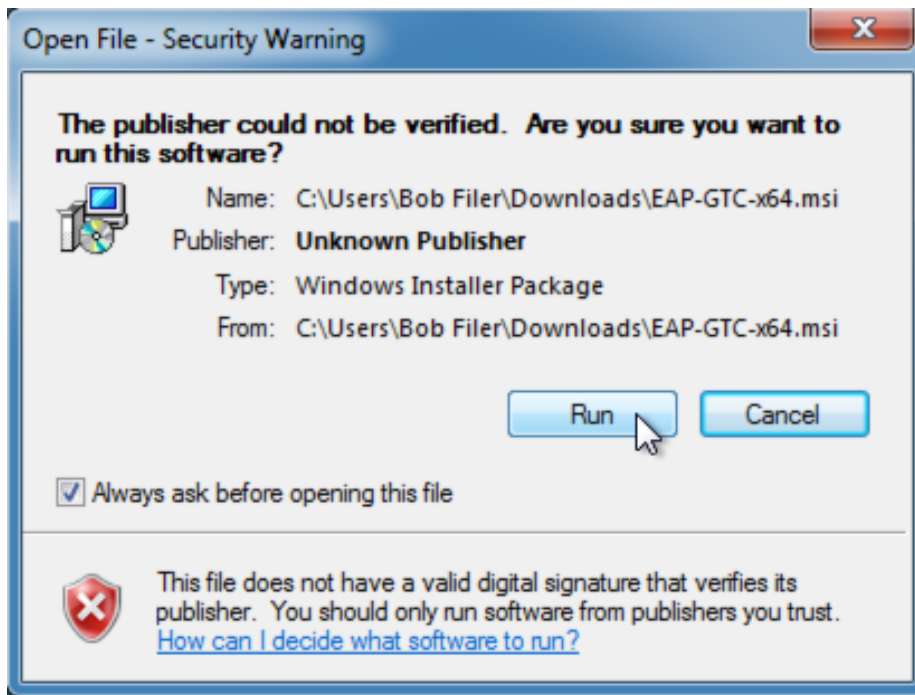
After you have configured ClearPass Policy Manager to use RSA SecurID authentication, a compatible 802.1X supplicant is required to fully implement the solution. Any supplicant used for RSA SecurID authentication must support either EAP-GTC (Generic Token Code) or native SecurID authentication. The additional functionality in these supplicants enables the endpoint to respond to challenges from the RSA Authentication Manager. These challenges manifest themselves in the form of prompts to the end user for events such as NEW PIN or NEXT TOKENCODE. The native supplicants supplied with operating systems such as Windows and Mac OS X do not contain support for 2-factor authentication systems such as RSA SecurID, but may be modified to include such support. Third-party supplicants such as the Juniper Odyssey Access Client may also be used in place of the native supplicants. You can explore additional supplicant options on the RSA Ready <sup>[2]</sup> community.

## Installing the EAP-GTC Plug-In

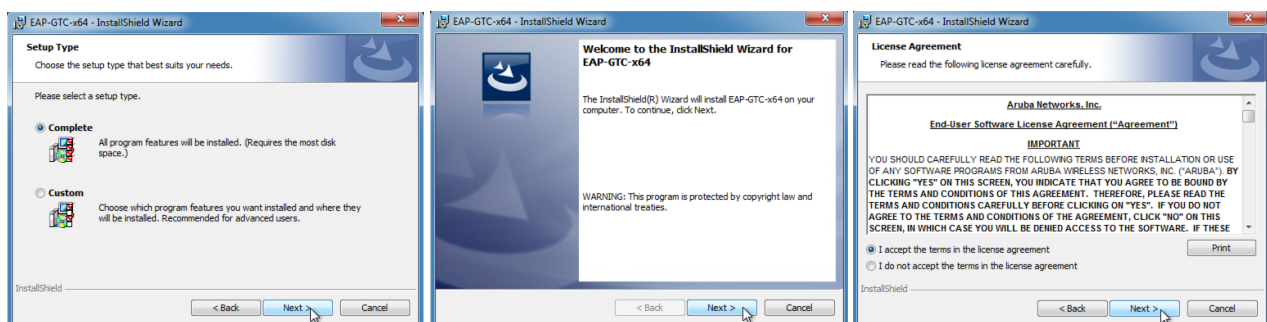
In the following example, the EAP-GTC plug-in (supplied by Aruba Networks) for Windows is used. This plug-in is available for download from the Aruba Networks support site <sup>[3]</sup>, and supports 32- and 64-bit versions of Windows XP, Vista, and 7. Follow the instructions included in the EAP-GTC Plug-In User's Guide to install the plug-in on Windows.

**NOTE:** Windows 7 is used for the client examples.

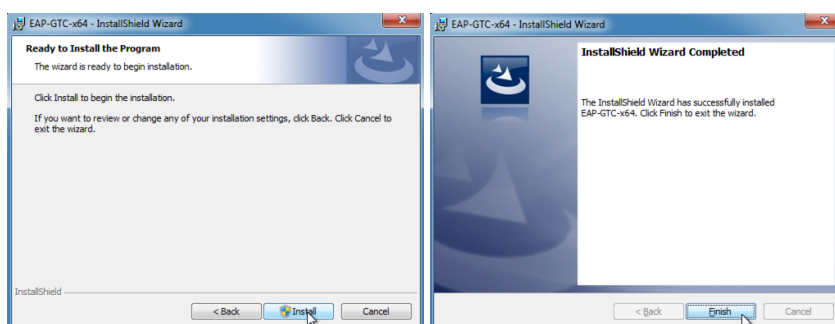
Launch the downloaded Windows installer package. The package is unsigned so you will have click **Run** to accept the Security Warning to proceed.



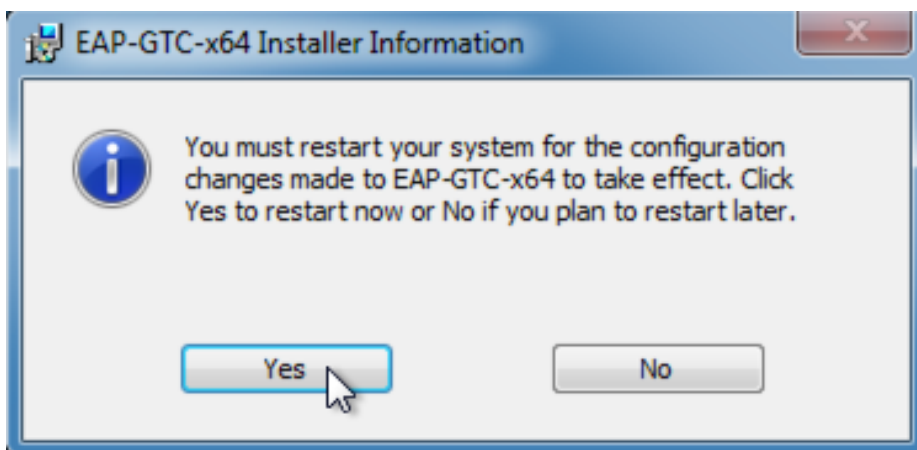
Click **Next**, then **Accept** the License Agreement and click **Next**. Select the **Complete** Setup Type and click **Next**.



Click **Install** to begin the installation and then click **Finish** once the installation is complete.

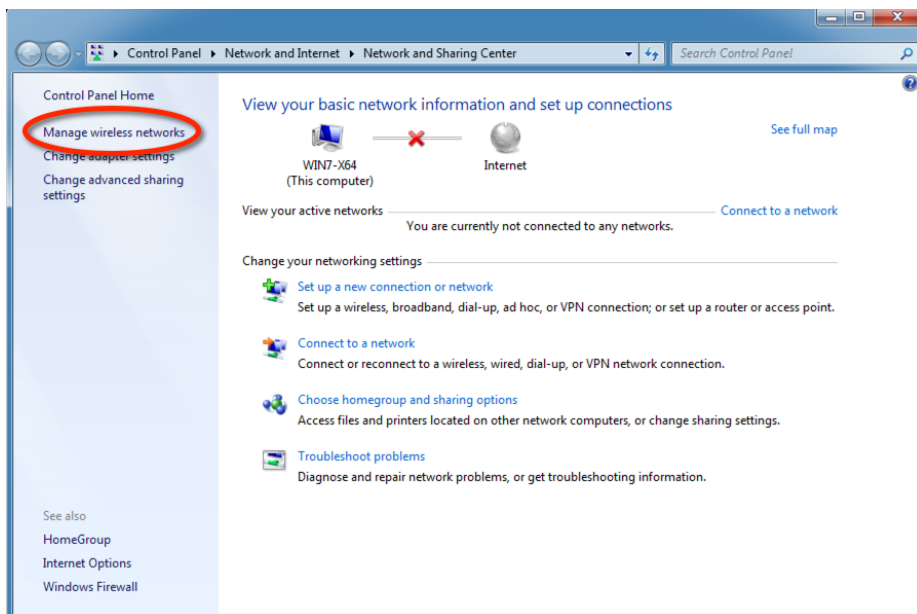


Finally, **restart** your system to complete the installation.



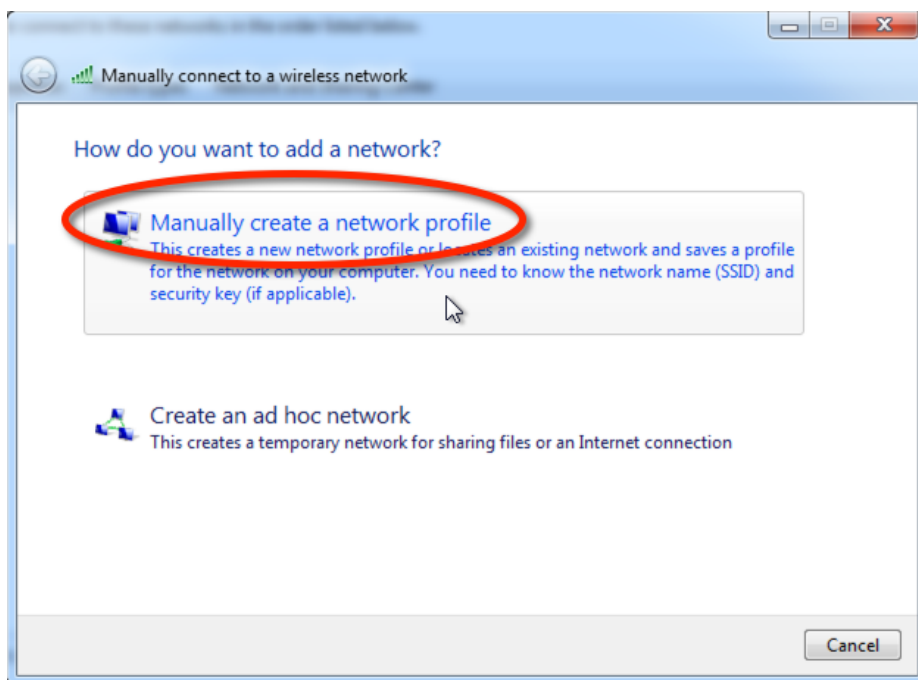
## Configuring the EAP-GTC Plug-In

After installation of the EAP-GTC plug-in, you need to manually create a Network Profile for the SSID that will use RSA SecurID. Open the Network and Sharing Center and click **Manage wireless networks**.



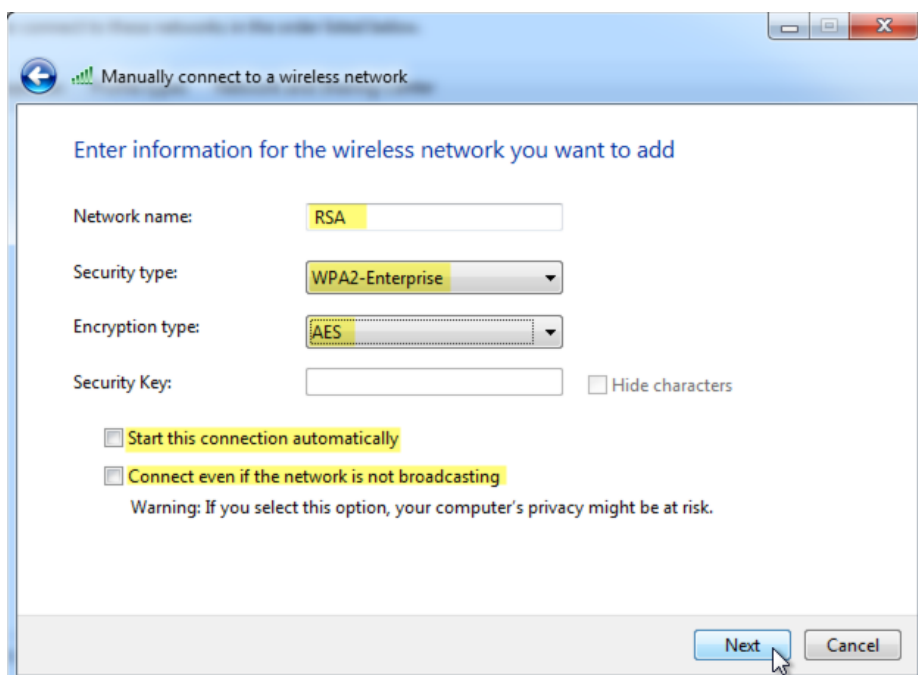
Click **Add** to create a new wireless network configuration.

Click **Manually create a network profile** to create a new network profile.

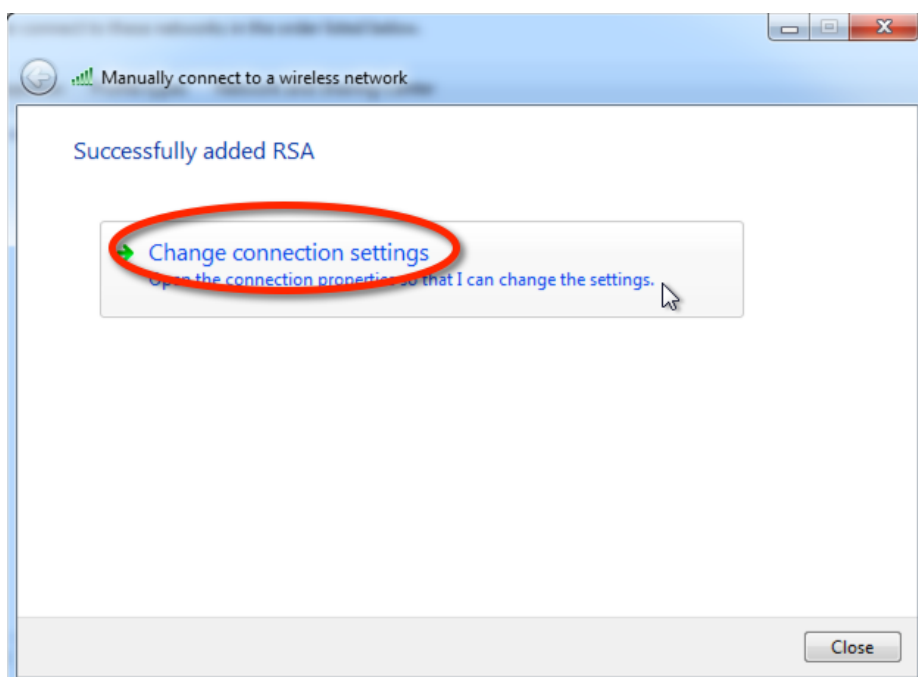


Enter the following information into the Wireless Network Information window, then click **Next**:

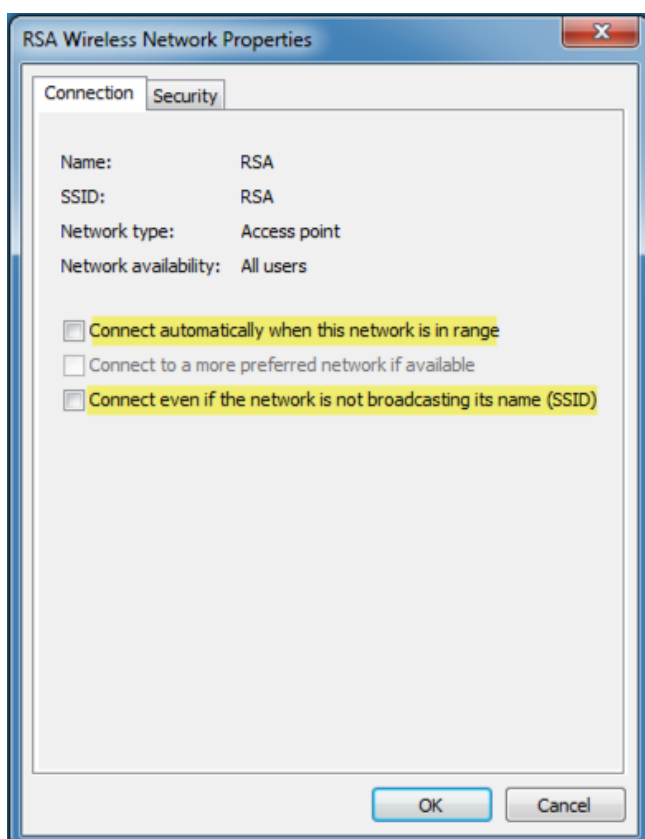
- **Network name:** Enter the network SSID
- **Security type:** Select **WPA2-Enterprise**, **WPA-Enterprise**, or **802.1X** from the pull-down list. This selection should match your network settings.
- **Encryption type:** Select **AES**, **TKIP**, or **WEP** as appropriate from the pull-down list.



Click **Change connection settings**.



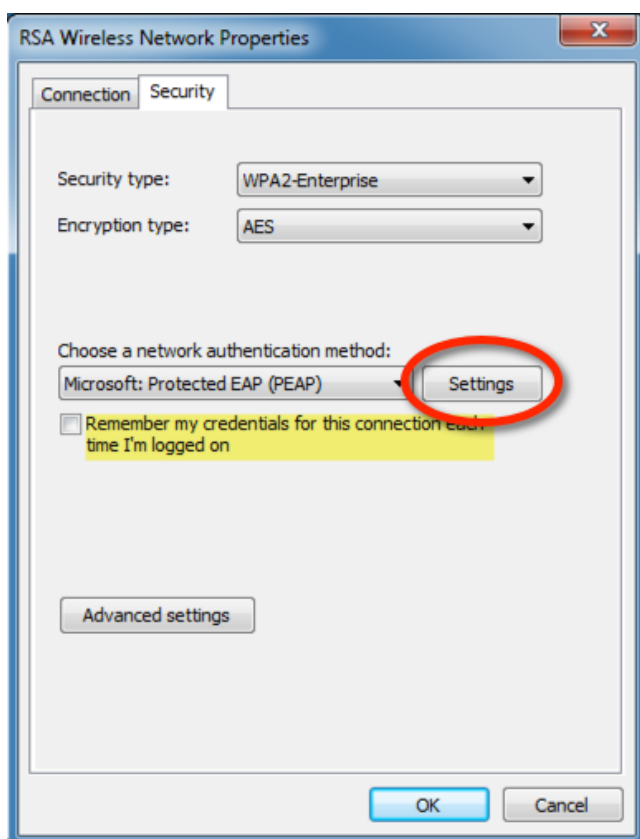
The **Wireless Network properties** dialog box appears with the **Connection** tab selected. Make changes as appropriate for your environment, then click on the **Security** tab.



Select **Microsoft: Protected EAP (PEAP)** from the **Choose a network authentication method** pull-down menu. Make other changes as appropriate, then click **Setting**.

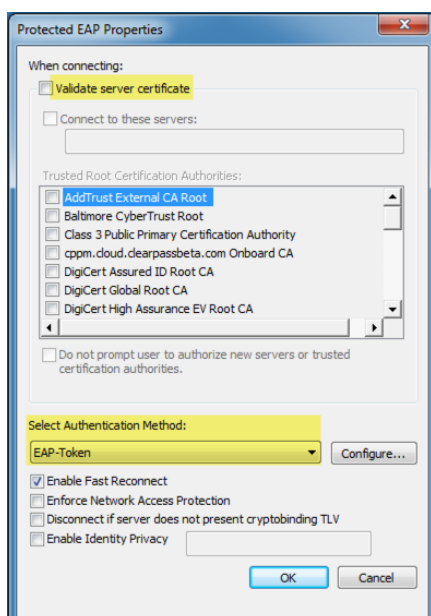
**NOTE:** While EAP-Token appears in both the inner and outer authentication method lists, you should only select it as an inner method. Select PEAP as the outer method.



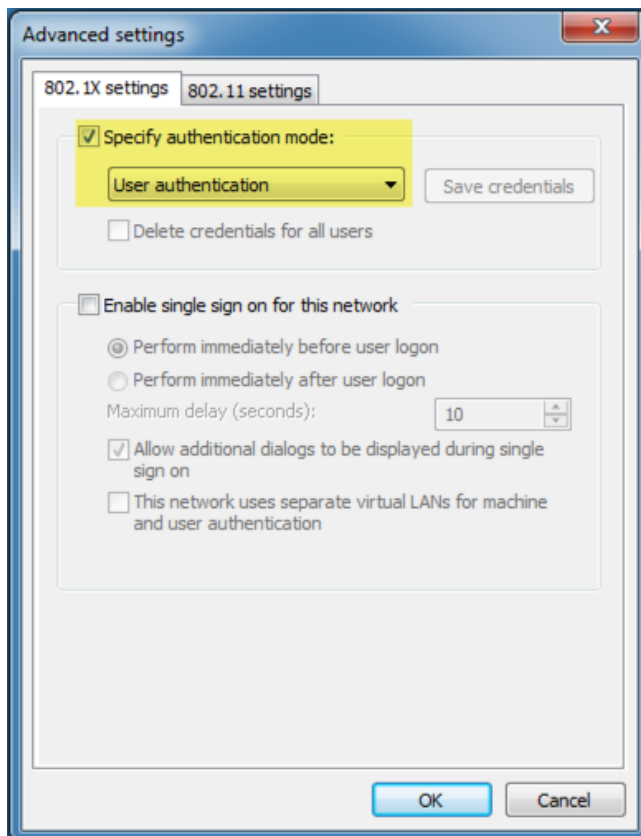


Select **EAP-Token** from the **Select Authentication Method** pull-down list. Make any other changes appropriate for your environment, then click **OK**.

**NOTE:** When you select EAP Token as the authentication method, no dialog box is displayed if you click on the Configure button.




Click the **Advanced** button if you need to make any changes to the **Advanced Properties** such as the Authentication Mode.



Click **OK** when you've made all the necessary changes.

## Configuring RSA Authentication Manager



See the  for guidelines on setting up RSA Authentication Manager. Make sure you set up RSA Authentication Manager for RADIUS.

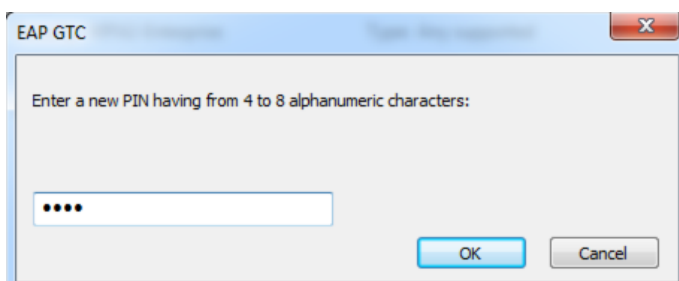
## RSA SecurID Login Screens

### Login Dialog

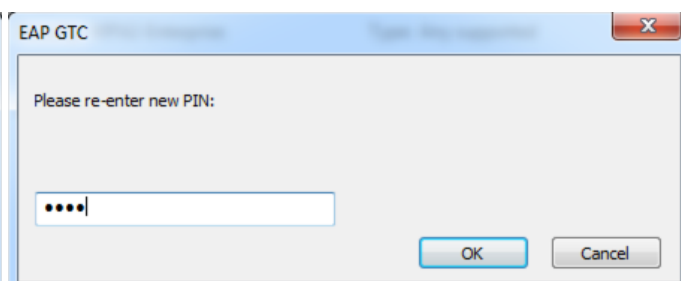


The 'Enter Credentials' dialog box features a blue header with a close button. Below the header is a graphic showing a globe on a stand with two laptops. The dialog contains three input fields: 'User name:', 'Password:' (masked with dots), and 'Logon domain:'. At the bottom are 'OK' and 'Cancel' buttons.

### User-Defined New PIN

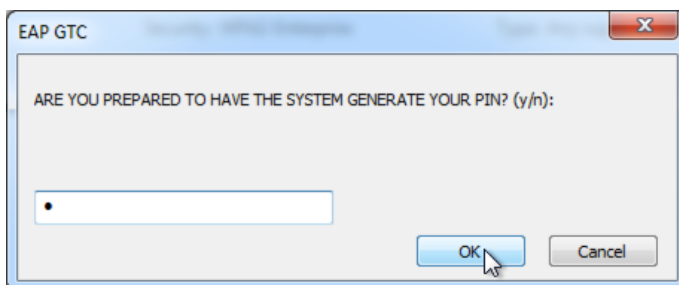


The 'EAP GTC' dialog box prompts the user to 'Enter a new PIN having from 4 to 8 alphanumeric characters:'. It includes a text input field with four dots, and 'OK' and 'Cancel' buttons at the bottom.

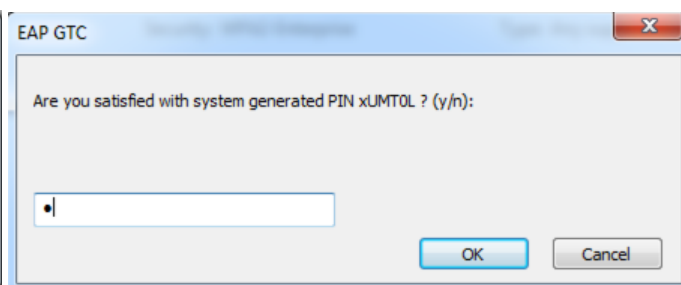


The 'EAP GTC' dialog box prompts the user to 'Please re-enter new PIN:'. It includes a text input field with four dots, and 'OK' and 'Cancel' buttons at the bottom.

### System-generated New PIN

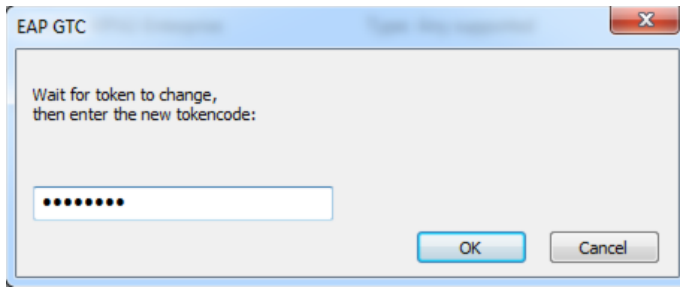


The 'EAP GTC' dialog box asks 'ARE YOU PREPARED TO HAVE THE SYSTEM GENERATE YOUR PIN? (y/n):'. It includes a text input field with a single dot, and 'OK' and 'Cancel' buttons at the bottom.



The 'EAP GTC' dialog box asks 'Are you satisfied with system generated PIN xUMT0L ? (y/n):'. It includes a text input field with a single dot, and 'OK' and 'Cancel' buttons at the bottom.

## Next Tokencode



## Historical

FOR HISTORICAL REFERENCE: **Configure CPPM to use RSA Token server as Authentication Source.PDF**

## References

- [1] <http://en.wikipedia.org/wiki/SecurID>
- [2] <https://community.emc.com/community/connect/rsaxchange/rsa-ready/content>
- [3] <http://support.arubanetworks.com/ToolsResources/tabid/76/DMXModule/514/EntryId/114/Default.aspx>

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