

RSA SecurID Ready Implementation Guide

Last Modified: December 29, 2005

Partner Information

Product Information			
Partner Name	Cisco Systems		
Web Site	www.cisco.com		
Product Name	ASA 5500 Series Adaptive Security Appliances		
Version & Platform	7.0(1)		
Product Description	7.0(1) Cisco® ASA 5500 Series adaptive security appliances are purpose-built solutions that combine best-of-breed security and VPN services with the innovative Cisco Adaptive Identification and Mitigation (AIM) architecture. Designed as a key component of the Cisco Self-Defending Network, the Cisco ASA 5500 Series provides proactive threat defense that stops attacks before they spread through the network, controls network activity and application traffic, and delivers flexible VPN connectivity. The result is a powerful multifunction network security appliance family that provides the security breadth and depth for protecting small and medium-sized business and enterprise networks while reducing the overall deployment and operations costs and complexities associated with providing this new level of security.		
Product Category	Perimeter Defense (Firewalls, VPNs & Intrusion Detection)		





Solution Summary

The Cisco ASA 5500 Series provides RSA SecurID authentication as one mechanism to control network activity via a RADIUS authentication and delivers flexible IPSEC or SSL VPN connectivity authentication via RADIUS or Native RSA SecurID Authentication.

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Product Requirements

Partner Product Requirements: Cisco ASA 5500		
Firmware Version	7.01	

Additional Software Requirements			
Application	Additional Patches		
Cisco VPN Client	4.6 or higher		

Important: If you are configuring the ASA Server to use IPSec you will also need to configure the Cisco VPN client. Information on how to configure the Cisco VPN client can be found in the Cisco VPN client implementation guide located at

 $\frac{http://rsasecurity.agora.com/rsasecured/guides/imp_pdfs/Cisco_VP}{N_Client_AuthMan61.pdf}\,.$



Agent Host Configuration

To facilitate communication between the Cisco ASA 5500 and the RSA Authentication Manager / RSA SecurID Appliance, an Agent Host record must be added to the RSA Authentication Manager database and RADIUS Server database if using RADIUS. The Agent Host record identifies the Cisco ASA 5500 within its database and contains information about communication and encryption.

To create the Agent Host record, you will need the following information.

- Hostname
- IP Addresses for all network interfaces
- RADIUS Secret (When using RADIUS Authentication Protocol)

When adding the Agent Host Record, you should configure the Cisco ASA 5500 as a Communication Server. This setting is used by the RSA Authentication Manager to determine how communication with the Cisco ASA 5500 will occur.

Note: Hostnames within the RSA Authentication Manager / RSA SecurID Appliance must resolve to valid IP addresses on the local network.

Please refer to the appropriate RSA Security documentation for additional information about Creating, Modifying and Managing Agent Host records.



Partner Authentication Agent Configuration

Before You Begin

This section provides instructions for integrating the partners' product with RSA SecurID Authentication. This document is not intended to suggest optimum installations or configurations.

It is assumed that the reader has both working knowledge of all products involved, and the ability to perform the tasks outlined in this section. Administrators should have access to the product documentation for all products in order to install the required components.

All vendor products/components must be installed and working prior to the integration. Perform the necessary tests to confirm that this is true before proceeding.

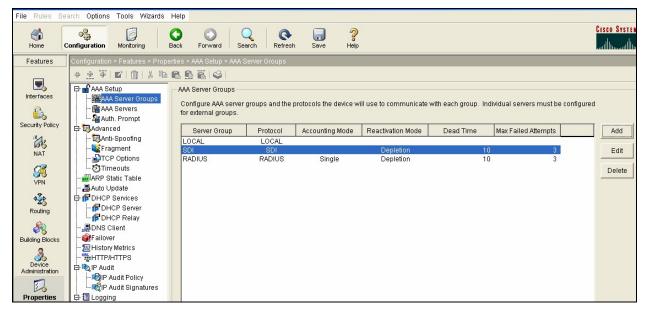
Documenting the Solution

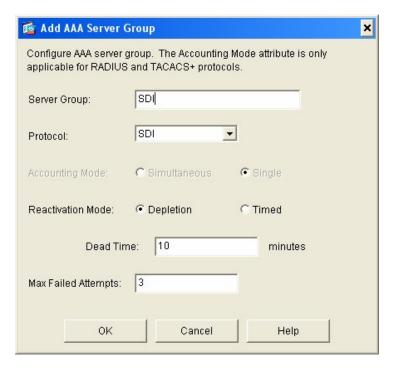
The ASA 5500 Series Adaptive Security Appliances can authenticate to an RSA Authentication Manager in two ways. One way is via the Native RSA SecurID Authentication Protocol and the other is via RADIUS. The ASA also has three areas were RSA SecurID Authentication can be enabled. They are IPSEC VPN, Web SSL VPN and Firewall. Start the Cisco ASDM manager and go to the appropriate configuration section below for your needs.

□ Note: Click Apply after your configuration changes when appropriate.

Authentication via RSA Native SecurID Authentication Protocol

- 1. Select **Configuration** from the top menu and then select **Properties** from the Features Menu on the left.
- Select AAA Setup AAA Server Groups.

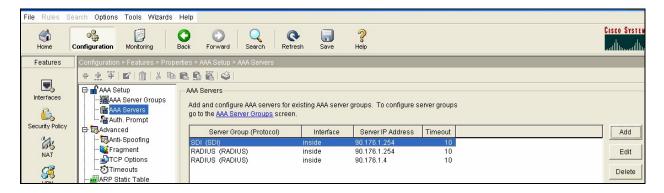




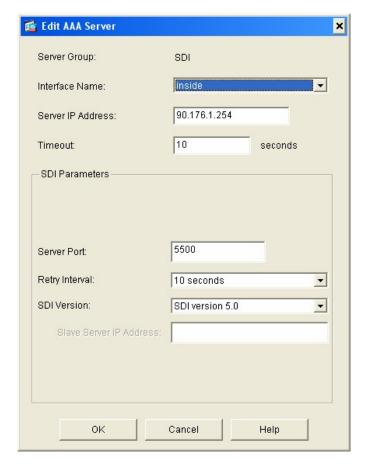
- Server Group: Name the server group.
- Protocol:: Select SDI.

Note: Cisco refers to RSA SecurID authentication as "SDI".

- 4. Click OK.
- 5. Select AAA Setup AAA Servers.



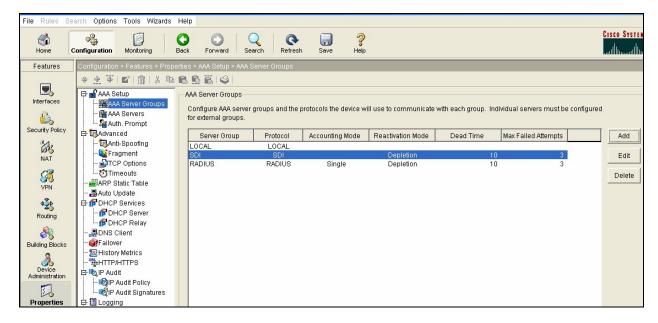


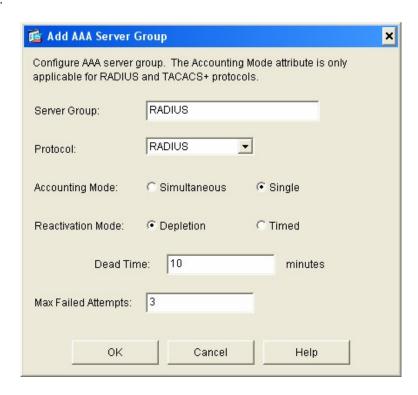


8. Select SDI Version 5.0 for the SDI Version. For the other parameters select the appropriate values for your servers.

Authentication via RADIUS

- 1. Select Configuration from the top menu and then select Properties from the Features Menu on the left.
- Select AAA Setup AAA Server Groups.

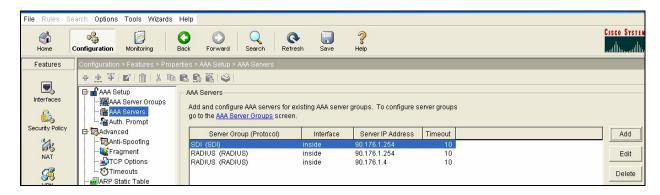




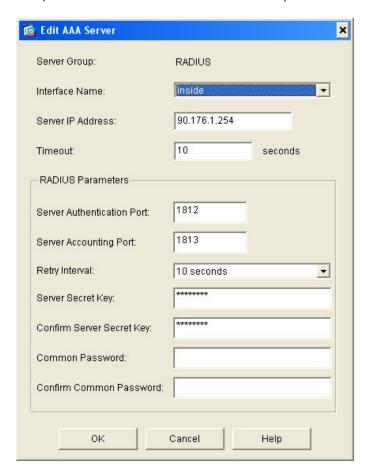
- 4. Name the server group and select RADIUS for the Protocol. This process can be repeated to add backup RADIUS Server.
- 5. Click **OK**.



Select AAA Setup – AAA Servers.



- 7. Click Add.
- 8. Select the Server Group created above for the RADIUS Server Group.



- 9. Select the Server Group created above for the RADIUS Server Group.
- 10. Enter the appropriate information for your configuration.

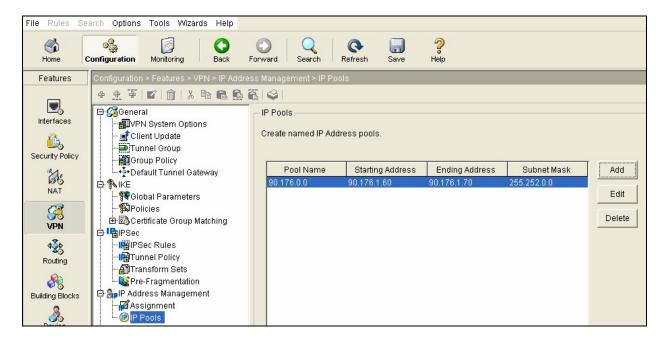
Note: The Server Secret Key needs to match the Secret Key created in the RADIUS server.

11. Click **OK**.

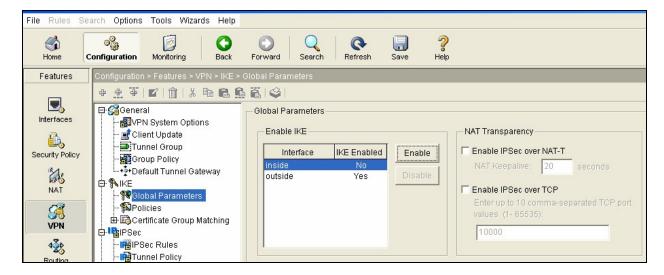


IPSec VPN Configuration

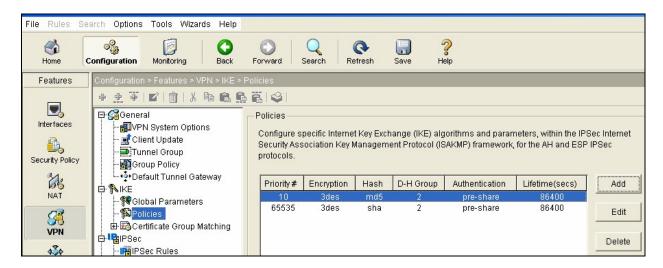
- 1. Select Configuration from the top menu and then select VPN from the Features Menu on the left.
- 2. Select IP Address Management IP Pools and add an IP pool.



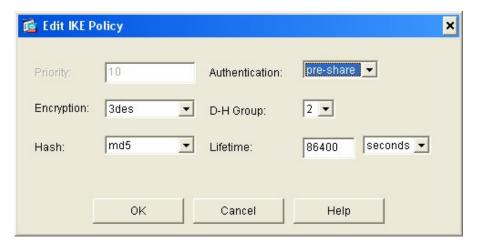
Select IKE – Global Parameters and enable IKE access to the appropriate interface.



4. Select IKE - Policies.

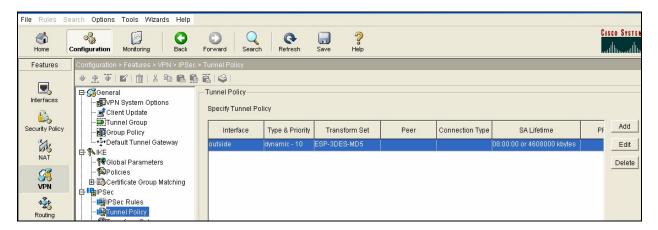


- Click Add or Edit.
- Create your IKE Policy with pre-shared selected for Authentication and the appropriate setting for the other parameters.

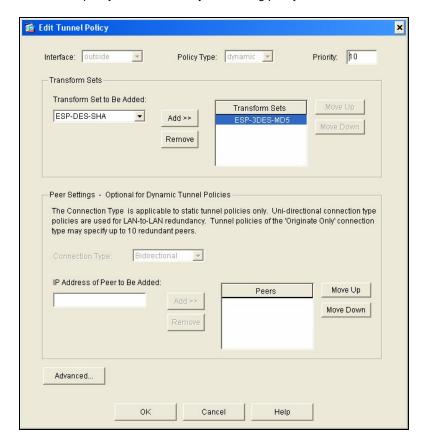


7. Click OK.

8. Select IPSec - Tunnel Policy.

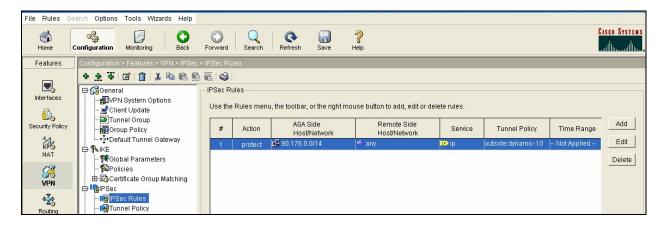


9. Select Add to add a new policy or Edit to modify an existing policy...

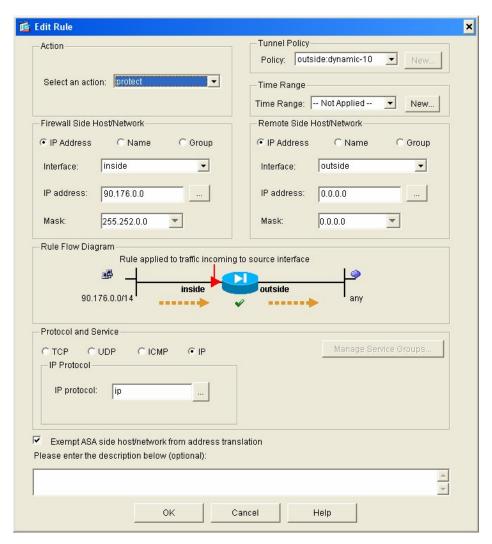


10. Click OK after selecting the appropriate settings for your policy.

11. Select IPSec - IPSec Rules.



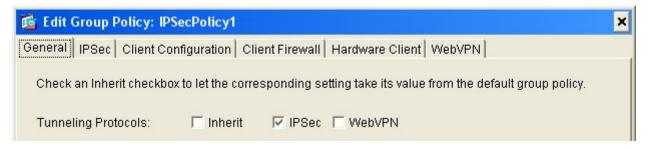
12. Click Add to add a new rule or Edit to modify an existing rule.



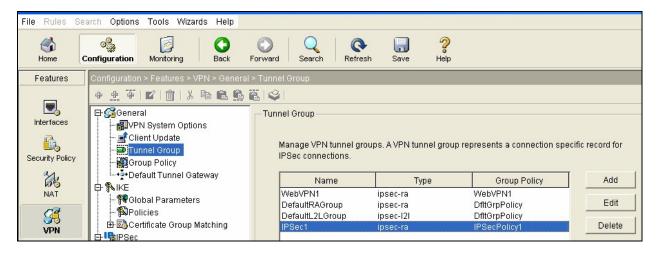
13. Select the newly created policy for the Runnel Policy and selecting the appropriate settings for the other parameters. Click **OK**

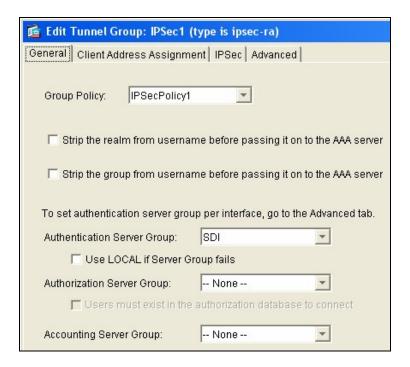


14. Select General – Group Policy and add a group policy.

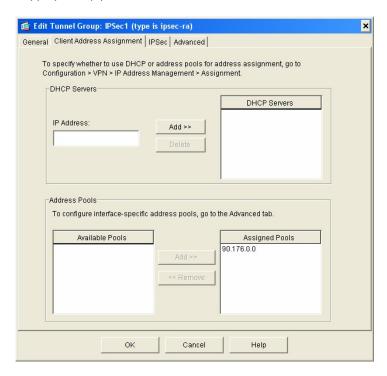


- 15. Check the box for IPSec and make any other configuration changes you need for your policy.
- 16. Click **OK**.
- 17. Select General Tunnel Group.



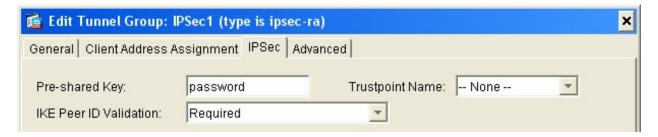


- 19. Select the General tab.
 - Group Policy: Select the Group Policy you created in the step above.
 - Authentication Server Group: Select the Authentication Method Created, which is RSA SecurID Authentication "SDI" or RADIUS.
- 20. Select the Client Address Assignment tab.
 - Add the appropriate ip pool.





21. Select the IPSec tab.



 Pre-shared Key: Enter a key. This will be the same as the group password in the Cisco VPN Client.

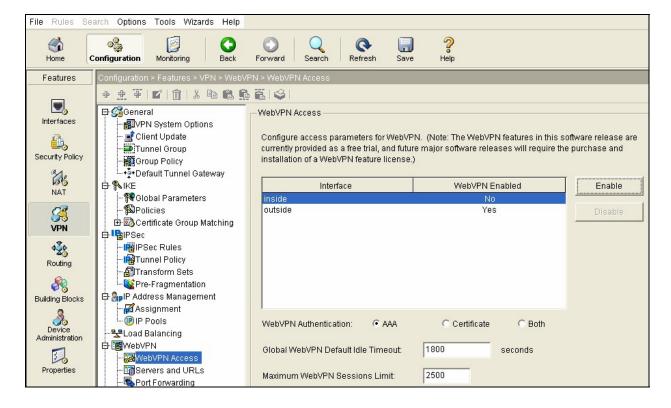
22. Click OK.

Important: A user who is in New-PIN mode will be asked to authenticate with their new PIN and be denied access. They will need to re-authenticate to gain access. See the second Known issue located in the Known Issues section of this guide for more information.

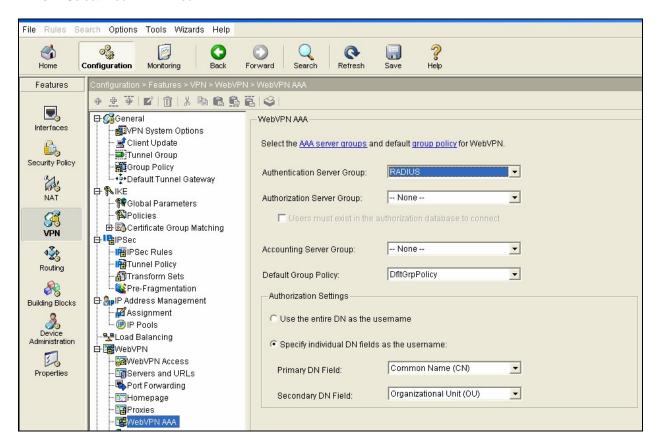
Important: The VPN client also needs to be configured for IPSec VPN access to work and the information on how to do that is documented in the Cisco VPN Client implementation guide located at http://rsasecurity.agora.com/rsasecured/guides/imp_pdfs/Cisco_VPN_Client_AuthMan61.pdf.

Web SSL VPN

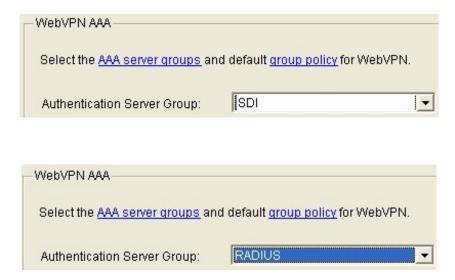
- 1. Select Configuration from the top menu and then select VPN from the Features Menu on the left.
- 2. Select Web VPN WebVPN Access and enable access to the appropriate interface.



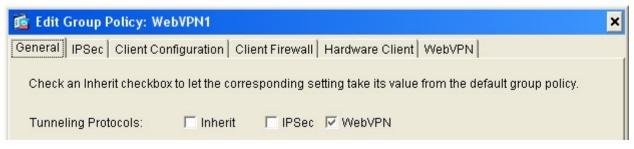
3. Select Web VPN - WebVPN AAA.



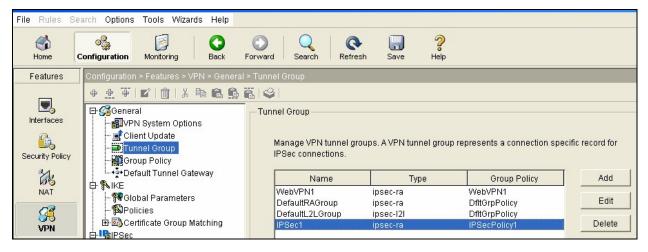
4. For Authentication Server Group select SDI or RADIUS.

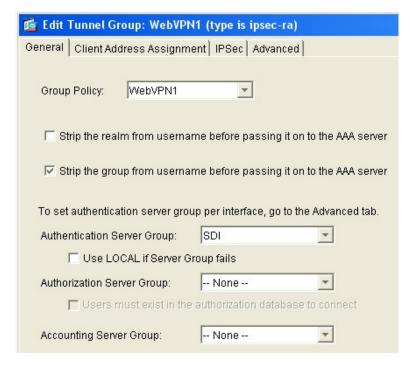


5. Select General – Group Policy and add a group policy.

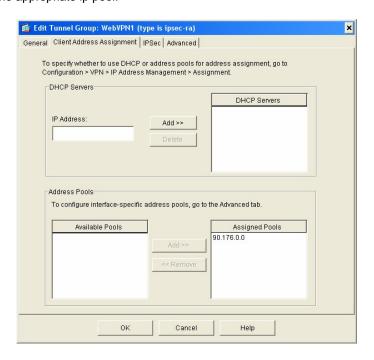


- 6. Check the box for WebVPN and make any other configuration changes you need for your policy.
- 7. Click OK.
- 8. Select General Tunnel Group.





- 10. Select the General tab.
 - Group Policy: Select the Group Policy you created in the step above.
 - Authentication Server Group: Select the Authentication Method Created, which is RSA SecurID Authentication "SDI" or RADIUS.
- 11. Select the Client Address Assignment tab.
 - Add the appropriate ip pool.

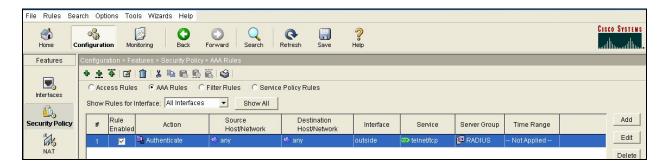


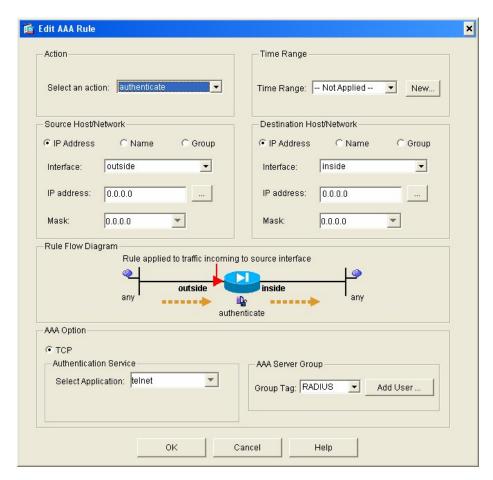
Click OK.



Firewall

- Select Configuration from the top menu and then select Security Policy from the Features Menu on the left.
- 2. Select the AAA Rules radio button.





- Select Authenticate for Select an Action.
- Select the appropriate application under AAA Options. In this example Telnet is the application.
- Select RADIUS for the Group Tag under AAA Server Group.
- Set the other parameters according to your policies.
- 4. Click OK.



Certification Checklist: IPSEC VPN

Date Tested: December 29, 2005

On Information Operating System Windows 2000 SP4
Windows 2000 SP4
Wildows 2000 Cl +
5) Windows XP SP2
IOS
and 4.8.00.0440 Windows XP SP2

Mandatory Functionality			
RSA Native Protocol	-	RADIUS Protocol	
New PIN Mode			
Force Authentication After New PIN	~	Force Authentication After New PIN	✓
System Generated PIN	V	System Generated PIN	✓
User Defined (4-8 Alphanumeric)	V	User Defined (4-8 Alphanumeric)	✓
User Defined (5-7 Numeric)	✓	User Defined (5-7 Numeric)	✓
User Selectable	✓	User Selectable	✓
Deny 4 and 8 Digit PIN	V	Deny 4 and 8 Digit PIN	✓
Deny Alphanumeric PIN	V	Deny Alphanumeric PIN	✓
PASSCODE			
16 Digit PASSCODE	~	16 Digit PASSCODE	✓
4 Digit Password	V	4 Digit Password	✓
Next Tokencode Mode			
Next Tokencode Mode	>	Next Tokencode Mode	✓
Load Balancing / Reliability Testing			
Failover (3-10 Replicas)	V	Failover	✓
Name Locking Enabled	V	Name Locking Enabled	
No RSA Authentication Manager	V	No RSA Authentication Manager	✓
	<u>Additional</u>	Functionality	
RSA Software Token Automation			
System Generated PIN		System Generated PIN	N/A
User Defined (8 Digit Numeric)		User Defined (8 Digit Numeric)	N/A
User Selectable		User Selectable	N/A
Next Tokencode Mode	✓	Next Tokencode Mode	N/A
RSA SecurID 800 Token Automation			
System Generated PIN		System Generated PIN	N/A
User Defined (8 Digit Numeric)	✓	User Defined (8 Digit Numeric)	N/A
User Selectable	V	User Selectable	N/A
Next Tokencode Mode	V	Next Tokencode Mode	N/A
Domain Credential Functionality			
Determine Cached Credential State	N/A	Determine Cached Credential State	
Set Domain Credential	N/A	Set Domain Credential	
Retrieve Domain Credential	N/A	Retrieve Domain Credential	
		/ B / B W B B W B B W B B	
SWA		√ = Pass X = Fail N/A = Non-Av	/allable Function

Certification Checklist: Web SSL VPN

Date Tested: December 29, 2005

Certification Environment			
Product Name	Version Information	Operating System	
RSA Authentication Manager	6.1	Windows 2000 SP4	
Cisco ASA 5500	7.0(1)	IOS	

Mandatory Functionality			
RSA Native Protocol		RADIUS Protocol	
New PIN Mode			
Force Authentication After New PIN	✓	Force Authentication After New PIN	N/A
System Generated PIN	✓	System Generated PIN	N/A
User Defined (4-8 Alphanumeric)	✓	User Defined (4-8 Alphanumeric)	N/A
User Defined (5-7 Numeric)	✓	User Defined (5-7 Numeric)	N/A
User Selectable	✓	User Selectable	N/A
Deny 4 and 8 Digit PIN	✓	Deny 4 and 8 Digit PIN	N/A
Deny Alphanumeric PIN	✓	Deny Alphanumeric PIN	N/A
PASSCODE			
16 Digit PASSCODE	✓	16 Digit PASSCODE	✓
4 Digit Password	✓	4 Digit Password	✓
Next Tokencode Mode			<u></u>
Next Tokencode Mode	>	Next Tokencode Mode	N/A
Load Balancing / Reliability Testing			
Failover (3-10 Replicas)	✓	Failover	✓
Name Locking Enabled	✓	Name Locking Enabled	
No RSA Authentication Manager	✓	No RSA Authentication Manager	✓
	Additional F	unctionality	
RSA Software Token Automation			
System Generated PIN	N/A	System Generated PIN	N/A
User Defined (8 Digit Numeric)	N/A	User Defined (8 Digit Numeric)	N/A
User Selectable	N/A	User Selectable	N/A
Next Tokencode Mode	N/A	Next Tokencode Mode	N/A
RSA SecurID 800Token Automation			
System Generated PIN	N/A	System Generated PIN	N/A
User Defined (8 Digit Numeric)	N/A	User Defined (8 Digit Numeric)	N/A
User Selectable	N/A	User Selectable	N/A
Next Tokencode Mode	N/A	Next Tokencode Mode	N/A
Domain Credential Functionality			
Determine Cached Credential State	N/A	Determine Cached Credential State	
Set Domain Credential	N/A	Set Domain Credential	
Retrieve Domain Credential	N/A	Retrieve Domain Credential	
SIMA		V - Page X - Fail N/A - Non Av	- National Education

RSA SecurID°

Certification Checklist: Firewall

Date Tested: December 29, 2005

Certification Environment				
Product Name Version Information Operating System				
RSA Authentication Manager	6.1	Windows 2000 SP4		
Cisco ASA 5500	7.0(1)	IOS		

Mandatory Functionality			
RSA Native Protocol RADIUS Protocol			
New PIN Mode			
Force Authentication After New PIN	N/A	Force Authentication After New PIN	✓
System Generated PIN	N/A	System Generated PIN	✓
User Defined (4-8 Alphanumeric)	N/A	User Defined (4-8 Alphanumeric)	✓
User Defined (5-7 Numeric)	N/A	User Defined (5-7 Numeric)	✓
User Selectable	N/A	User Selectable	✓
Deny 4 and 8 Digit PIN	N/A	Deny 4 and 8 Digit PIN	✓
Deny Alphanumeric PIN	N/A	Deny Alphanumeric PIN	
PASSCODE			
16 Digit PASSCODE	N/A	16 Digit PASSCODE	~
4 Digit Password	N/A	4 Digit Password	
Next Tokencode Mode			
Next Tokencode Mode	N/A	Next Tokencode Mode	~
Load Balancing / Reliability Testing			<u></u>
Failover (3-10 Replicas)	N/A	Failover	~
Name Locking Enabled	N/A	Name Locking Enabled	
No RSA Authentication Manager	N/A	No RSA Authentication Manager	~
			<u> </u>
	Additional	Functionality	
RSA Software Token Automation			
System Generated PIN	N/A	System Generated PIN	N/A
User Defined (8 Digit Numeric)	N/A	User Defined (8 Digit Numeric)	N/A
User Selectable	N/A	User Selectable	N/A
Next Tokencode Mode	N/A Next Tokencode Mode N/A		N/A
RSA SecurID 800Token Automation			
System Generated PIN	N/A	System Generated PIN	N/A
User Defined (8 Digit Numeric)	N/A	User Defined (8 Digit Numeric)	N/A
User Selectable	N/A	User Selectable	N/A
Next Tokencode Mode	N/A	Next Tokencode Mode	N/A
Domain Credential Functionality			
Determine Cached Credential State	N/A	Determine Cached Credential State	
Set Domain Credential	N/A	Set Domain Credential	
Retrieve Domain Credential	N/A	Retrieve Domain Credential	
SWA		✓ = Pass X = Fail N/A = Non-A	voilable Eurotice

Known Issues

- 1. **Firewall authentication:** New-PIN and Next-Tokencode does not work via FTP or HTTP. Virtual telnet needs to be configured to enable this functionality. See the Cisco documentation on how to enable this feature.
- 2. IPSEC VPN Authentication: After a user creates a PIN they are asked to re-authenticate using that new PIN. This authentication will fail but the next authentication a user performs will work. The end user will not notice this issue as they most likely will think that they entered the wrong code and try again which will succeed if they enter the correct information. The Authentication Manger Administrator will see an "Access Denied, name lock required" error in the log file. Cisco has been made aware of this issue and should be contacted if more information is needed.
- 3. **SSL VPN Authentication:** New-PIN and Next-Tokencode are not supported when using RADIUS as the authentication method.
- 4. **Name Lock Error:** Users will generate name locking errors in the RSA Authentication Manager logs when in NEW PIN mode and name locking is enabled.



Appendix

See the Cisco Secure VPN Client implementation guide for information on how to configure the Cisco VPN Client to work with the Cisco ASA 5500 and RSA SecurID authentication.