NetNumber, Inc.
TITAN

RSA SecurID Ready Implementation Guide

Last Modified: July 17, 2009

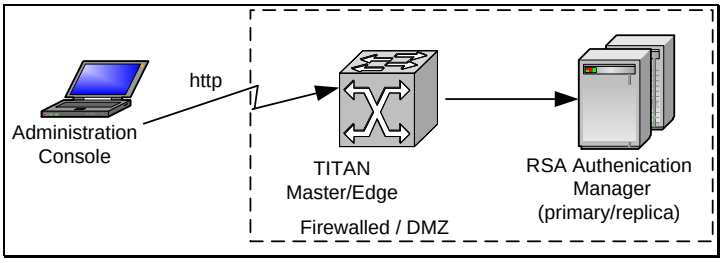
Partner Information

Product Information	
Partner Name	NetNumber Inc.
Web Site	www.netnumber.com
Product Name	TITAN – Transactional IP Telephony Addressing & Numbering
Version & Platform	6.7
Product Description	The NetNumber™ TITAN server represents the core of a communications service providers next-generation addressing infrastructure and enables the service provider to offer a variety of traditional and next generation intelligent network addressing services such as Number-Portability, Global Title Translation, SMS/MMS/IMS/VOIP routing, and Calling Name Presentation over a variety of C7/SS7 and IP protocols including AIN 0.2, PCS 1900, IS41, MAP, SCCP, as well as, SIP, ENUM/DNS and SOAP/XML.
Product Category	Networks and Communications

Solution Summary

The purpose of this guide is to show an administrator how to configure the NetNumber TITAN application to use RSA SecurID to authenticate users of the web-based TITAN Administration Console. The RSA SecurID Agent support is seamlessly integrated into the TITAN application providing a simple deployment and configuration experience. The TITAN Administration Console is used to configure the settings that are necessary for the TITAN application to communicate with the RSA Authentication Manager.

Partner Integration Overview	
Authentication Methods Supported	Native RSA SecurID Authentication
RSA SecurID Library Version Used	Authentication API 6.1
RSA Authentication Manager Replica Support	Full Replica Support
Secondary RADIUS Server Support	N/A
RSA Authentication Agent Host Type for 6.1	Communication Server
RSA Authentication Agent Host Type for 7.1	Standard Agent
RSA SecurID User Specification	All Users
RSA SecurID Protection of Administrative Users	Yes
RSA Software Token and RSA SecurID 800 Automation	No



Product Requirements

Partner Product Requirements: NetNumber TITAN Server	
CPU	See the TITAN Installation Guide
Memory	See the TITAN Installation Guide
Storage	See the TITAN Installation Guide

Operating System	
Platform	**Required Patches**
Solaris 10	Core OS Software Group
Red Hat Enterprise Linux	RHEL 4

Additional Software Requirements:

The Java Runtime Environment, JRE, is bundled with the TITAN application distribution ensuring that the correct version is always available. Also bundled with TITAN is the MySQL database software, although the customer has a choice of databases that TITAN can interface with.

Additional Software Requirements	
Application	**Additional Patches**
Internet Explorer	5.0 or greater

Agent Host Configuration

Important: "Agent Host" and "Authentication Agent" are synonymous. "Agent Host" is a term used with the RSA Authentication Manager 6.x servers and below. RSA Authentication Manager 7.1 uses the term "Authentication Agent".

Important: All "Authentication Agent" types for 7.1 should be set to "Standard Agent".

To facilitate communication between the NetNumber TITAN and the RSA Authentication Manager / RSA SecurID Appliance, an Agent Host record must be added to the RSA Authentication Manager database. The Agent Host record identifies the NetNumber TITAN 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

When adding the Agent Host Record, you should configure the NetNumber TITAN as Standard Agent. This setting is used by the RSA Authentication Manager to determine how communication with the NetNumber TITAN will occur.

To create the RADIUS client record, you will need the following information.

- Hostname
- IP Addresses for all network interfaces
- RADIUS Secret

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, and RADIUS client records.

RSA SecurID files

RSA SecurID Authentication Files	
Files	**Location**
sdconf.rec	/opt/titan/sys/rsa
Node Secret (securid)	/opt/titan/sys/rsa
sdstatus.12	/opt/titan/sys/rsa
sdopts.rec	/opt/titan/sys/rsa

Partner Product 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.

Configure the TITAN Server

The following steps should be taken to configure the TITAN server and test the authentication of a user using RSA SecurID.

1. Copy the RSA SecurID Agent configuration file to the TITAN server.
2. Select RSA SecurID as the TITAN authentication type.
3. Test authentication of the administrator.

The following sections describe each of the four steps. For detailed information about any of these steps, please see the NetNumber TITAN Administration Guide.

Copy the RSA SecurID Agent configuration file to the TITAN server

Once the Agent Host configuration is complete (see previous section, Agent Host Configuration), you must save the configuration to a file named sdconf.rec using the RSA Authentication Manager Administration interface and then transfer the file to the TITAN platform using FTP, SFTP, etc. The sdconf.rec file must be placed in the following TITAN application directory (where <root_dir> is the directory that the TITAN application is installed):

```
<root_dir>/sys/rsa/
```

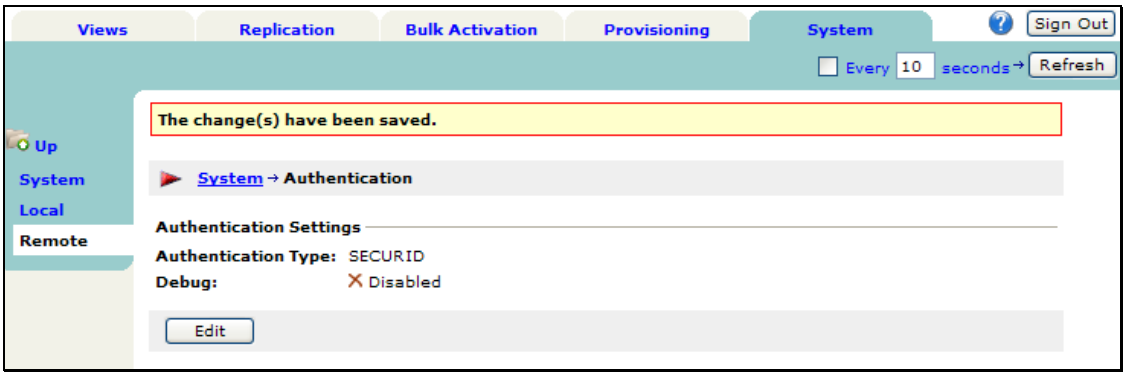
The file permissions on the sdconf.rec file should be READ-ONLY so that the file can be read by the TITAN application.

Select RSA SecurID as the TITAN Authentication Type

The default authentication type is Local, which means the usernames and passwords are stored in the TITAN database. To change the authentication type to RSA SecurID, follow these steps:

- Login to the web-based TITAN Administration Console as the root administrative user that was created during TITAN application setup.
- On the main page, at the *System* tab and then click on the *Authentication* link.
- The Authentication configuration page will display the general configuration settings. Select the *Remote* link in the left margin and select the **Edit** button.
- In the Authentication Type dropdown menu, select SECURID and press the **Save** button.

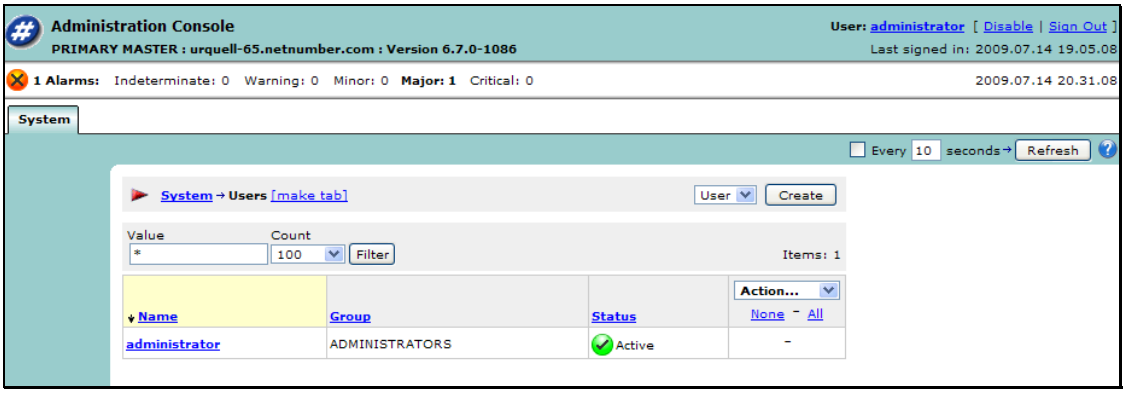
The only configurable setting for the RSA SecurID type is enabling/disabling debug. We recommend that debug be disabled on all production systems. The following figure shows the TITAN Authentication configuration web page with RSA SecurID as the selected value.



TITAN Administrator User

There should be a user configured in both the RSA Authentication Manager and in the TITAN server who has been given the same login user name. Use the RSA Authentication Manager Administration interface to create an RSA SecurID user. The following examples use the user name “user”. See the RSA documentation for detailed information on how to do this.

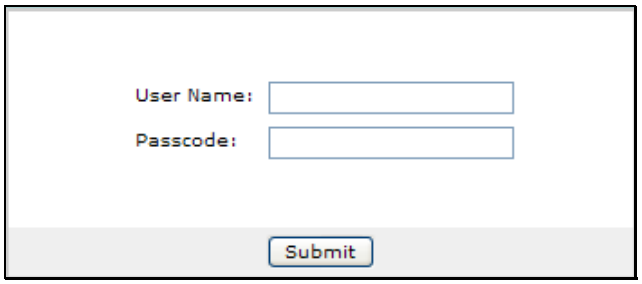
The TITAN Administrator user is created during the TITAN setup procedure and can be verified.



Test Authentication of the Administrator

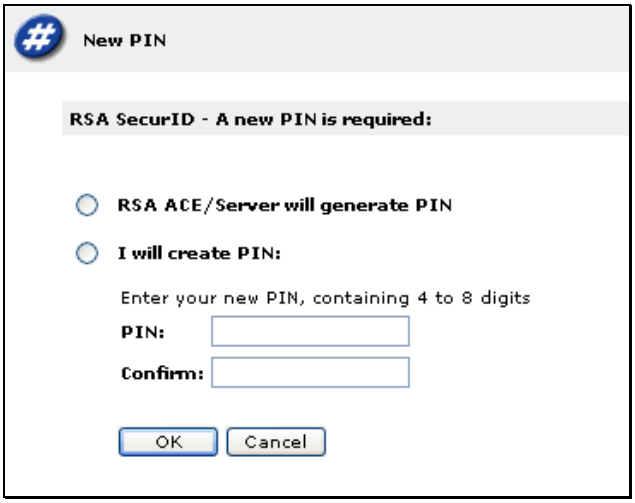
Test that RSA SecurID authentication works by attempting to login to the TITAN application with the “user” login name. Enter “user” in the User Name text field and enter the tokencode displayed on your RSA SecurID authenticator (ie. keyfob) in the Passcode text field and push the **Sign In** button. Alternately, if your RSA Authentication Manager is setup to require passwords, then enter your password in the Passcode field.

A new user does not yet have a PIN until after they go through New PIN Mode, which is described below. After the first login, the user will enter their PIN followed by their tokencode into the Passcode field. The following shows the main TITAN Administration console login screen:

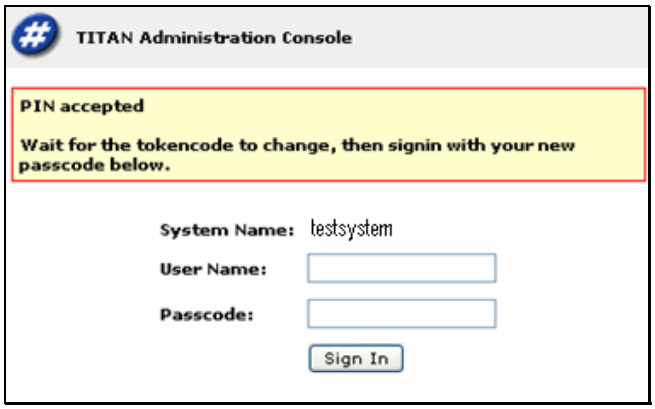


If the user name and Tokencode are accepted by the RSA Authentication Server, the user is put into New PIN mode which will walk them through the process of getting a new PIN. Depending on the configuration of your RSA Authentication Manager, the user will either be:

- prompted to select their own PIN
- given a system generated PIN
- or they will have to choose between these two methods of getting a new PIN, as shown in the following screen:

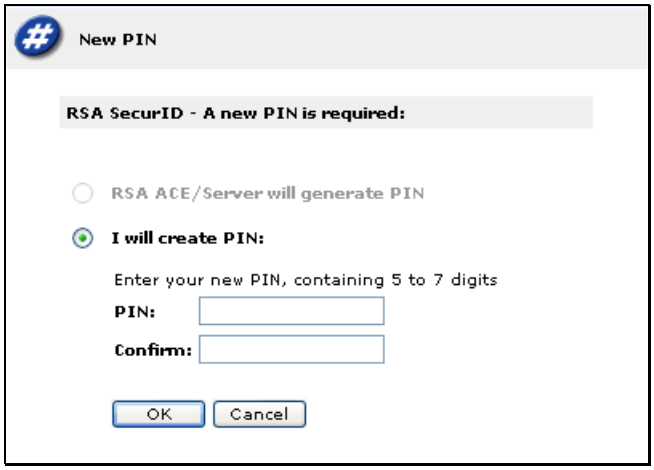


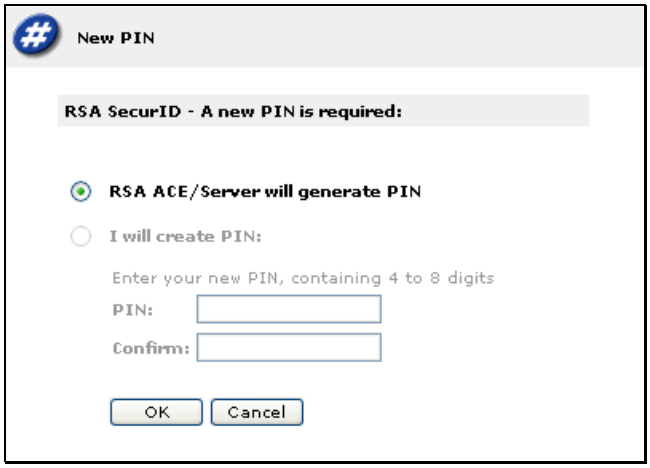
The length of the PIN is determined by the configuration settings on the RSA Authentication Manager. In the above screen, the user should make a selection by clicking on the desired button, enter a PIN if desired in the PIN and Confirm fields, and push the **Ok** button. If the PIN is valid, the following screen is displayed instructing the user to wait for the token code to change and then signing in with their new Passcode (PIN + Tokencode).

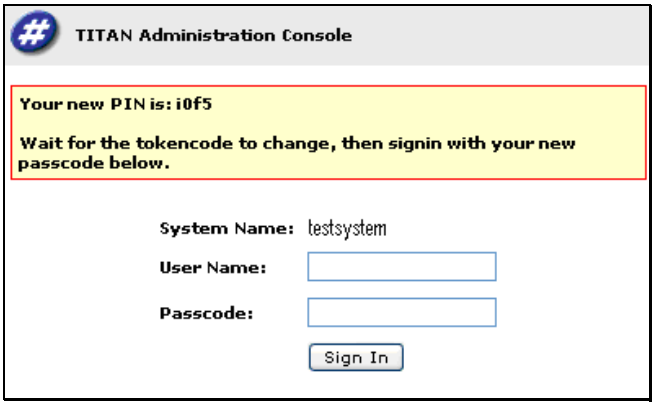


End User Experience

The screens for the other two New PIN options are shown below. The first is when the user is required to choose their PIN. The second is when the system generates the PIN for the user. Again, the New PIN Mode behavior is determined by the settings in the RSA Authentication Manager and can not be set in the TITAN application.

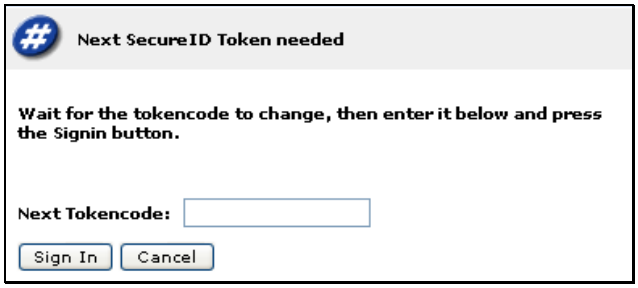






Next Tokencode Mode

If the user enters an incorrect Passcode three times, the RSA Authentication Manager puts the user into “Next Tokencode Mode”. This scenario exists to ensure that the keyfob has not been stolen/lost and that someone else is not trying to guess the PIN + Tokencode. If the real user then enters a correct PIN + Tokencode (Passcode), the following screen is displayed:



The user should wait for the Tokencode to change, enter the new tTokencode in the Next Tokencode text field and then push the **Sign In** button. If an incorrect Tokencode is entered, then the user is denied access. The next time the user tries to sign in, the user will again be prompt.

Certification Checklist for RSA Authentication Manager v6.x

Date Tested: February 3, 2009

Certification Environment		
Product Name	**Version Information**	**Operating System**
RSA Authentication Manager	6.1.3	Windows Server 2003 Enterprise
NetNumber TITAN	6.7	Solaris 10

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	N/A
4 Digit Password	✓	4 Digit Password	N/A
Next Tokencode Mode			
Next Tokencode Mode	✓	Next Tokencode Mode	N/A
Load Balancing / Reliability Testing			
Failover (3-10 Replicas)	✓	Failover	N/A
Name Locking Enabled	✓	Name Locking Enabled	
No RSA Authentication Manager	✓	No RSA Authentication Manager	N/A

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
RSA SD800 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
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	

BSD / PAR

✓ = Pass ✗ = Fail N/A = Non-Available Function

Certification Checklist for RSA Authentication Manager 7.x

Date Tested: July 13, 2009

Certification Environment		
Product Name	**Version Information**	**Operating System**
RSA Authentication Manager	7.1	Windows Server 2003 Enterprise
NetNumber TITAN	6.7	Solaris 10

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	N/A
4 Digit Password	✓	4 Digit Password	N/A
Next Tokencode Mode			
Next Tokencode Mode	✓	Next Tokencode Mode	N/A
Load Balancing / Reliability Testing			
Failover (3-10 Replicas)	✓	Failover	N/A
Name Locking Enabled	✓	Name Locking Enabled	
No RSA Authentication Manager	✓	No RSA Authentication Manager	N/A

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
RSA SD800 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
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	

BSD / PAR

✓ = Pass ✗ = Fail N/A = Non-Available Function