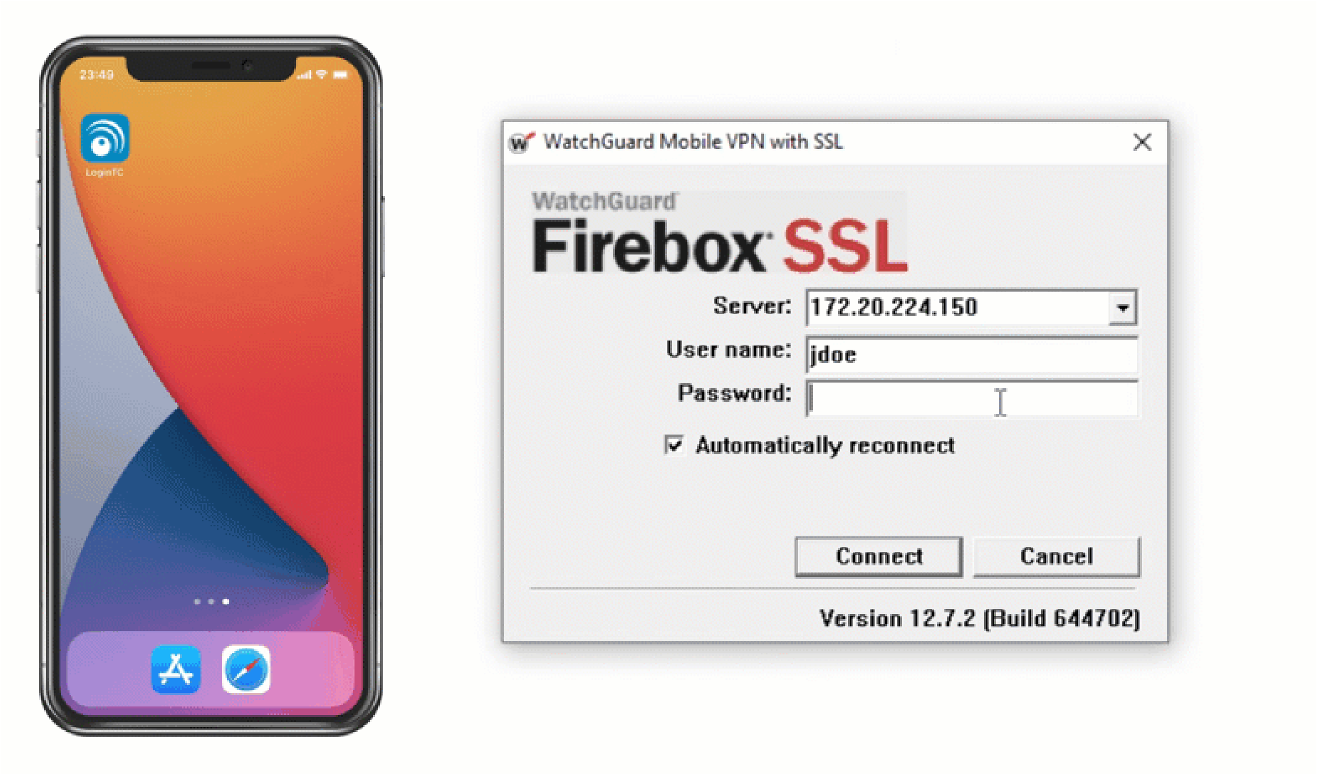
WatchGuard Two-Factor Authentication - XTM and Firebox SSL VPN

logintc.com/docs/connectors/watchguard



Server: 172.20.224.150

User name: jdoe

Password:

☑ Automatically reconnect

The LoginTC RADIUS Connector is a complete two-factor authentication virtual machine packaged to run within your corporate network. The LoginTC RADIUS Connector enables the WatchGuard XTM and Firebox VPN (e.g. **Mobile VPN with SSL or IPsec**) to use LoginTC for the most secure two-factor authentication. For an alternate method using direct authentication then you may be interested in: Two factor authentication for WatchGuard XTM and Firebox SSL VPN Alternative.

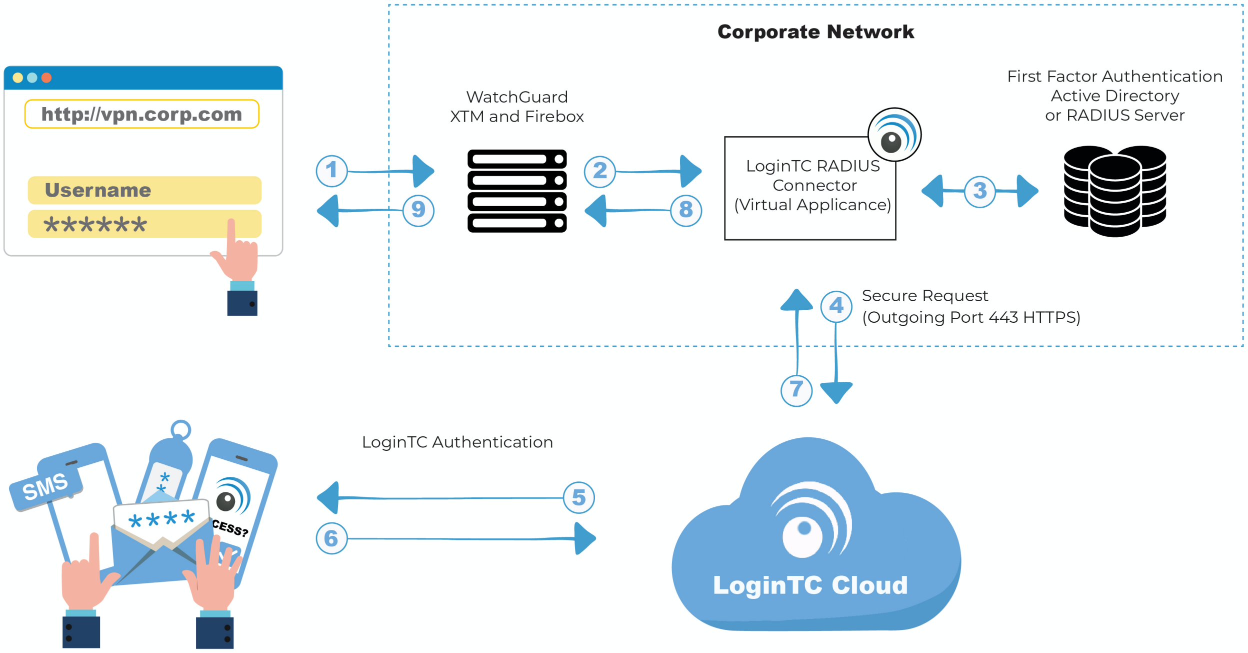
User Experience

After entering the username and password into the Mobile VPN client, the user is presented with an Authentication Message. The user may enter ‘1’ to receive a push notification to their device to approve or enter a valid One-Time Password (OTP). This flow works the same for clientless access.

Video Instructions

Watch Video At: https://youtu.be/mDQ9HdCqYK8

Architecture



Authentication Flow

1. A user attempts access with their existing WatchGuard client with username / password
2. A RADIUS authentication request is sent to the LoginTC RADIUS Connector
3. The username / password is verified against an existing first factor directory (LDAP, Active Directory or RADIUS)
4. An authentication request is made to LoginTC Cloud Services
5. Secure push notification request sent to the user's mobile or desktop device
6. User response (approval or denial of request) sent to LoginTC Cloud Services
7. The LoginTC RADIUS Connector polls until the user responds or a timeout is reached
8. RADIUS Access-Accept sent back to WatchGuard
9. User is granted access to WatchGuard

Compatibility

WatchGuard appliance compatibility:

- WatchGuard Firebox T10 Series
- WatchGuard XTM 2 Series
- WatchGuard XTM 3 Series
- WatchGuard XTM 5 Series
- WatchGuard Unified Threat Management (UTM)
- WatchGuard Next-Generation Firewall (NGFW)
- WatchGuard appliance supporting RADIUS authentication

Appliance not listed?
We probably support it. Contact us if you have any questions.

Compatibility Guide
WatchGuard XTM, Firebox and any other appliance which have configurable RADIUS authentication are supported. For example, WatchGuard Mobile VPN with SSL.

Prerequisites
Before proceeding, please ensure you have the following:

- LoginTC Admin Panel account
- Computer virtualization software such as VMware ESXi, VirtualBox, or Hyper-V
- Virtual Machine requirements:
  - 2048 MB RAM
  - 8 GB disk size

Create Application
Start by creating a LoginTC Application for your deployment. An Application represents a service (e.g. An application is a service (e.g., VPN or web application) that you want to protect. e) that you want to protect with LoginTC.

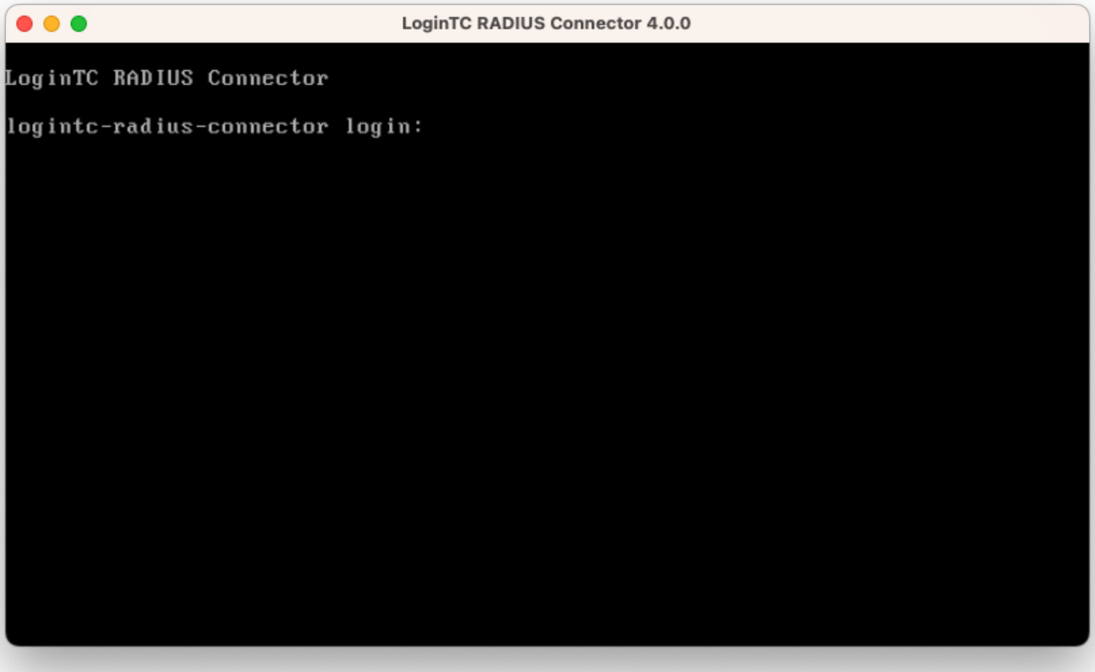
Create a LoginTC Application in LoginTC Admin Panel, follow Create Application Steps.

If you have already created a LoginTC Application for your deployment, then you may skip this section and proceed to Installation.

Installation

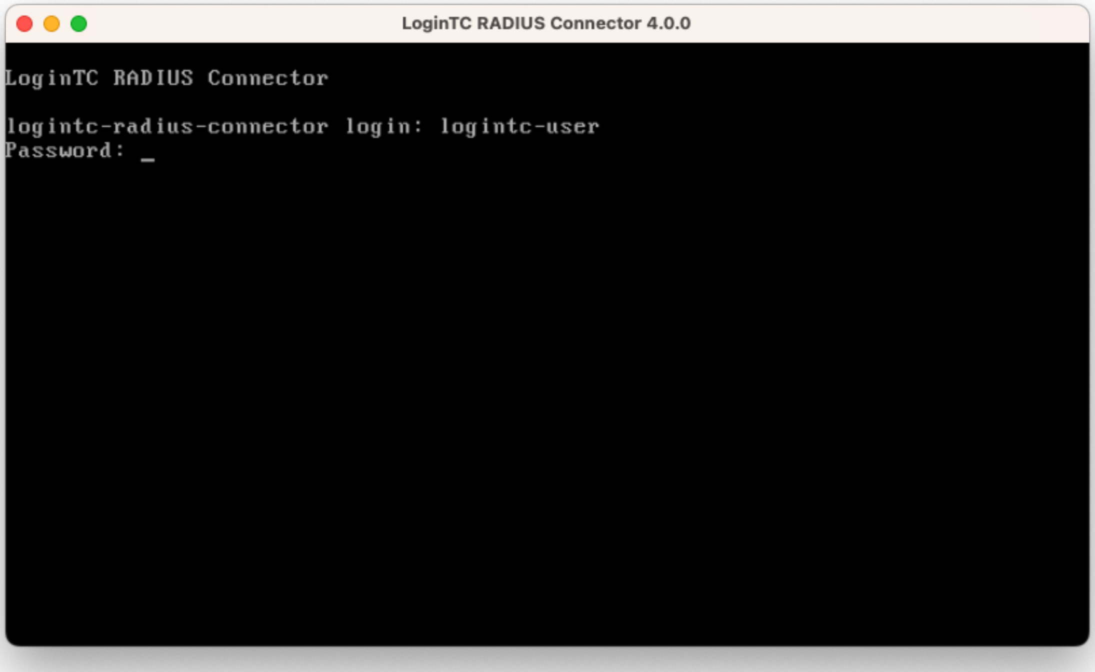
1. Import the virtual appliance your computer virtualization software
   Instructions for Hyper-V
2. Ensure that LoginTC RADIUS CONNECTOR has a virtual network card
3. Start the virtual appliance

4. You will be with a console prompt:



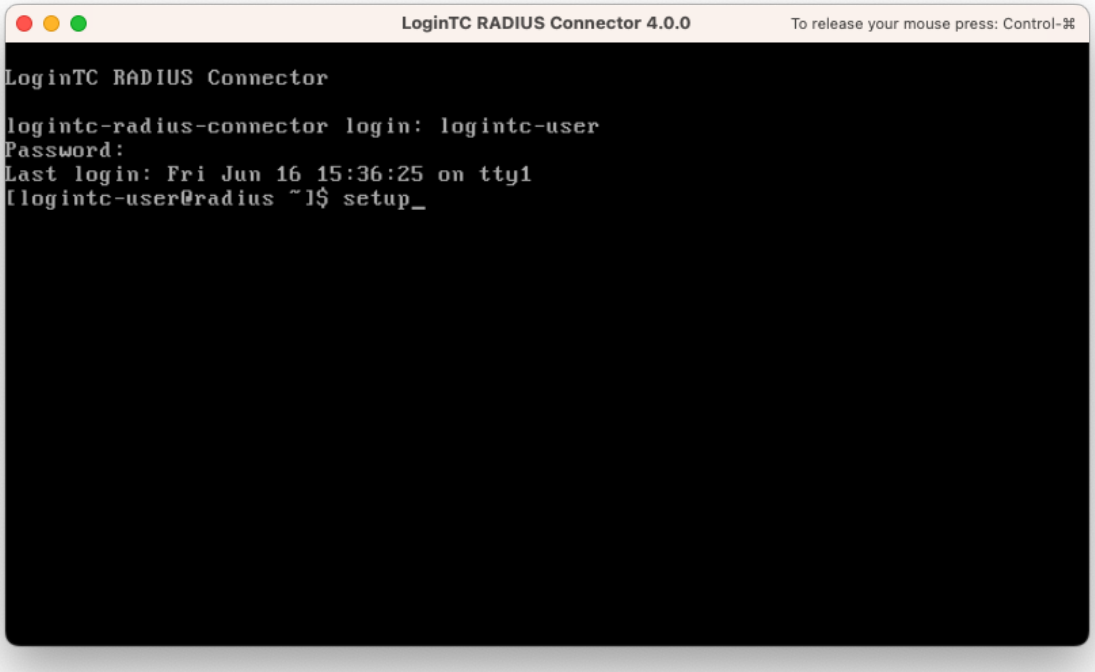
```
LoginTC RADIUS Connector

logintc-radius-connector login:
```

5. Login using the username **logintc-user** and default password **logintcradius**:



```
LoginTC RADIUS Connector

logintc-radius-connector login: logintc-user
Password: _
```

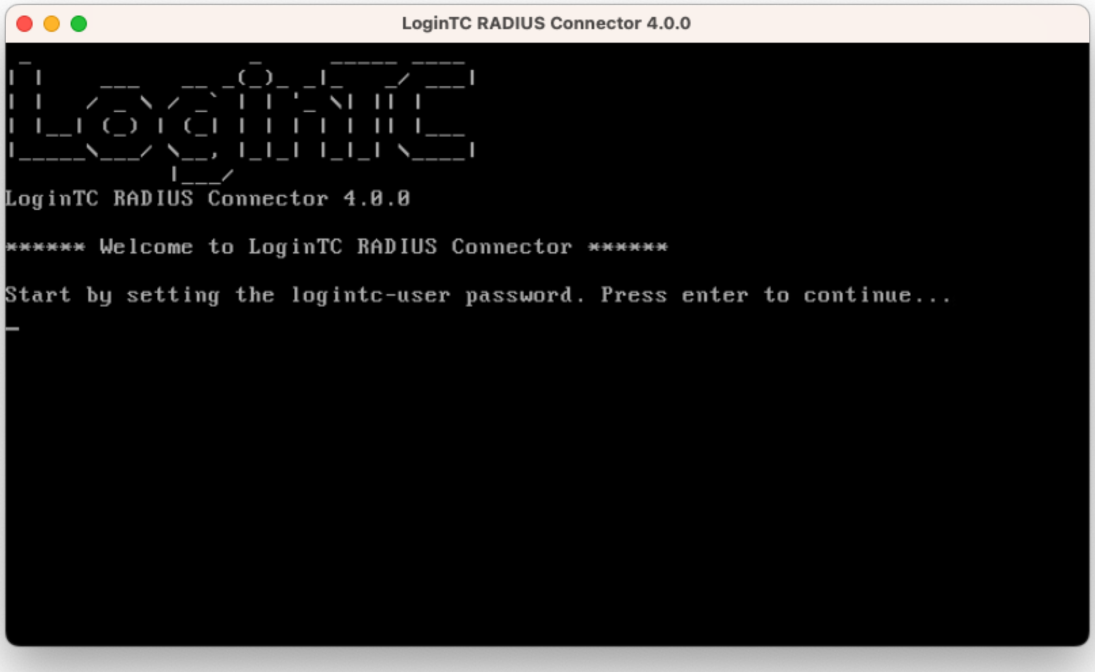
6. Once logged in type **setup**:



LoginTC RADIUS Connector 4.0.0
To release your mouse press: Control-⌘

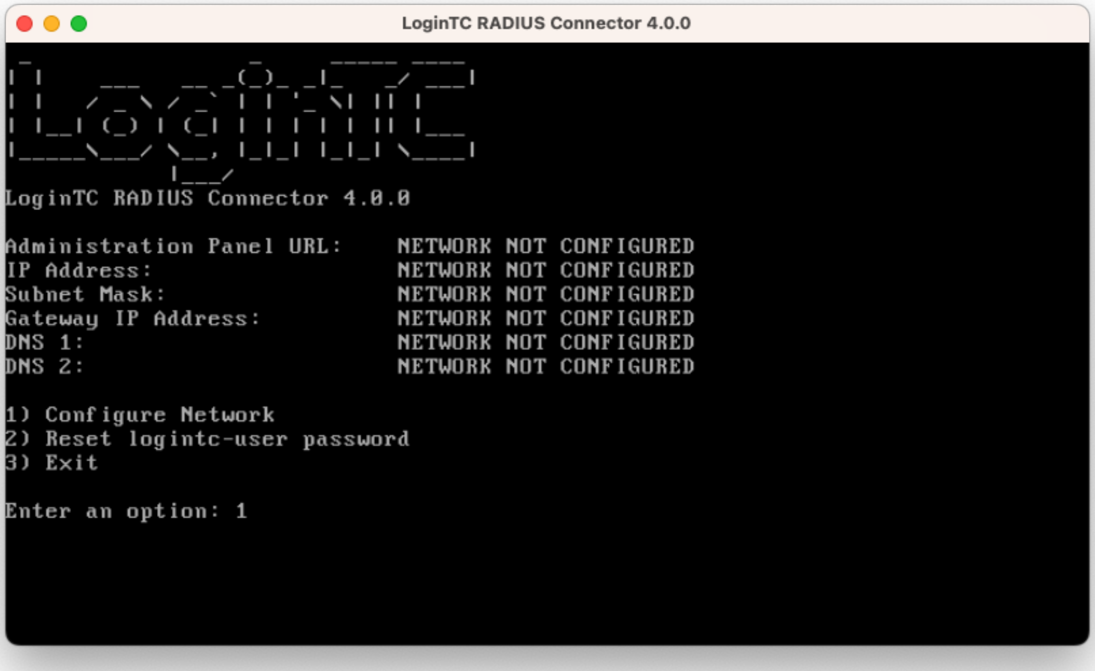
```
LoginTC RADIUS Connector

logintc-radius-connector login: logintc-user
Password:
Last login: Fri Jun 16 15:36:25 on tty1
[logintc-user@radius ~]$ setup_
```

7. Follow the on-screen prompt to setup a new password for **logintc-user**:



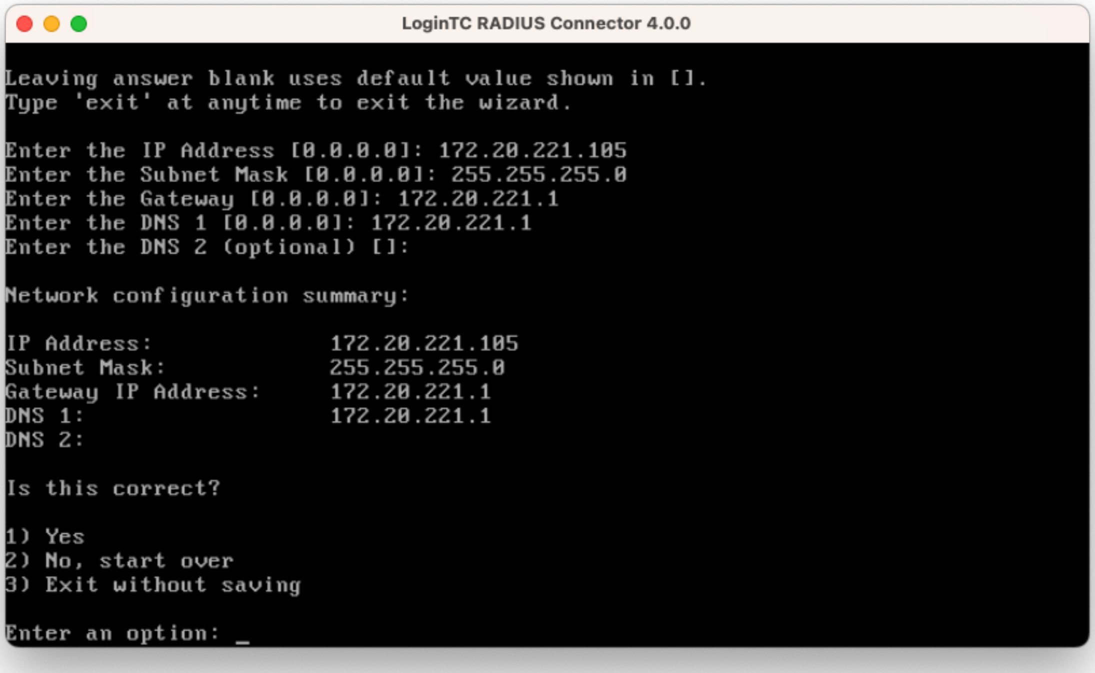
```
 _                _       _____ ____
| |    ___   __ _(_)_ __ |_   _/ ___|
| |   / _ \ / _` | | '_ \  | || |
| |__| (_) | (_| | | | | | | || |___
|_____\___/ \__, |_|_| |_| |_| \____|
            |___/
LoginTC RADIUS Connector 4.0.0

****** Welcome to LoginTC RADIUS Connector ******

Start by setting the logintc-user password. Press enter to continue...
_
```

8. By default the appliance network is not configured. Manually configure the network by typing **1** and hit enter:



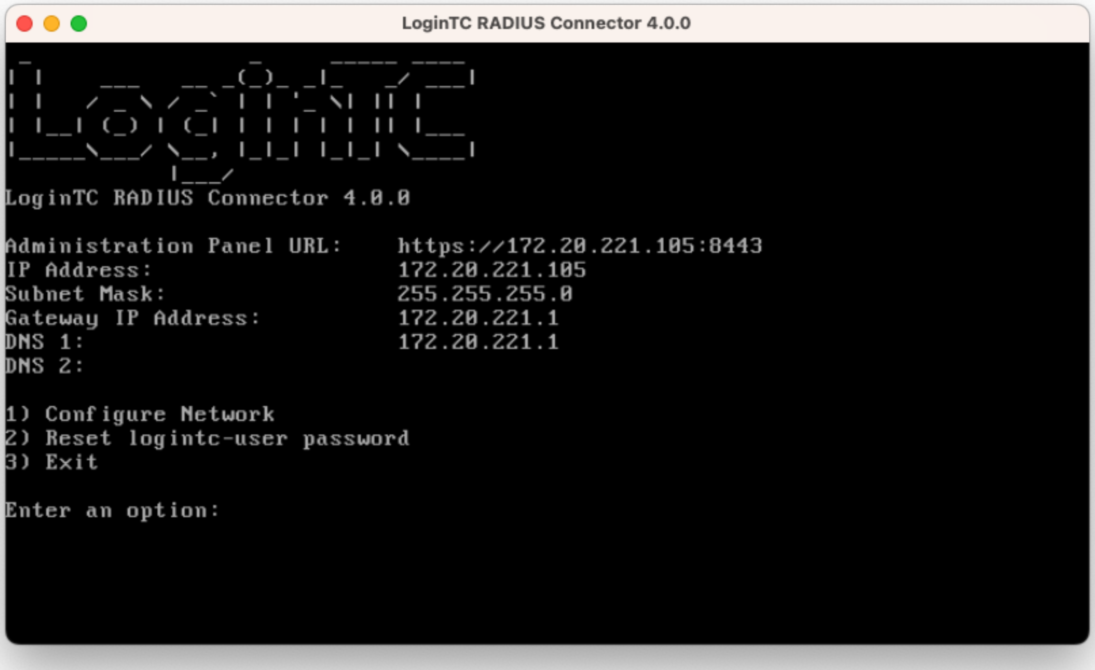
```
 _                _       _____ ____
| |    ___   __ _(_)_ __ |_   _/ ___|
| |   / _ \ / _` | | '_ \  | || |
| |__| (_) | (_| | | | | | | || |___
|_____\___/ \__, |_|_| |_| |_| \____|
            |___/
LoginTC RADIUS Connector 4.0.0

Administration Panel URL:    NETWORK NOT CONFIGURED
IP Address:                  NETWORK NOT CONFIGURED
Subnet Mask:                 NETWORK NOT CONFIGURED
Gateway IP Address:          NETWORK NOT CONFIGURED
DNS 1:                       NETWORK NOT CONFIGURED
DNS 2:                       NETWORK NOT CONFIGURED

1) Configure Network
2) Reset logintc-user password
3) Exit

Enter an option: 1
```

9. Follow the on-screen prompts to setup the network. When done, type **1** and enter to confirm the settings:



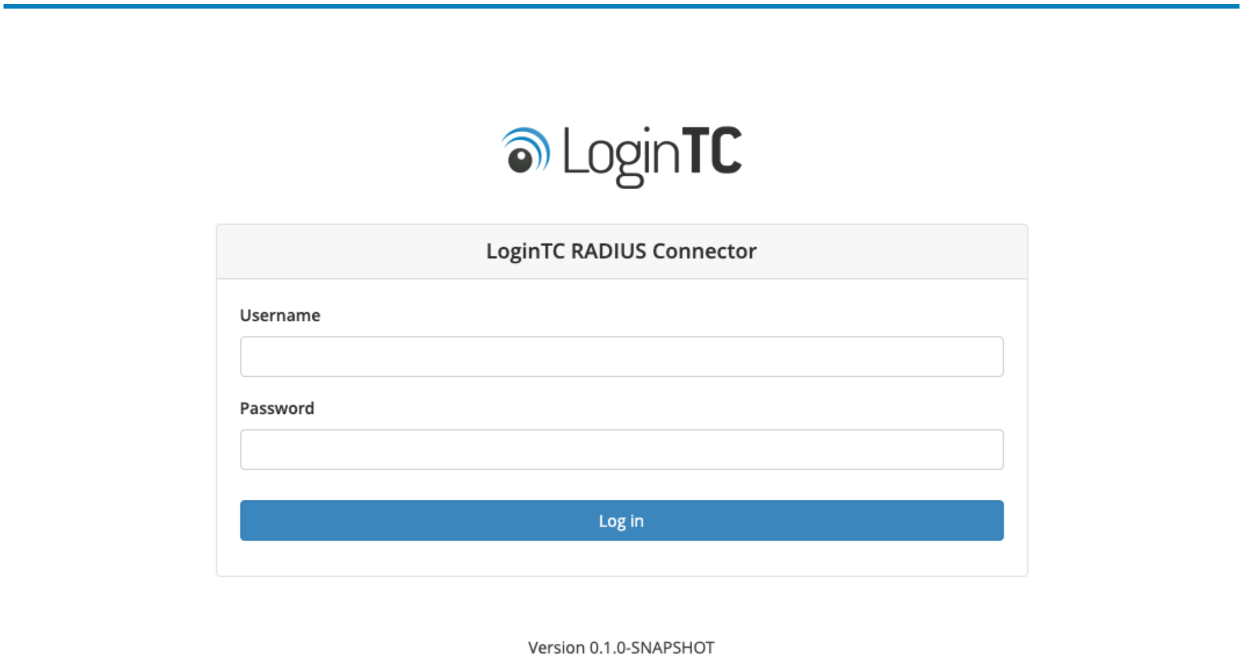
```
Leaving answer blank uses default value shown in [].
Type 'exit' at anytime to exit the wizard.

Enter the IP Address [0.0.0.0]: 172.20.221.105
Enter the Subnet Mask [0.0.0.0]: 255.255.255.0
Enter the Gateway [0.0.0.0]: 172.20.221.1
Enter the DNS 1 [0.0.0.0]: 172.20.221.1
Enter the DNS 2 (optional) []:

Network configuration summary:

IP Address:             172.20.221.105
Subnet Mask:            255.255.255.0
Gateway IP Address:     172.20.221.1
DNS 1:                  172.20.221.1
DNS 2:

Is this correct?

1) Yes
2) No, start over
3) Exit without saving

Enter an option: _
```

10. You will be presented with the network configuration which includes the URL to connect to the appliance from a web browser (example https://172.20.221.105:8443):

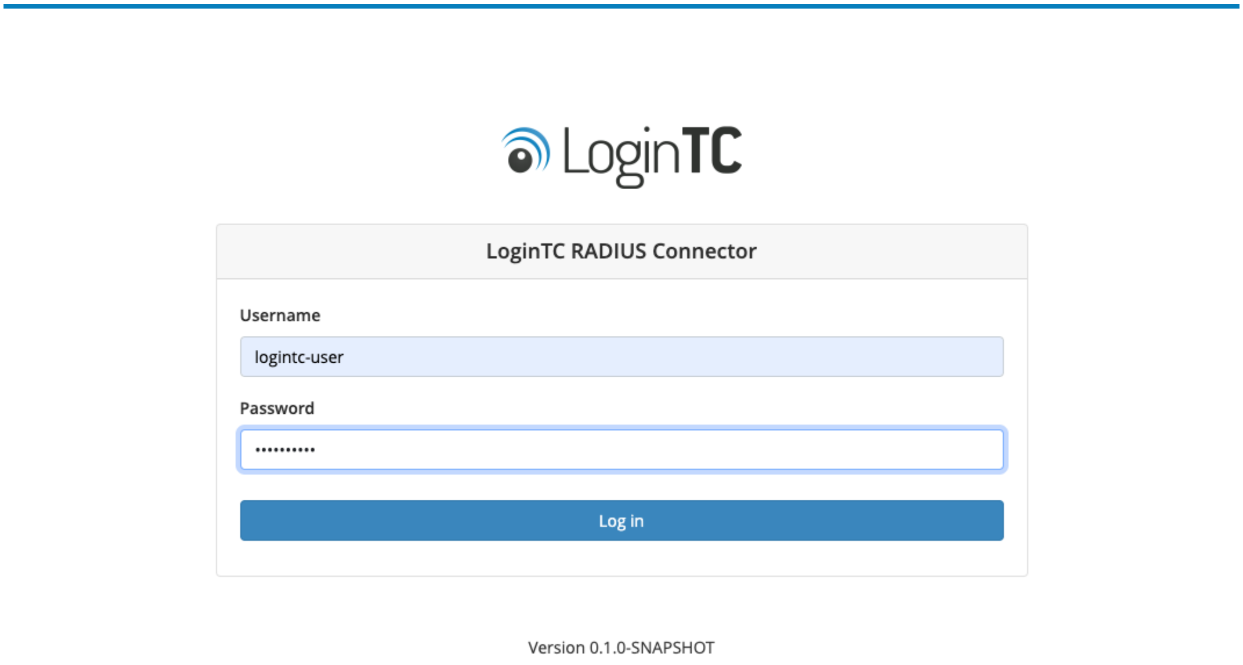


```
LoginTC RADIUS Connector 4.0.0

Administration Panel URL:    https://172.20.221.105:8443
IP Address:                  172.20.221.105
Subnet Mask:                 255.255.255.0
Gateway IP Address:          172.20.221.1
DNS 1:                       172.20.221.1
DNS 2:

1) Configure Network
2) Reset logintc-user password
3) Exit

Enter an option:
```

11. Navigate to the URL shown in the console dashboard (example: `https://172.20.221.105:8443`):



12. Login using the username **logintc-user** and the password that was set in the initial setup:



LoginTC RADIUS Connector

Username

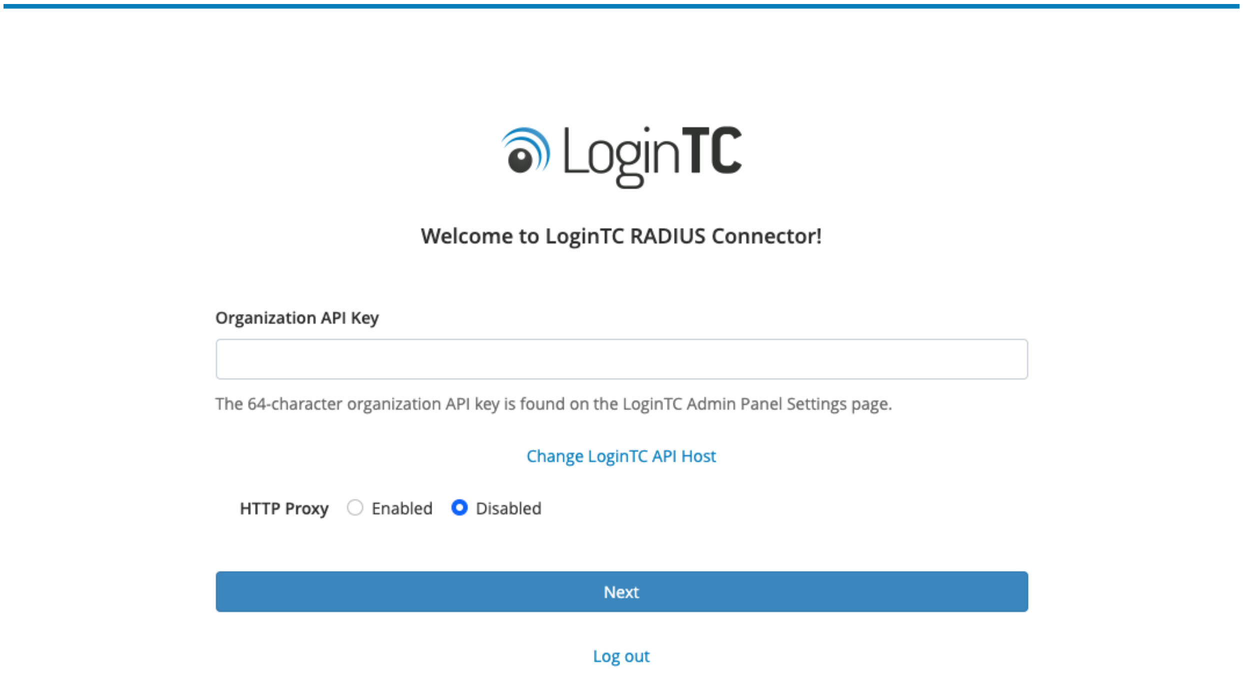
logintc-user

Password

••••••••••

Version 0.1.0-SNAPSHOT

13. Link to your existing LoginTC organization. The 64-character Organization API Key is found on the LoginTC Admin Panel under **Settings** >page **API** >page **Click to view**, also see Organization API Key:



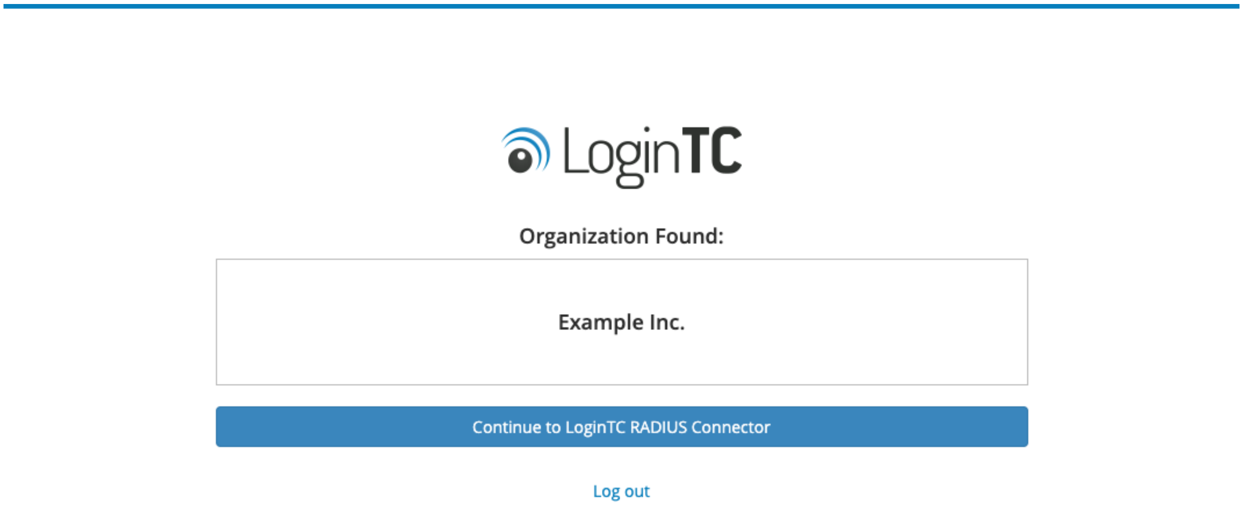
Welcome to LoginTC RADIUS Connector!

Organization API Key

The 64-character organization API key is found on the LoginTC Admin Panel Settings page.

HTTP Proxy ○ Enabled ● Disabled

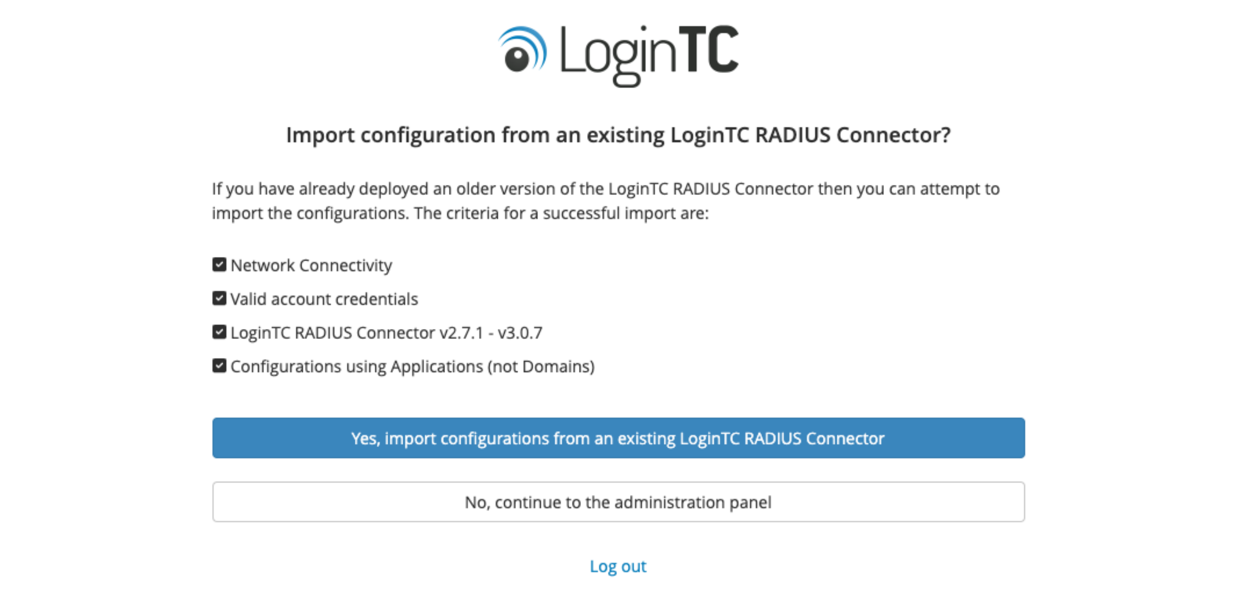
14. Confirm the LoginTC organization name and click **Continue to LoginTC RADIUS Connector**:



Organization Found:

Example Inc.

15. If you have an existing LoginTC RADIUS Connector your wish to import configurations then click **Yes, import configurations from an existing LoginTC RADIUS Connector**, otherwise click **No, continue to the adminsitration panel**:



Import configuration from an existing LoginTC RADIUS Connector?

If you have already deployed an older version of the LoginTC RADIUS Connector then you can attempt to import the configurations. The criteria for a successful import are:

☑ Network Connectivity

☑ Valid account credentials

☑ LoginTC RADIUS Connector v2.7.1 - v3.0.7

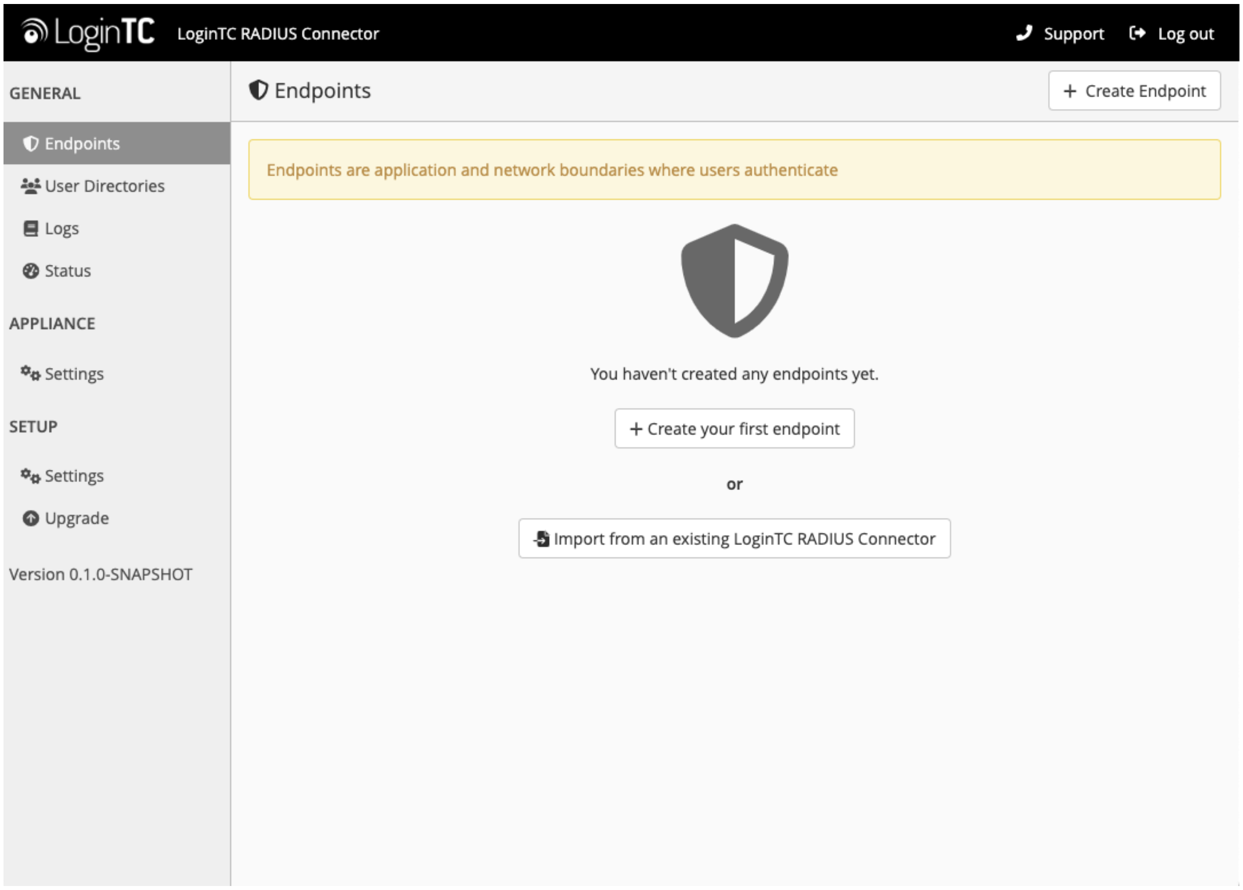
☑ Configurations using Applications (not Domains)

LoginTC
Yes, import configurations from an existing LoginTC RADIUS Connector
No, continue to the administration panel
Log out

NOTE

These instructions assume a new environment. For a complete 2.X / 3.X to 4.X upgrade guide: LoginTC RADIUS Connector Upgrade Guide

16. Now you are ready to use the LoginTC RADIUS Connector:



Endpoints are application and network boundaries where users authenticate

You haven't created any endpoints yet.

The LoginTC RADIUS Connector runs Linux with SELinux. A firewall runs with the following open ports:

Port	Protocol	Purpose
1812	UDP	RADIUS authentication
443	TCP	API traffic
8443	TCP	Web interface
123	UDP	NTP, Clock synchronization (outgoing)

Note: Username and Password `logintc-user` is used for SSH and web access. The default password is `logintcradius`. You will be asked to change the default password on first boot of the appliance.

Configuration for WatchGuard VPN MFA

Endpoints describe how the appliance will authenticate your RADIUS-speaking device with an optional first factor and LoginTC as a second factor. Each endpoint has **4 Sections**:

1. LoginTC Settings

This section describes how the appliance itself authenticates against LoginTC Admin Panel with your LoginTC Application. Only users that are part of your organization and added to the domain configured will be able to authenticate.

2. User Directory

This section describes how the appliance will conduct an optional first factor. Either against an existing LDAP, Active Directory or RADIUS server. If no first factor is selected, then only LoginTC will be used for authentication.

3. Challenge Strategy / Passthrough

This section describes whether the appliance will perform a LoginTC challenge for an authenticating user. The default is to challenge all users. However with either a static list or Active Directory / LDAP Group you can control whom gets challenged to facilitate seamless testing and rollout.

4. Client Settings

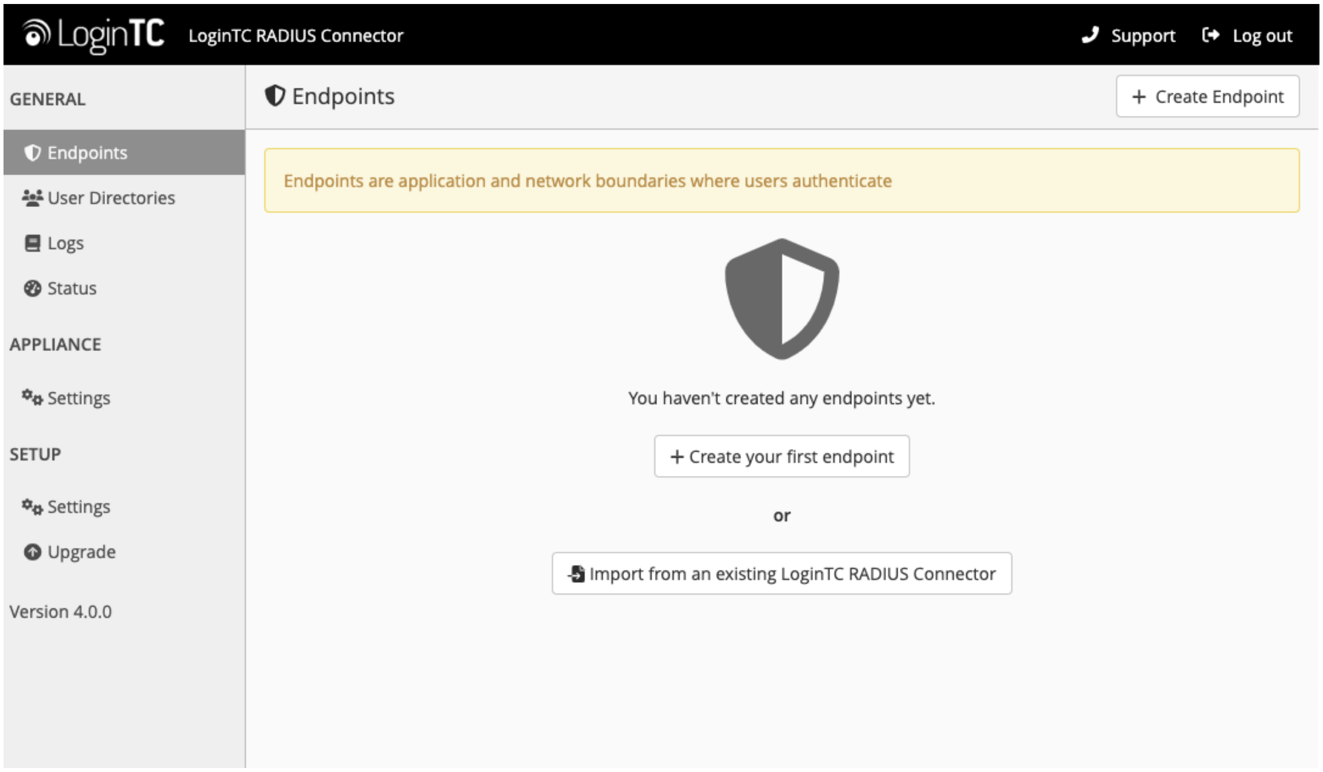
This section describes which RADIUS-speaking device will be connecting to the appliance and whether to encrypt API Key, password and secret parameters.

The **web interface** makes setting up an endpoint simple and straightforward. Each section has a **Test** feature, which validates each input value and reports all potential errors. Section specific validation simplifies troubleshooting and gets your infrastructure protected correctly faster.

First Endpoint

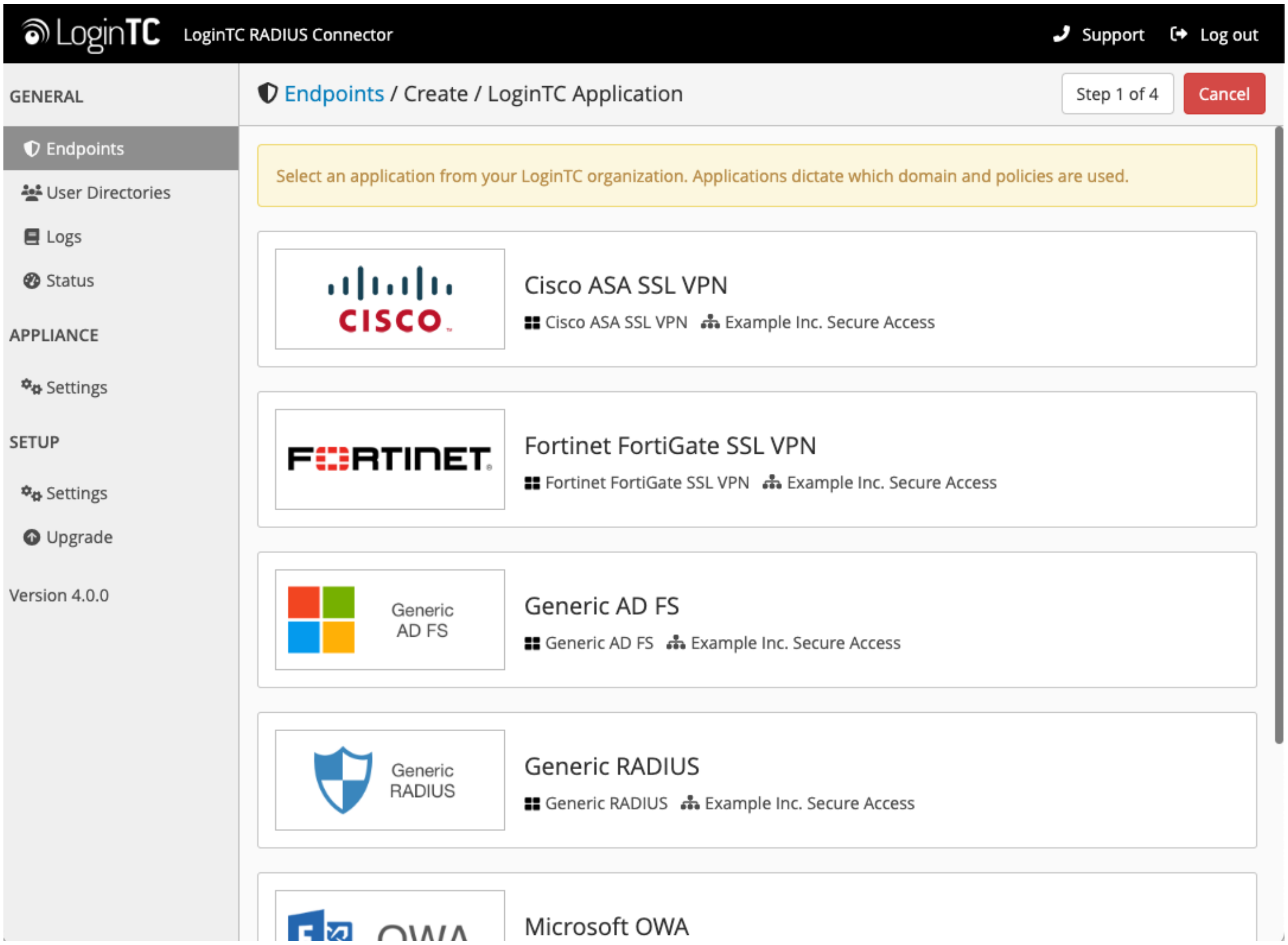
Close the console and navigate to your appliance **web interface** URL. Use username `logintc-user` and the password you set upon initial launch of the appliance. You will now configure the LoginTC RADIUS Connector.

Create a new endpoint file by clicking **+ Create your first endpoint**:


LoginTC
LoginTC RADIUS Connector
Support
Log out
GENERAL
Endpoints
User Directories
Logs
Status
APPLIANCE
Settings
SETUP
Settings
Upgrade
Version 4.0.0
Endpoints
+ Create Endpoint
Endpoints are application and network boundaries where users authenticate
You haven't created any endpoints yet.
+ Create your first endpoint
or
Import from an existing LoginTC RADIUS Connector

LoginTC Settings

A list of available Applications will be displayed from your LoginTC organization. Select which LoginTC **Application** to use:



Select an application from your LoginTC organization. Applications dictate which domain and policies are used.

Cisco ASA SSL VPN
Cisco ASA SSL VPN · Example Inc. Secure Access

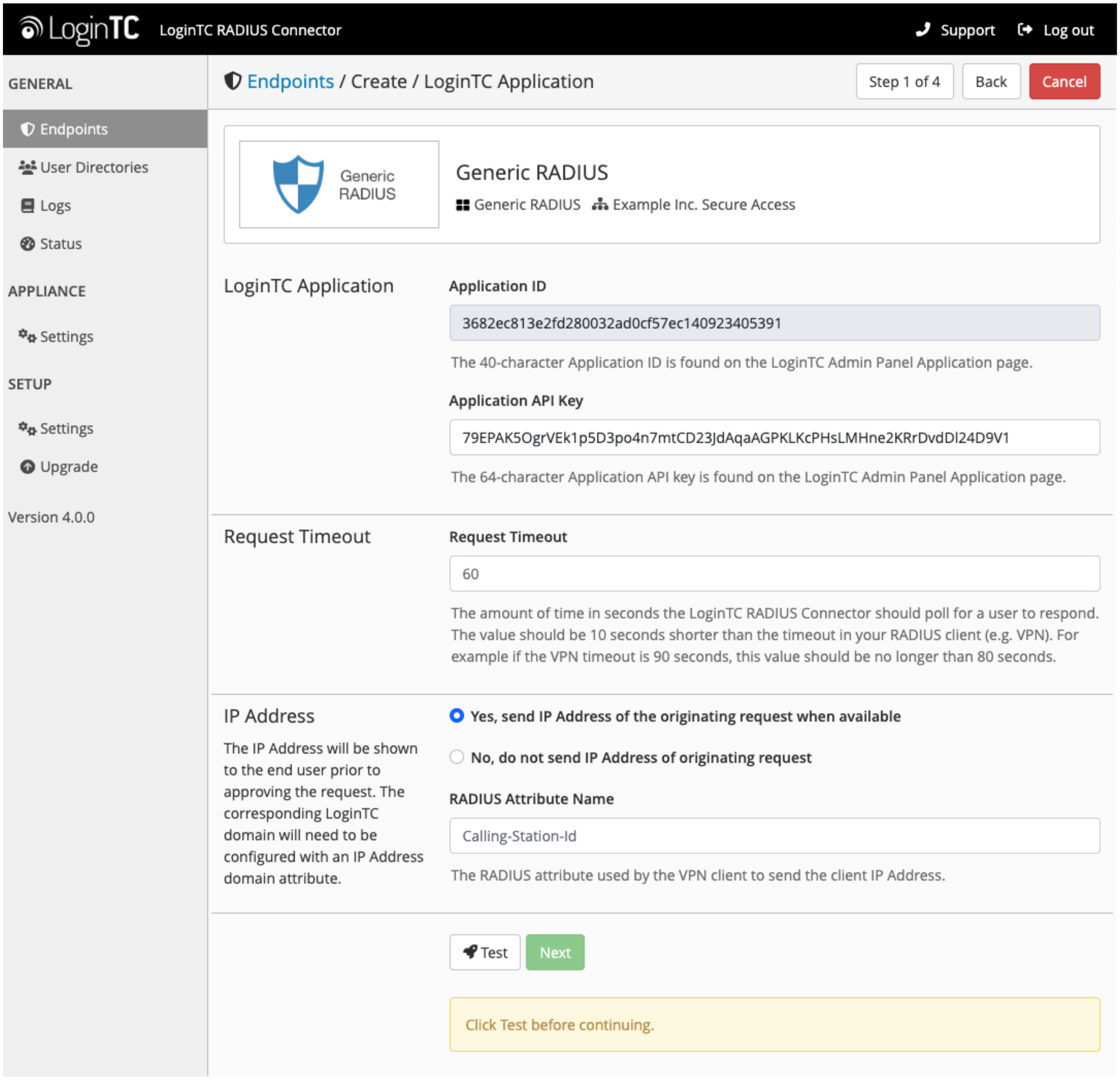
Fortinet FortiGate SSL VPN
Fortinet FortiGate SSL VPN · Example Inc. Secure Access

Generic AD FS
Generic AD FS · Example Inc. Secure Access

Generic RADIUS
Generic RADIUS · Example Inc. Secure Access

Microsoft OWA

Configure the application:



Endpoints / Create / LoginTC Application

Generic RADIUS

Generic RADIUS Example Inc. Secure Access

LoginTC Application

Application ID

3682ec813e2fd280032ad0cf57ec140923405391

The 40-character Application ID is found on the LoginTC Admin Panel Application page.

Application API Key

79EPAK5OgrVEk1p5D3po4n7mtCD23JdAqaAGPKLKcPHsLMHne2KRrDvdDl24D9V1

The 64-character Application API key is found on the LoginTC Admin Panel Application page.

Request Timeout

Request Timeout

60

The amount of time in seconds the LoginTC RADIUS Connector should poll for a user to respond. The value should be 10 seconds shorter than the timeout in your RADIUS client (e.g. VPN). For example if the VPN timeout is 90 seconds, this value should be no longer than 80 seconds.

IP Address

The IP Address will be shown to the end user prior to approving the request. The corresponding LoginTC domain will need to be configured with an IP Address domain attribute.

● Yes, send IP Address of the originating request when available

○ No, do not send IP Address of originating request

RADIUS Attribute Name

Calling-Station-Id

The RADIUS attribute used by the VPN client to send the client IP Address.

Test Next

Click Test before continuing.

Configuration values:

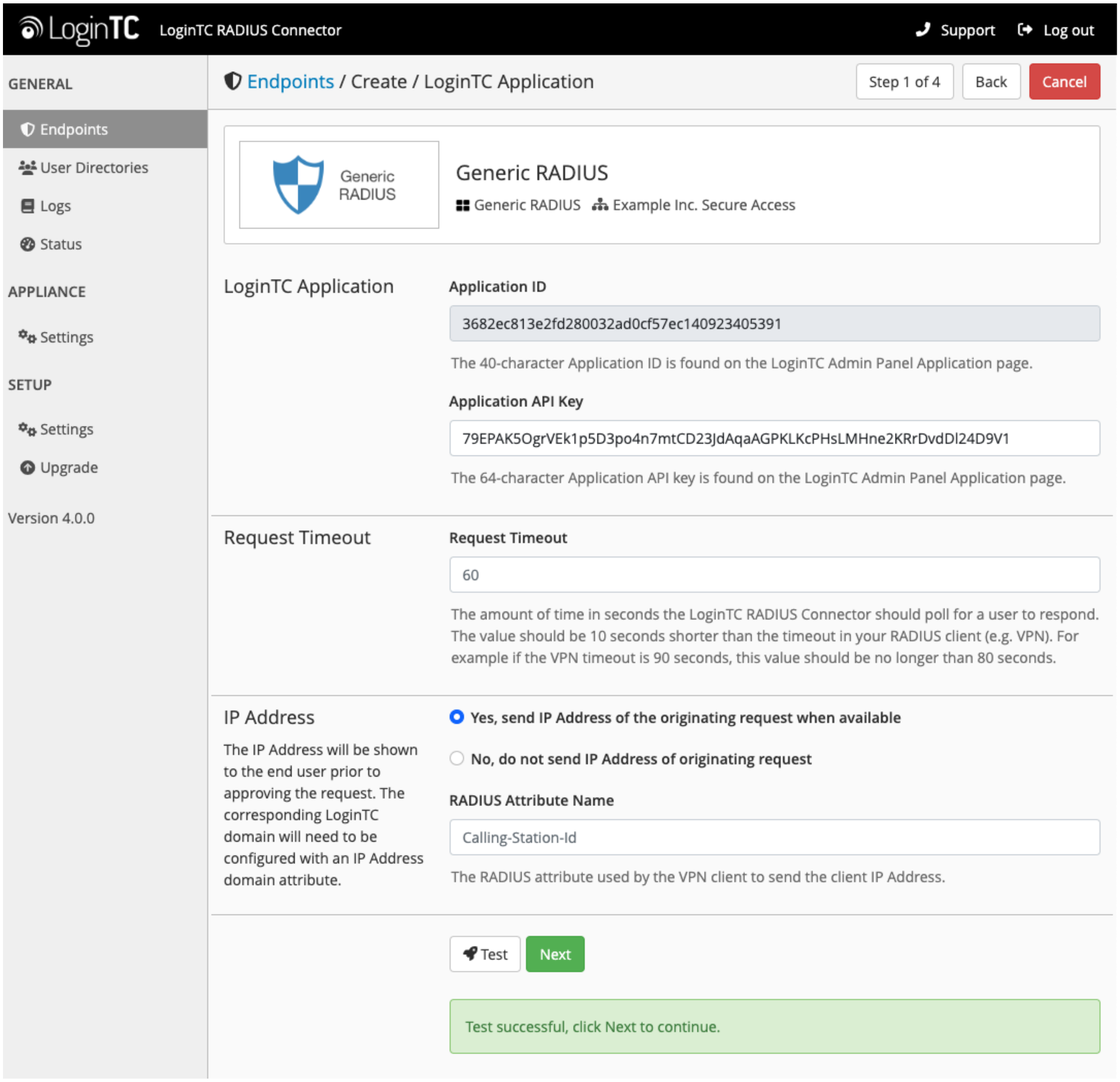
Property	Explanation
`Application ID`	The 40-character Application ID, retrieve Application ID
`Application API Key`	The 64-character Application API Key, retrieve Application API Key
`Request Timeout`	Number of seconds that the RADIUS connector will wait for

The Application ID and Application API Key are found on the LoginTC Admin Panel.

Request Timeout

Make a note of what you set the Request Timeout to as you will need to use a larger timeout value in your RADIUS client. We recommend setting the Request Timeout value to 60 seconds in the LoginTC RADIUS Connector and setting the RADIUS authentication server timeout to 70 seconds in RADIUS Client. For more information see: Recommended settings for an optimal user experience for VPN access

Click **Test** to validate the values and then click **Next**:



Generic RADIUS

Generic RADIUS   Example Inc. Secure Access

LoginTC Application

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The 64-character Application API key is found on the LoginTC Admin Panel Application page.

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Request Timeout

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IP Address

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● **Yes, send IP Address of the originating request when available**

○ **No, do not send IP Address of originating request**

RADIUS Attribute Name

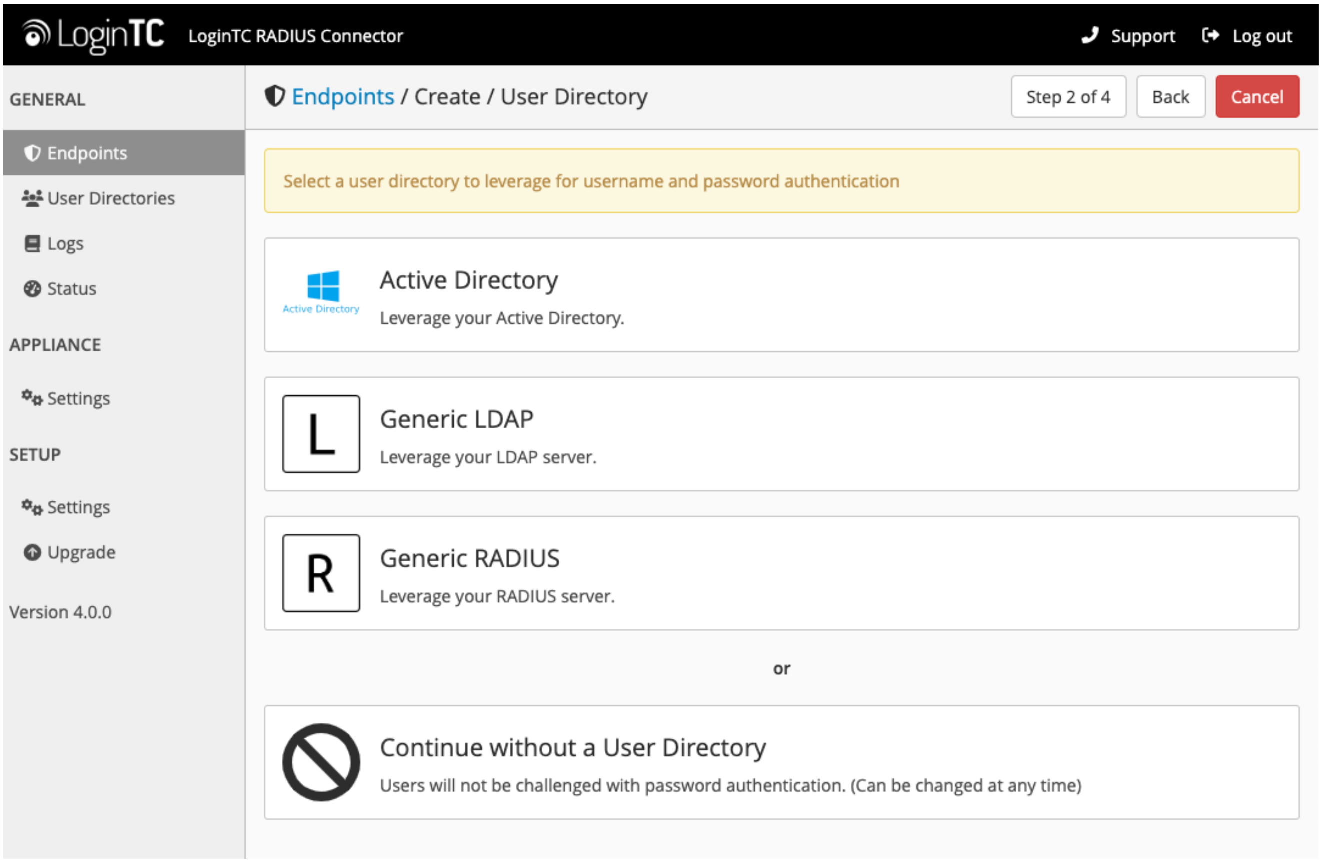
Calling-Station-Id

The RADIUS attribute used by the VPN client to send the client IP Address.

Test successful, click Next to continue.

User Directory

Configure the user directory to be used for first authentication factor in conjunction with LoginTC. You may use Active Directory / LDAP or an existing RADIUS server. You may also opt not to use a first factor, in which case LoginTC will be the only authentication factor.



Endpoints / Create / User Directory

Select a user directory to leverage for username and password authentication

Active Directory
Leverage your Active Directory.

Generic LDAP
Leverage your LDAP server.

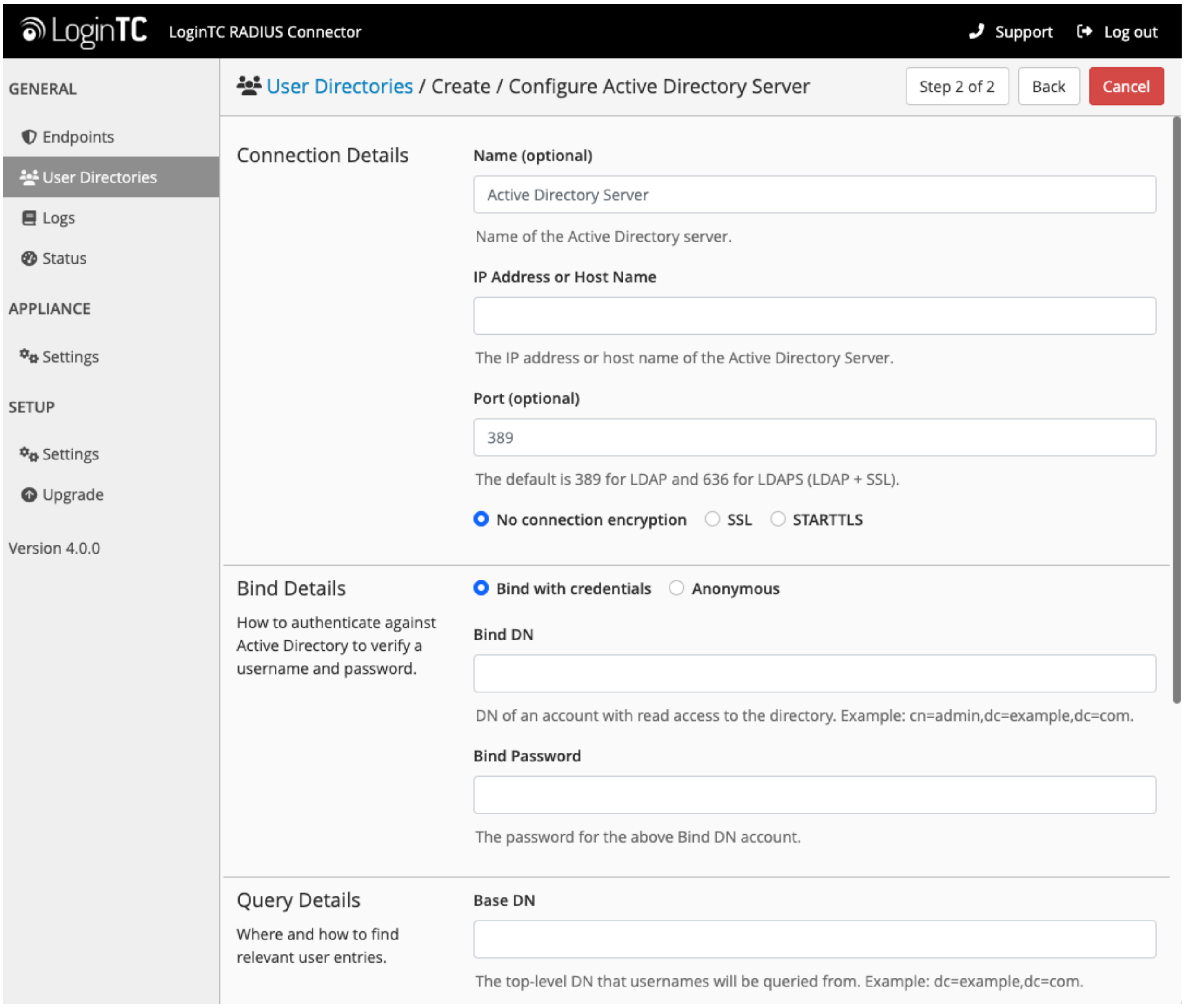
Generic RADIUS
Leverage your RADIUS server.

or

Continue without a User Directory
Users will not be challenged with password authentication. (Can be changed at any time)

Active Directory / Generic LDAP Option

Select **Active Directory** if you have an AD Server. For all other LDAP-speaking directory services, such as OpenDJ or OpenLDAP, select **Generic LDAP**:



User Directories / Create / Configure Active Directory Server

Connection Details

Name (optional): Active Directory Server

Name of the Active Directory server.

IP Address or Host Name:

The IP address or host name of the Active Directory Server.

Port (optional): 389

The default is 389 for LDAP and 636 for LDAPS (LDAP + SSL).

● No connection encryption ○ SSL ○ STARTTLS

Bind Details

How to authenticate against Active Directory to verify a username and password.

● Bind with credentials ○ Anonymous

Bind DN:

DN of an account with read access to the directory. Example: cn=admin,dc=example,dc=com.

Bind Password:

The password for the above Bind DN account.

Query Details

Where and how to find relevant user entries.

Base DN:

The top-level DN that usernames will be queried from. Example: dc=example,dc=com.

Configuration values:

Property	Explanation	Examples
`host`	Host or IP address of the LDAP server	`ldap.example.com` or `192.168.1.42`
`port` (optional)	Port if LDAP server uses non-standard (i.e., `389`/`636`)	`4000`
`bind_dn`	DN of a user with read access to the directory	`cn=admin,dc=example,dc=com`
`bind_password`	The password for the above bind_dn account	`password`
`base_dn`	The top-level DN that you wish to query from	`dc=example,dc=com`

Property	Explanation	Examples
`attr_username`	The attribute containing the user's username	`sAMAccountName` or `uid`
`attr_name`	The attribute containing the user's real name	`displayName` or `cn`
`attr_email`	The attribute containing the user's email address	`mail` or `email`
`LDAP Group` (optional)	The name of the LDAP group to be sent back to the authenticating server.	`SSLVPN-Users`
`encryption` (optional)	Encryption mechanism	`ssl` or `startTLS`
`cacert` (optional)	CA certificate file (PEM format)	`/opt/logintc/cacert.pem`

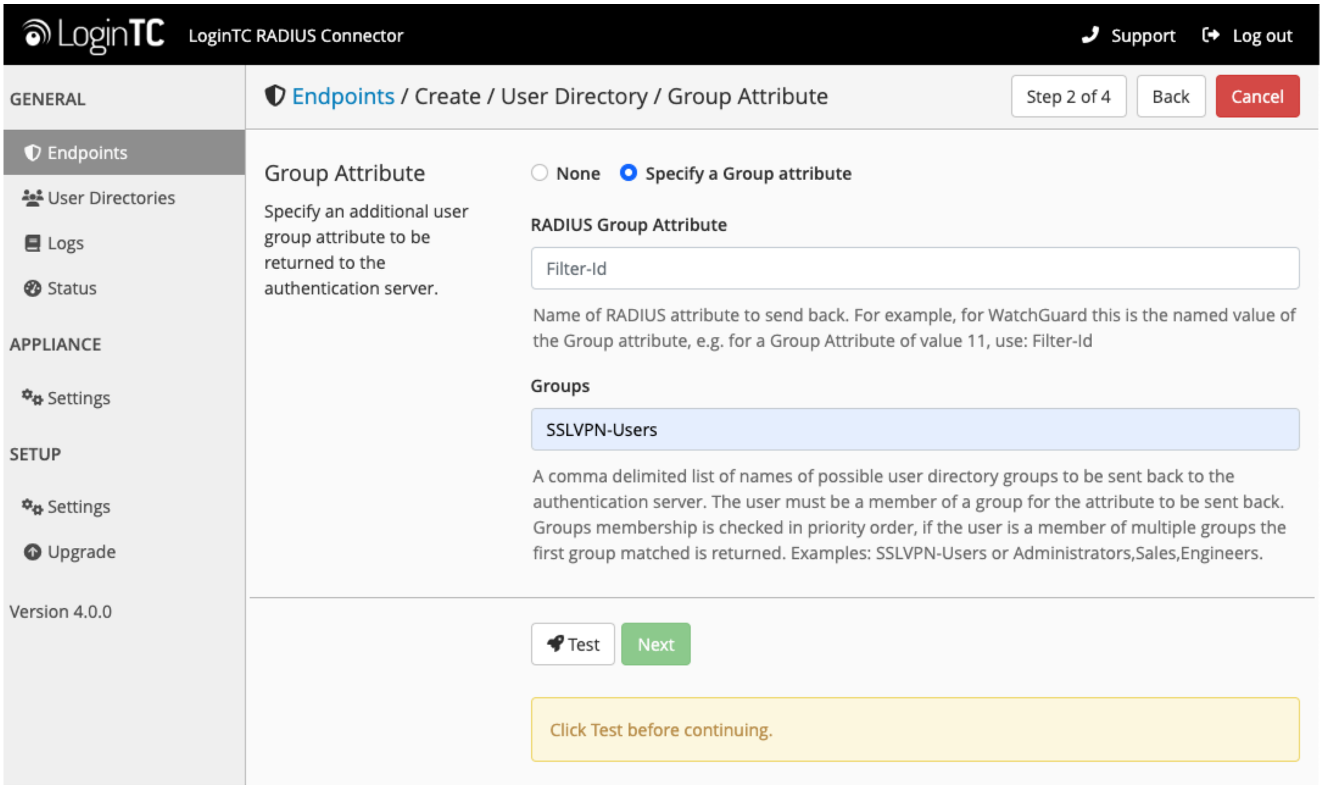
Click **Test** to validate the values and then click **Next**.

Group Attribute and Access Control

In order to use Mobile VPN with SSL or IPSec, you must properly configure the **Group Attribute** in your RADIUS Connector. WatchGuard devices use the Group Attribute value to set the attribute that carries the User Group information. This information is used for access control.

To match WatchGuard's default values, set `RADIUS Group Attribute` to `Filter-Id` and `LDAP Group` to `SSLVPN-Users`

LDAP Group / AD Group : The name of a group in the LDAP Directory that all authenticating users belong to. The group name must also be added to WatchGuard's list of groups authorized to authenticate using SSL. By default this is only the SSLVPN-Users group, but other groups can be added manually from the WatchGuard Web UI.


LoginTC RADIUS Connector

Endpoints / Create / User Directory / Group Attribute

Group Attribute

Specify an additional user group attribute to be returned to the authentication server.

○ None ● Specify a Group attribute

RADIUS Group Attribute

Filter-Id

Name of RADIUS attribute to send back. For example, for WatchGuard this is the named value of the Group attribute, e.g. for a Group Attribute of value 11, use: Filter-Id

Groups

SSLVPN-Users

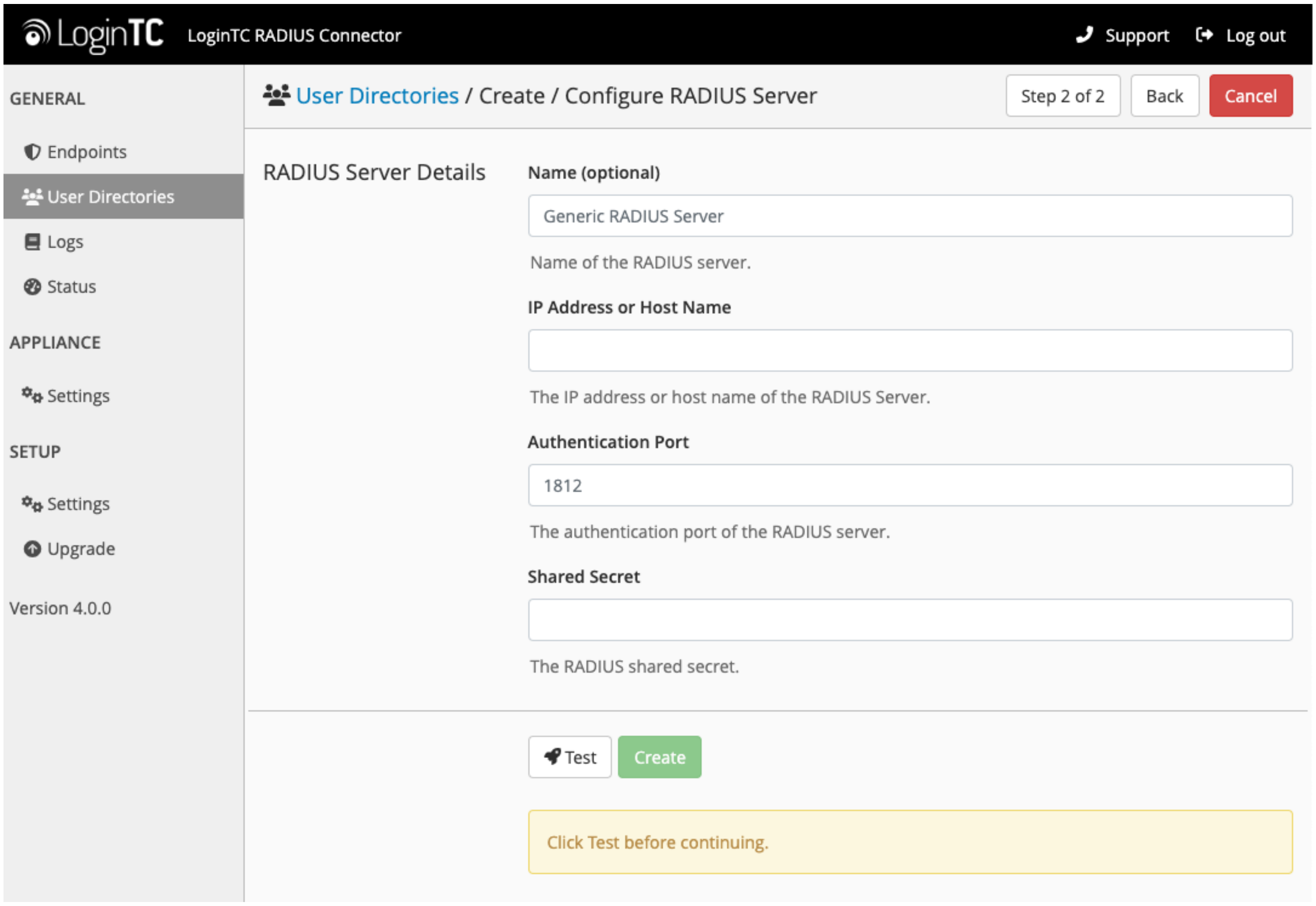
A comma delimited list of names of possible user directory groups to be sent back to the authentication server. The user must be a member of a group for the attribute to be sent back. Groups membership is checked in priority order, if the user is a member of multiple groups the first group matched is returned. Examples: SSLVPN-Users or Administrators,Sales,Engineers.

Click Test before continuing.

Click **Test** to validate the values and then click **Next**.

Existing RADIUS Server Option

If you want to use your existing RADIUS server, select **RADIUS**:



RADIUS Server Details

Name (optional)

Generic RADIUS Server

Name of the RADIUS server.

IP Address or Host Name

The IP address or host name of the RADIUS Server.

Authentication Port

1812

The authentication port of the RADIUS server.

Shared Secret

The RADIUS shared secret.

Click Test before continuing.

Configuration values:

Property	Explanation	Examples
`IP Address or Host Name`	Host or IP address of the RADIUS server	`radius.example.com` or `192.168.1.43`
`Authentication Port` (optional)	Port if the RADIUS server uses non-standard (i.e., `1812`)	`1812`
`Shared Secret`	The secret shared between the RADIUS server and the LoginTC RADIUS Connector	`testing123`

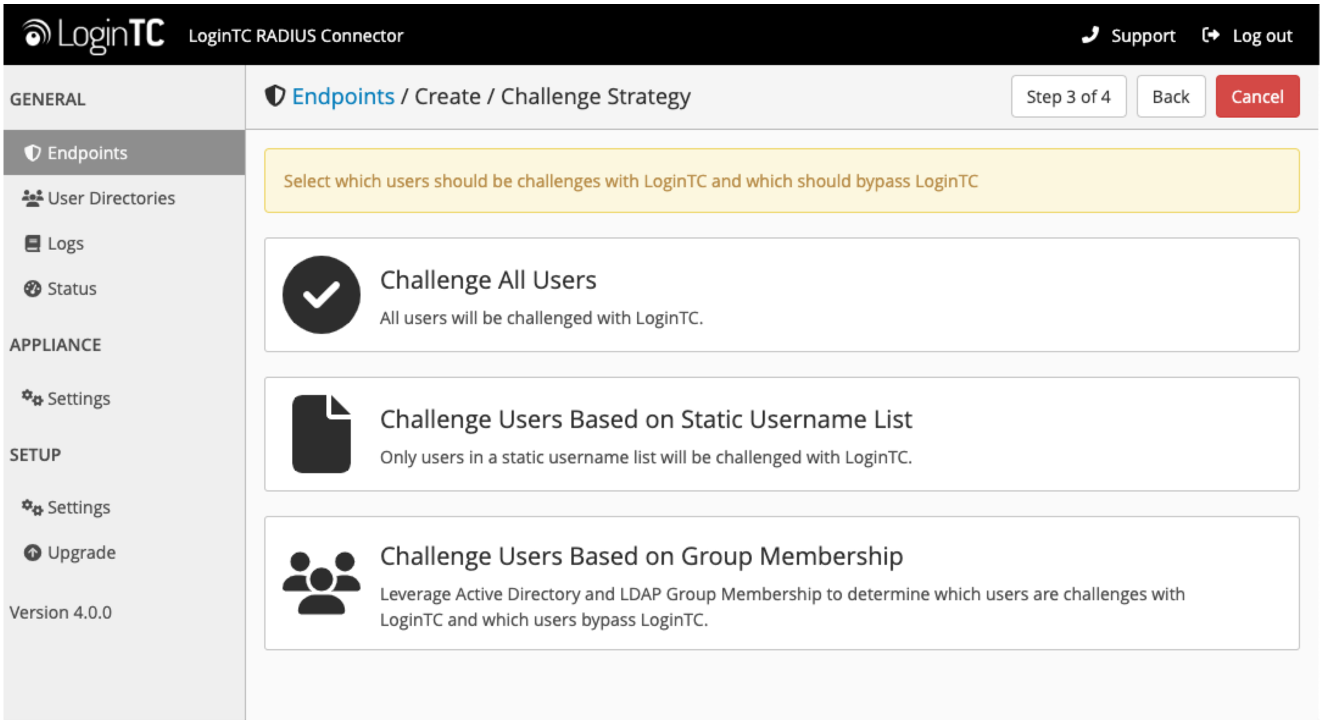
RADIUS Vendor-Specific Attributes

Common Vendor-Specific Attributes (VSAs) returned by the RADIUS server will be relayed.

Click **Test** to validate the values and then click **Next**.

Challenge Strategy / Passthrough

Configure which users will be challenged with LoginTC. This allows you to control how LoginTC will be phased in for your users. This flexibility allows for seamless testing and roll out.



Select which users should be challenges with LoginTC and which should bypass LoginTC

Challenge All Users

All users will be challenged with LoginTC.

Challenge Users Based on Static Username List

Only users in a static username list will be challenged with LoginTC.

Challenge Users Based on Group Membership

Leverage Active Directory and LDAP Group Membership to determine which users are challenges with LoginTC and which users bypass LoginTC.

For example, with smaller or proof of concept deployments select the Static List option. Users on the static list will be challenged with LoginTC, while those not on the list will only be challenged with the configured First Authentication Factor. That means you will be able to test LoginTC without affecting existing users accessing your VPN.

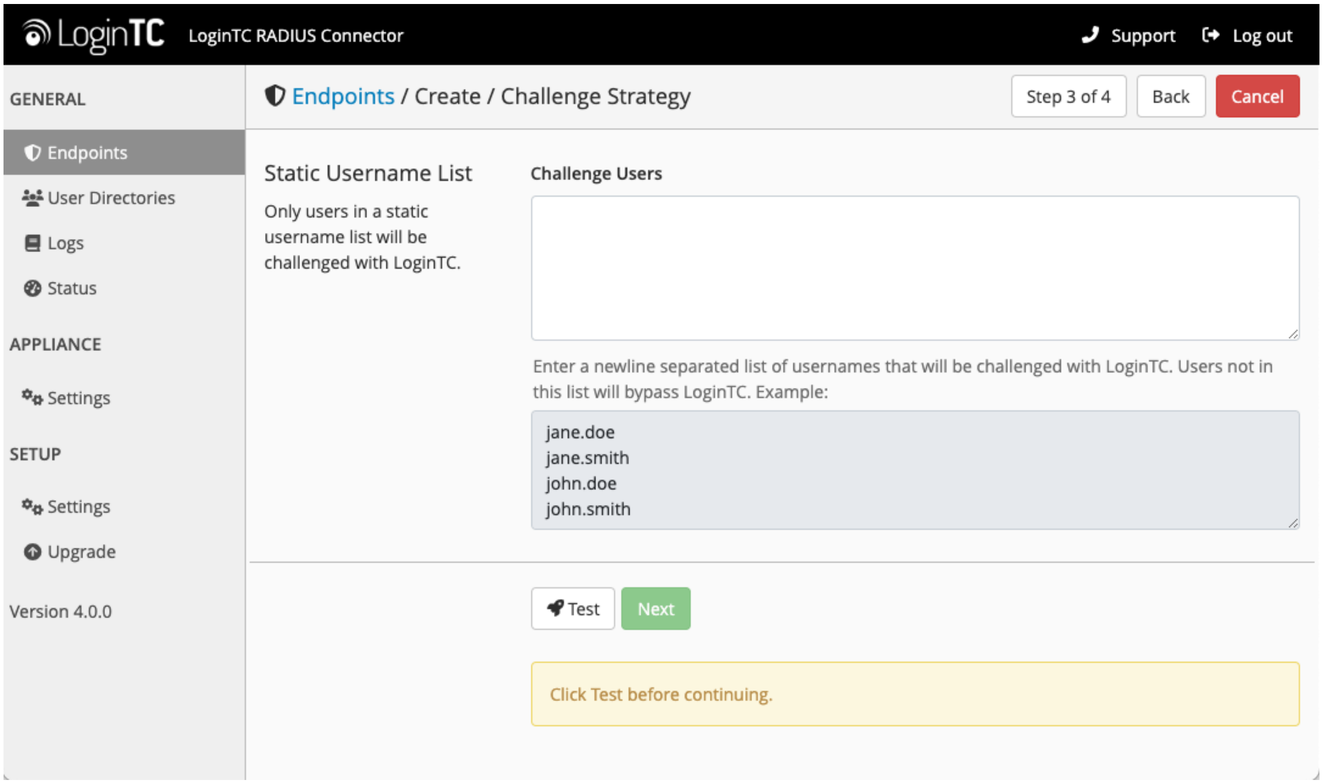
For larger deployments you can elect to use the Active Directory or LDAP Group option. Only users part of a particular LDAP or Active Directory Group will be challenged with LoginTC. As your users are migrating to LoginTC your LDAP and Active Directory group policy will ensure that they will be challenged with LoginTC. Users not part of the group will only be challenged with the configured First Authentication Factor.

Challenge All Users

Select this option if you wish every user to be challenged with LoginTC.

Challenge Users Based on Static Username List

Select this option if you wish to have a static list of users that will be challenged with LoginTC. Good for small number of users.



Static Username List

Only users in a static username list will be challenged with LoginTC.

Challenge Users

Enter a newline separated list of usernames that will be challenged with LoginTC. Users not in this list will bypass LoginTC. Example:

```
jane.doe
jane.smith
john.doe
john.smith
```

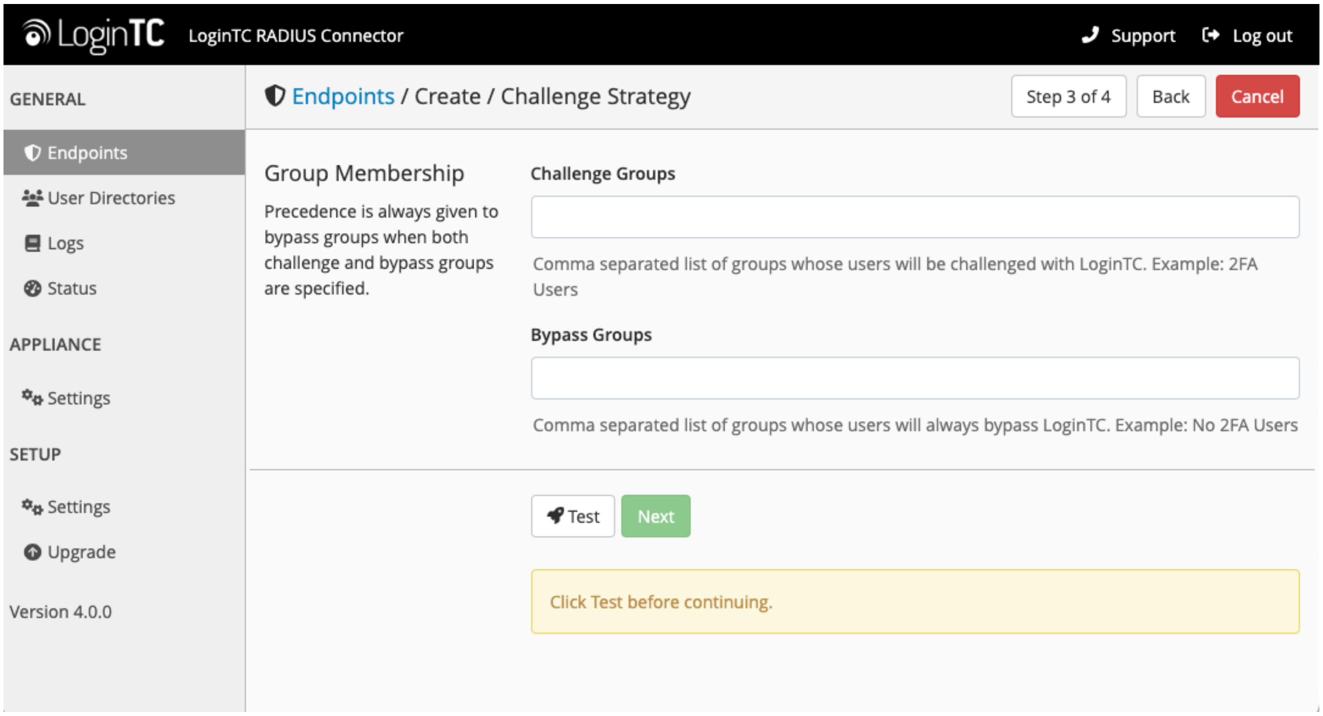
Click Test before continuing.

LoginTC challenge users: a new line separated list of usernames. For example:

```
jane.doe
jane.smith
john.doe
john.smith
```

Challenge Users Based on Group Membership

Select this option if you wish to have only users part of a particular Active Directory or LDAP group to be challenged with LoginTC. Good for medium and large number of users.



Group Membership

Precedence is always given to bypass groups when both challenge and bypass groups are specified.

Challenge Groups

Comma separated list of groups whose users will be challenged with LoginTC. Example: 2FA Users

Bypass Groups

Comma separated list of groups whose users will always bypass LoginTC. Example: No 2FA Users

Click Test before continuing.

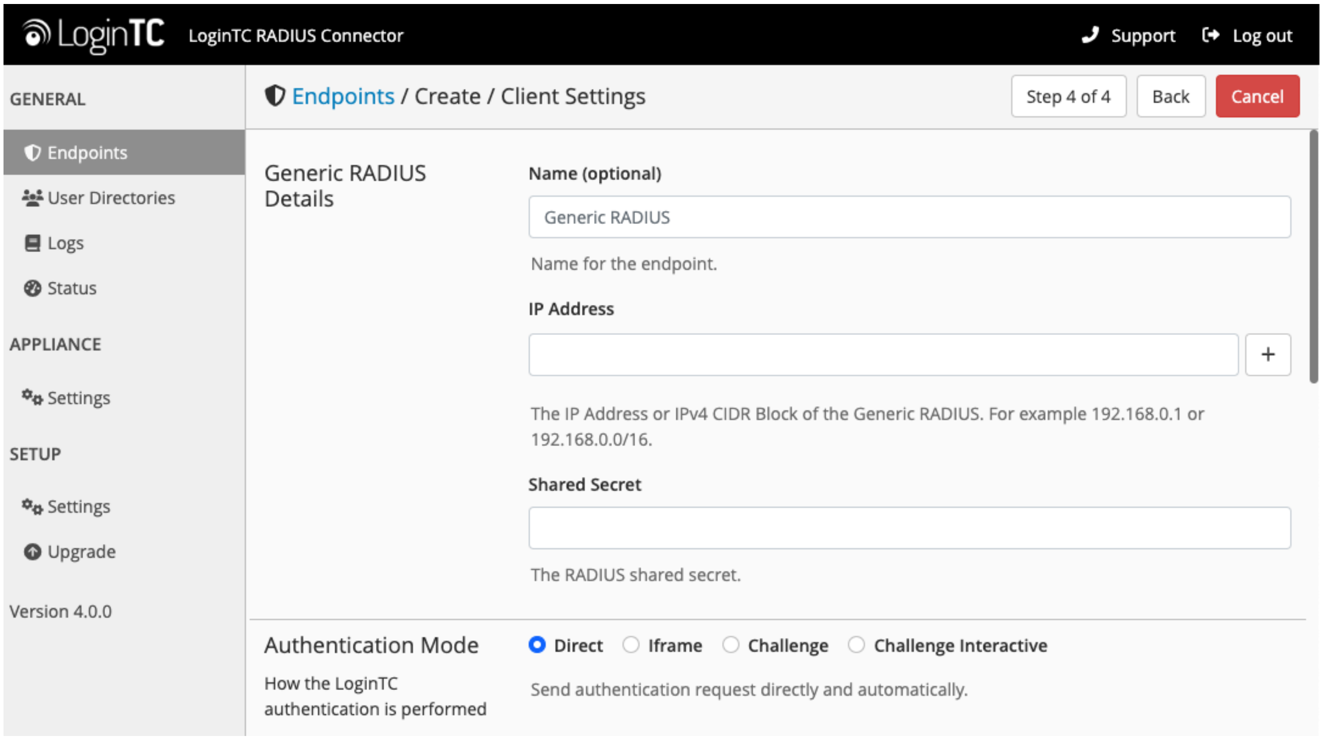
Configuration values:

Property	Explanation	Examples
`Challenge Groups (Optional)`	Comma separated list of groups for which users will be challenged with LoginTC	`SSLVPN-Users` or `two-factor-users`
`Challenge Groups (Optional)`	Comma separated list of groups for which users will always bypass LoginTC	`NOMFA-Users`

Click **Test** to validate the values and then click **Next**.

Client Settings

Configure RADIUS client (e.g. your RADIUS-speaking VPN):



Endpoints / Create / Client Settings

Generic RADIUS Details

Name (optional)

Generic RADIUS

Name for the endpoint.

IP Address

The IP Address or IPv4 CIDR Block of the Generic RADIUS. For example 192.168.0.1 or 192.168.0.0/16.

Shared Secret

The RADIUS shared secret.

Authentication Mode

How the LoginTC authentication is performed

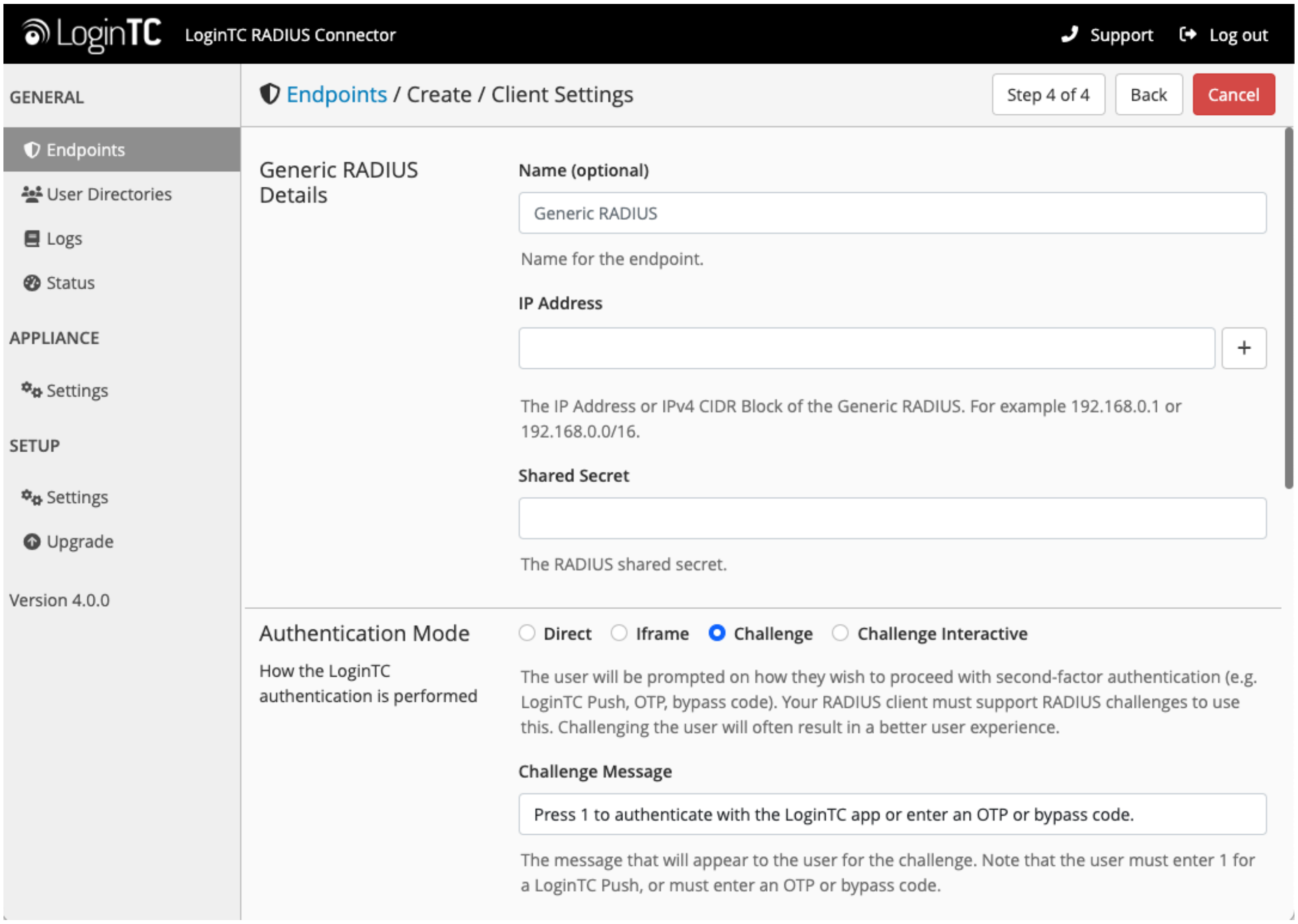
● Direct ○ Iframe ○ Challenge ○ Challenge Interactive

Send authentication request directly and automatically.

Client configuration values:

Property	Explanation	Examples
`name`	A unique identifier of your RADIUS client	`CorporateVPN`
`IP Addresss`	The IP address of your RADIUS client (e.g. your RADIUS-speaking VPN). Add additional IP Addresses by clicking **plus**.	`192.168.1.44`
`Shared Secret`	The secret shared between the LoginTC RADIUS Connector and its client	`bigsecret`

Under Authentication Mode select **Challenge**



Endpoints / Create / Client Settings

Generic RADIUS Details

Name (optional)

Generic RADIUS

Name for the endpoint.

IP Address

The IP Address or IPv4 CIDR Block of the Generic RADIUS. For example 192.168.0.1 or 192.168.0.0/16.

Shared Secret

The RADIUS shared secret.

Authentication Mode

How the LoginTC authentication is performed

○ Direct ○ Iframe ● Challenge ○ Challenge Interactive

The user will be prompted on how they wish to proceed with second-factor authentication (e.g. LoginTC Push, OTP, bypass code). Your RADIUS client must support RADIUS challenges to use this. Challenging the user will often result in a better user experience.

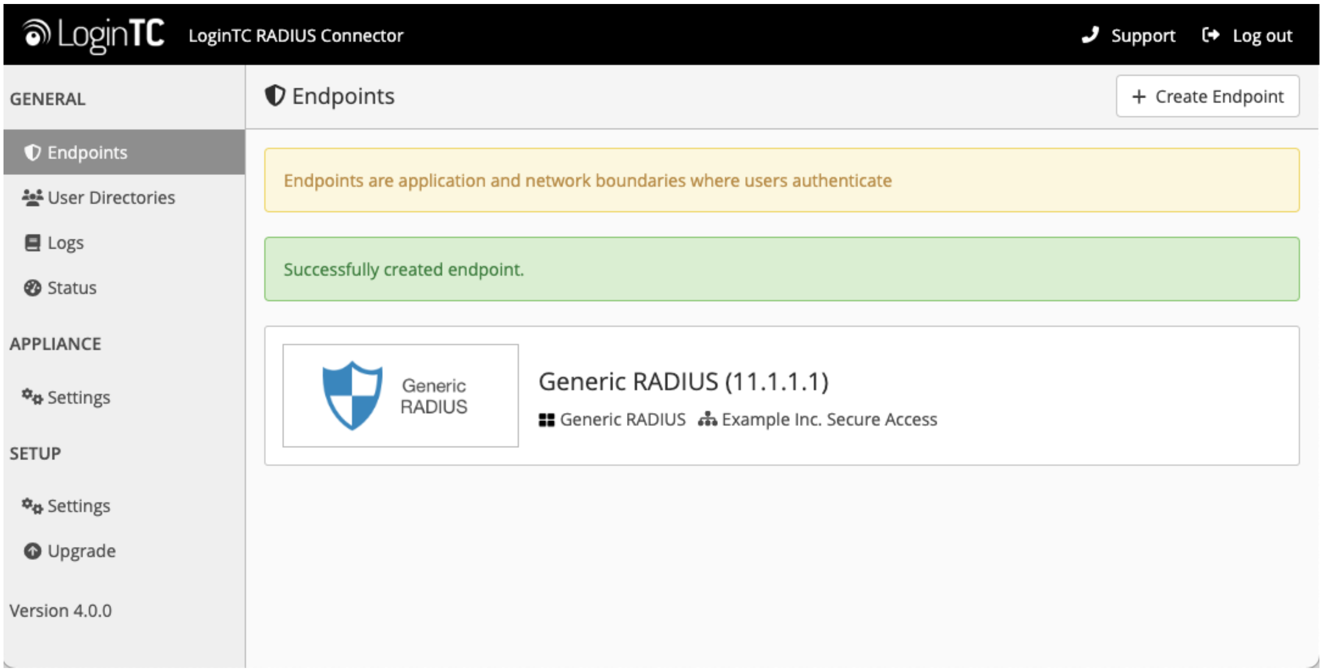
Challenge Message

Press 1 to authenticate with the LoginTC app or enter an OTP or bypass code.

The message that will appear to the user for the challenge. Note that the user must enter 1 for a LoginTC Push, or must enter an OTP or bypass code.

The user will be prompted on how they wish to proceed with second-factor authentication (e.g. LoginTC Push, OTP, bypass code). Your RADIUS client must support RADIUS challenges to use this. Challenging the user will often result in a better user experience. See User Experience for more information.

Click **Test** to validate the values and then click **Save**.



Endpoints are application and network boundaries where users authenticate

Successfully created endpoint.

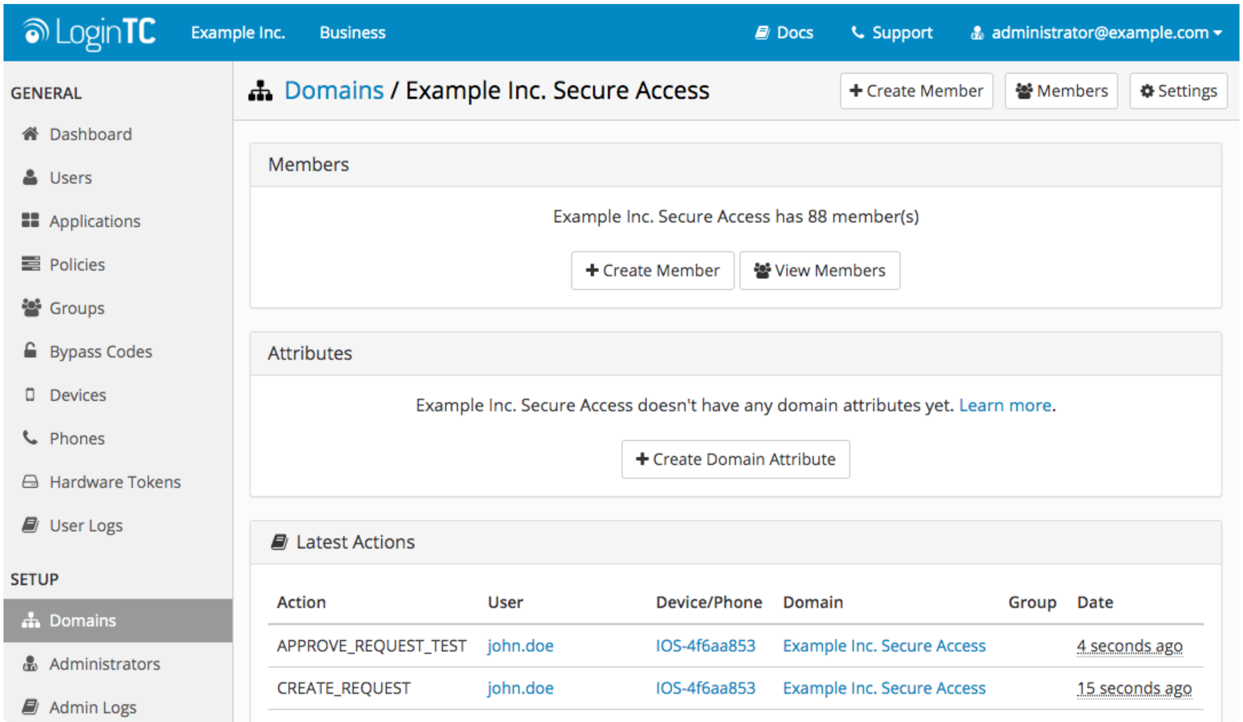
Generic RADIUS (11.1.1.1)

Generic RADIUS Example Inc. Secure Access

Testing

When you are ready to test your configuration, create a LoginTC user (if you haven't already done so). The username should match your existing user. Provision a token by following the steps:

1. In a new tab / window log into the LoginTC Admin Panel
2. Click **Domains**
3. Click on your domain
4. Click on **Members**

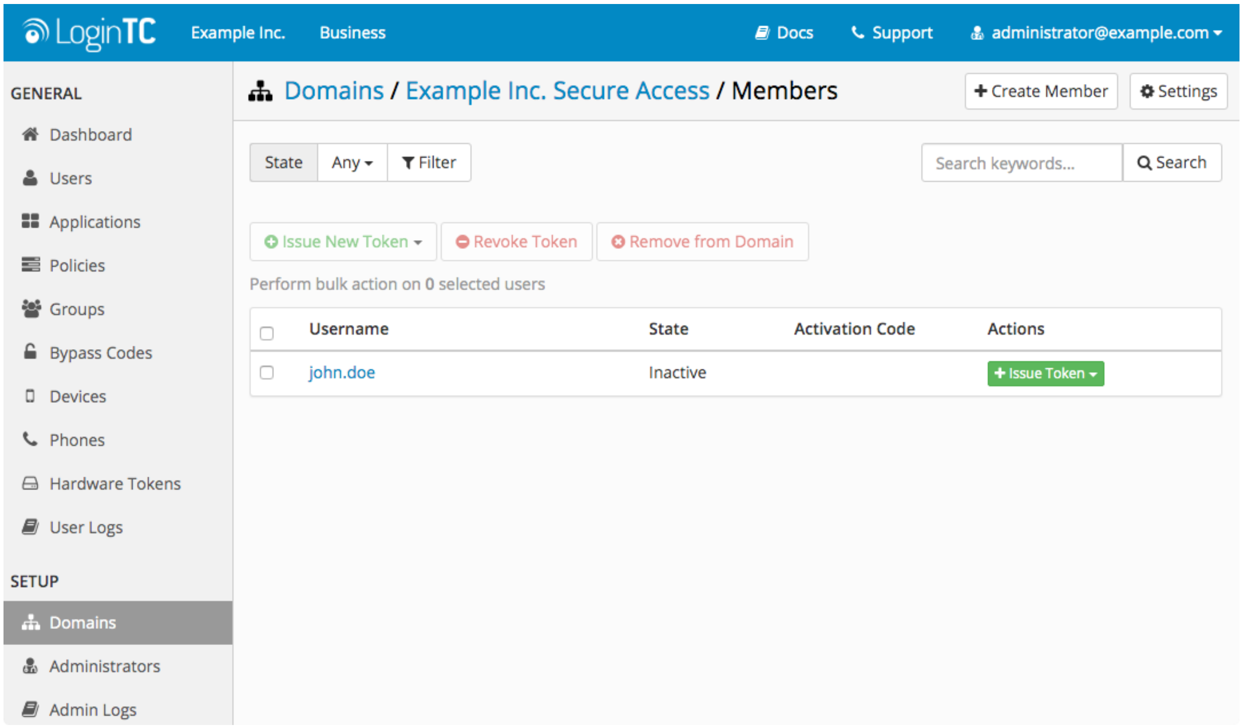


Example Inc. Secure Access has 88 member(s)

Example Inc. Secure Access doesn't have any domain attributes yet. Learn more.

Action	User	Device/Phone	Domain	Group	Date
APPROVE_REQUEST_TEST	john.doe	IOS-4f6aa853	Example Inc. Secure Access		4 seconds ago
CREATE_REQUEST	john.doe	IOS-4f6aa853	Example Inc. Secure Access		15 seconds ago

5. Click **Issue Token** button beside your user:

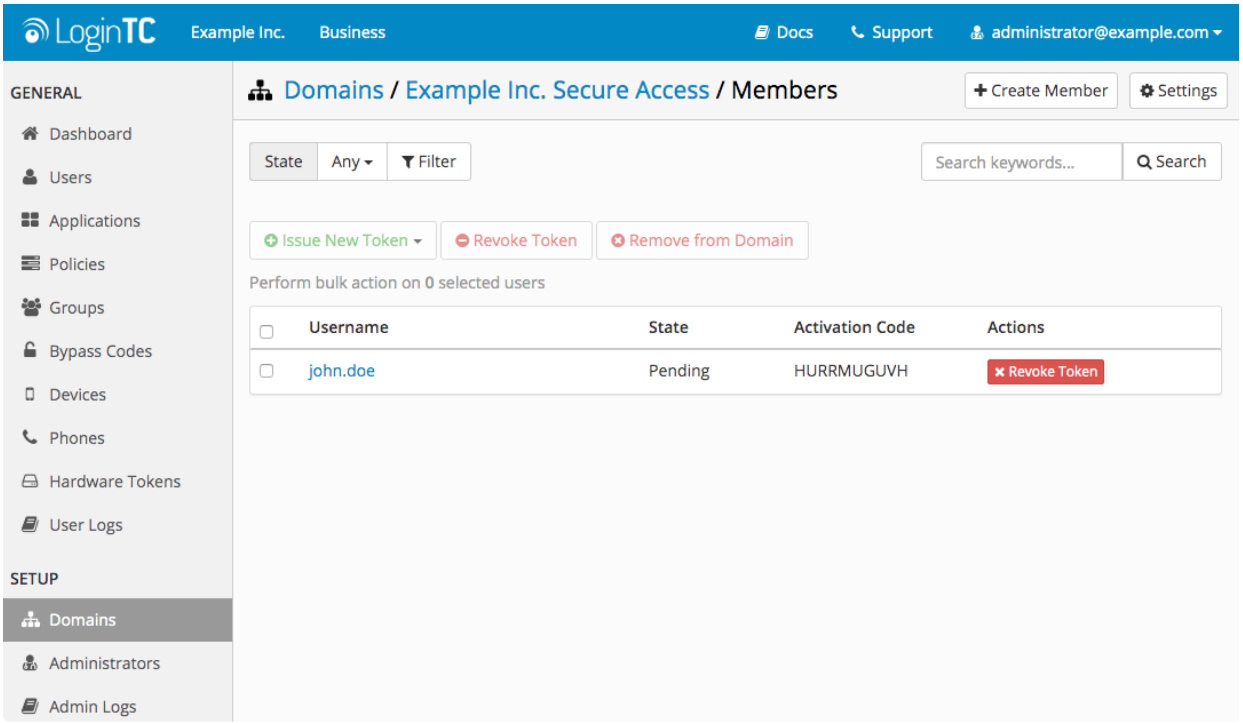


Domains / Example Inc. Secure Access / Members

Perform bulk action on 0 selected users

□	Username	State	Activation Code	Actions
□	john.doe	Inactive		+ Issue Token

6. A 10-character alphanumeric activation code will appear beside the user:



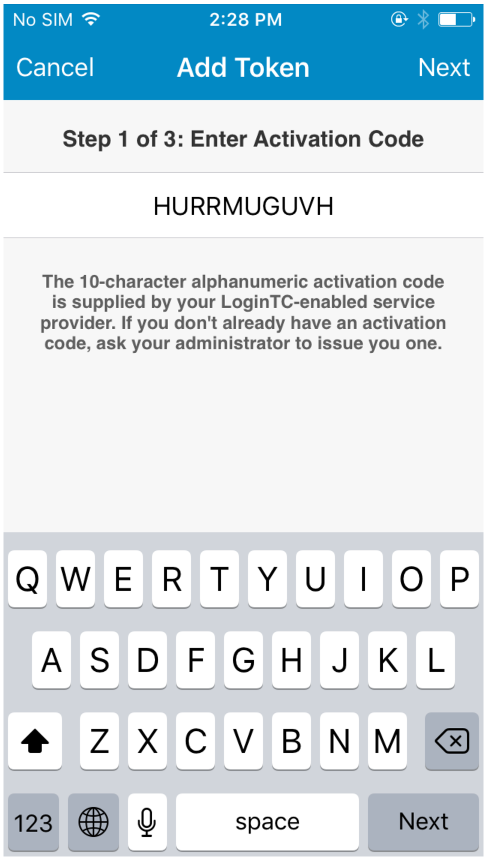
Domains / Example Inc. Secure Access / Members

Perform bulk action on 0 selected users

□	Username	State	Activation Code	Actions
□	john.doe	Pending	HURRMUGUVH	✖ Revoke Token

7. Open the LoginTC mobile app.

8. Enter the 10-character alphanumeric activation code:

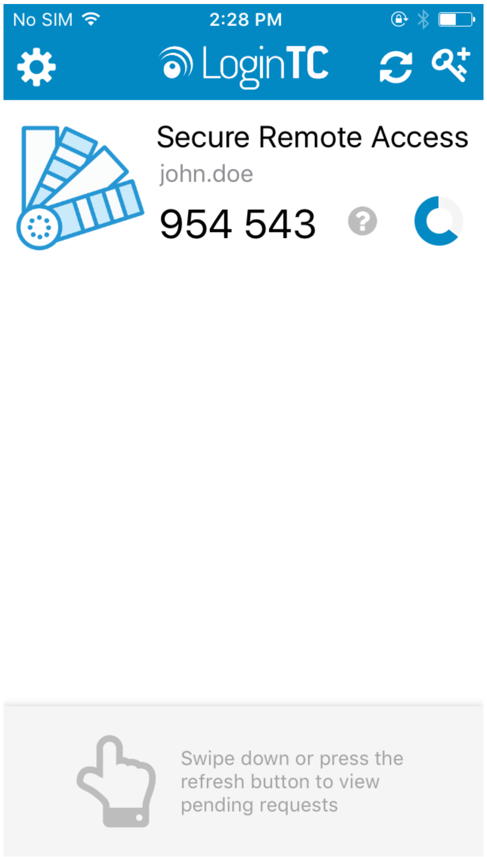


Step 1 of 3: Enter Activation Code

HURRMUGUVH

The 10-character alphanumeric activation code is supplied by your LoginTC-enabled service provider. If you don't already have an activation code, ask your administrator to issue you one.

9. Load the token to complete the process



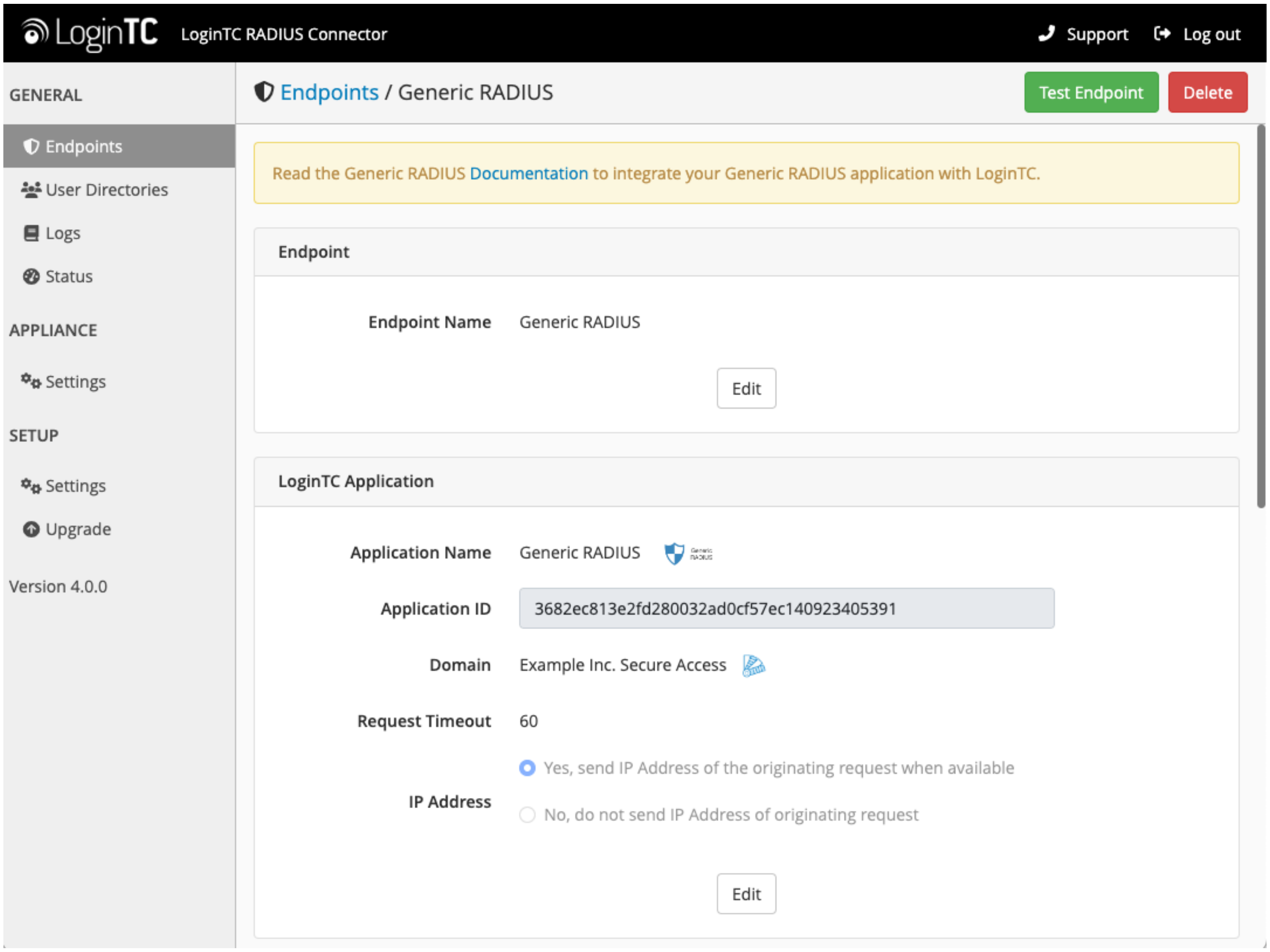
Secure Remote Access

john.doe

954 543

Swipe down or press the refresh button to view pending requests

When you have loaded a token for your new user and domain, navigate to your appliance **web interface** URL:



Read the Generic RADIUS Documentation to integrate your Generic RADIUS application with LoginTC.

Endpoint

Endpoint Name: Generic RADIUS

LoginTC Application

Application Name: Generic RADIUS

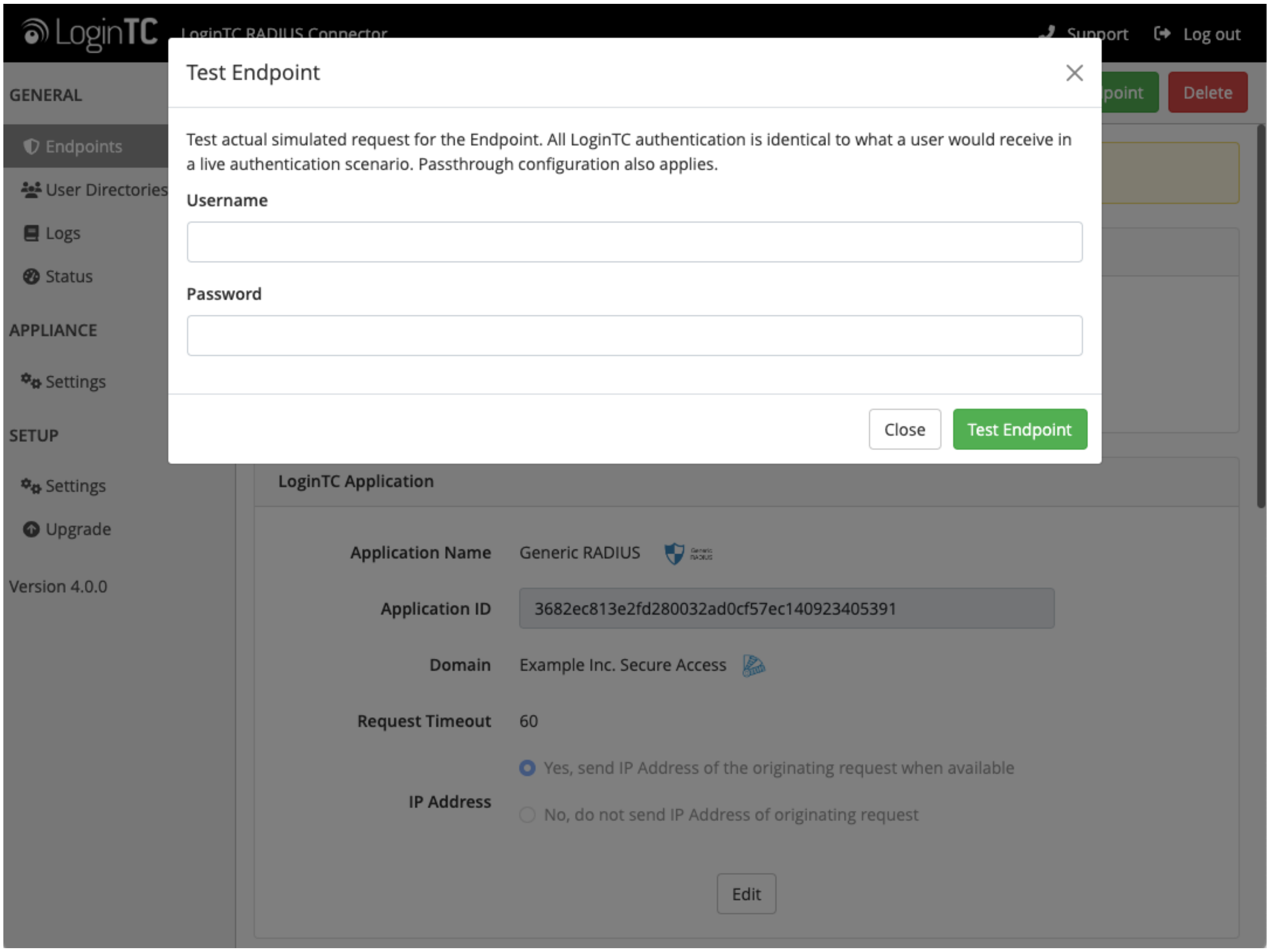
Application ID: 3682ec813e2fd280032ad0cf57ec140923405391

Domain: Example Inc. Secure Access

Request Timeout: 60

IP Address:
● Yes, send IP Address of the originating request when available
○ No, do not send IP Address of originating request

Click **Test Configuration**:



Test Endpoint

Test actual simulated request for the Endpoint. All LoginTC authentication is identical to what a user would receive in a live authentication scenario. Passthrough configuration also applies.

Username

Password

LoginTC Application

Application Name: Generic RADIUS

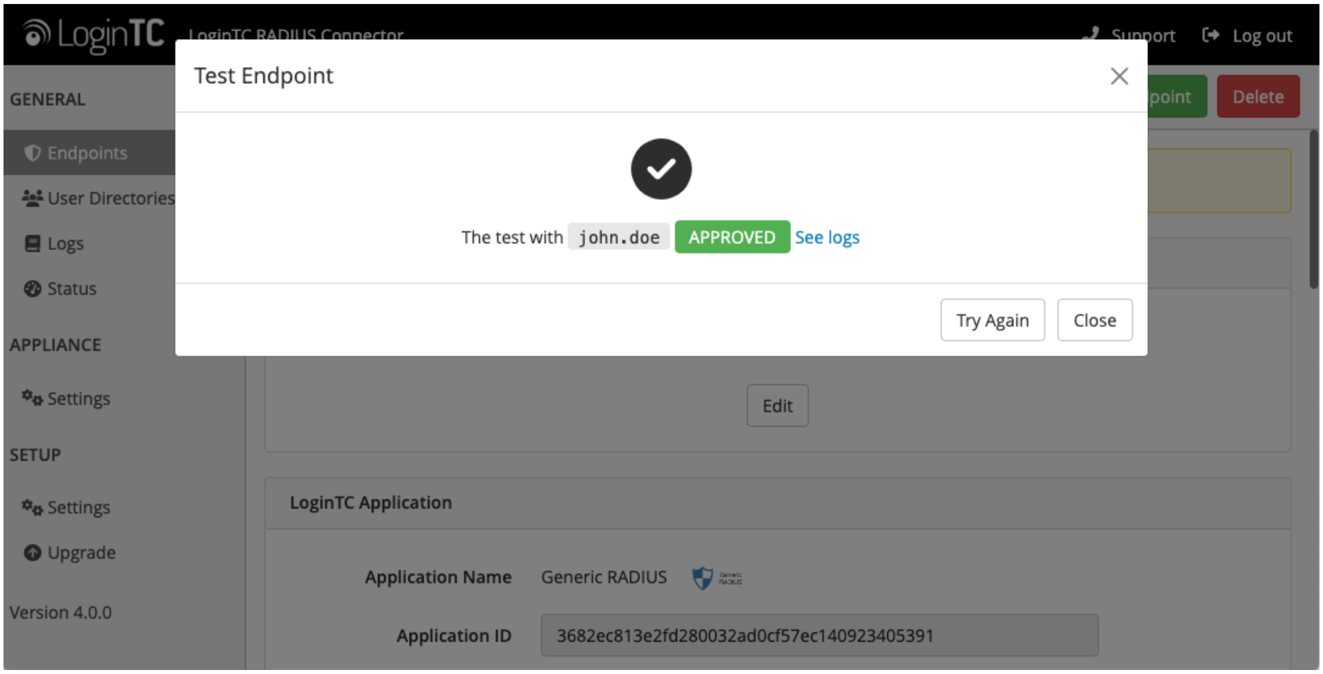
Application ID: 3682ec813e2fd280032ad0cf57ec140923405391

Domain: Example Inc. Secure Access

Request Timeout: 60

IP Address:
● Yes, send IP Address of the originating request when available
○ No, do not send IP Address of originating request

Enter a valid username and password; if there is no password leave it blank. A simulated authentication request will be sent to the mobile or desktop device with the user token loaded. Approve the request to continue:



Test Endpoint

The test with `john.doe` APPROVED See logs

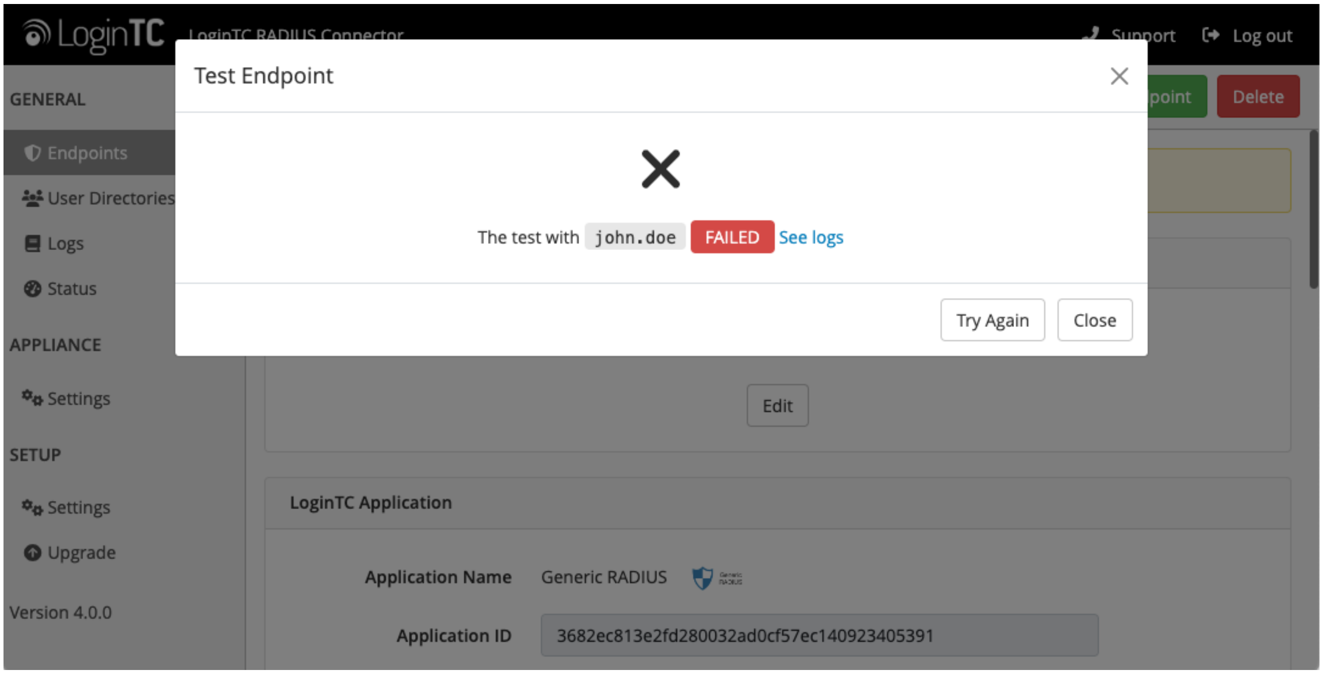
LoginTC Application

Application Name: Generic RADIUS

Application ID: 3682ec813e2fd280032ad0cf57ec140923405391

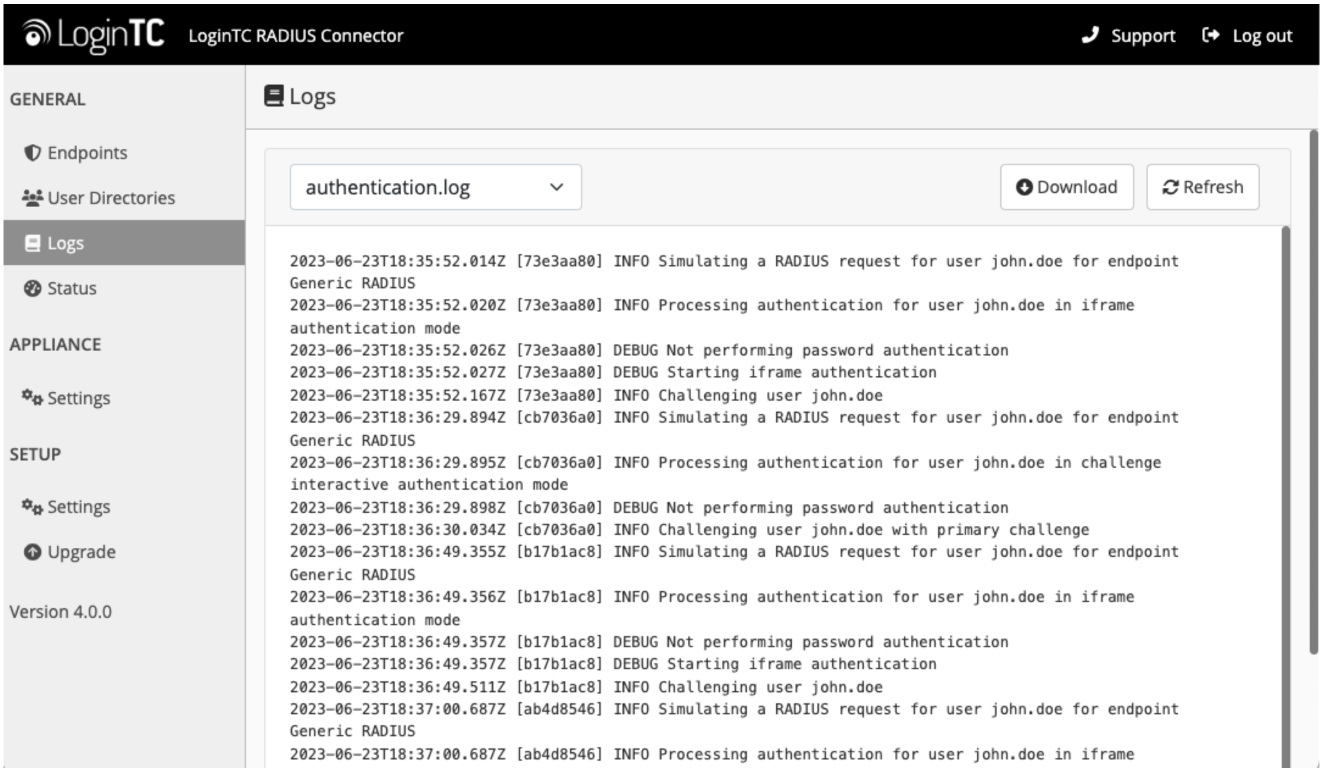
Congratulations! Your appliance can successfully broker first and second factor authentication. The only remaining step is to configure your RADIUS device!

If there was an error during testing, the following will appear:



The test with john.doe FAILED See logs

In this case, click **See logs** (or click the **Logs** section):

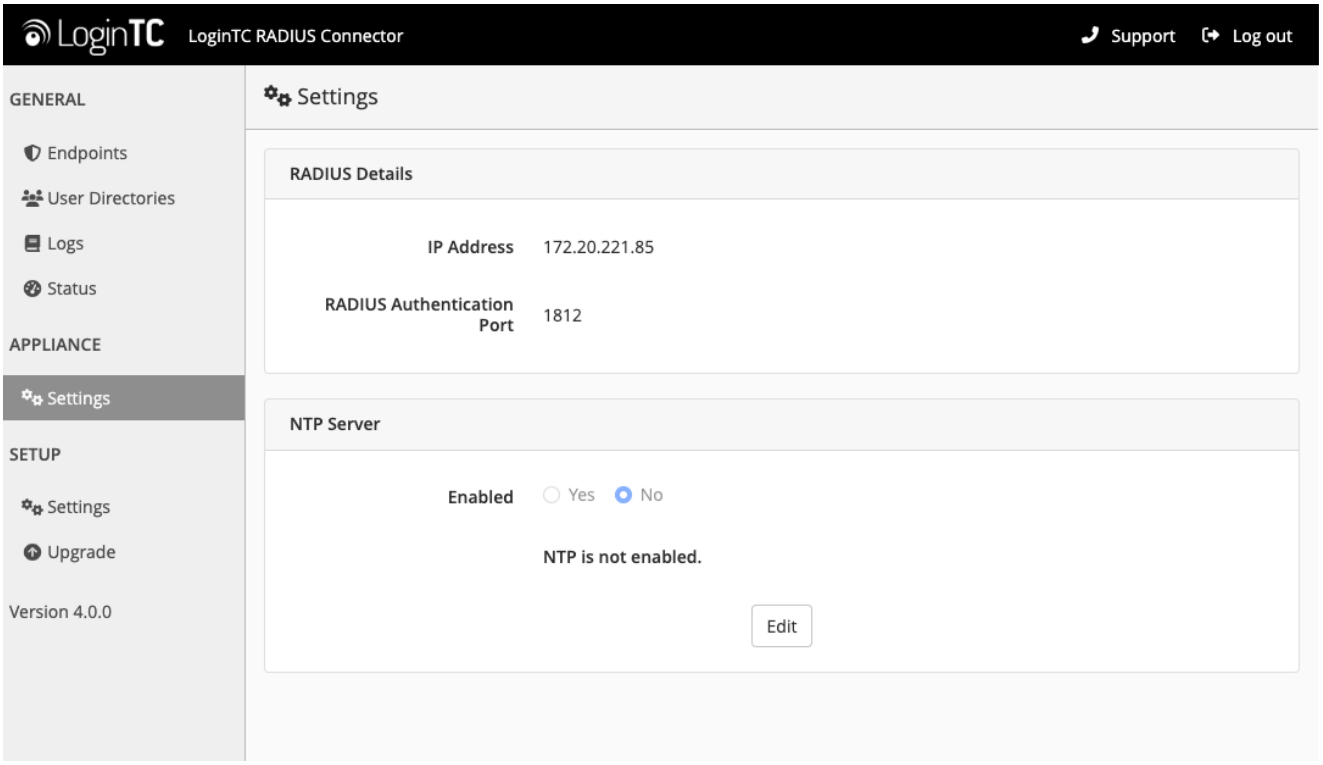


```
2023-06-23T18:35:52.014Z [73e3aa80] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:35:52.020Z [73e3aa80] INFO Processing authentication for user john.doe in iframe
authentication mode
2023-06-23T18:35:52.026Z [73e3aa80] DEBUG Not performing password authentication
2023-06-23T18:35:52.027Z [73e3aa80] DEBUG Starting iframe authentication
2023-06-23T18:35:52.167Z [73e3aa80] INFO Challenging user john.doe
2023-06-23T18:36:29.894Z [cb7036a0] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:36:29.895Z [cb7036a0] INFO Processing authentication for user john.doe in challenge
interactive authentication mode
2023-06-23T18:36:29.898Z [cb7036a0] DEBUG Not performing password authentication
2023-06-23T18:36:30.034Z [cb7036a0] INFO Challenging user john.doe with primary challenge
2023-06-23T18:36:49.355Z [b17b1ac8] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:36:49.356Z [b17b1ac8] INFO Processing authentication for user john.doe in iframe
authentication mode
2023-06-23T18:36:49.357Z [b17b1ac8] DEBUG Not performing password authentication
2023-06-23T18:36:49.357Z [b17b1ac8] DEBUG Starting iframe authentication
2023-06-23T18:36:49.511Z [b17b1ac8] INFO Challenging user john.doe
2023-06-23T18:37:00.687Z [ab4d8546] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:37:00.687Z [ab4d8546] INFO Processing authentication for user john.doe in iframe
```

WatchGuard VPN MFA Configuration

Once you are satisfied with your setup, configure your WatchGuard to use the LoginTC RADIUS Connector.

For your reference, the appliance **web interface Settings** page displays the appliance IP address and RADIUS port:



Settings

RADIUS Details

IP Address 172.20.221.85

RADIUS Authentication Port 1812

NTP Server

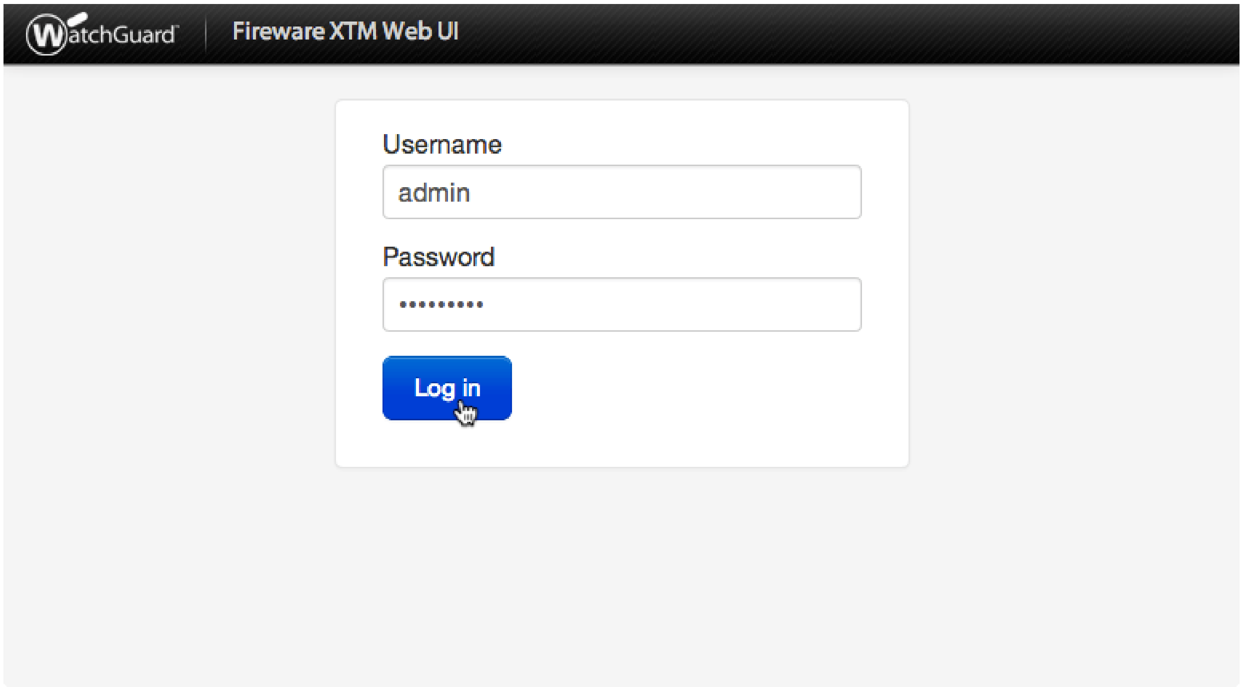
Enabled ○ Yes ● No

NTP is not enabled.

The following are quick steps to get VPN access protected with LoginTC. The instructions can be used for existing setups as well. Although these were performed on WatchGuard Fireware XTM Web UI, the same is true for other devices in the XTM series.

Mobile VPN with SSL

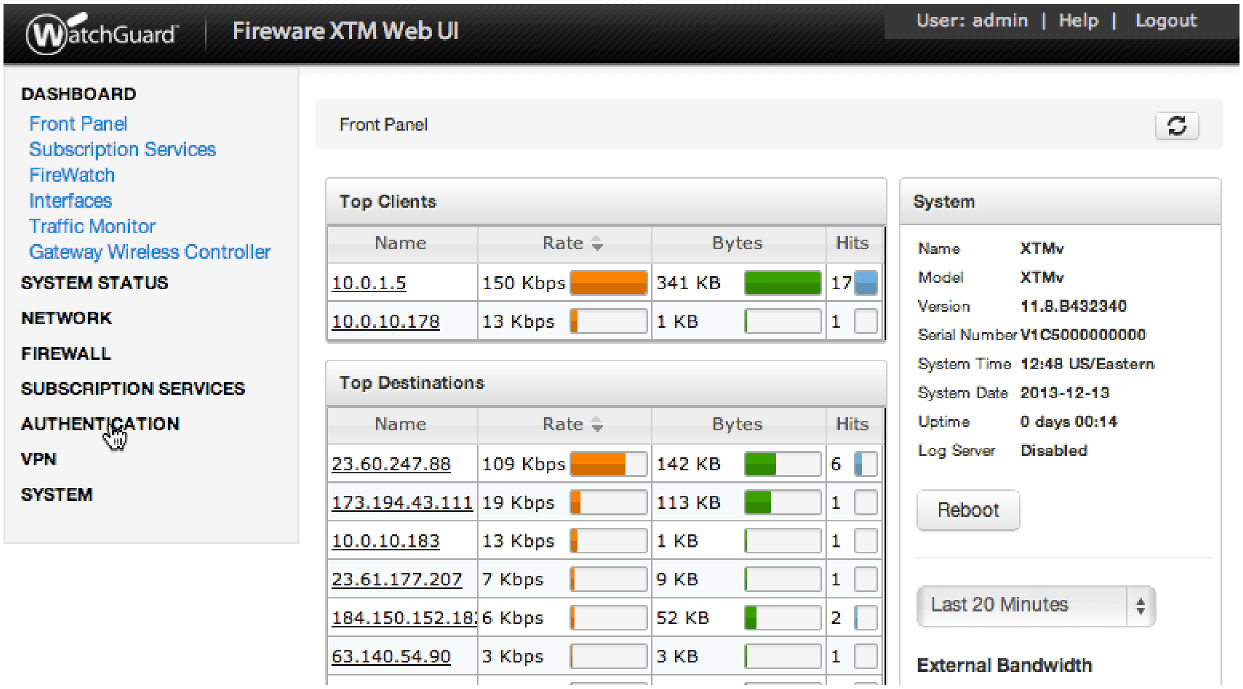
1. Log in to your WatchGuard (Fireware XTM Web UI)



Username: admin

Password: ••••••••••

2. Click **Authentication**:



Top Clients

Name	Rate	Bytes	Hits
10.0.1.5	150 Kbps	341 KB	17
10.0.10.178	13 Kbps	1 KB	1

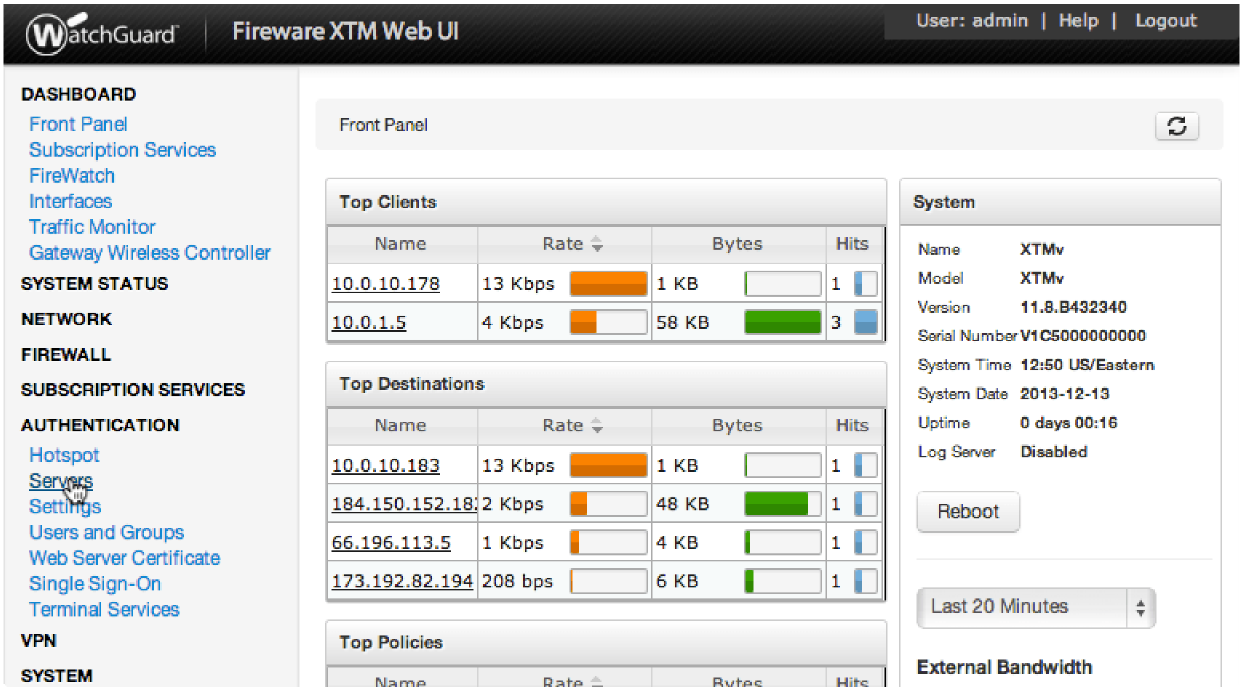
Top Destinations

Name	Rate	Bytes	Hits
23.60.247.88	109 Kbps	142 KB	6
173.194.43.111	19 Kbps	113 KB	1
10.0.10.183	13 Kbps	1 KB	1
23.61.177.207	7 Kbps	9 KB	1
184.150.152.18	6 Kbps	52 KB	2
63.140.54.90	3 Kbps	3 KB	1

System

Name	XTMv
Model	XTMv
Version	11.8.B432340
Serial Number	V1C5000000000
System Time	12:48 US/Eastern
System Date	2013-12-13
Uptime	0 days 00:14
Log Server	Disabled

3. Under **Authentication** click **Servers**:



Top Clients

Name	Rate		Bytes		Hits	
10.0.10.178	13 Kbps		1 KB		1	
10.0.1.5	4 Kbps		58 KB		3	

Top Destinations

Name	Rate		Bytes		Hits	
10.0.10.183	13 Kbps		1 KB		1	
184.150.152.18	2 Kbps		48 KB		1	
66.196.113.5	1 Kbps		4 KB		1	
173.192.82.194	208 bps		6 KB		1	

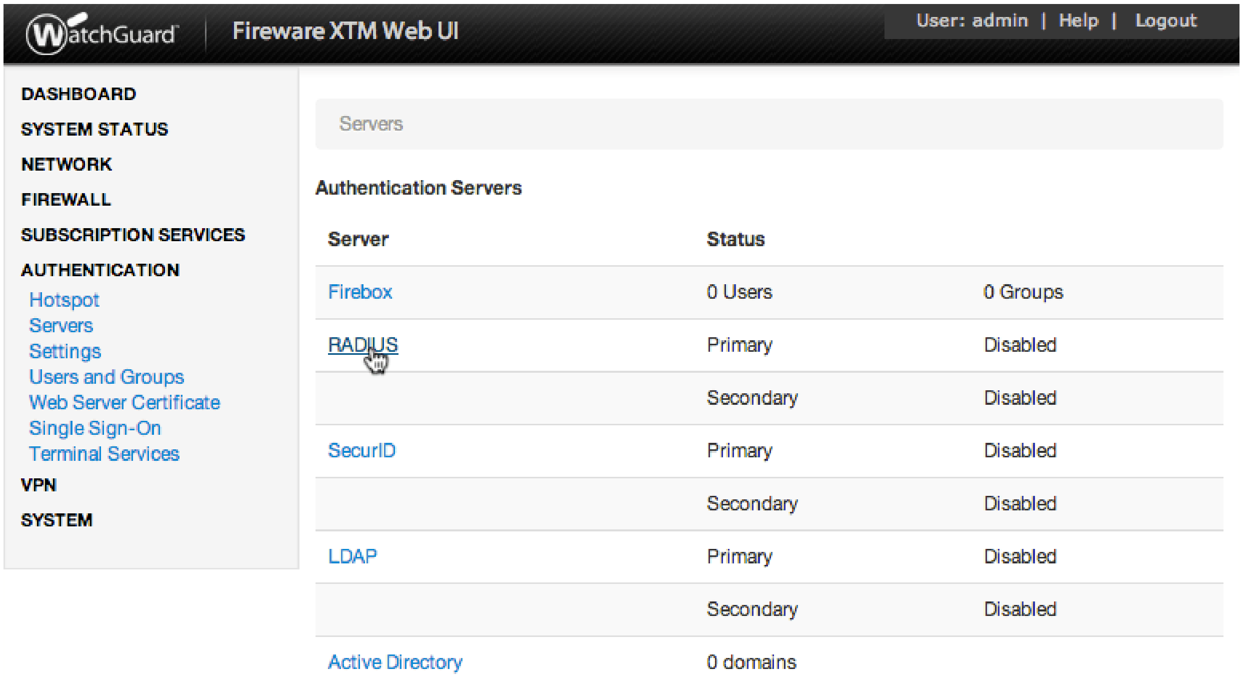
Top Policies

Name	Rate	Bytes	Hits

System

Name	XTMv
Model	XTMv
Version	11.8.B432340
Serial Number	V1C5000000000
System Time	12:50 US/Eastern
System Date	2013-12-13
Uptime	0 days 00:16
Log Server	Disabled

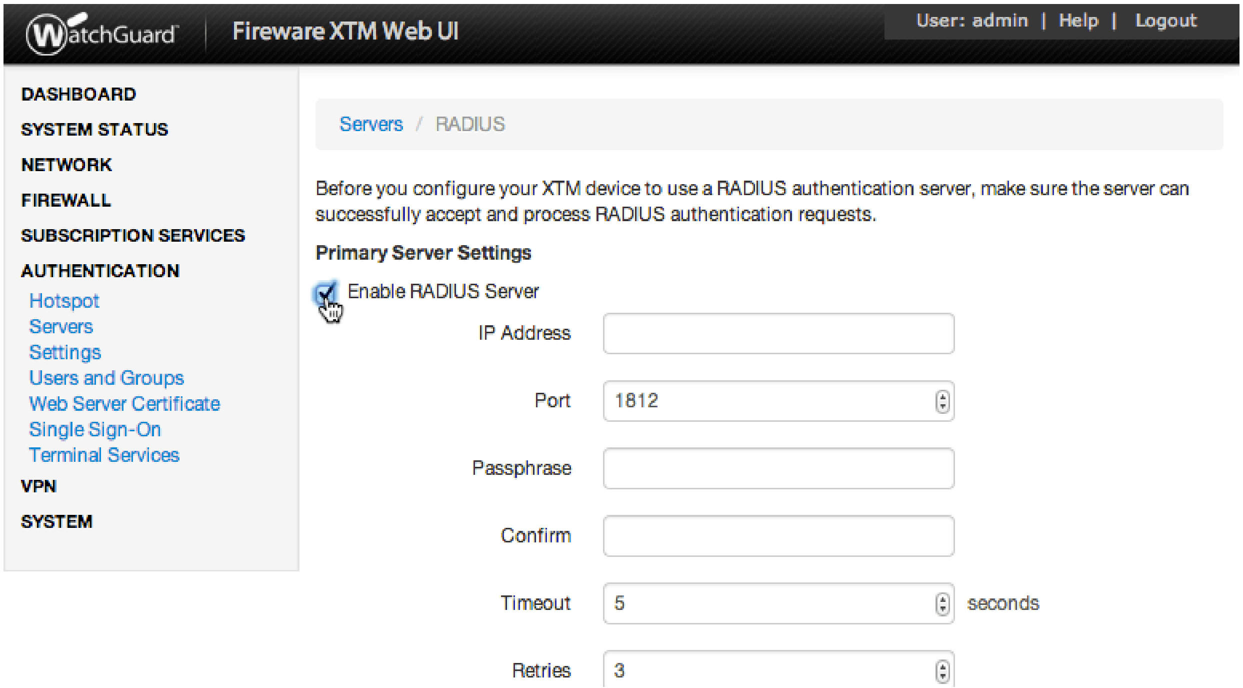
4. Under **Authentication Servers** click **RADIUS**:



Authentication Servers

Server	Status	
Firebox	0 Users	0 Groups
RADIUS	Primary	Disabled
	Secondary	Disabled
SecurID	Primary	Disabled
	Secondary	Disabled
LDAP	Primary	Disabled
	Secondary	Disabled
Active Directory	0 domains	

5. Under **Primary Server Settings** click **Enable RADIUS Server**:



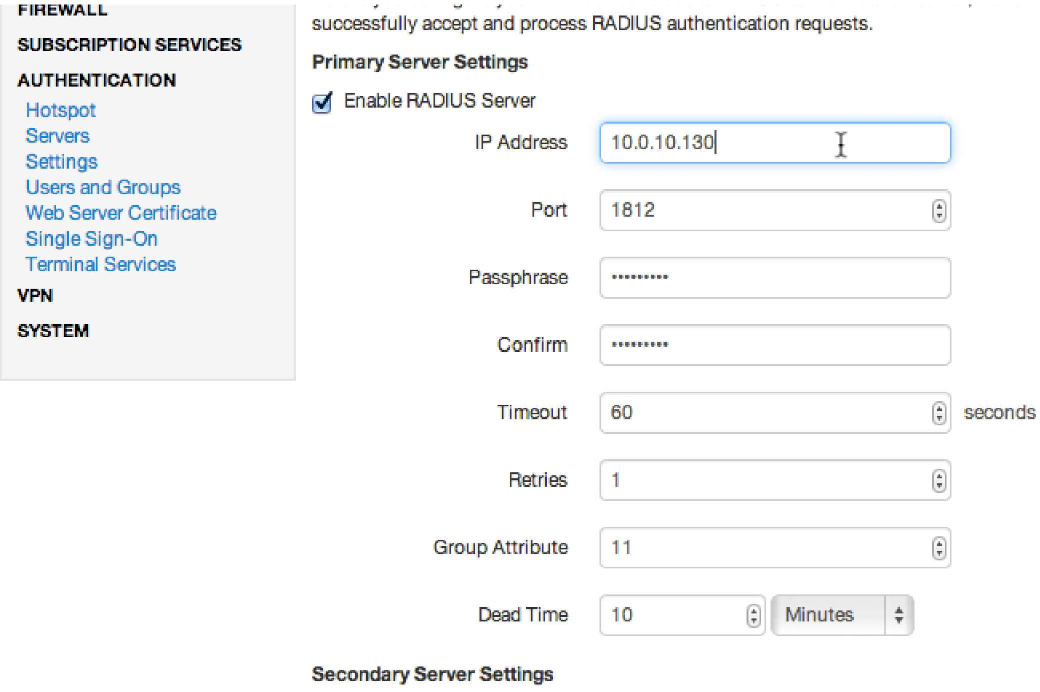
Before you configure your XTM device to use a RADIUS authentication server, make sure the server can successfully accept and process RADIUS authentication requests.

Primary Server Settings

☑ Enable RADIUS Server

IP Address	
Port	1812
Passphrase	
Confirm	
Timeout	5 seconds
Retries	3

6. Complete **Primary Server Settings** form:



successfully accept and process RADIUS authentication requests.

Primary Server Settings

☑ Enable RADIUS Server

IP Address	10.0.10.130
Port	1812
Passphrase	•••••••••
Confirm	•••••••••
Timeout	60 seconds
Retries	1
Group Attribute	11
Dead Time	10 Minutes

Secondary Server Settings

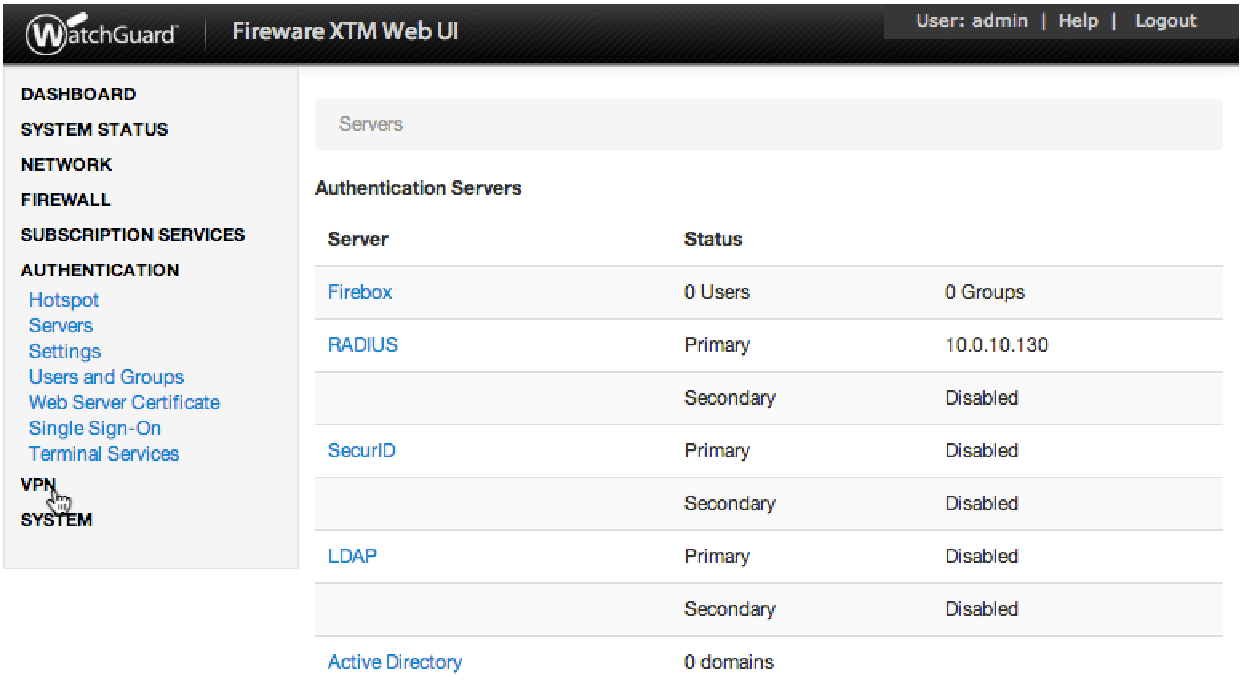
Property	Explanation	Example
`IP Address`	Address of LoginTC RADIUS Connector	10.0.10.130
`Port`	RADIUS authentication port. Must be 1812.	1812
`Passphrase`	The secret shared between the LoginTC RADIUS Connector and its client	bigsecret
`Confirm`	The secret shared between the LoginTC RADIUS Connector and its client	bigsecret
`Timeout`	Amount of time in seconds to wait. At least 90s.	90
`Retries`	Amount of times to retry authentication. Must be 1.	1
`Group Attribute`	RADIUS Attribute to be populated with user group info. Must be 11 when using SSL.	11
`Dead Time`	Amount of time an unresponsive RADIUS server is marked as inactive	0

Group Attribute and Access Control

WatchGuard devices can use the **Group Attribute** value to set the attribute that carries the User Group information. This information is used for access control. Configure Group

Attribute in Active Directory / LDAP Option to include the Filter ID string with the user authentication message that gets sent to the Watchguard device.

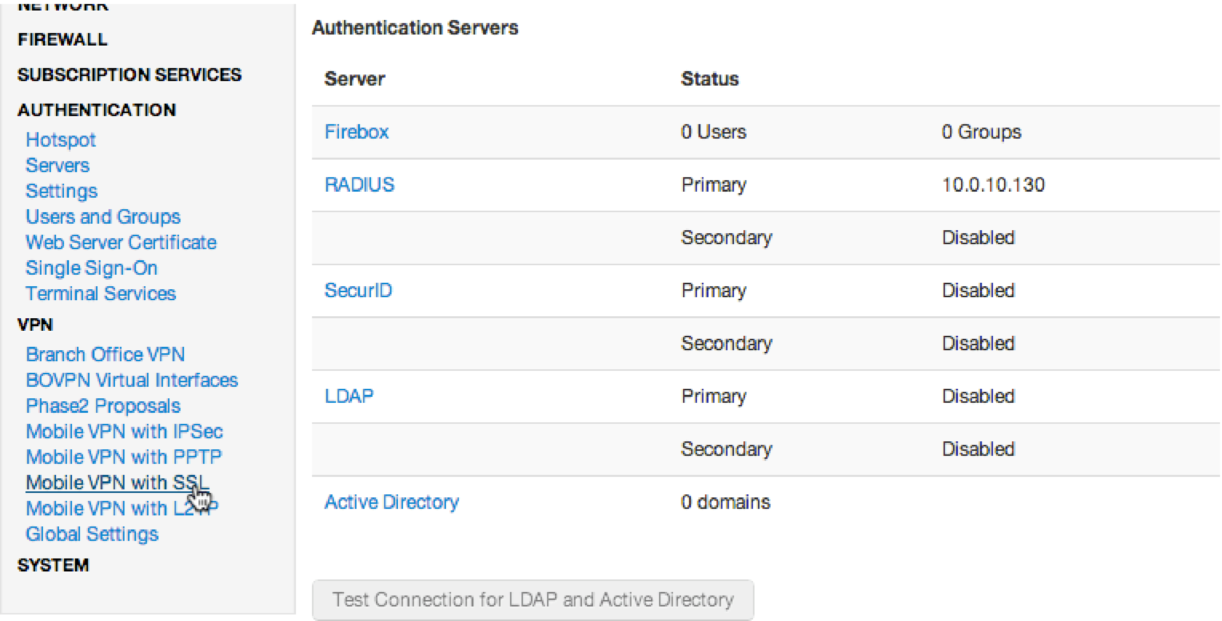
7. Click **VPN**:



Authentication Servers

Server	Status	
Firebox	0 Users	0 Groups
RADIUS	Primary	10.0.10.130
	Secondary	Disabled
SecurID	Primary	Disabled
	Secondary	Disabled
LDAP	Primary	Disabled
	Secondary	Disabled
Active Directory	0 domains	

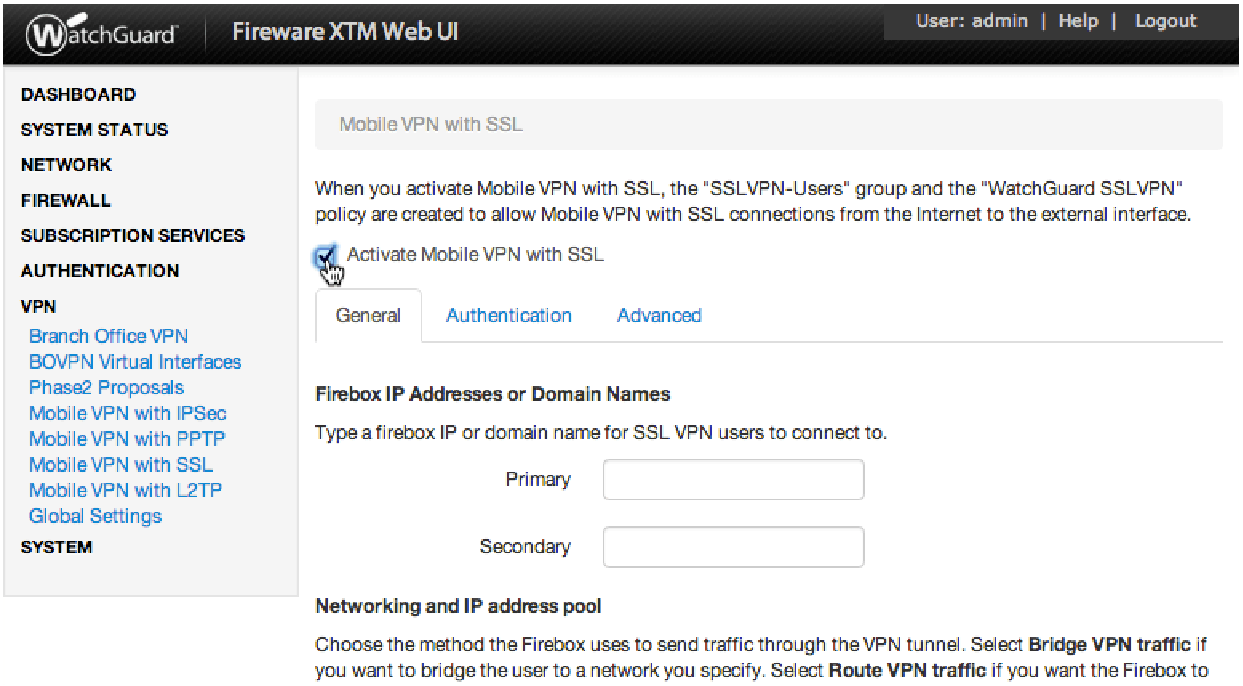
8. Under **VPN** click **Mobile VPN with SSL**:



Authentication Servers

Server	Status	
Firebox	0 Users	0 Groups
RADIUS	Primary	10.0.10.130
	Secondary	Disabled
SecurID	Primary	Disabled
	Secondary	Disabled
LDAP	Primary	Disabled
	Secondary	Disabled
Active Directory	0 domains	

9. Click **Activate Mobile VPN with SSL**:



Mobile VPN with SSL

When you activate Mobile VPN with SSL, the "SSLVPN-Users" group and the "WatchGuard SSLVPN" policy are created to allow Mobile VPN with SSL connections from the Internet to the external interface.

☑ Activate Mobile VPN with SSL

Firebox IP Addresses or Domain Names

Type a firebox IP or domain name for SSL VPN users to connect to.

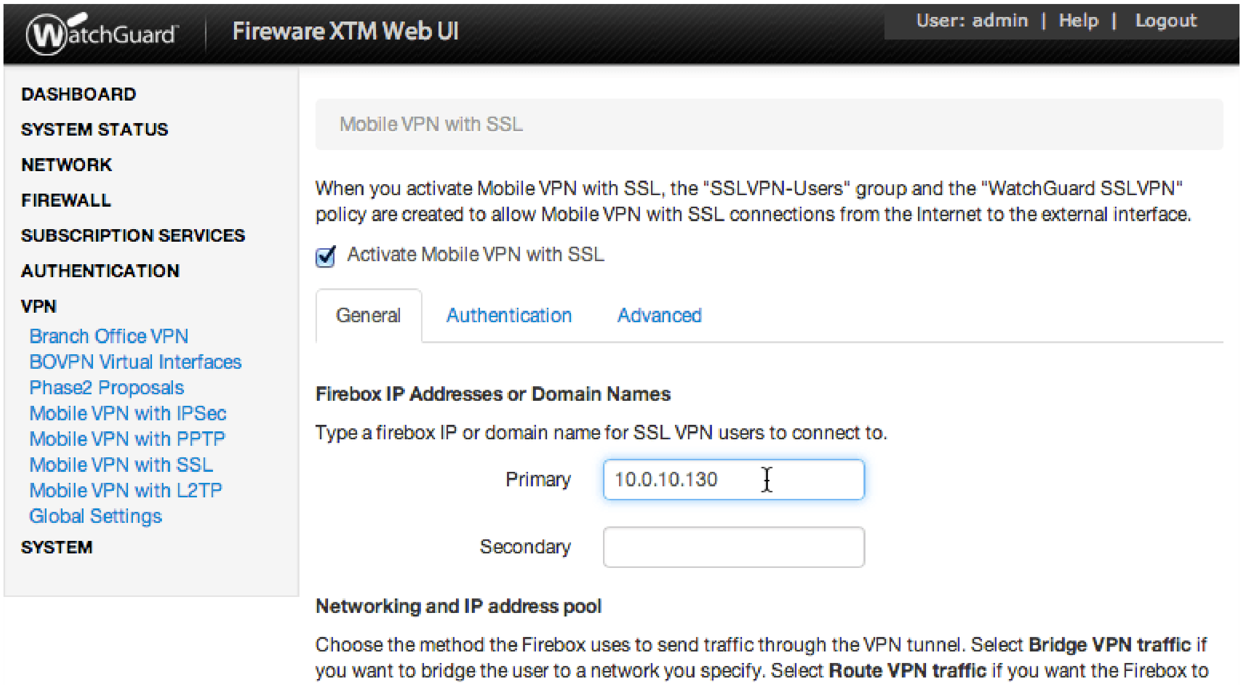
Primary

Secondary

Networking and IP address pool

Choose the method the Firebox uses to send traffic through the VPN tunnel. Select **Bridge VPN traffic** if you want to bridge the user to a network you specify. Select **Route VPN traffic** if you want the Firebox to

10. Under **Firebox IP Address or Domain Names**



Mobile VPN with SSL

When you activate Mobile VPN with SSL, the "SSLVPN-Users" group and the "WatchGuard SSLVPN" policy are created to allow Mobile VPN with SSL connections from the Internet to the external interface.

☑ Activate Mobile VPN with SSL

Firebox IP Addresses or Domain Names

Type a firebox IP or domain name for SSL VPN users to connect to.

Primary 10.0.10.130

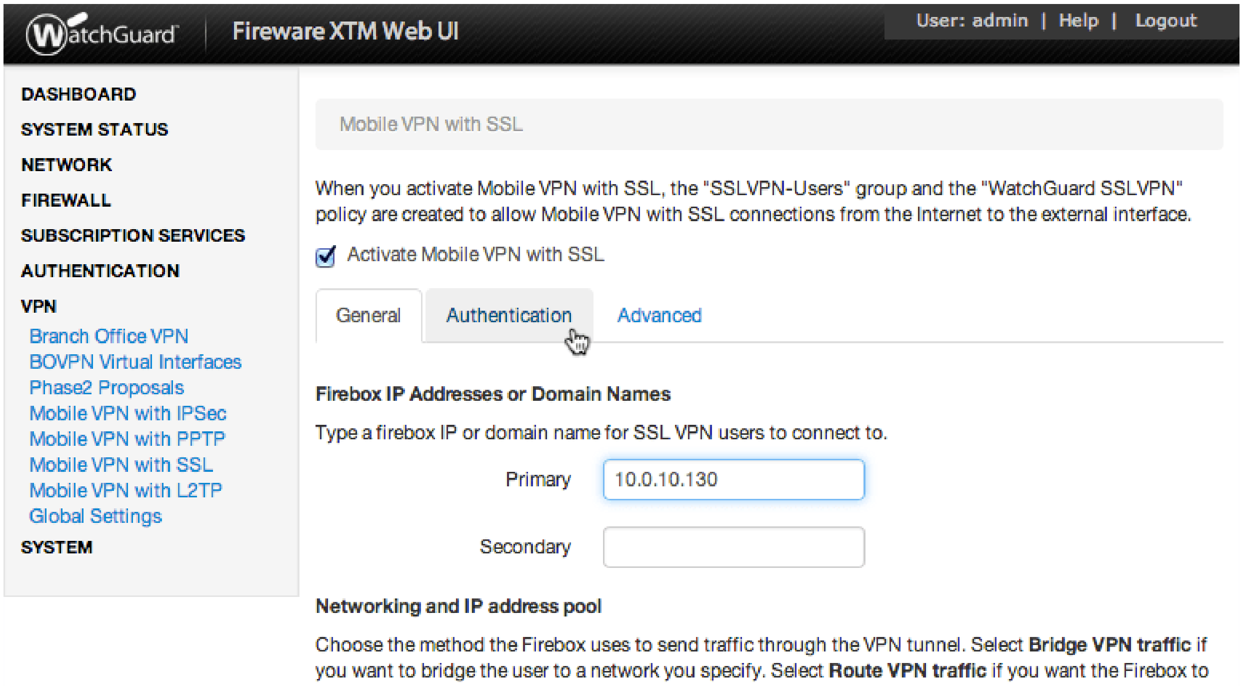
Secondary

Networking and IP address pool

Choose the method the Firebox uses to send traffic through the VPN tunnel. Select **Bridge VPN traffic** if you want to bridge the user to a network you specify. Select **Route VPN traffic** if you want the Firebox to

Property	Explanation	Example
`Primary`	Primary IP address or domain name Firebox users connect to.	10.0.10.130
`Secondary` (optional)	Secondary IP address or domain name Firebox users connect to.	10.0.10.131

11. Click **Authentication** tab:



Mobile VPN with SSL

When you activate Mobile VPN with SSL, the "SSLVPN-Users" group and the "WatchGuard SSLVPN" policy are created to allow Mobile VPN with SSL connections from the Internet to the external interface.

☑ Activate Mobile VPN with SSL

Firebox IP Addresses or Domain Names

Type a firebox IP or domain name for SSL VPN users to connect to.

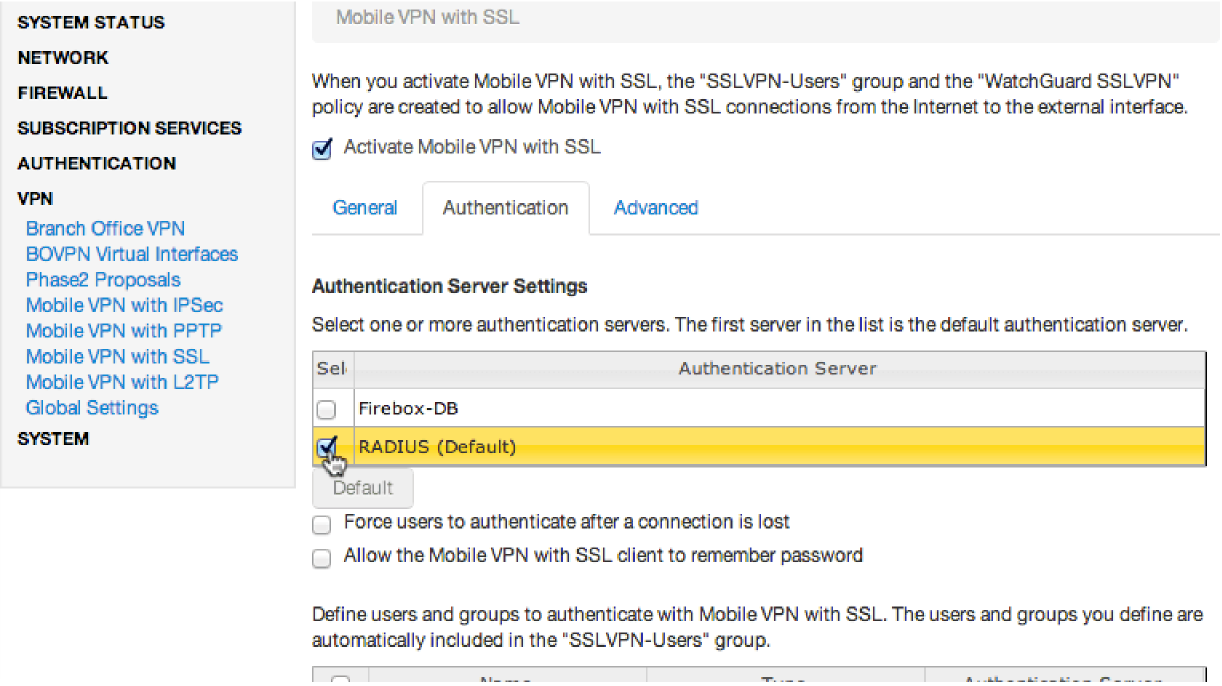
Primary 10.0.10.130

Secondary

Networking and IP address pool

Choose the method the Firebox uses to send traffic through the VPN tunnel. Select **Bridge VPN traffic** if you want to bridge the user to a network you specify. Select **Route VPN traffic** if you want the Firebox to

12. Select **RADIUS**:



Mobile VPN with SSL

When you activate Mobile VPN with SSL, the "SSLVPN-Users" group and the "WatchGuard SSLVPN" policy are created to allow Mobile VPN with SSL connections from the Internet to the external interface.

☑ Activate Mobile VPN with SSL

Authentication Server Settings

Select one or more authentication servers. The first server in the list is the default authentication server.

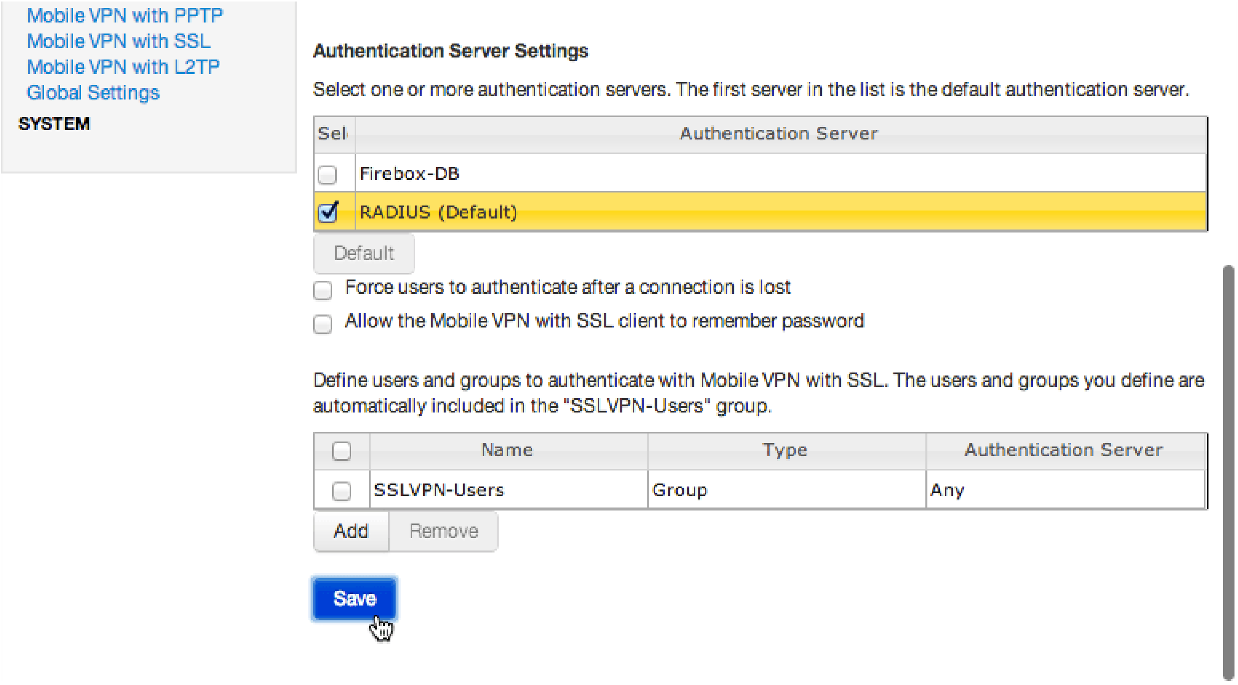
Sel	Authentication Server
☐	Firebox-DB
☑	RADIUS (Default)

☐ Force users to authenticate after a connection is lost

☐ Allow the Mobile VPN with SSL client to remember password

Define users and groups to authenticate with Mobile VPN with SSL. The users and groups you define are automatically included in the "SSLVPN-Users" group.

13. Click **Save**:



Authentication Server Settings

Select one or more authentication servers. The first server in the list is the default authentication server.

Sel	Authentication Server
□	Firebox-DB
☑	RADIUS (Default)

Default

□ Force users to authenticate after a connection is lost

□ Allow the Mobile VPN with SSL client to remember password

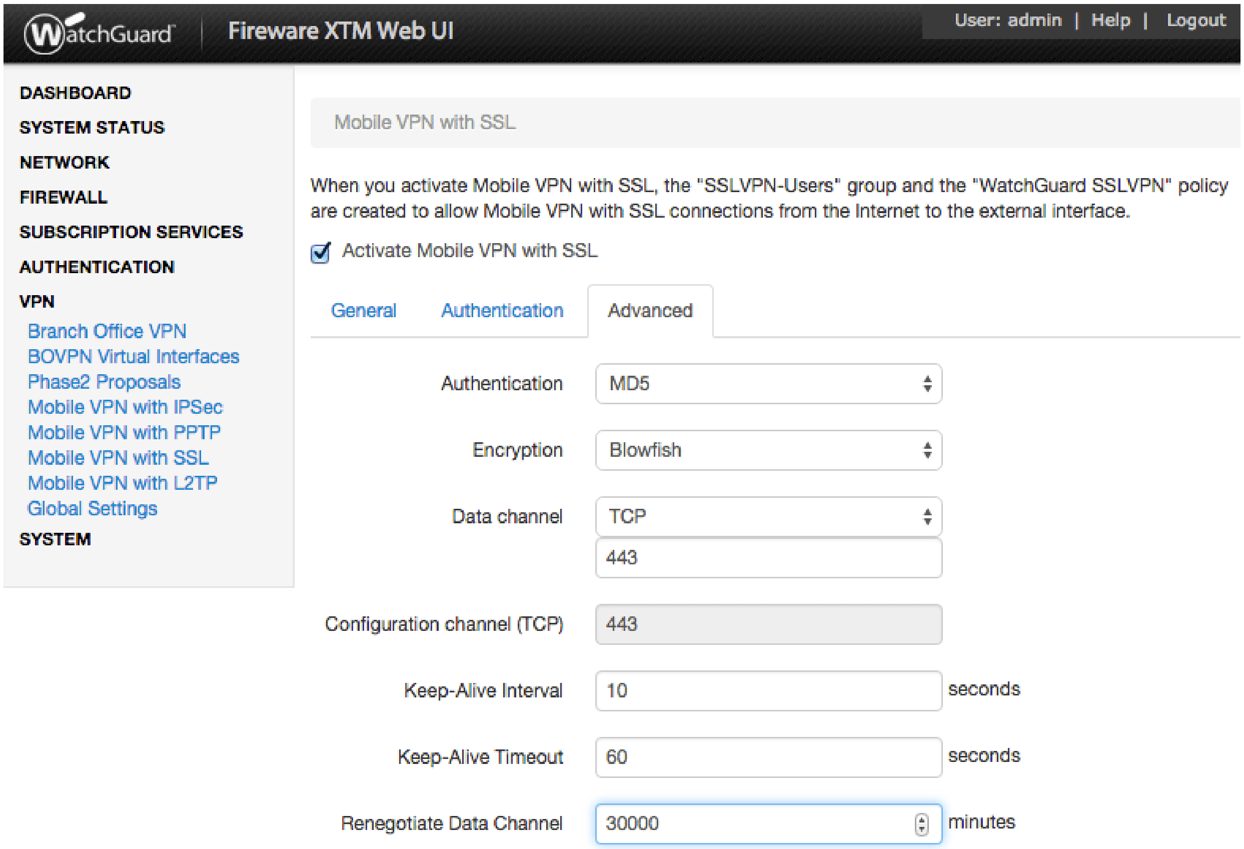
Define users and groups to authenticate with Mobile VPN with SSL. The users and groups you define are automatically included in the "SSLVPN-Users" group.

□	Name	Type	Authentication Server
□	SSLVPN-Users	Group	Any

Add Remove

Save

14. Click on the **Advanced** tab:
15. Set **Renegotiate Data Channel** to a high value such as `30000`



Mobile VPN with SSL

When you activate Mobile VPN with SSL, the "SSLVPN-Users" group and the "WatchGuard SSLVPN" policy are created to allow Mobile VPN with SSL connections from the Internet to the external interface.

☑ Activate Mobile VPN with SSL

Authentication: MD5

Encryption: Blowfish

Data channel: TCP 443

Configuration channel (TCP): 443

Keep-Alive Interval: 10 seconds

Keep-Alive Timeout: 60 seconds

Renegotiate Data Channel: 30000 minutes

16. Click **Save**

You are now ready to test your configuration.

Testing (WatchGuard Configuration)

To test, navigate to your WatchGuard clientless VPN portal or use a WatchGuard client and attempt access.

To test SSL connections, you can use the following online portal:

```
https://[device interface IP address]/sslvpn_logon.shtml
```

User Management

There are several options for managing your users within LoginTC:

- Individual users can be added manually in LoginTC Admin Panel
- Bulk operations using CSV Import
- Programmatically manage user lifecycle with the REST API
- One-way user synchronization of users to LoginTC Admin is performed using User Sync Tool.

Failover

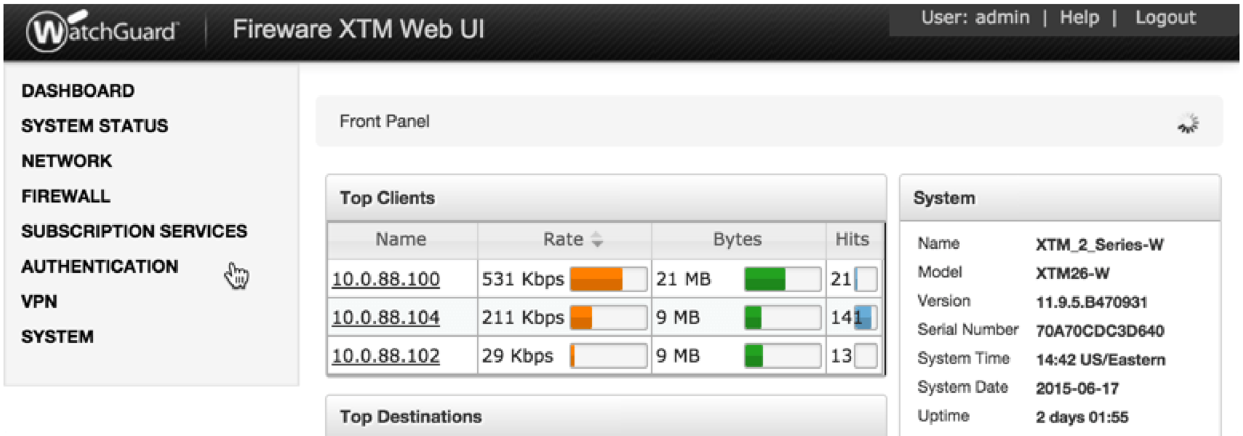
WatchGuard devices have built-in settings that make it easy to configure a secondary RADIUS server to provide failover.

> After three authentication attempts fail, Fireware XTM uses the secondary RADIUS server for the next authentication attempt. If the secondary server also fails to respond after three authentication attempts, Fireware XTM waits for the **Dead Time** interval (10 minutes by default) to elapse. After the Dead Time interval has elapsed, Fireware XTM tries to use the primary RADIUS server again.

— *WatchGuard System Manager Help*

To set up another RADIUS server, deploy the downloaded LoginTC Connector again (you can deploy it multiple times) and configure it using the same settings as the first one. Click here to review the Connector configuration process. Afterwards, login to your **WatchGuard Web UI** and make the following changes:

1. Select **Authentication** from the left-hand navigation bar



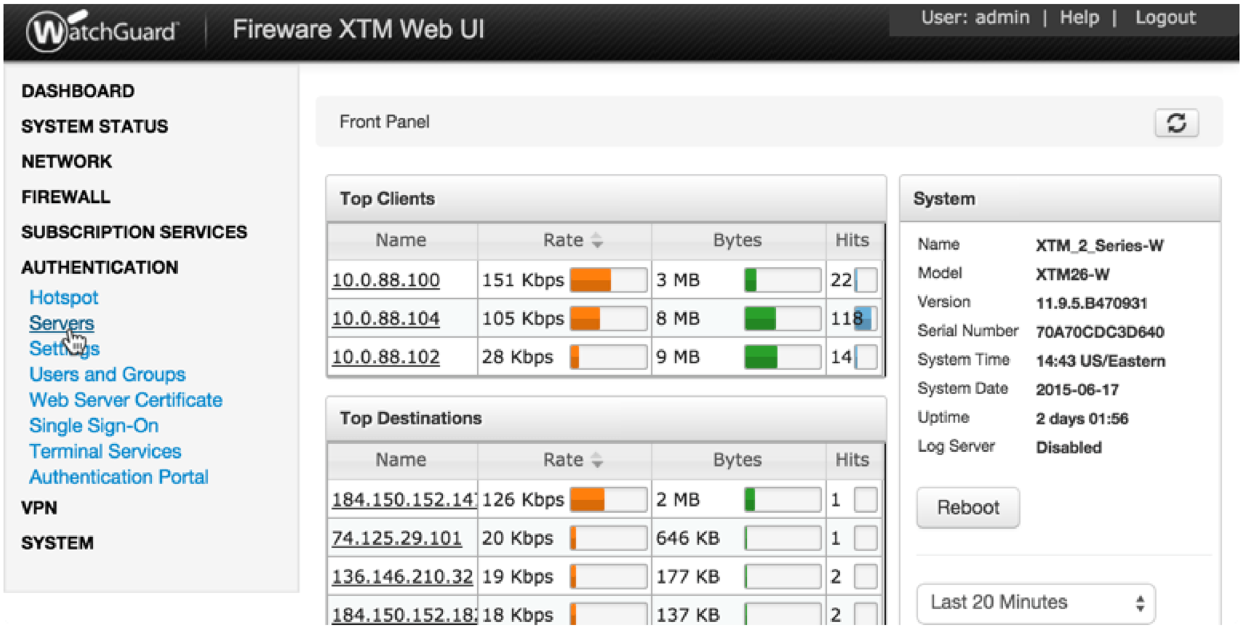
Top Clients

Name	Rate	Bytes	Hits
10.0.88.100	531 Kbps	21 MB	21
10.0.88.104	211 Kbps	9 MB	141
10.0.88.102	29 Kbps	9 MB	13

System

Name	XTM_2_Series-W
Model	XTM26-W
Version	11.9.5.B470931
Serial Number	70A70CDC3D640
System Time	14:42 US/Eastern
System Date	2015-06-17
Uptime	2 days 01:55

2. Click **Servers**



Top Clients

Name	Rate	Bytes	Hits
10.0.88.100	151 Kbps	3 MB	22
10.0.88.104	105 Kbps	8 MB	118
10.0.88.102	28 Kbps	9 MB	14

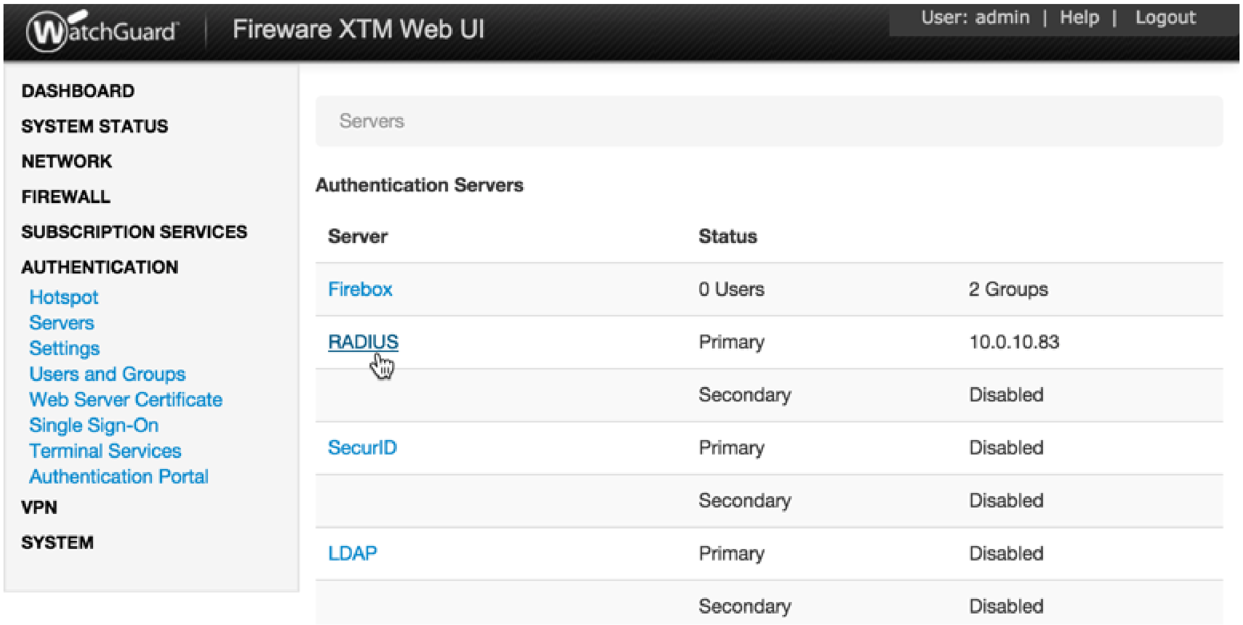
Top Destinations

Name	Rate	Bytes	Hits
184.150.152.14	126 Kbps	2 MB	1
74.125.29.101	20 Kbps	646 KB	1
136.146.210.32	19 Kbps	177 KB	2
184.150.152.18	18 Kbps	137 KB	2

System

Name	XTM_2_Series-W
Model	XTM26-W
Version	11.9.5.B470931
Serial Number	70A70CDC3D640
System Time	14:43 US/Eastern
System Date	2015-06-17
Uptime	2 days 01:56
Log Server	Disabled

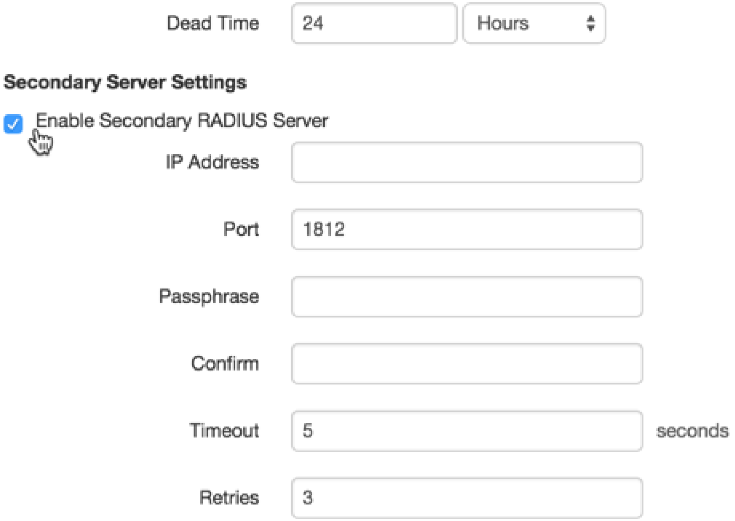
3. Select **RADIUS**



Authentication Servers

Server	Status	
Firebox	0 Users	2 Groups
RADIUS	Primary	10.0.10.83
	Secondary	Disabled
SecurID	Primary	Disabled
	Secondary	Disabled
LDAP	Primary	Disabled
	Secondary	Disabled

4. Check the box to **Enable Secondary RADIUS Server**



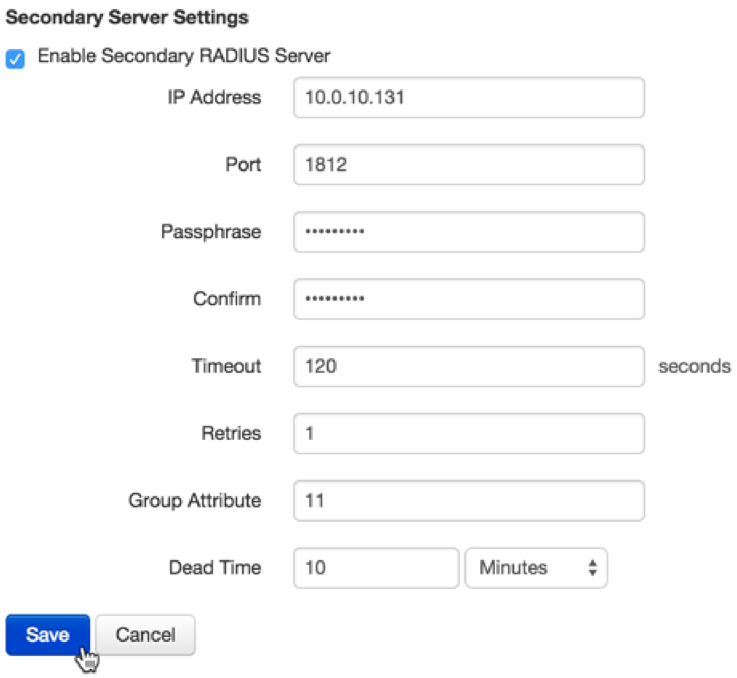
Dead Time: 24 Hours

Secondary Server Settings

☑ Enable Secondary RADIUS Server

IP Address	
Port	1812
Passphrase	
Confirm	
Timeout	5 seconds
Retries	3

5. Complete the Secondary Server Settings Form using the same settings as the primary one



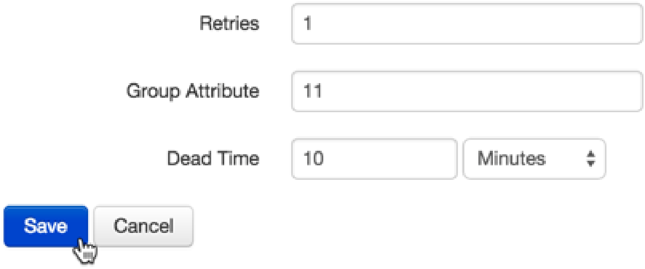
Secondary Server Settings

☑ Enable Secondary RADIUS Server

IP Address	10.0.10.131
Port	1812
Passphrase	•••••••••
Confirm	•••••••••
Timeout	120 seconds
Retries	1
Group Attribute	11
Dead Time	10 Minutes

Property	Explanation	Example
`IP Address`	Address of Secondary LoginTC RADIUS Connector	10.0.10.131
`Port`	RADIUS authentication port. Must be 1812.	1812
`Passphrase`	The secret shared between the LoginTC RADIUS Connector and its client	newsecret
`Confirm`	The secret shared between the LoginTC RADIUS Connector and its client	newsecret
`Timeout`	Amount of time in seconds to wait. Must be at least 10 seconds longer than the LoginTC Request Timeout.	70
`Retries`	Amount of times to retry authentication. Must be 1.	1
`Group Attribute`	RADIUS Attribute to be populated with user group info. Must be 11.	11
`Dead Time`	Amount of time an unresponsive RADIUS server is marked as inactive before the WatchGuard device attempts to connect to it again	10

6. Click **Save**



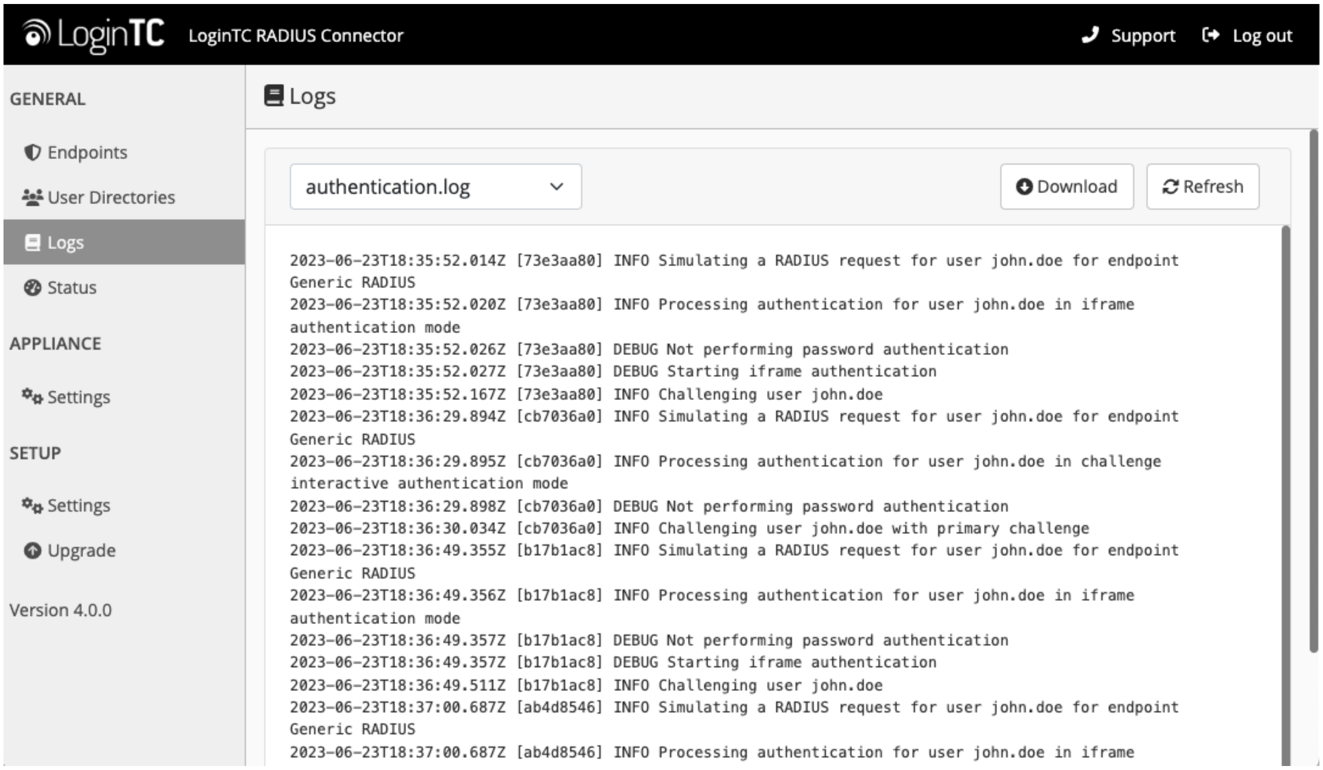
Retries: 1

Group Attribute: 11

Dead Time: 10 Minutes

Logging

Logs can be found on the **Logs** tab:



```
2023-06-23T18:35:52.014Z [73e3aa80] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:35:52.020Z [73e3aa80] INFO Processing authentication for user john.doe in iframe
authentication mode
2023-06-23T18:35:52.026Z [73e3aa80] DEBUG Not performing password authentication
2023-06-23T18:35:52.027Z [73e3aa80] DEBUG Starting iframe authentication
2023-06-23T18:35:52.167Z [73e3aa80] INFO Challenging user john.doe
2023-06-23T18:36:29.894Z [cb7036a0] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:36:29.895Z [cb7036a0] INFO Processing authentication for user john.doe in challenge
interactive authentication mode
2023-06-23T18:36:29.898Z [cb7036a0] DEBUG Not performing password authentication
2023-06-23T18:36:30.034Z [cb7036a0] INFO Challenging user john.doe with primary challenge
2023-06-23T18:36:49.355Z [b17b1ac8] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:36:49.356Z [b17b1ac8] INFO Processing authentication for user john.doe in iframe
authentication mode
2023-06-23T18:36:49.357Z [b17b1ac8] DEBUG Not performing password authentication
2023-06-23T18:36:49.357Z [b17b1ac8] DEBUG Starting iframe authentication
2023-06-23T18:36:49.511Z [b17b1ac8] INFO Challenging user john.doe
2023-06-23T18:37:00.687Z [ab4d8546] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:37:00.687Z [ab4d8546] INFO Processing authentication for user john.doe in iframe
```

Troubleshooting

User Receives Multiple LoginTC Requests

See the Knowledge Base articles:

Authentication times out

See the Knowledge Base articles:

No Network Connection

1. First ensure that your LoginTC RADIUS Connector is configured to have a virtual network adapter on `eth0`

2. Ensure that the virtual network adapter MAC address matches the one in the file `/etc/sysconfig/network-scripts/ifcfg-eth0`
3. Restart the networking service:

   ```
   service network restart
   ```

4. If you notice the error that `eth0` is not enabled, then check driver messages for more information:

   ```
   dmesg | grep eth
   ```

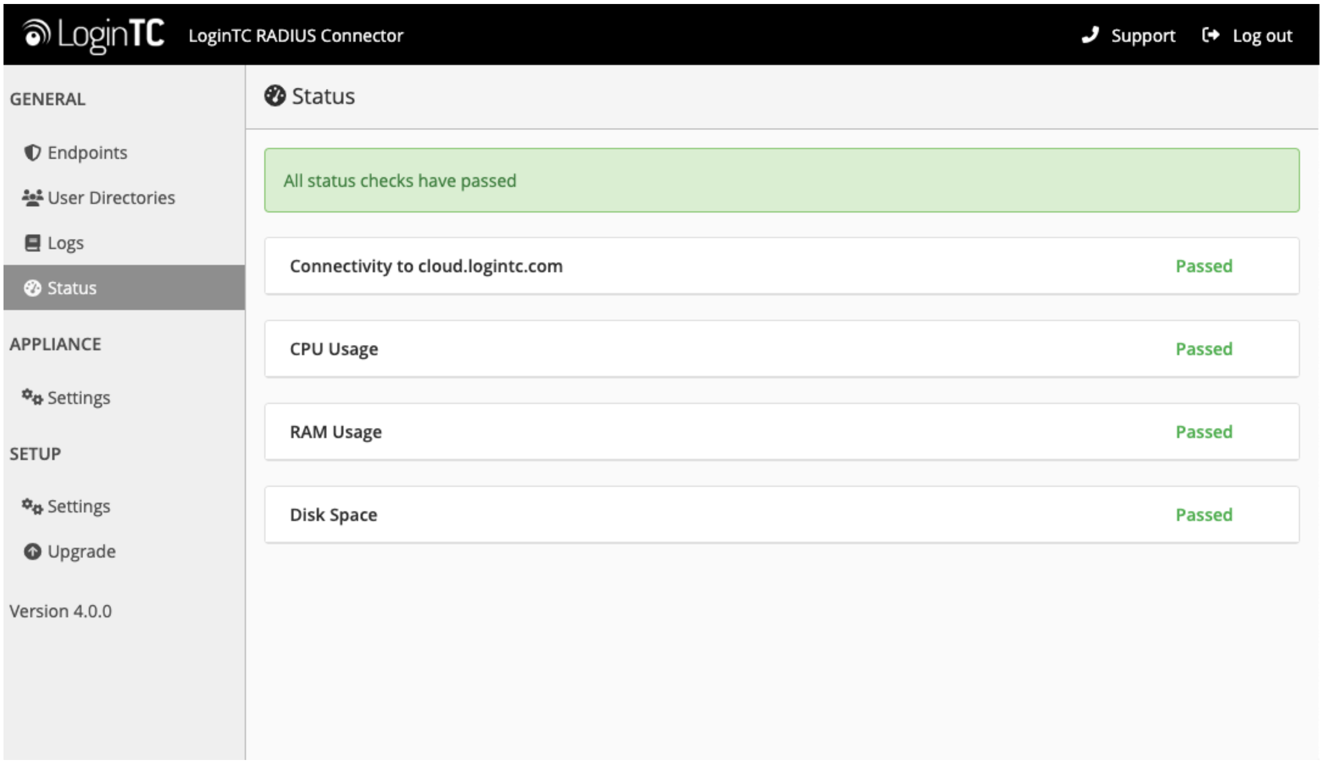
5. It's possible that the virtualization software renamed the network adapter to `eth1`. If this is the case, rename `/etc/sysconfig/network-scripts/ifcfg-eth0` to `ifcfg-eth1`.

   ```
   mv /etc/sysconfig/network-scripts/ifcfg-eth0 /etc/sysconfig/network-
   scripts/ifcfg-eth1
   ```

   Open the file and update the `DEVICE="eth0"` line to `DEVICE="eth1"`

Not Authenticating

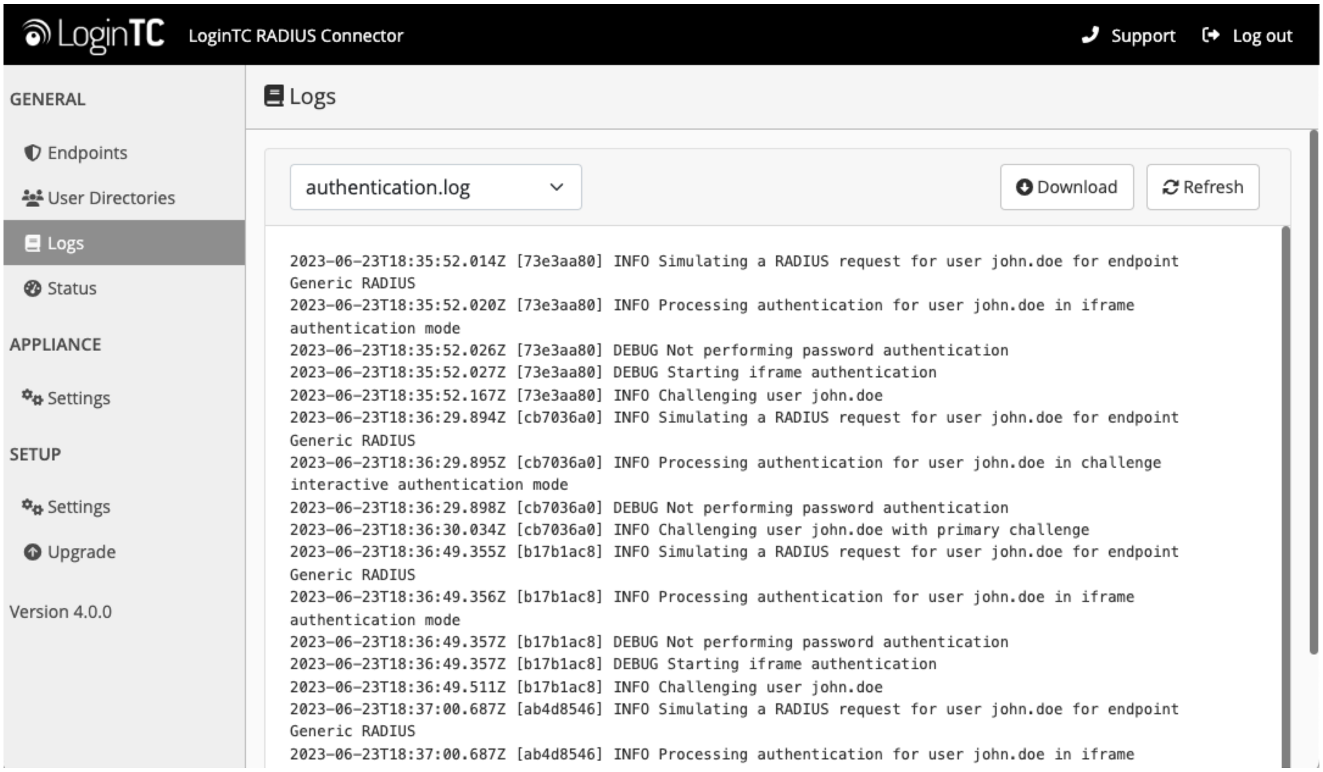
If you are unable to authenticate, navigate to your appliance **web interface** URL and click **Status**:



All status checks have passed

Connectivity to cloud.logintc.com	Passed
CPU Usage	Passed
RAM Usage	Passed
Disk Space	Passed

Ensure that all the status checks pass. For additional troubleshooting, click **Logs**:



```
2023-06-23T18:35:52.014Z [73e3aa80] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:35:52.020Z [73e3aa80] INFO Processing authentication for user john.doe in iframe
authentication mode
2023-06-23T18:35:52.026Z [73e3aa80] DEBUG Not performing password authentication
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2023-06-23T18:36:29.894Z [cb7036a0] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:36:29.895Z [cb7036a0] INFO Processing authentication for user john.doe in challenge
interactive authentication mode
2023-06-23T18:36:29.898Z [cb7036a0] DEBUG Not performing password authentication
2023-06-23T18:36:30.034Z [cb7036a0] INFO Challenging user john.doe with primary challenge
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Generic RADIUS
2023-06-23T18:36:49.356Z [b17b1ac8] INFO Processing authentication for user john.doe in iframe
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2023-06-23T18:36:49.511Z [b17b1ac8] INFO Challenging user john.doe
2023-06-23T18:37:00.687Z [ab4d8546] INFO Simulating a RADIUS request for user john.doe for endpoint
Generic RADIUS
2023-06-23T18:37:00.687Z [ab4d8546] INFO Processing authentication for user john.doe in iframe
```

Unsuccessful authentication may be caused by premature timeouts

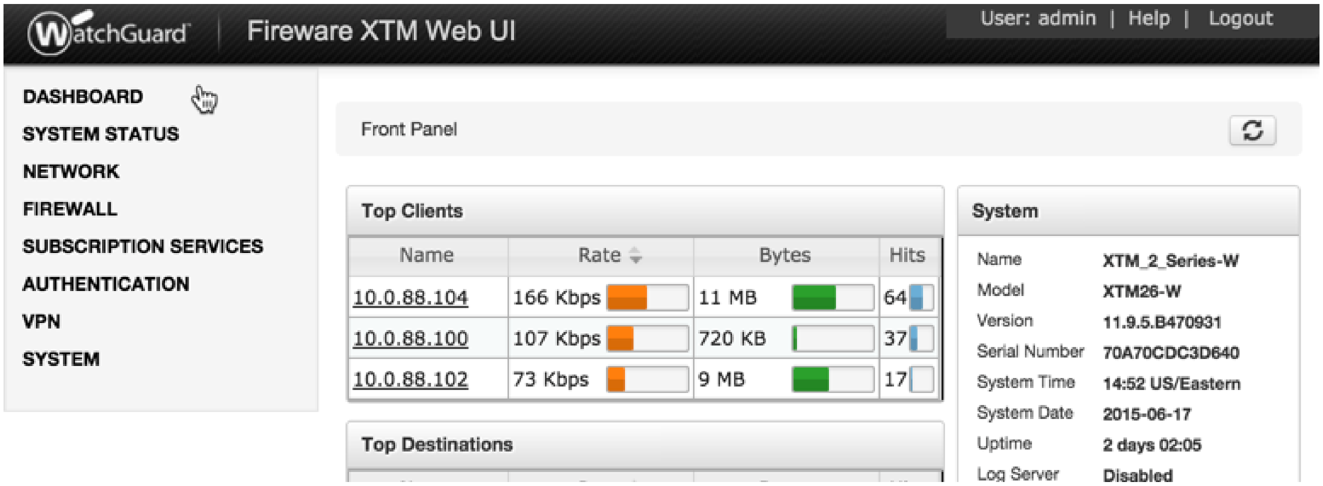
If you have activated Mobile VPN with SSL, check that your Group Attributes are configured correctly.

Email Support

For any additional help please email support@cyphercor.com. Expect a speedy reply.

Incorrect Group Settings

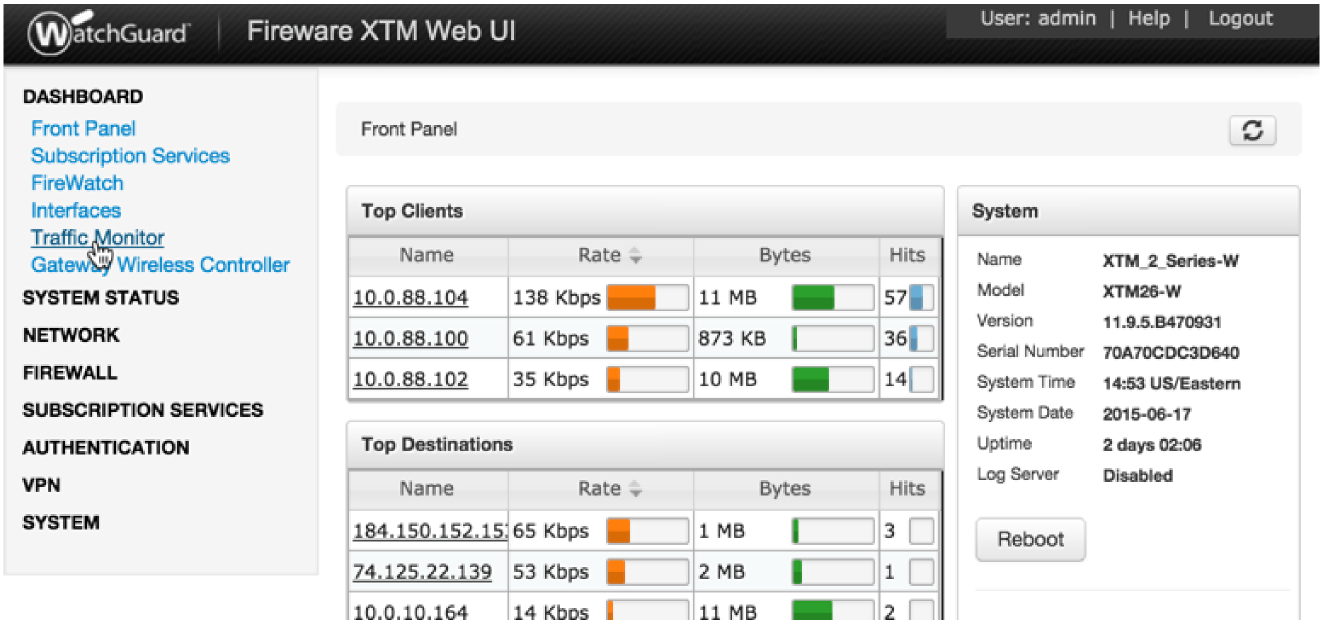
If you are using a Mobile VPN protocol such as SSL and are unable to authenticate, check that your Group Attributes are configured correctly. Navigate to your **WatchGuard Web UI** and click **Dashboard** in the left-hand navigation bar:



Name	Rate	Bytes	Hits
10.0.88.104	166 Kbps	11 MB	64
10.0.88.100	107 Kbps	720 KB	37
10.0.88.102	73 Kbps	9 MB	17

Name	XTM_2_Series-W
Model	XTM26-W
Version	11.9.5.B470931
Serial Number	70A70CDC3D640
System Time	14:52 US/Eastern
System Date	2015-06-17
Uptime	2 days 02:05
Log Server	Disabled

Click on **Traffic Monitor**:



Top Clients

Name	Rate	Bytes	Hits
10.0.88.104	138 Kbps	11 MB	57
10.0.88.100	61 Kbps	873 KB	36
10.0.88.102	35 Kbps	10 MB	14

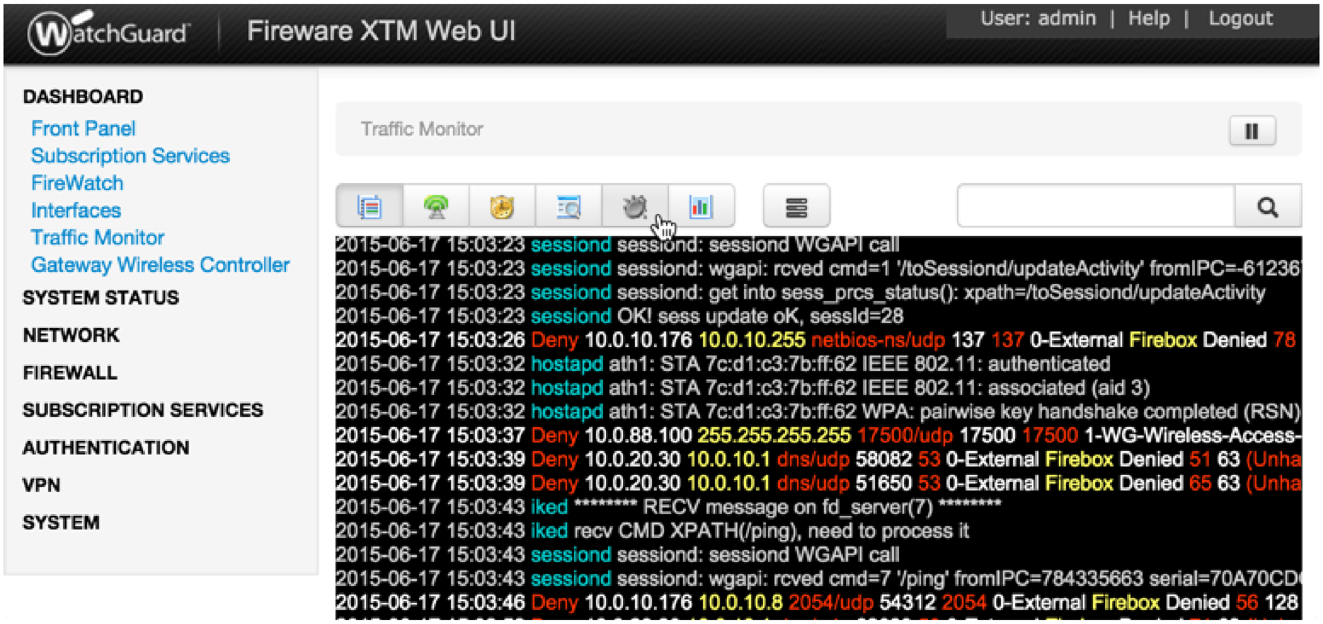
Top Destinations

Name	Rate	Bytes	Hits
184.150.152.15	65 Kbps	1 MB	3
74.125.22.139	53 Kbps	2 MB	1
10.0.10.164	14 Kbps	11 MB	2

System

Name	XTM_2_Series-W
Model	XTM26-W
Version	11.9.5.B470931
Serial Number	70A70CDC3D640
System Time	14:53 US/Eastern
System Date	2015-06-17
Uptime	2 days 02:06
Log Server	Disabled

Select **Diagnostic** from the table header options:



```
2015-06-17 15:03:23 sessiond sessiond: sessiond WGAPI call
2015-06-17 15:03:23 sessiond sessiond: wgapi: rcved cmd=1 '/toSessiond/updateActivity' fromIPC=-61236
2015-06-17 15:03:23 sessiond sessiond: get into sess_prcs_status(): xpath=/toSessiond/updateActivity
2015-06-17 15:03:23 sessiond OK! sess update oK, sessId=28
2015-06-17 15:03:26 Deny 10.0.10.176 10.0.10.255 netbios-ns/udp 137 137 0-External Firebox Denied 78
2015-06-17 15:03:32 hostapd ath1: STA 7c:d1:c3:7b:ff:62 IEEE 802.11: authenticated
2015-06-17 15:03:32 hostapd ath1: STA 7c:d1:c3:7b:ff:62 IEEE 802.11: associated (aid 3)
2015-06-17 15:03:32 hostapd ath1: STA 7c:d1:c3:7b:ff:62 WPA: pairwise key handshake completed (RSN)
2015-06-17 15:03:37 Deny 10.0.88.100 255.255.255.255 17500/udp 17500 17500 1-WG-Wireless-Access-
2015-06-17 15:03:39 Deny 10.0.20.30 10.0.10.1 dns/udp 58082 53 0-External Firebox Denied 51 63 (Unha
2015-06-17 15:03:39 Deny 10.0.20.30 10.0.10.1 dns/udp 51650 53 0-External Firebox Denied 65 63 (Unha
2015-06-17 15:03:43 iked ******** RECV message on fd_server(7) ********
2015-06-17 15:03:43 iked recv CMD XPATH(/ping), need to process it
2015-06-17 15:03:43 sessiond sessiond: sessiond WGAPI call
2015-06-17 15:03:43 sessiond sessiond: wgapi: rcved cmd=7 '/ping' fromIPC=784335663 serial=70A70CD
2015-06-17 15:03:46 Deny 10.0.10.176 10.0.10.8 2054/udp 54312 2054 0-External Firebox Denied 56 128
```

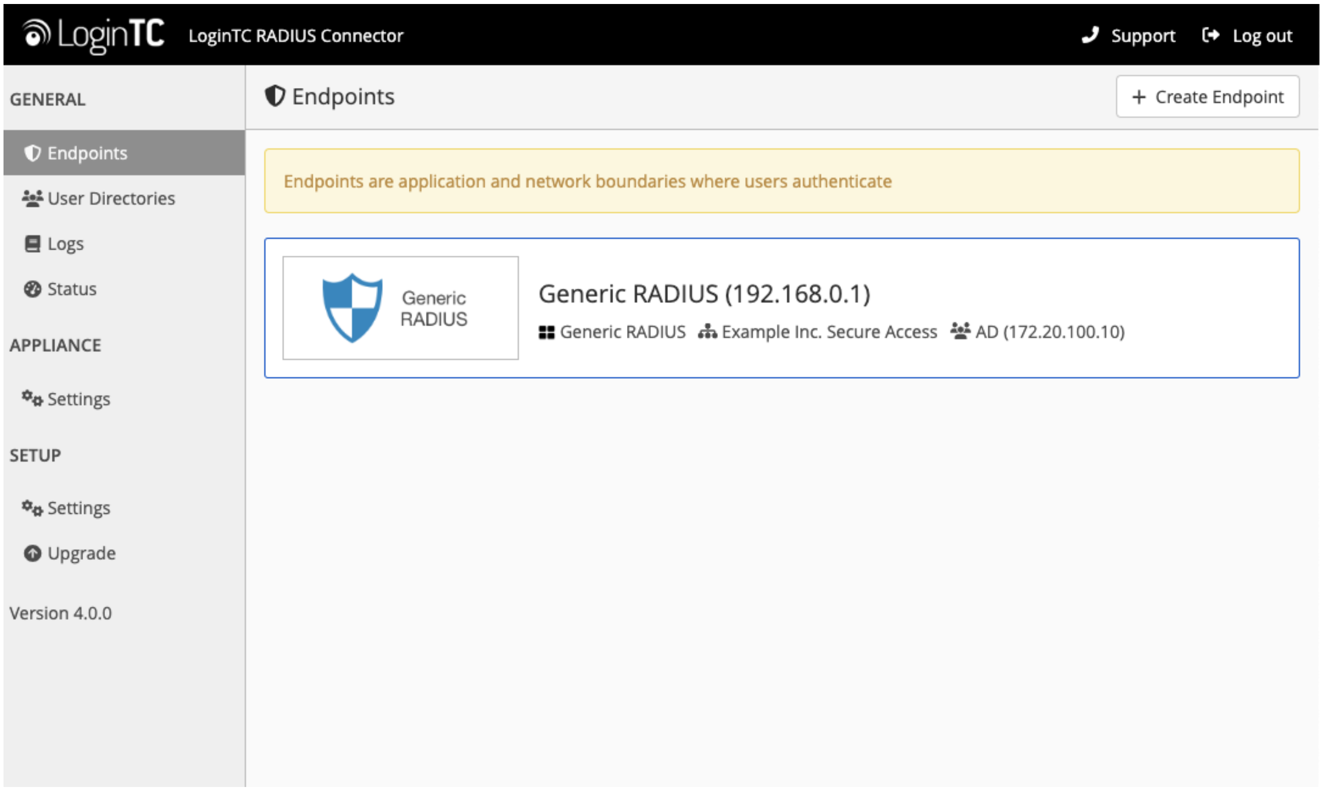
If you can find the following error message then there is a problem with your Group Attribute settings:

```
                2015-XX-XX 16:52:41 admd Authentication failed: user username@RADIUS
isn't in the authorized SSLVPN group/user list!
```

Search for the following error message:

```
                2015-XX-XX 16:59:52 admd RADIUS: no attribute-value pair is retrieved
from packet
```

If found, it means that the RADIUS Connector is not sending back any Group Attribute information. Navigate to your appliance **web interface** and click **Configurations**. Select the endpoint you're having problems with:

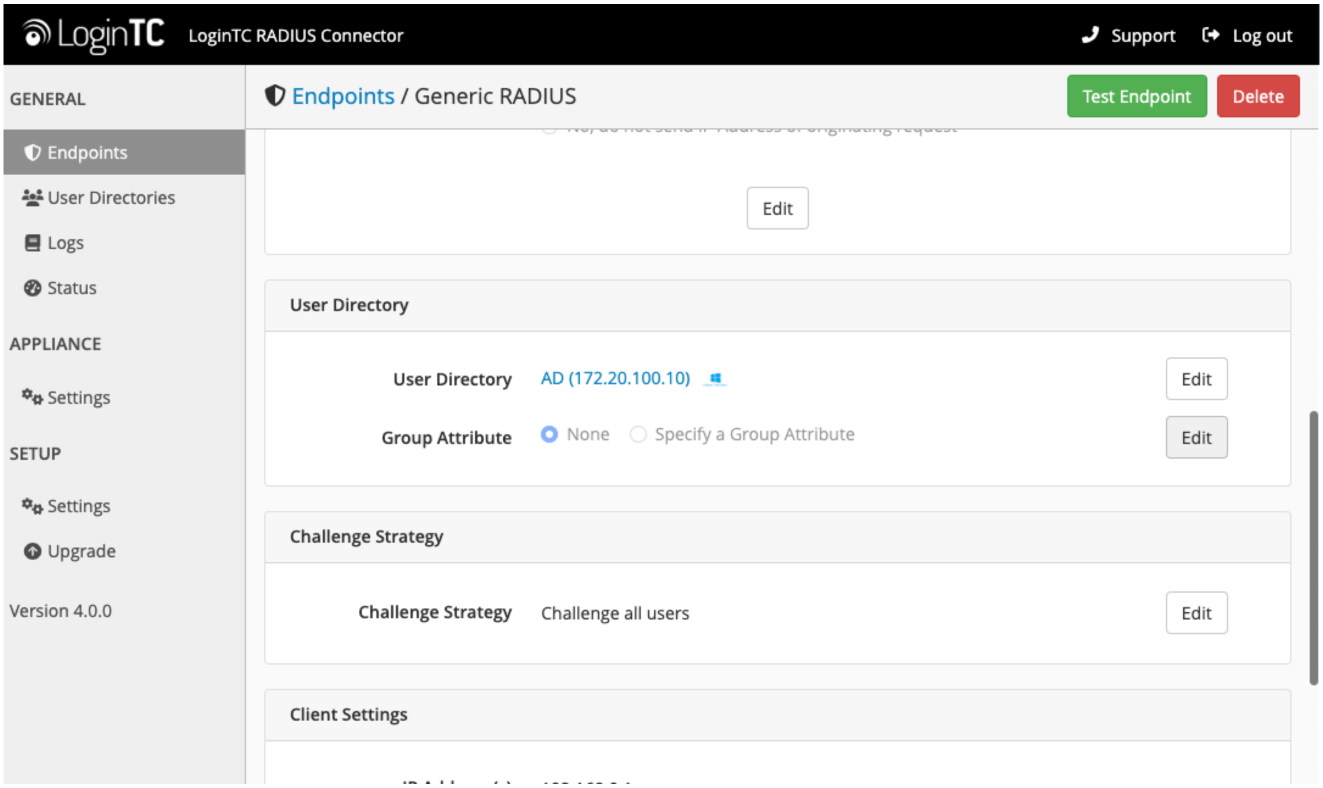


Endpoints are application and network boundaries where users authenticate

Generic RADIUS (192.168.0.1)

Generic RADIUS · Example Inc. Secure Access · AD (172.20.100.10)

Scroll down to the **User Directory** section and next to **Group Attribute** click **Edit**:



User Directory

User Directory: AD (172.20.100.10)

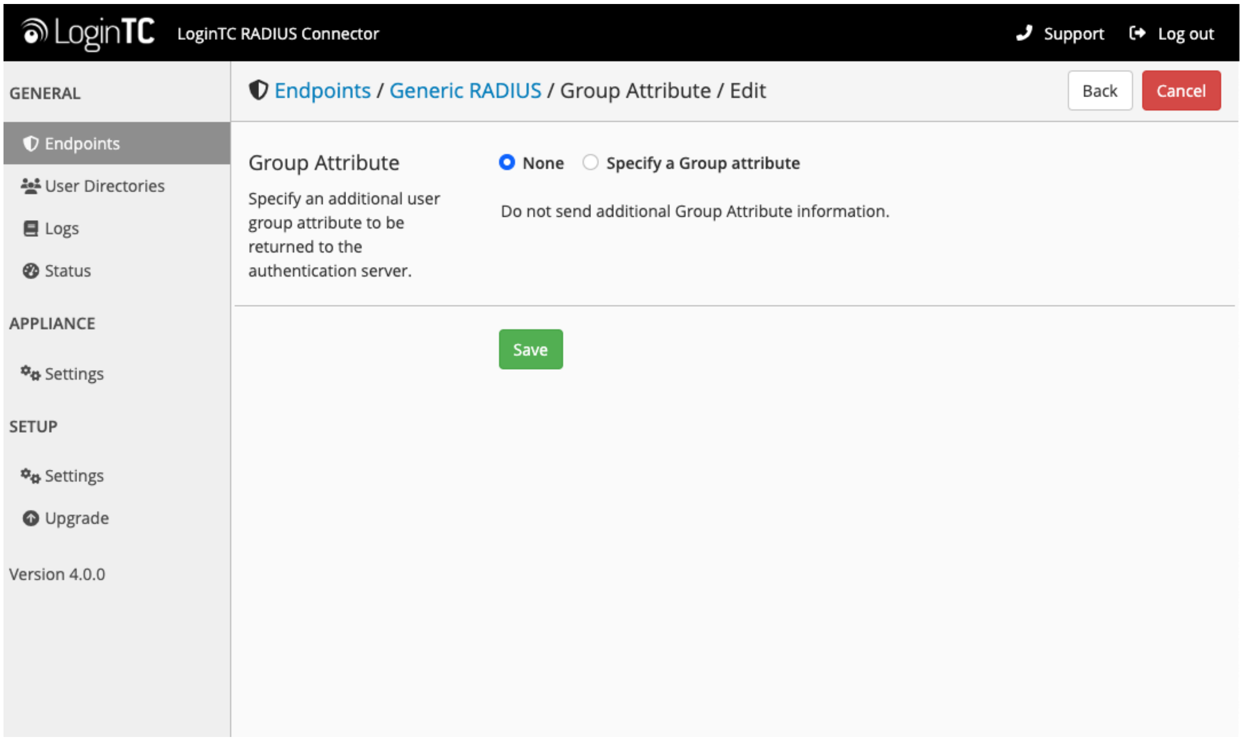
Group Attribute: ● None ○ Specify a Group Attribute

Challenge Strategy

Challenge Strategy: Challenge all users

Client Settings

1. If “None” is selected, change it to “Specify a group attribute”. Click here to review how to configure the Group Attribute for SSL



Endpoints / Generic RADIUS / Group Attribute / Edit

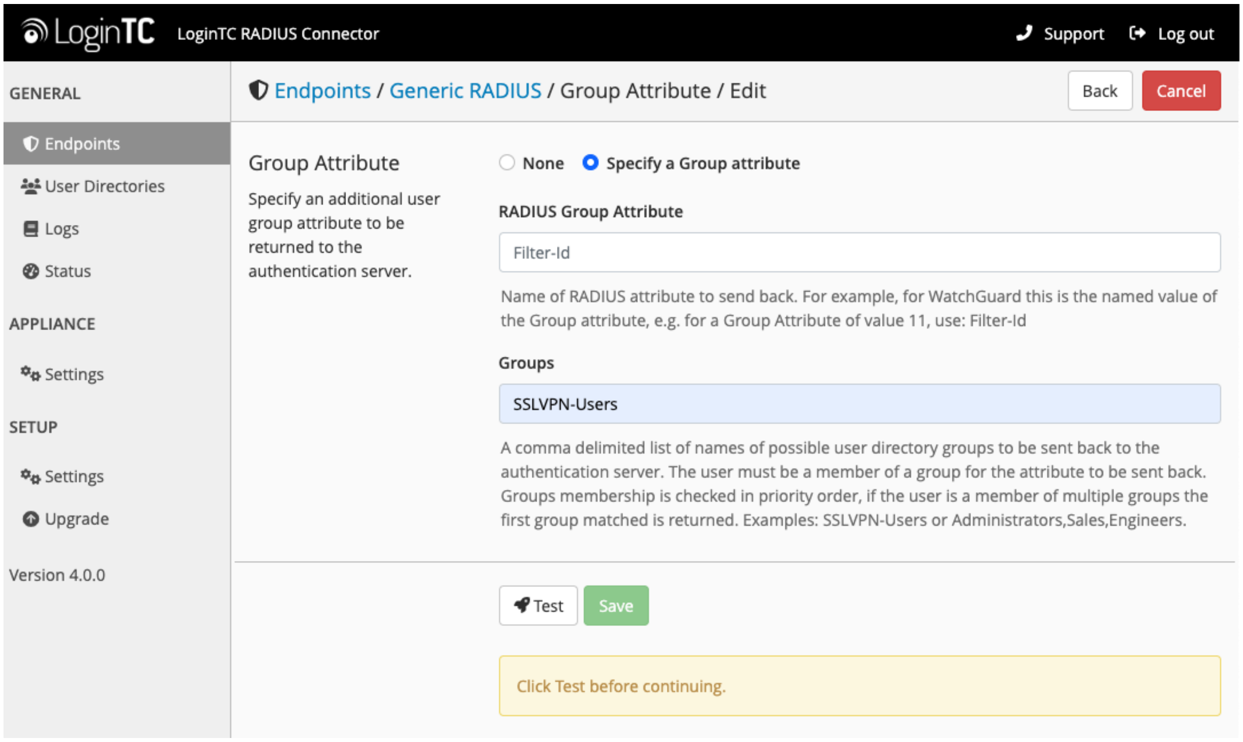
Group Attribute

Specify an additional user group attribute to be returned to the authentication server.

● None ○ Specify a Group attribute

Do not send additional Group Attribute information.

2. Otherwise, check that your user is a member of the specified group in the LDAP Directory. If they are not, it will cause RADIUS to return a blank attribute.



Endpoints / Generic RADIUS / Group Attribute / Edit

Group Attribute

Specify an additional user group attribute to be returned to the authentication server.

○ None ● Specify a Group attribute

RADIUS Group Attribute: Filter-Id

Name of RADIUS attribute to send back. For example, for WatchGuard this is the named value of the Group attribute, e.g. for a Group Attribute of value 11, use: Filter-Id

Groups: SSLVPN-Users

A comma delimited list of names of possible user directory groups to be sent back to the authentication server. The user must be a member of a group for the attribute to be sent back. Groups membership is checked in priority order, if the user is a member of multiple groups the first group matched is returned. Examples: SSLVPN-Users or Administrators,Sales,Engineers.

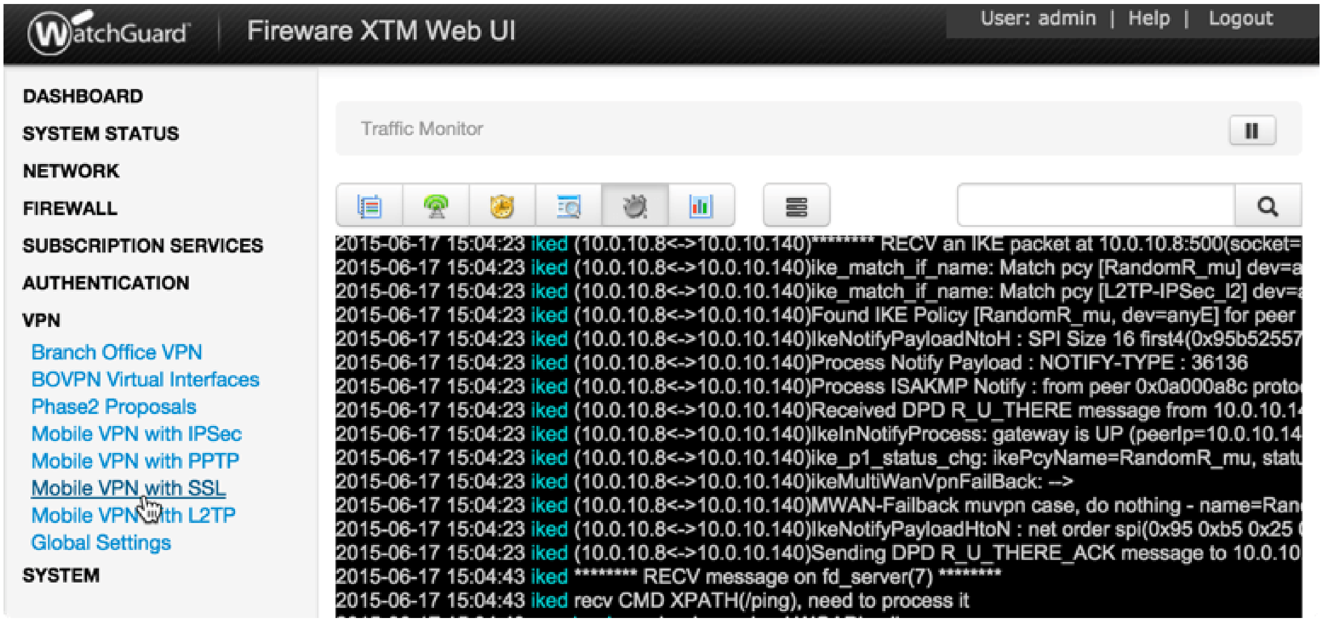
Click Test before continuing.

If you find a log message similar to this:

```
                2015-XX-XX 16:52:41 admd RADIUS: finished parsing attribute-value
pairs
                2015-XX-XX 16:52:41 admd RADIUS: group 1, type=11 value=L2TP-Users
                2015-XX-XX 16:52:41 admd RADIUS: retrieve VP:Filter-Id(11) int=10
```

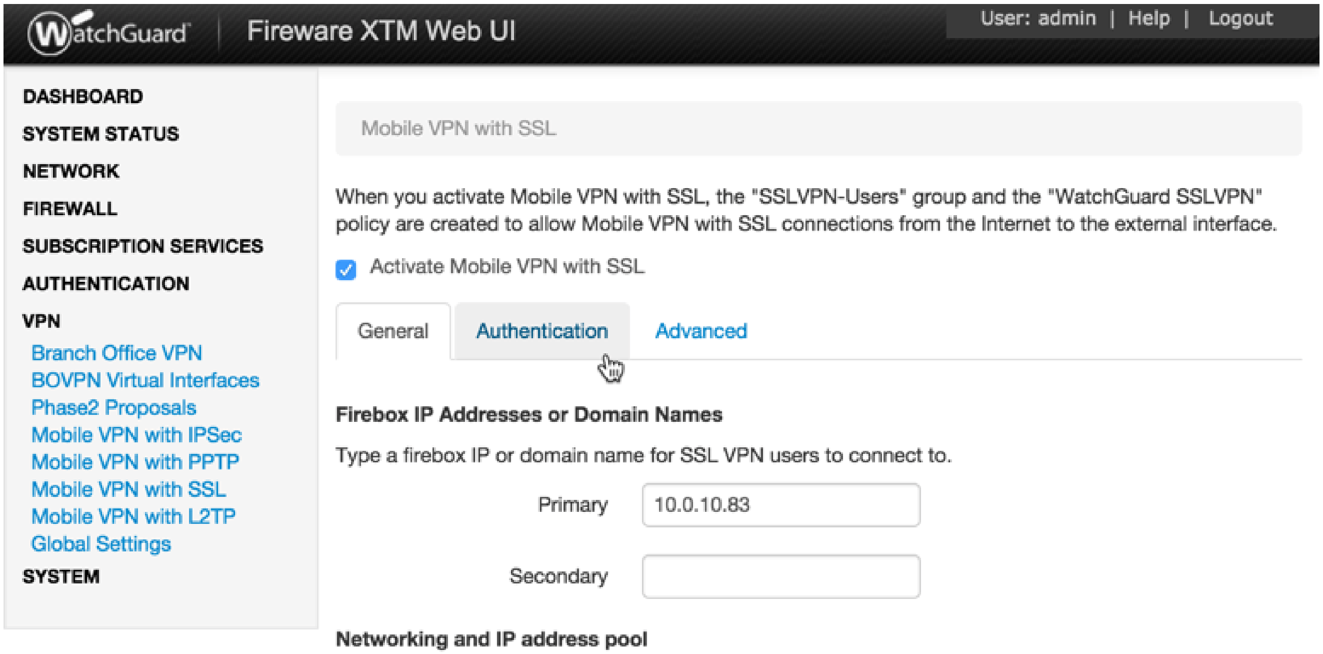
Then the RADIUS server is sending back a Group Attribute, but it may not be the correct one.

Check that the **value** is the name of the group that has been added to list of groups authorized to authenticate with SSL. Log into the **WatchGuard Web UI** and select **VPN** from the left-hand navigation bar. Click on **Mobile VPN with SSL** :



```
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)******** RECV an IKE packet at 10.0.10.8:500(socket=
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)ike_match_if_name: Match pcy [RandomR_mu] dev=a
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)ike_match_if_name: Match pcy [L2TP-IPSec_l2] dev=a
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)Found IKE Policy [RandomR_mu, dev=anyE] for peer
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)IkeNotifyPayloadNtoH : SPI Size 16 first4(0x95b52557
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)Process Notify Payload : NOTIFY-TYPE : 36136
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)Process ISAKMP Notify : from peer 0x0a000a8c proto
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)Received DPD R_U_THERE message from 10.0.10.14
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)IkeInNotifyProcess: gateway is UP (peerIp=10.0.10.14
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)ike_p1_status_chg: ikePcyName=RandomR_mu, statu
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)ikeMultiWanVpnFailBack: -->
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)MWAN-Failback muvpn case, do nothing - name=Ran
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)IkeNotifyPayloadHtoN : net order spi(0x95 0xb5 0x25
2015-06-17 15:04:23 iked (10.0.10.8<->10.0.10.140)Sending DPD R_U_THERE_ACK message to 10.0.10
2015-06-17 15:04:43 iked ******** RECV message on fd_server(7) ********
2015-06-17 15:04:43 iked recv CMD XPATH(/ping), need to process it
```

Click on the **Authentication** tab:



When you activate Mobile VPN with SSL, the "SSLVPN-Users" group and the "WatchGuard SSLVPN" policy are created to allow Mobile VPN with SSL connections from the Internet to the external interface.

☑ Activate Mobile VPN with SSL

Firebox IP Addresses or Domain Names

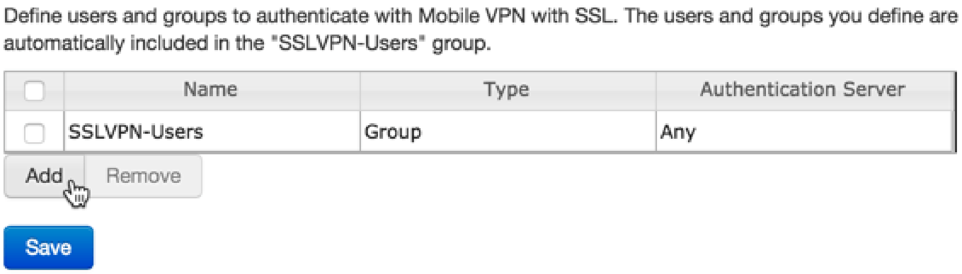
Type a firebox IP or domain name for SSL VPN users to connect to.

Primary: 10.0.10.83

Secondary:

Networking and IP address pool

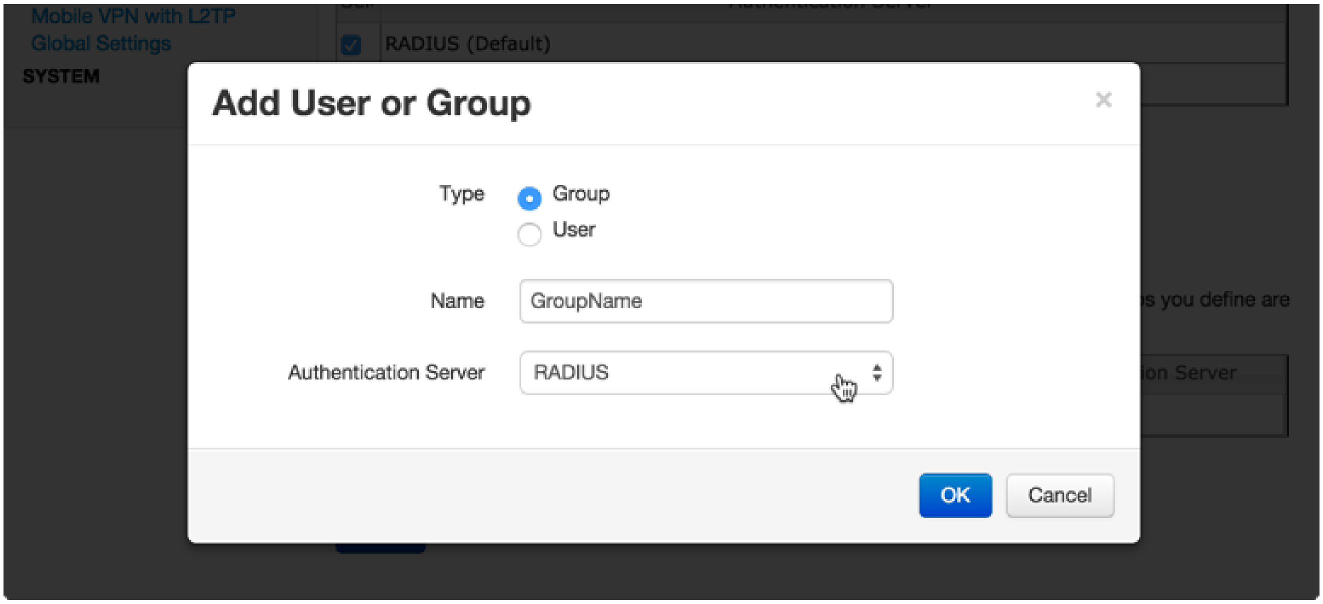
The bottom table contains the list of groups that are authorized to connect with SSL. If the group returned by the RADIUS server is not part of it, it must be added. Click the **Add** button:



Define users and groups to authenticate with Mobile VPN with SSL. The users and groups you define are automatically included in the "SSLVPN-Users" group.

□	Name	Type	Authentication Server
□	SSLVPN-Users	Group	Any

Type in the group name and select **RADIUS** as the Authentication Server:



Add User or Group

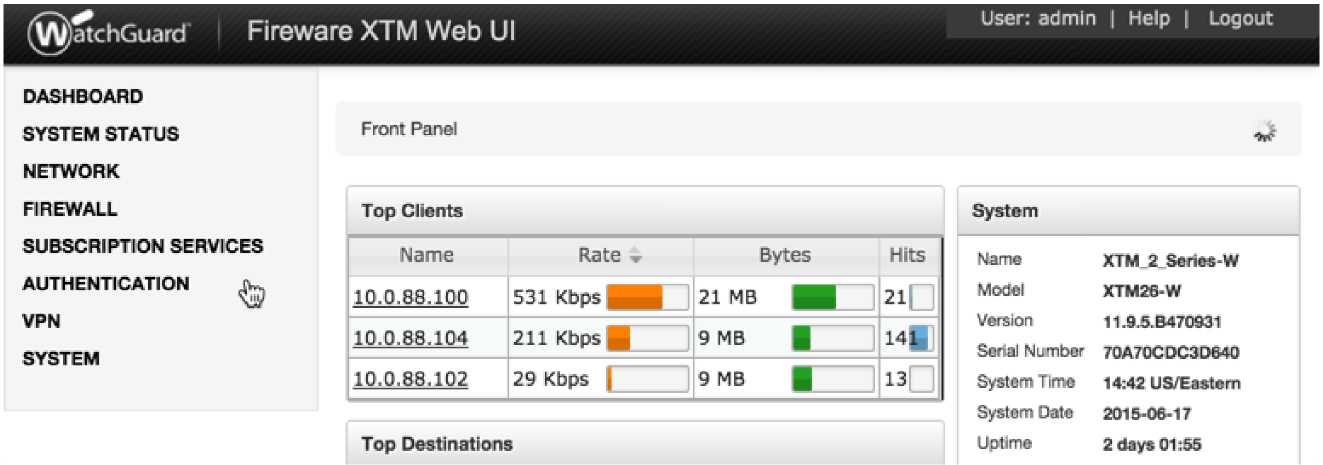
Type ● Group ○ User

Name: GroupName

Authentication Server: RADIUS

Authentication Timing Out

If authentication is failing, it is possible that the authentication requests are timing out too quickly. By default, LoginTC push requests will timeout after 90 seconds. Another timeout value is defined by the RADIUS server configuration. If it is set too low, it will cause requests to prematurely timeout. To check, login to your **WatchGuard Web UI**



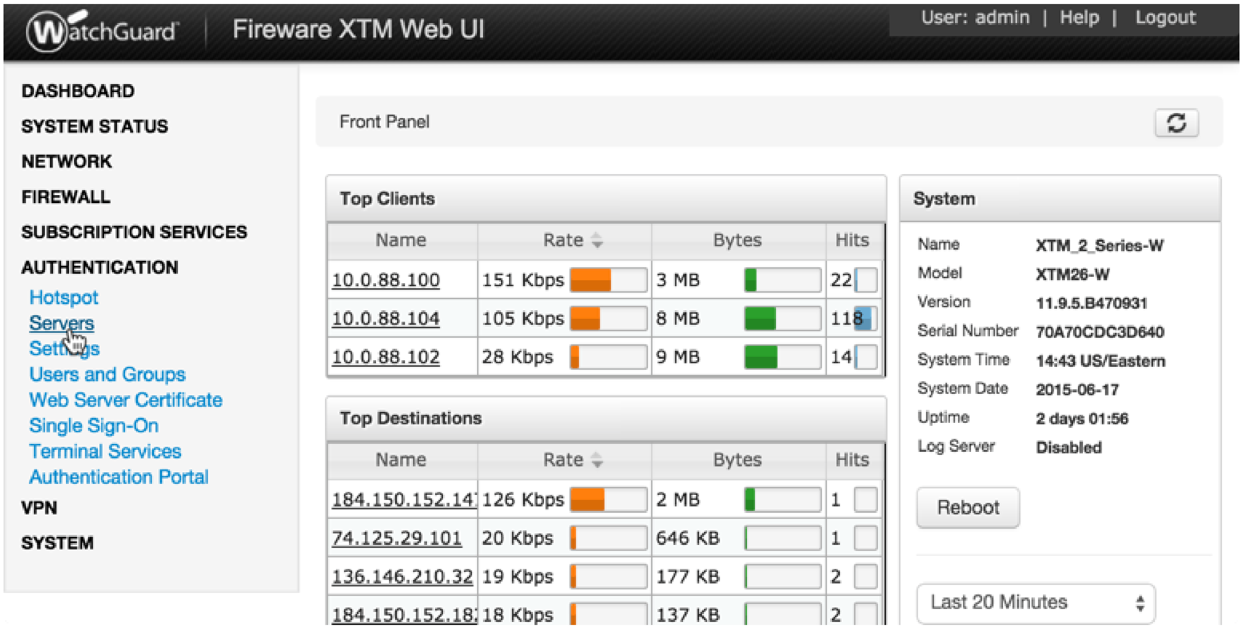
Top Clients

Name	Rate	Bytes	Hits
10.0.88.100	531 Kbps	21 MB	21
10.0.88.104	211 Kbps	9 MB	141
10.0.88.102	29 Kbps	9 MB	13

System

Name	XTM_2_Series-W
Model	XTM26-W
Version	11.9.5.B470931
Serial Number	70A70CDC3D640
System Time	14:42 US/Eastern
System Date	2015-06-17
Uptime	2 days 01:55

1. Select **Authentication** from the left-hand navigation bar, then click **Servers**



Top Clients

Name	Rate	Bytes	Hits
10.0.88.100	151 Kbps	3 MB	22
10.0.88.104	105 Kbps	8 MB	118
10.0.88.102	28 Kbps	9 MB	14

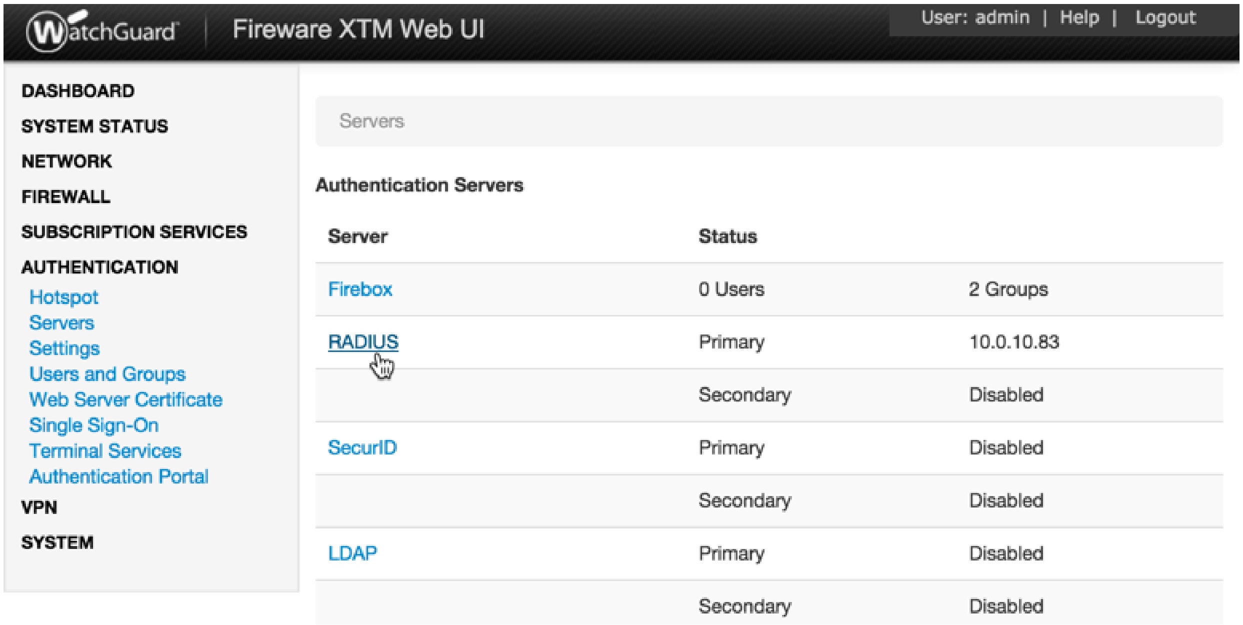
Top Destinations

Name	Rate	Bytes	Hits
184.150.152.14	126 Kbps	2 MB	1
74.125.29.101	20 Kbps	646 KB	1
136.146.210.32	19 Kbps	177 KB	2
184.150.152.18	18 Kbps	137 KB	2

System

Name	XTM_2_Series-W
Model	XTM26-W
Version	11.9.5.B470931
Serial Number	70A70CDC3D640
System Time	14:43 US/Eastern
System Date	2015-06-17
Uptime	2 days 01:56
Log Server	Disabled

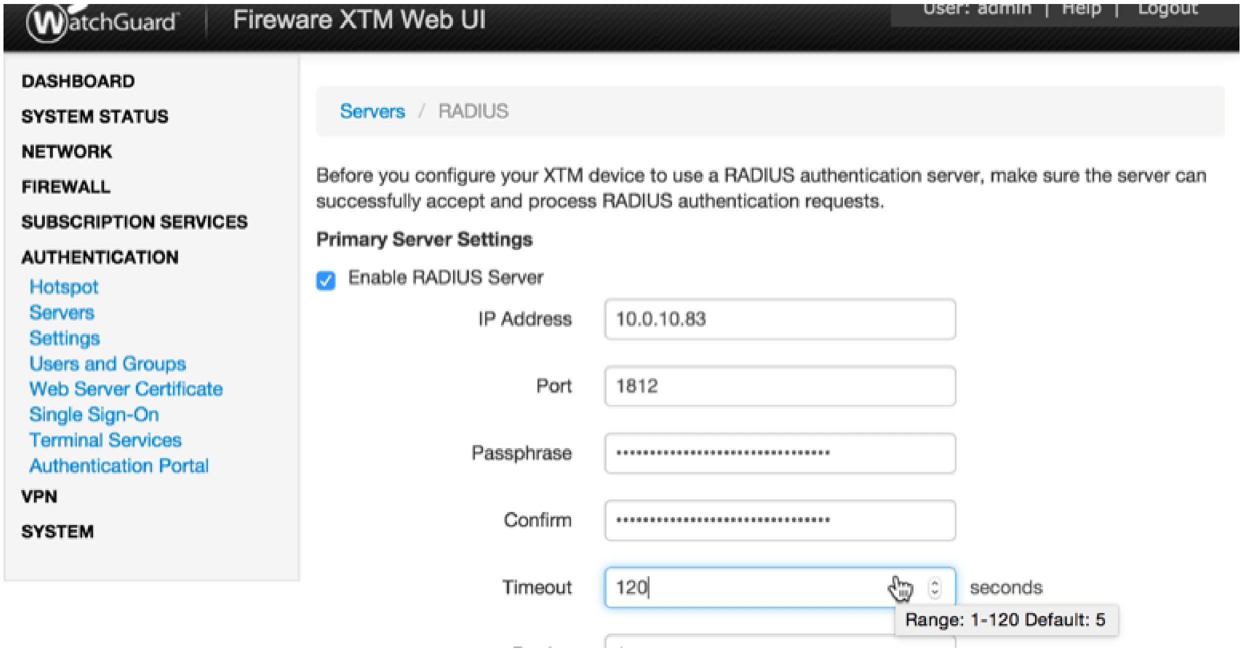
2. Click **RADIUS**



Authentication Servers

Server	Status	
Firebox	0 Users	2 Groups
RADIUS	Primary	10.0.10.83
	Secondary	Disabled
SecurID	Primary	Disabled
	Secondary	Disabled
LDAP	Primary	Disabled
	Secondary	Disabled

3. Check the **Timeout** attribute field. It should be at least 10 seconds longer than the LoginTC Request Timeout set in the LoginTC RAIDUS Connector.



Before you configure your XTM device to use a RADIUS authentication server, make sure the server can successfully accept and process RADIUS authentication requests.

Primary Server Settings

☑ Enable RADIUS Server

IP Address: 10.0.10.83

Port: 1812

Passphrase: ••••••••••••••••••••••••••••••••

Confirm: ••••••••••••••••••••••••••••••••

Timeout: 120 seconds

Range: 1-120 Default: 5

See the Knowledge Base articles for more information:

Email Support

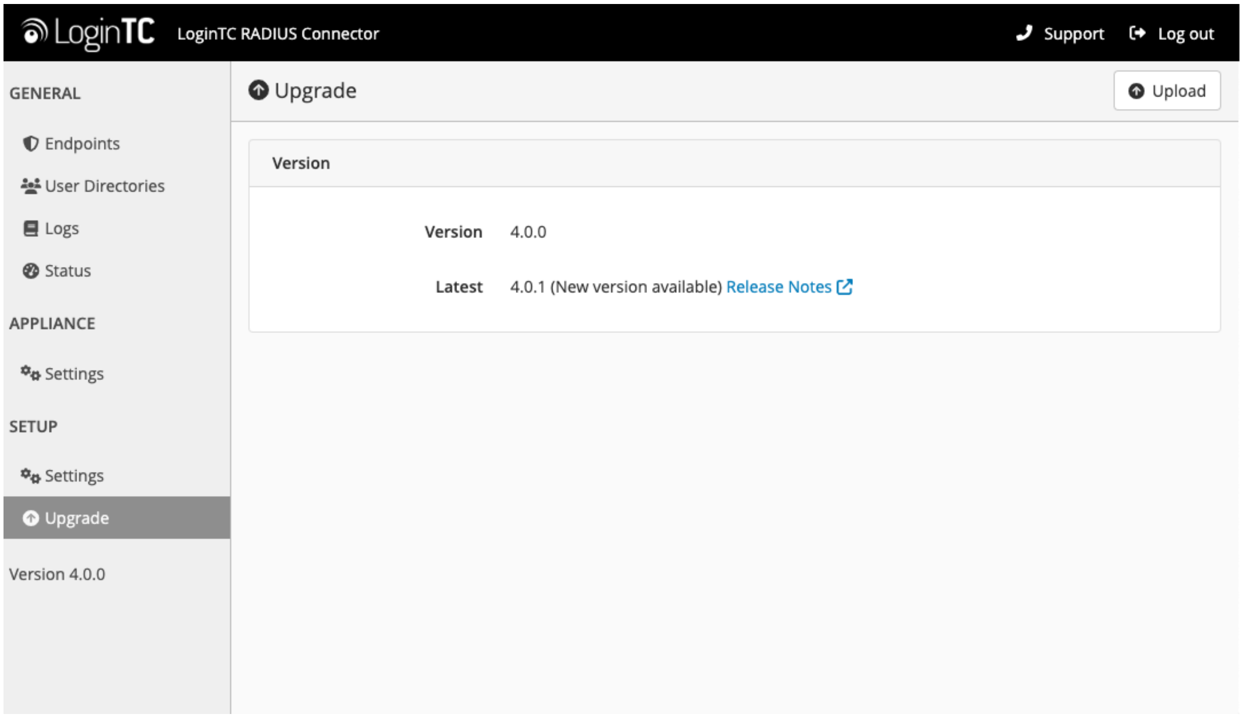
For any additional help please email support@cyphercor.com. Expect a speedy reply.

Upgrading

From 4.X

The latest LoginTC RADIUS Connector upgrade package can be downloaded here: Download RADIUS Connector (Upgrade)

1. Navigate to **SETUP > Upgrade**:

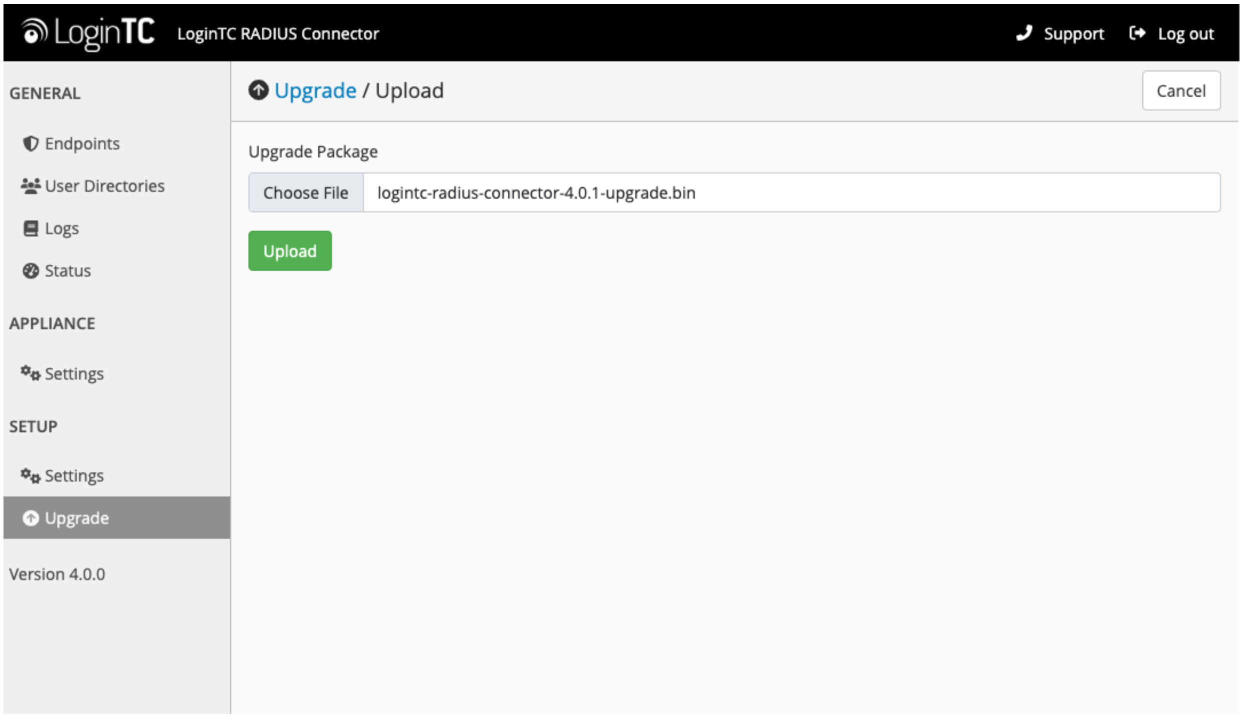


Version

Version 4.0.0

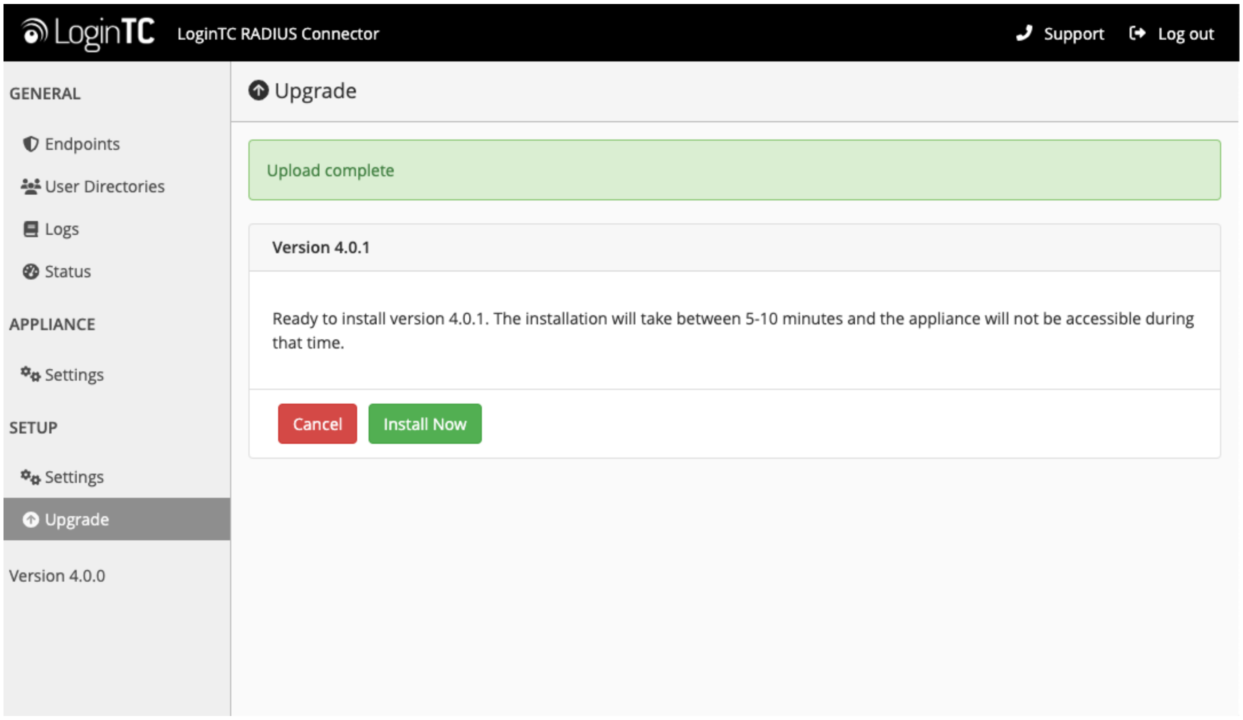
Latest 4.0.1 (New version available) Release Notes

2. Click **Upload** and select your LoginTC RADIUS Connector upgrade file:



Upgrade Package: logintc-radius-connector-4.0.1-upgrade.bin

3. Click **Upload** and do not navigate away from the page:



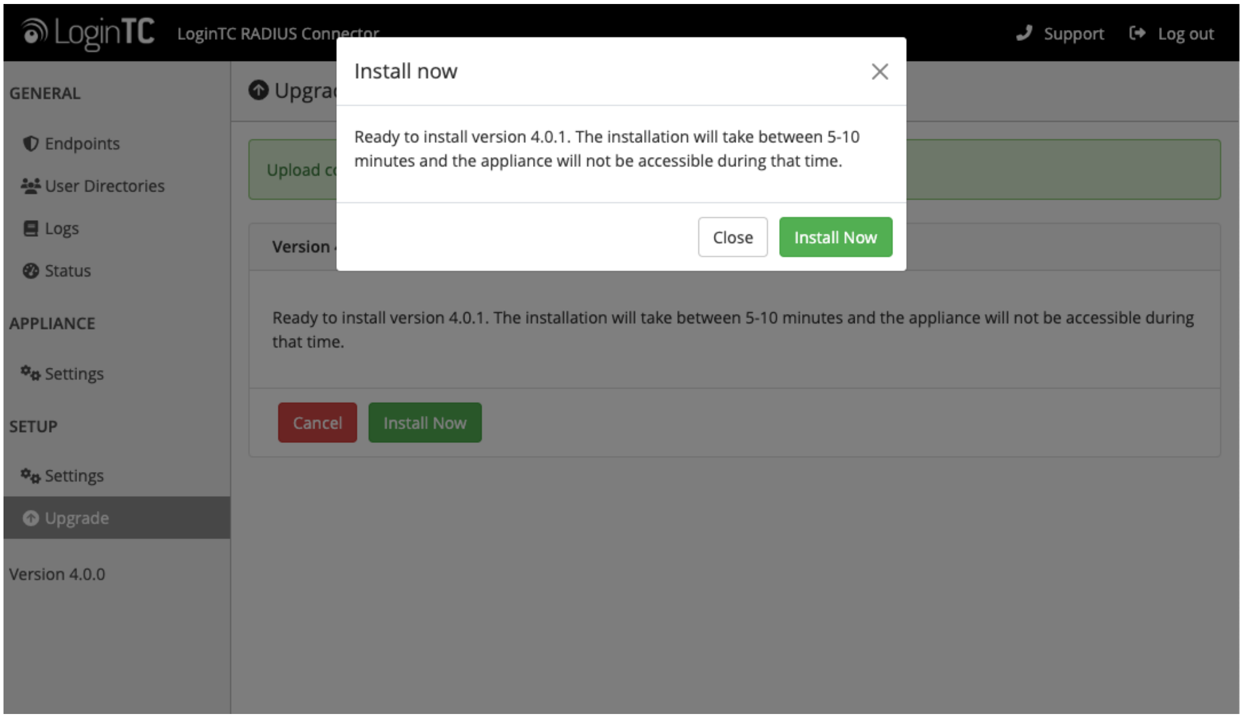
Upload complete

Version 4.0.1

Ready to install version 4.0.1. The installation will take between 5-10 minutes and the appliance will not be accessible during that time.

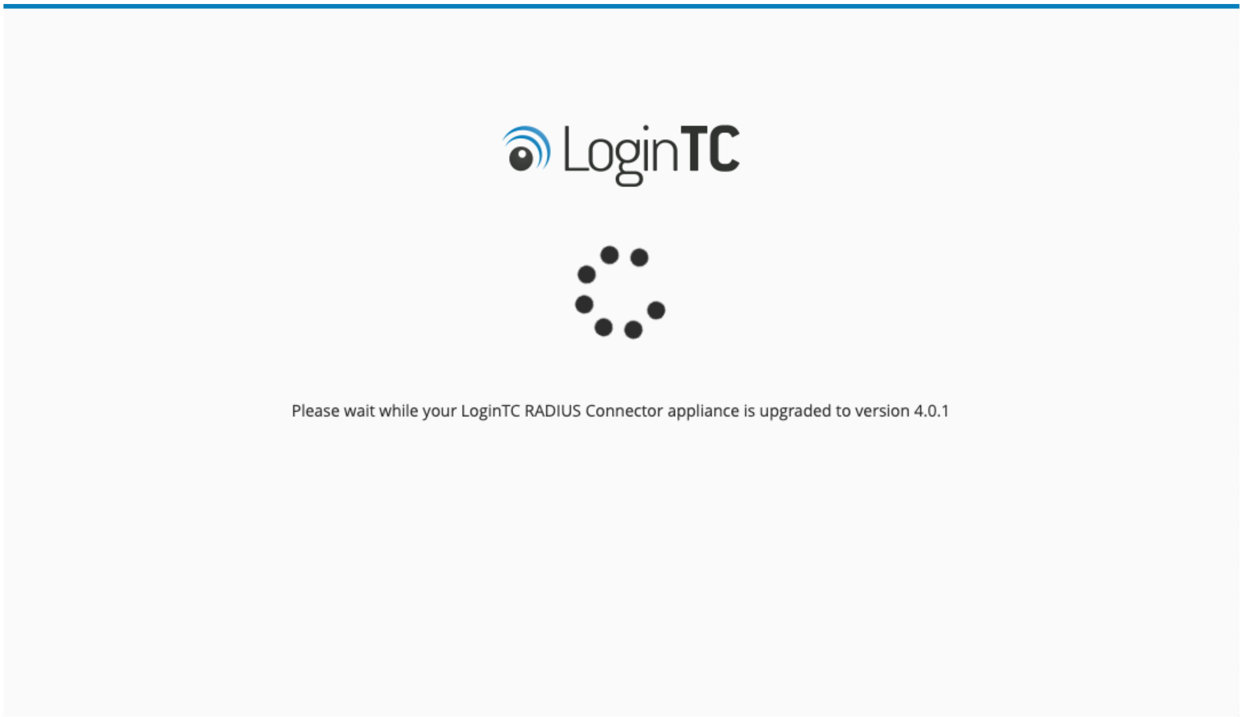
Version 4.0.0

4. Once upload is complete upgrade by clicking **Install Now**:



Ready to install version 4.0.1. The installation will take between 5-10 minutes and the appliance will not be accessible during that time.

5. Wait 10-15 minutes for upgrade to complete:



Please wait while your LoginTC RADIUS Connector appliance is upgraded to version 4.0.1

NOTE: Upgrade time
Upgrade can take 10-15 minutes, please be patient.

From 3.X

Important: LoginTC RADIUS Connector 3.X End-of-life
The LoginTC RADIUS Connector 3.X virtual appliance is built with CentOS 7.9. CentOS 7.X is End of Lifetime (EOL) June 30th, 2024. See CentOS Product Specifications. Although the appliance will still function it will no longer receive updates and nor will it be officially supported.

New LoginTC RADIUS Connector 4.X
A new LoginTC RADIUS Connector 4.X virtual appliance has been created. The Operating System will be supported for many years. Inline upgrade is not supported. As a result upgrade is deploying a new appliance. The appliance has been significantly revamped and although the underlying functionality is identical, it has many new features to take advantage of.

Complete 3.X to 4.X upgrade guide: LoginTC RADIUS Connector Upgrade Guide