

RSA Two Factor Authentication

Feature Description

UPDATED: 28 July 2023

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

These materials and all Progress® software products are copyrighted and all rights are reserved by Progress Software Corporation. The information in these materials is subject to change without notice, and Progress Software Corporation assumes no responsibility for any errors that may appear therein. The references in these materials to specific platforms supported are subject to change.

#1 Load Balancer in Price/Performance, 360 Central, 360 Vision, Chef, Chef (and design), Chef Habitat, Chef Infra, Code Can (and design), Compliance at Velocity, Corticon, Corticon.js, DataDirect (and design), DataDirect Cloud, DataDirect Connect, DataDirect Connect64, DataDirect XML Converters, DataDirect XQuery, DataRPM, Defrag This, Deliver More Than Expected, DevReach (and design), Driving Network Visibility, Flowmon, Inspec, Ipswitch, iMacros, K (stylized), Kemp, Kemp (and design), Kendo UI, Kinvey, LoadMaster, MessageWay, MOVEit, NativeChat, OpenEdge, Powered by Chef, Powered by Progress, Progress, Progress Software Developers Network, SequeLink, Sitefinity (and Design), Sitefinity, Sitefinity (and design), Sitefinity Insight, SpeedScript, Stylized Design (Arrow/3D Box logo), Stylized Design (C Chef logo), Stylized Design of Samurai, TeamPulse, Telerik, Telerik (and design), Test Studio, WebSpeed, WhatsConfigured, WhatsConnected, WhatsUp, and WS_FTP are registered trademarks of Progress Software Corporation or one of its affiliates or subsidiaries in the U.S. and/or other countries.

Analytics360, AppServer, BusinessEdge, Chef Automate, Chef Compliance, Chef Desktop, Chef Workstation, Corticon Rules, Data Access, DataDirect Autonomous REST Connector, DataDirect Spy, DevCraft, Fiddler, Fiddler Classic, Fiddler Everywhere, Fiddler Jam, FiddlerCap, FiddlerCore, FiddlerScript, Hybrid Data Pipeline, iMail, InstaRelinker, JustAssembly, JustDecompile, JustMock, KendoReact, OpenAccess, PASOE, Pro2, ProDataSet, Progress Results, Progress Software, ProVision, PSE Pro, Push Jobs, SafeSpaceVR, Sitefinity Cloud, Sitefinity CMS, Sitefinity Digital Experience Cloud, Sitefinity Feather, Sitefinity Thunder, SmartBrowser, SmartComponent, SmartDataBrowser, SmartDataObjects, SmartDataView, SmartDialog, SmartFolder, SmartFrame, SmartObjects, SmartPanel, SmartQuery, SmartViewer, SmartWindow, Supermarket, SupportLink, Unite UX, and WebClient are trademarks or service marks of Progress Software Corporation and/or its subsidiaries or affiliates in the U.S. and other countries. Java is a registered trademark of Oracle and/or its affiliates. Any other marks contained herein may be trademarks of their respective owners.

Please refer to the NOTICE.txt or Release Notes – Third-Party Acknowledgements file applicable to a particular Progress product/hosted service offering release for any related required third-party acknowledgements.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Table of Contents

1 Introduction **4**

1.1 Next Token Mode 5

1.2 New PIN Mode 5

1.3 Document Purpose 5

1.4 Intended Audience 5

1.5 Prerequisites 6

2 Configure RSA SecurID Multi-Factor Authentication **7**

2.1 Generate an Authentication Agent Entry 7

2.2 Export the Authentication Manager Configuration 9

2.3 Generate a Node Secret File 9

2.4 Configure the LoadMaster 12

2.4.1 Upload a Node Secret File for the LoadMaster 14

2.4.2 Set the L7 Client Token Timeout Value 15

2.4.3 Create a Virtual Service 16

References **20**

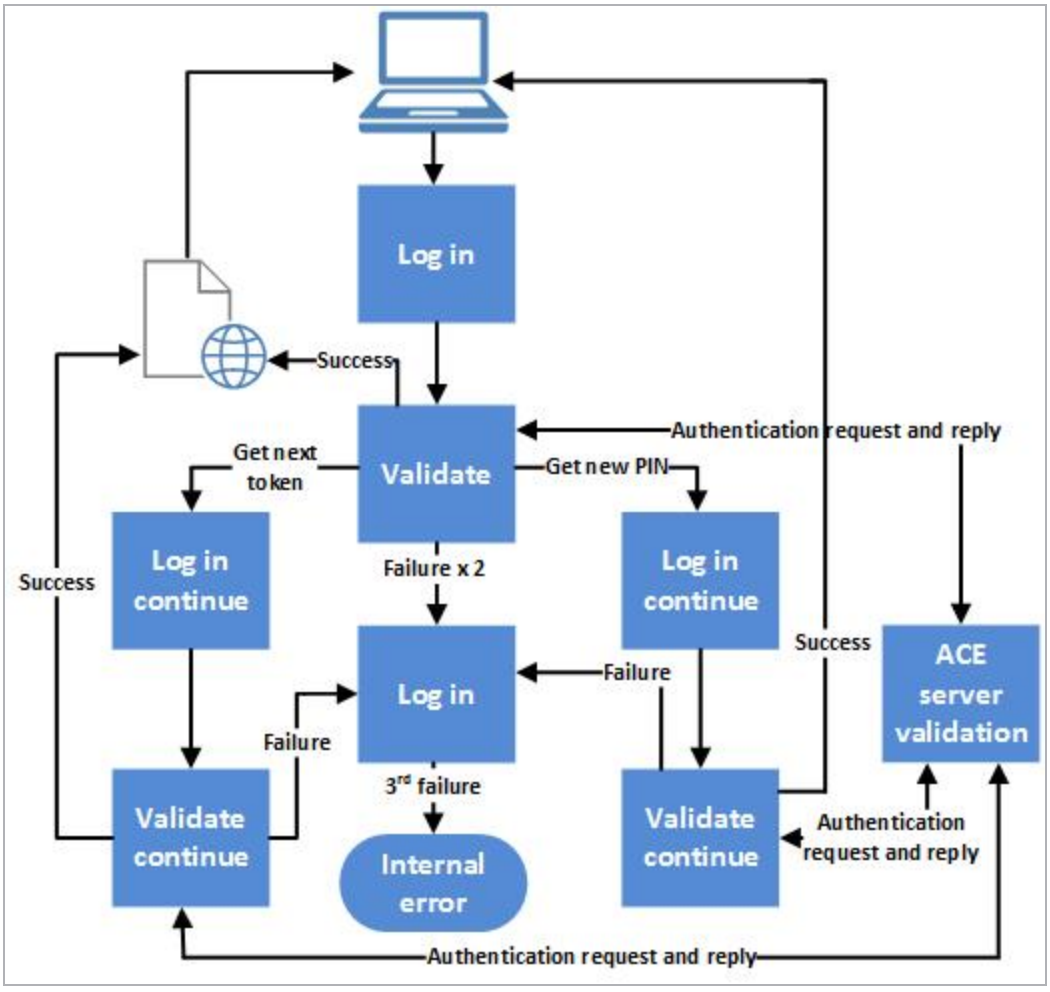
Last Updated Date **21**

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

1 Introduction

As part of the Kemp Edge Security Pack (ESP), the LoadMaster supports the RSA SecurID authentication scheme. This scheme authenticates the user on an RSA SecurID Server. When RSA is enabled as the authentication method, during the login process the user is prompted to enter a password that is a combination of two numbers – a Personal Identification Number (PIN) and a token code which is the number displayed on the RSA SecurID authenticator (dongle).

There are two additional challenge-response modes: next token and new PIN. These are described in the sections below.



© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

The above diagram shows both next token and new pin modes which are only applicable under the conditions described below. This flow allows for three login attempts, after which login failure is final. The actual number of login attempts users are allowed to have is configurable.

1.1 Next Token Mode

Next token mode is applied in cases where the authentication process requires additional verification of the token code. The user is asked to enter the next token code, that is, wait for the number that is currently displayed on the authenticator to change, and enter the new number (without the PIN).

> When using RSA and Kerberos Constrained Delegation (KCD), the user password will not be authenticated which may result in unsecured access – particularly if RSA operates in token code only mode. While many RSA implementations use token code and PIN, others just use token code.

1.2 New PIN Mode

New PIN mode is applied in cases where the authentication process requires additional verification of the PIN. In this case, the user must use a new PIN. Depending on the configuration of the RSA ACE/Server, the user is prompted to select and enter a new PIN, or the server supplies the user with a new PIN. The user then re-authenticates with the new PIN. The use of new PIN mode is optional and can be enabled or disabled in the authentication server.

1.3 Document Purpose

This document describes how to configure the LoadMaster to use the RSA two factor authentication method.

The RSA Security Console screenshots and steps in this document are examples. Kemp will not be notified of any changes made in the RSA Security Console so please refer to the RSA documentation for the latest information, if needed.

1.4 Intended Audience

This document is intended to be read by anyone who is interested in finding out how to use RSA authentication with the Kemp LoadMaster.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

1.5 Prerequisites

The following are required in order to use RSA as an authentication method:

- A configured RSA SecurID Server

  > The LoadMaster can only use one RSA server at a time.

- RSA Authentication Manager 8.1
- SecurID dongles

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

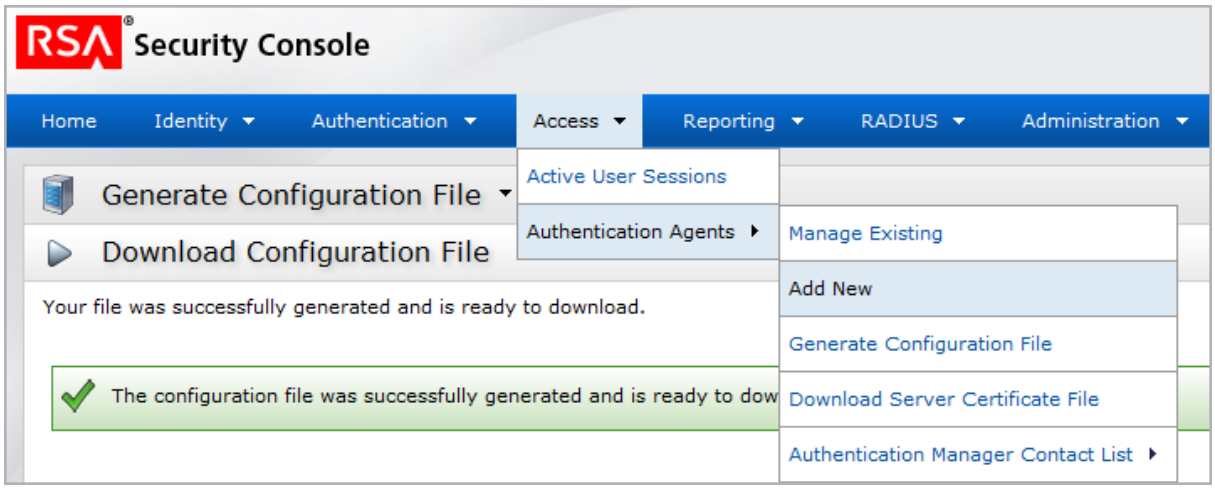
2 Configure RSA SecurID Multi-Factor Authentication

You need to complete three steps in order to configure RSA multi-factor authentication on the LoadMaster. These are outlined in the sections below.

If multiple domains are configured, sign-on can then be authenticated all at once. More information on this option can be found in ESP, Feature Description.

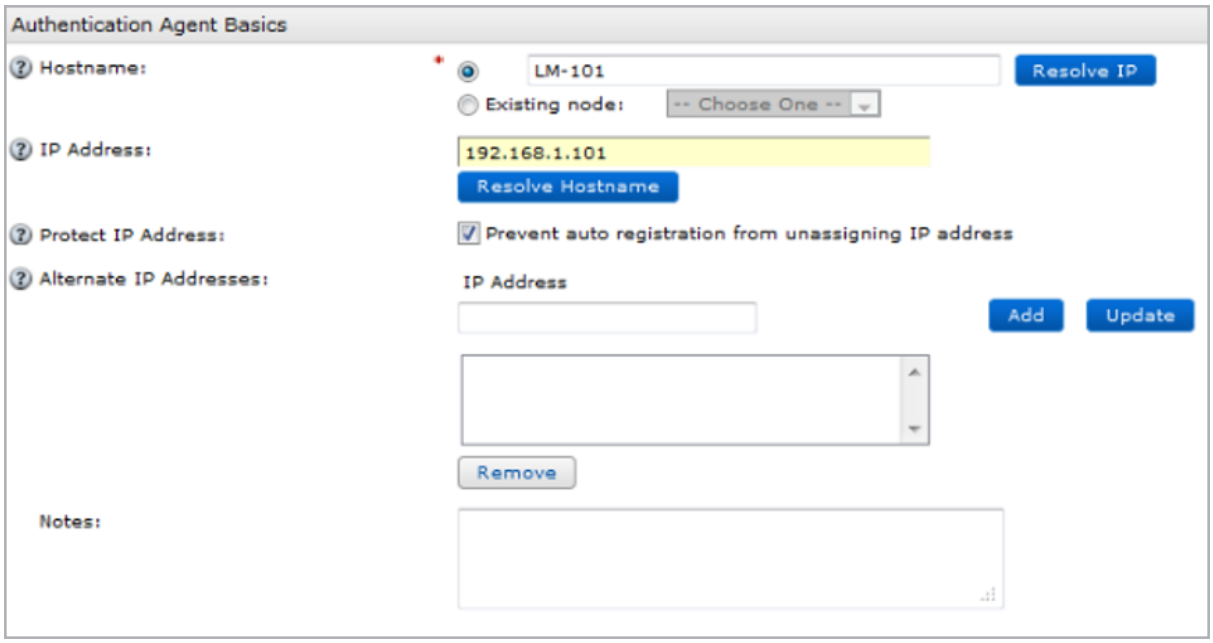
2.1 Generate an Authentication Agent Entry

An Authentication Agent Entry needs to be generated for the LoadMaster in the RSA Authentication Manager. To do this, in the RSA Security Console, follow the steps below:



1. Select **Access > Authentication Agents** and click **Add New**.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

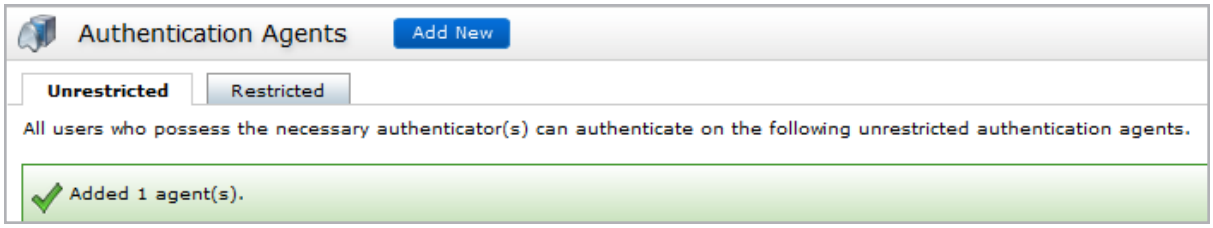


2. Enter the LoadMaster IP address in the **IP Address** text box.

   For a HA cluster, add all three LoadMaster IP addresses (unit 1, unit 2 and the shared IP address).

   If the source IP address of traffic from the LoadMaster to the RSA server changes as a result of interface IP changes or routing changes, please note that a new RSA-Config file will need to be generated.

3. Click the **Resolve Hostname** button. The **Hostname** field will auto-populate.
4. Fill out the remaining fields as required on the form.
5. Click **Save**.

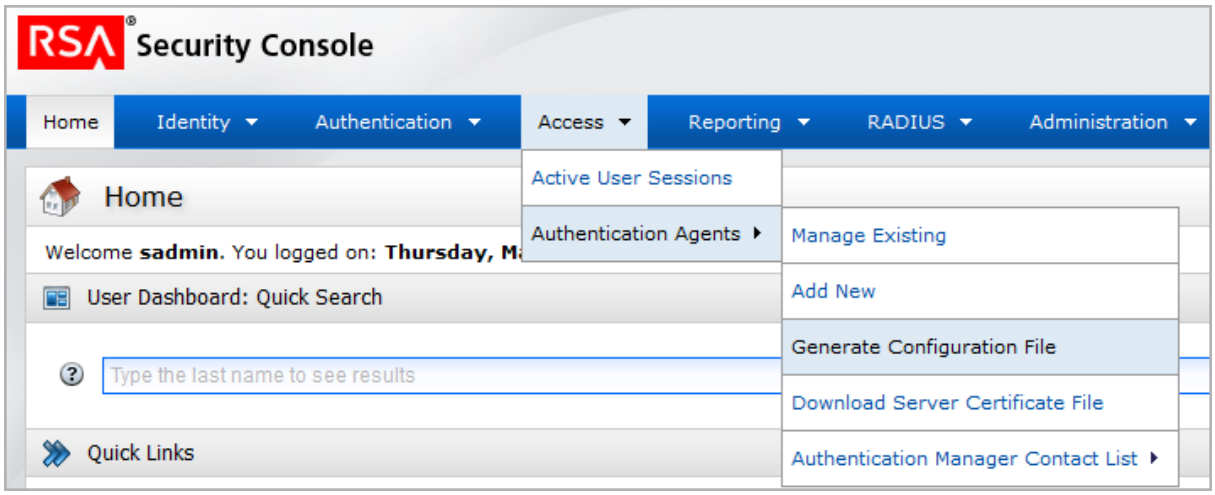


A message will appear confirming that the agent was added.

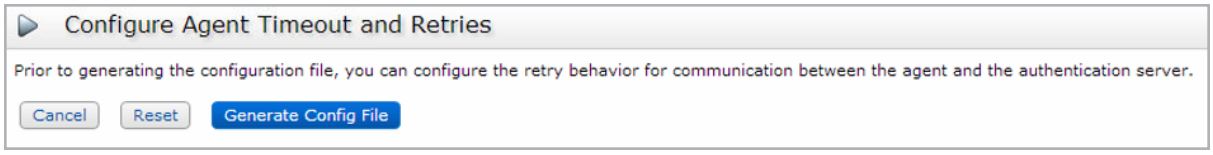
© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

2.2 Export the Authentication Manager Configuration

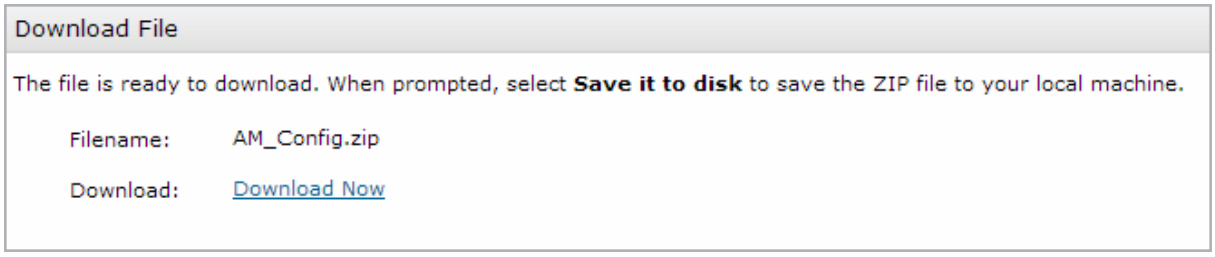
Before uploading the Authentication Manager configuration, it needs to be exported from the RSA Security Console. To do this, follow the steps below:



1. Select **Access > Authentication Agents** and click **Generate Configuration File**.



2. Click **Generate Config File**.

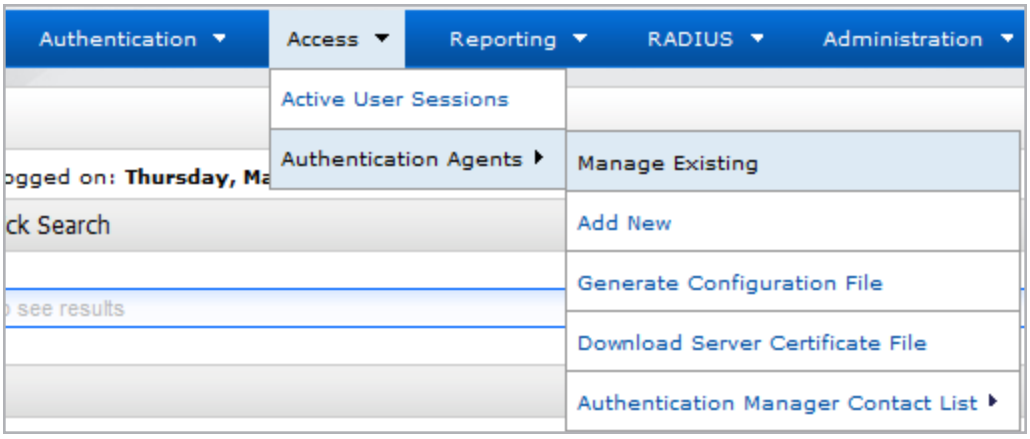


3. Click **Download Now** to download the configuration file.

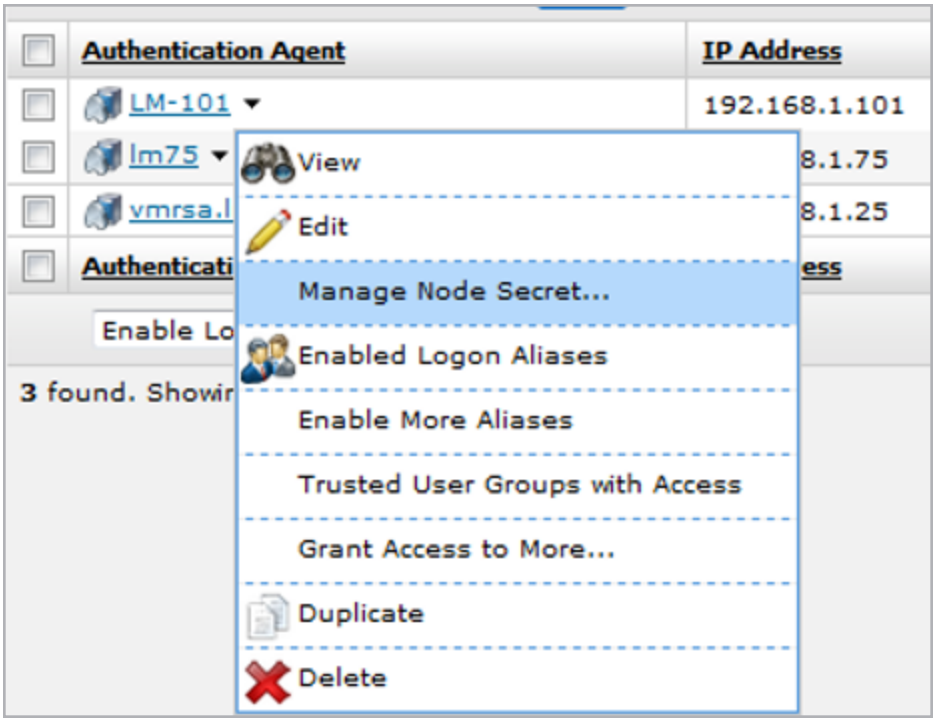
2.3 Generate a Node Secret File

First, generate a Node Secret in the RSA Security Console by following the steps below:

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

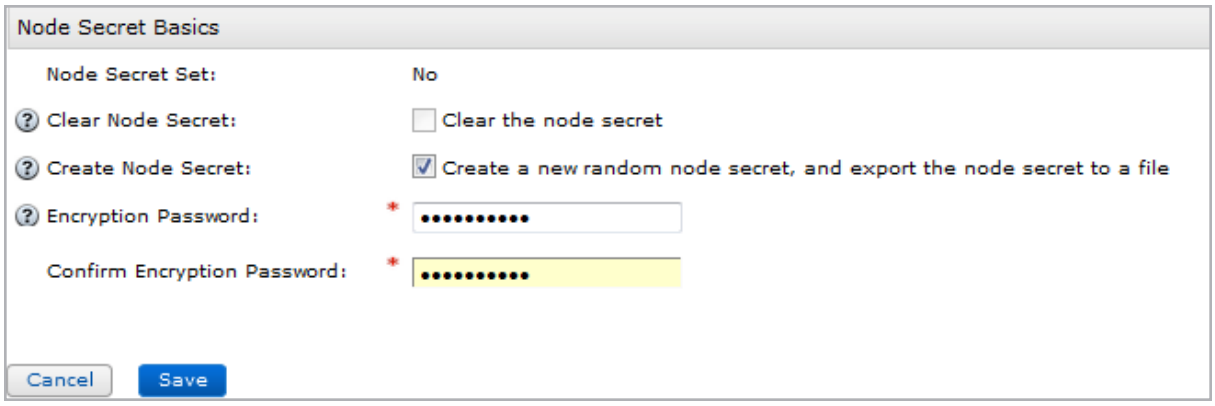


1. Select **Access > Authentication Agents > Manage Existing**.

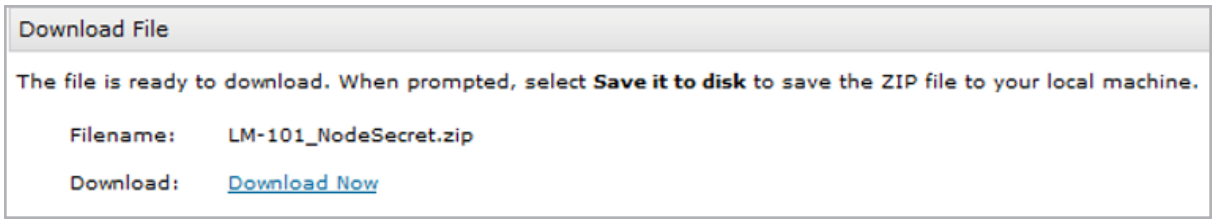


2. Right click the LoadMaster entry and click **Manage Node Secret**.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

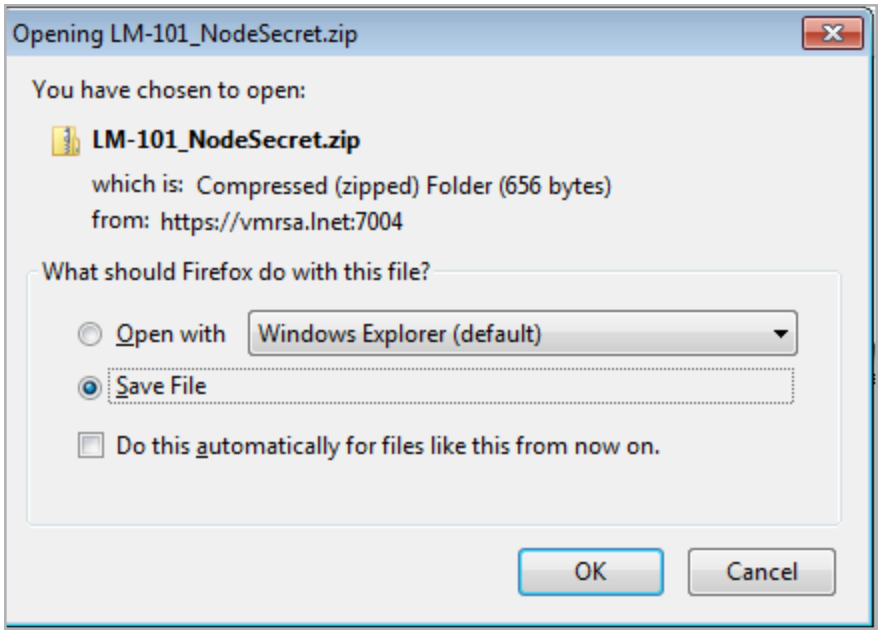


3. Select the **Create a new random node secret, and export the node secret to a file** check box.
4. Enter an **Encryption Password** for the node secret file.
5. Confirm the encryption password.
6. Click **Save**.



7. Click **Download Now**.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



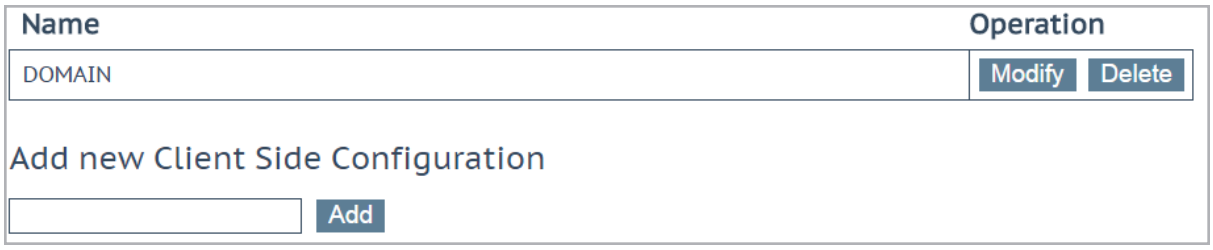
8. Save the file.

2.4 Configure the LoadMaster

> The LoadMaster can only use one RSA server at a time.

In the LoadMaster Web User Interface (WUI), follow the steps below:

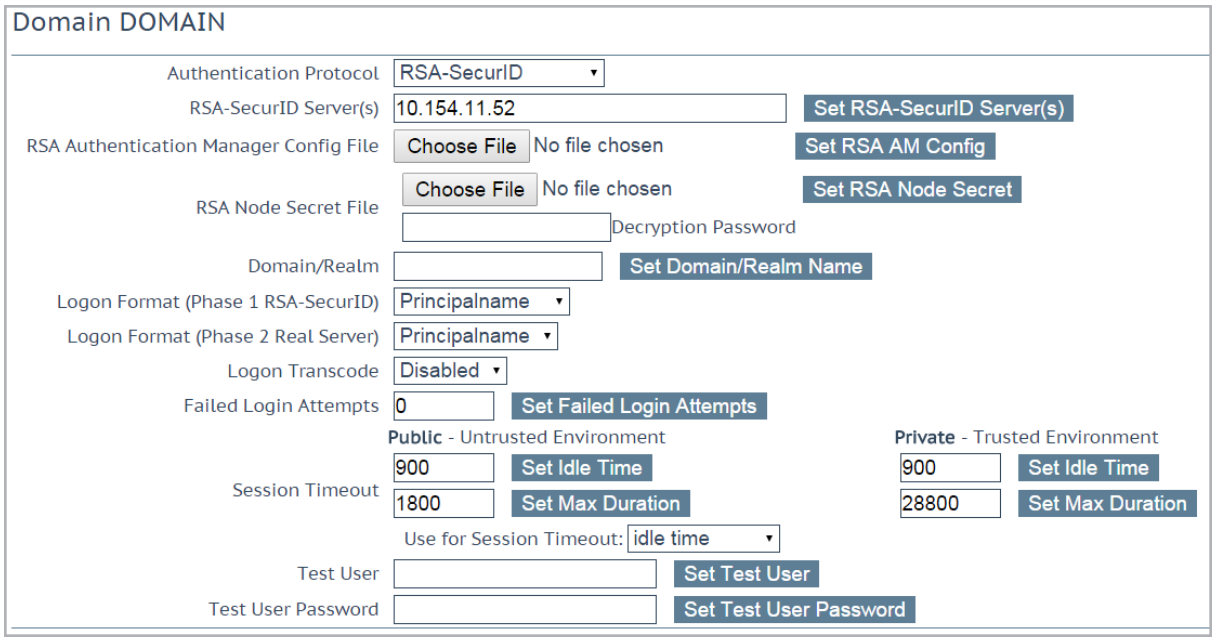
1. In the main menu, select **Virtual Services** and **Manage SSO**.



> For steps on how to configure an SSO domain and ESP, refer to the ESP, Feature Description document.

2. Click **Modify** on the relevant SSO domain.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



3. Select RSA-SecurID as the Authentication protocol.

> It is also possible to select **RSA-SecurID and LDAP** as the **Authentication Protocol**. If this is selected, the **LDAP Endpoint** will also need to be selected.

4. In the **RSA-SecurID Server(s)** text box, enter the address(es) of the RSA-SecurID server(s) that are used to validate this domain.

5. Click **Set RSA-SecurID Server(s)**.

6. In the **RSA Authentication Manager Config File** field, click **Choose File**.

7. Browse to and select the file exported in the **Export the Authentication Manager Configuration** section.

8. Click **Set RSA AM Config**.

9. Enter the login domain to be used in the **Domain/Realm** text box.

> This is also used with the logon format to construct the normalized username, for example;
> - **Principalname:** <username>@<domain>
> - **Username:** <domain>\<username>

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

> If the **Domain/Realm** field is not set, the **Domain** name set when initially adding an SSO domain is used as the **Domain/Realm** name.

10. Select the relevant option for **Logon Format (Phase 1 RSA-SecurID)**.
11. Select the relevant option for **Logon Format (Phase 2)**.

> The different logon formats are described below:
> - **Not Specified:** The username will have no normalization applied to it - it is taken as it is typed.
> - **Principalname:** Selecting this as the **Logon format** means that the client does not need to enter the domain when logging in, for example **username@domain**. The SSO domain added in the corresponding text box is used as the domain in this case.
> - **Username:** Selecting this as the **Logon format** means that the client needs to enter the domain and username, for example **domain\username**.
> - **Username Only:** Selecting this as the **Logon Format** means that the text entered is normalized to the username only (the domain is removed).

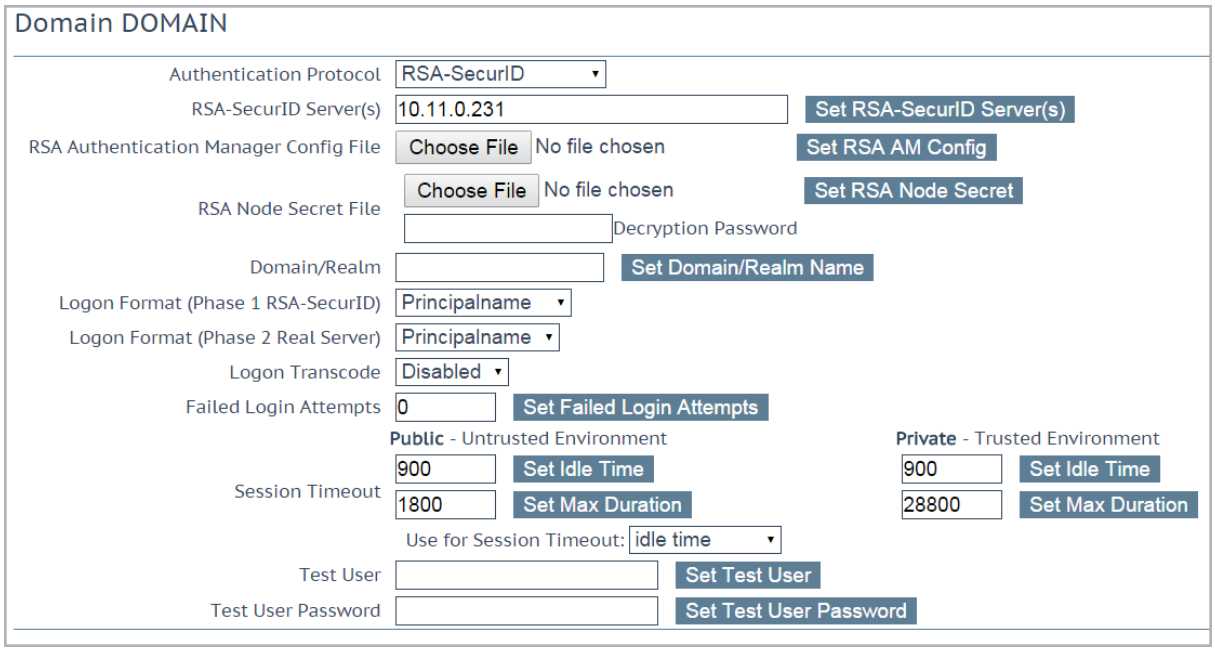
12. Enter the **Test User** and click **Set Test User**.
13. Enter the **Test User Password** and click **Set Test User Password**.

> The LoadMaster will use this test information in a health check of the SecurID Server. These details are static and should be set in the RSA management WUI. This health check is performed every 20 seconds.

2.4.1 Upload a Node Secret File for the LoadMaster

Upload the node secret in the LoadMaster. In the Manage SSO screen on the LoadMaster WUI, follow the steps below:

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



1. In the **RSA Node Secret File** field, click **Choose File**.

2. Browse to and select the Node Secret file generated in the **Generate a Node Secret File** section.

> It is not possible to upload the RSA node secret file until the RSA Authentication Manager configuration file is uploaded. The node secret file is dependent on the configuration file.

3. Enter the **Decryption Password**.

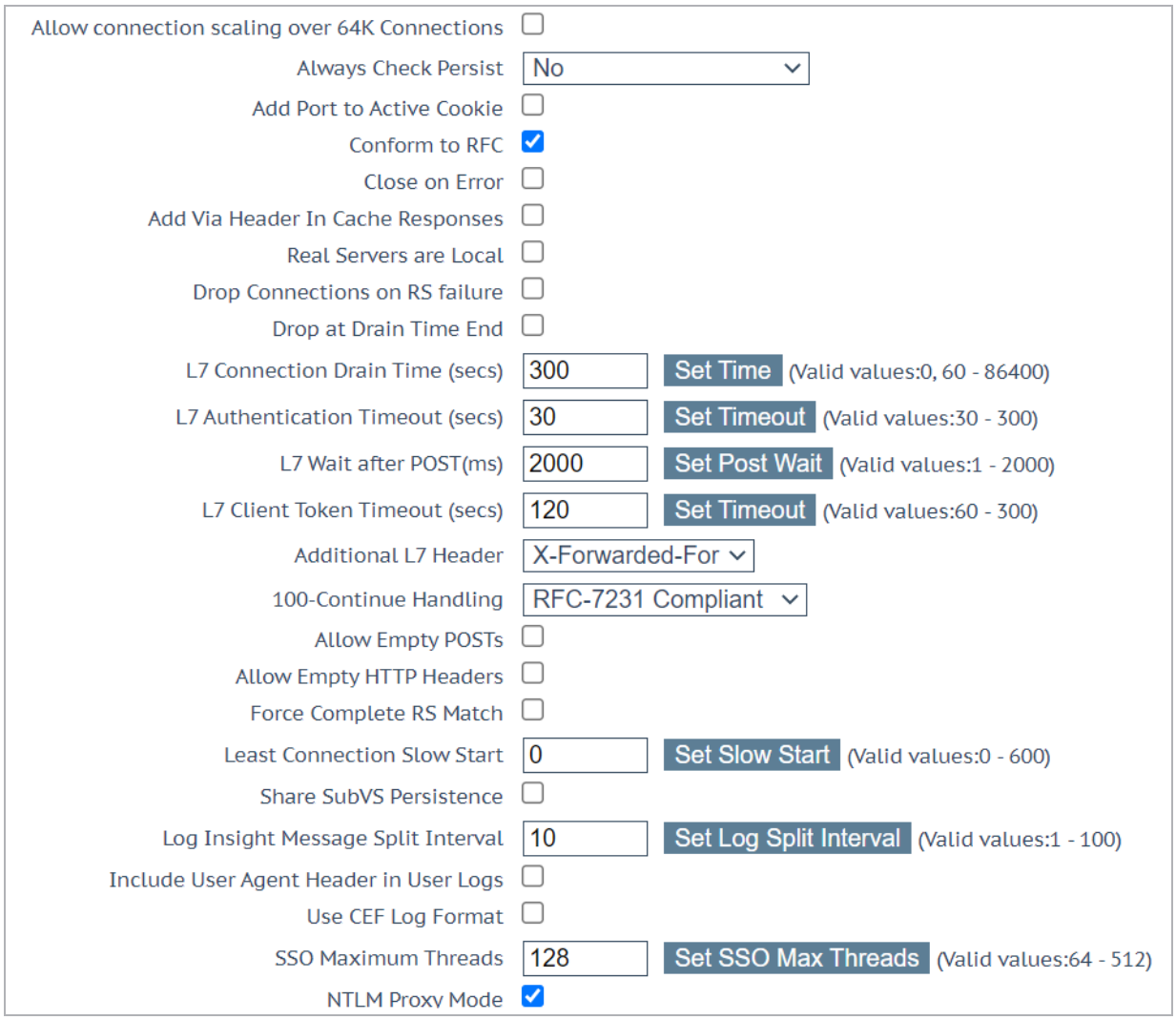
4. Click **Set RSA Node Secret**.

2.4.2 Set the L7 Client Token Timeout Value

The L7 Client Token Timeout is the duration of time (in seconds) to wait for the client token while the process of authentication is ongoing. The default L7 client token timeout is set to 120 seconds. This can be modified as needed in the LoadMaster WUI. The range of valid values is 60 to 300. To configure the timeout value, follow the steps below:

1. In the main menu, go to **System Configuration > Miscellaneous Options > L7 Configuration**.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



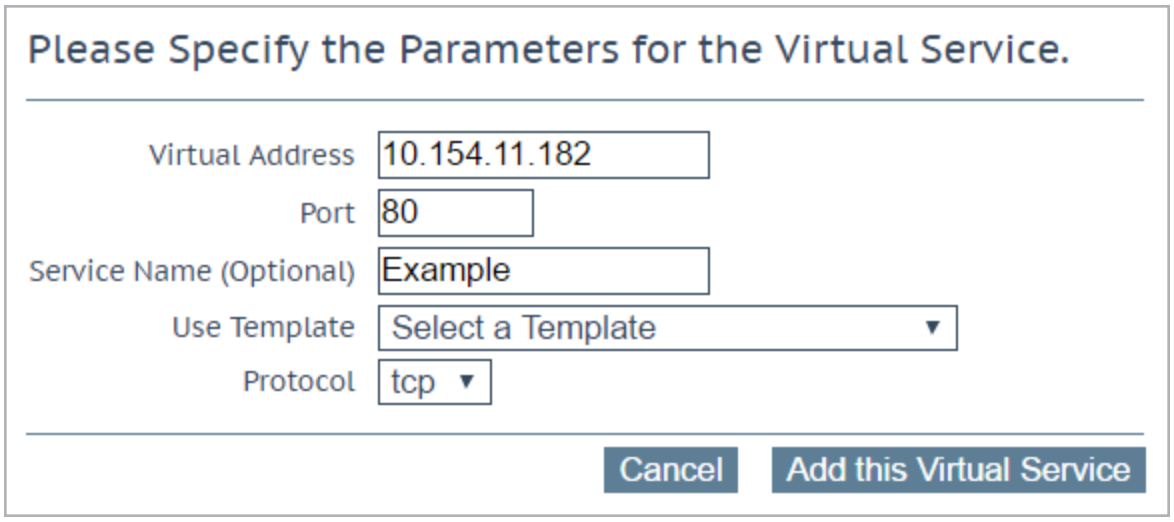
2. Enter the new value in the **L7 Client Token Timeout** text box and click **Set Timeout**.

2.4.3 Create a Virtual Service

Follow the steps below to create a Virtual Service in the LoadMaster WUI:

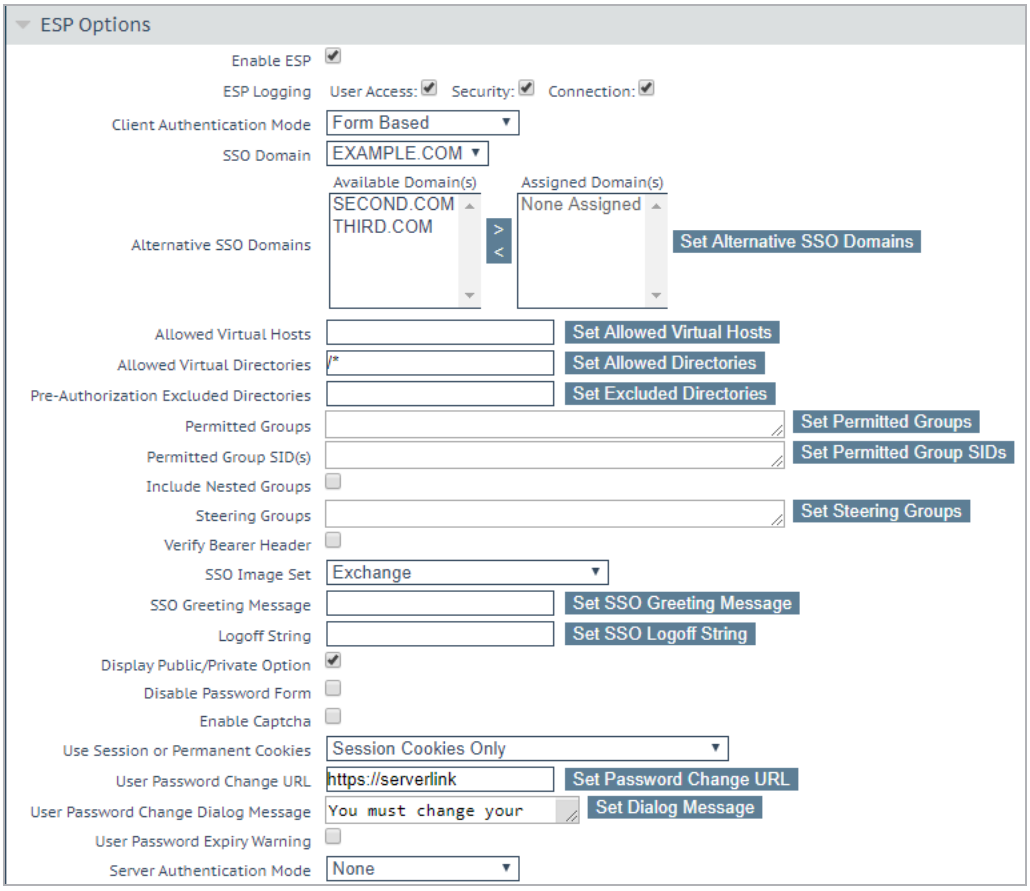
1. In the main menu, expand **Virtual Services** and click **Add New**.

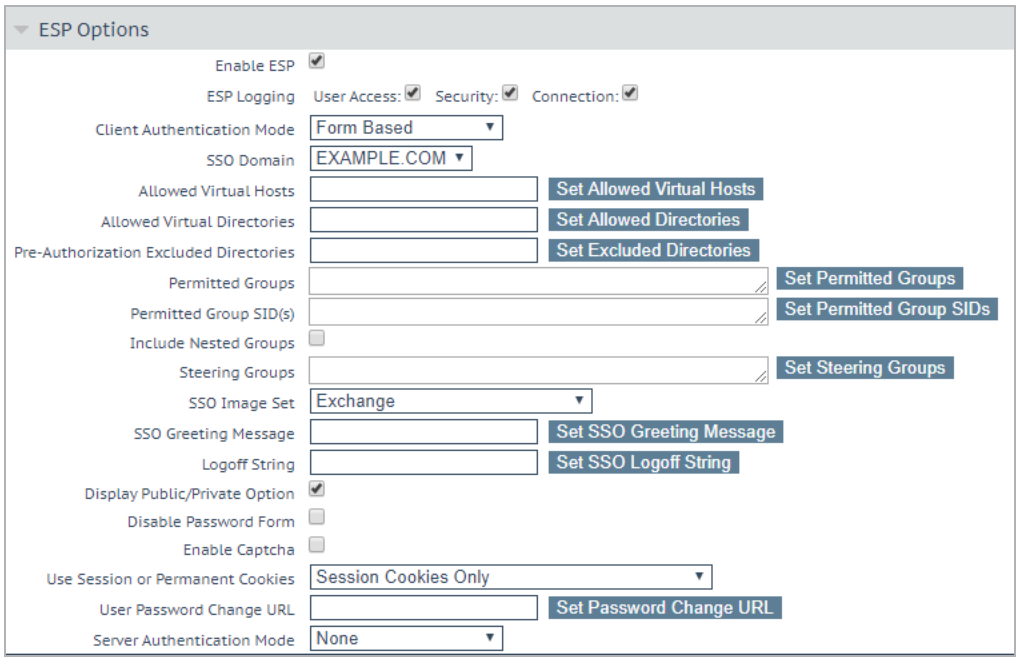
© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.



2. Enter a valid **Virtual Address**.
3. Fill out any other details as needed.
4. Click **Add this Virtual Service**.
5. Expand the **ESP Options** section.

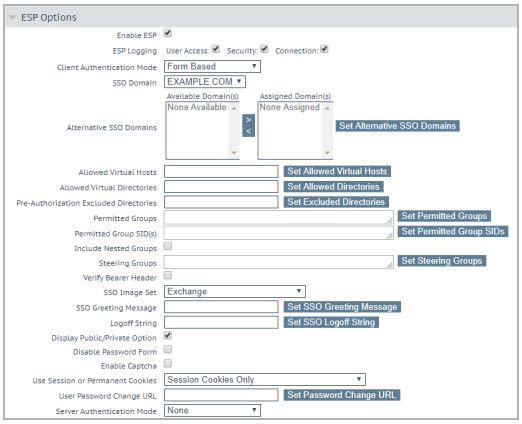
© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.





© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

6. Expand the **ESP Options** section.



7. Select the **Enable ESP** check box.
8. Select **Form Based** as the **Client Authentication Mode**.
9. Select the SSO domain created previously from the **SSO Domain** drop-down list.
10. Fill out any other details as needed.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

References

Unless otherwise specified, the following documents can be found at http://kemptechnologies.com/documentation.

ESP, Feature Description

Web User Interface, Configuration Guide

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Last Updated Date

This document was last updated on 28 July 2023.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.