



Custom Authentication Form

Technical Note

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1 Introduction

With Kemp's Edge Security Pack (ESP), it is possible to specify how clients, which are connecting to the LoadMaster, are authenticated. One of the options is **Form Based** authentication. When this option is selected, clients must enter their user details within a form to be authenticated on the LoadMaster.

When **Form Based** authentication is enabled, it is possible to customize the login form that the user sees.

For more information on ESP, and the various methods of authentication, refer to the [ESP, Feature Description](#).

1.1 Document Purpose

This document describes how to customize the login form when **Form Based** authentication is selected as the **Client Authentication mode**.

1.2 Intended Audience

This document is intended to be read by anyone who is interested in finding out how to customize the Kemp ESP authentication form.

2 Customizing the Login Form

There are two ways to customize the ESP login form:

- Using the SSO Greeting Message text box
- Using a Single Sign On (SSO) image set

The **SSO Greeting Message** text box is an easy way of adding some text to the login form.

The SSO image set option should be used for further customizations, such as configuring the form to have a desired look and feel.

Refer to the relevant section below to find out more.

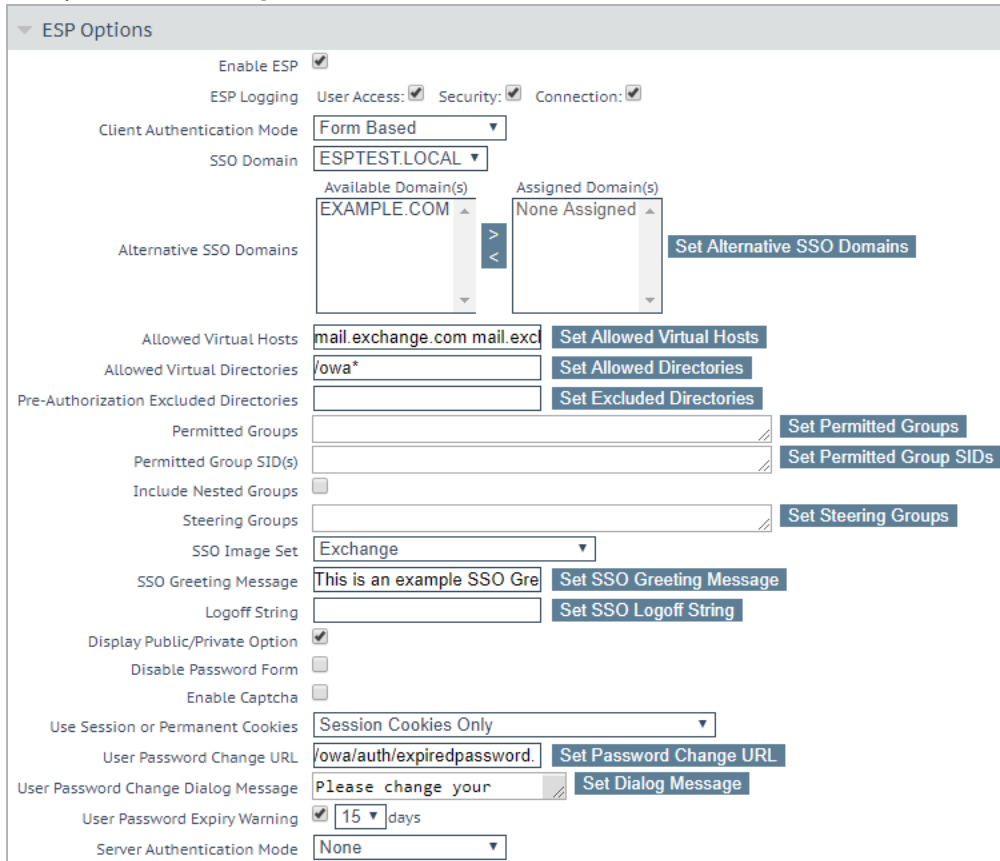
2.1 SSO Greeting Message

The login form can be customized by adding text. To do this, follow the steps below in the LoadMaster Web User Interface (WUI):

1. In the main menu of the WUI, select **Virtual Services** and **View/Modify Services**.
2. Click **Modify** on the relevant Virtual Service.

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3. Expand the **ESP Options** section.



The screenshot shows the 'ESP Options' configuration form. The 'Enable ESP' checkbox is checked. Under 'ESP Logging', 'User Access', 'Security', and 'Connection' are all checked. 'Client Authentication Mode' is set to 'Form Based'. 'SSO Domain' is 'ESPTTEST.LOCAL'. 'Available Domain(s)' contains 'EXAMPLE.COM'. 'Assigned Domain(s)' is 'None Assigned'. 'Allowed Virtual Hosts' contains 'mail.exchange.com mail.exc'. 'Allowed Virtual Directories' contains '/owa*'. 'Pre-Authorization Excluded Directories' is empty. 'Permitted Groups' and 'Permitted Group SID(s)' are empty. 'Include Nested Groups' is unchecked. 'Steering Groups' is empty. 'SSO Image Set' is 'Exchange'. 'SSO Greeting Message' contains 'This is an example SSO Gre'. 'Logoff String' is empty. 'Display Public/Private Option' is checked. 'Disable Password Form' and 'Enable Captcha' are unchecked. 'Use Session or Permanent Cookies' is 'Session Cookies Only'. 'User Password Change URL' contains '/owa/auth/expiredpassword.'. 'User Password Change Dialog Message' contains 'Please change your'. 'User Password Expiry Warning' is checked and set to '15' days. 'Server Authentication Mode' is 'None'. Buttons for 'Set Allowed Virtual Hosts', 'Set Allowed Directories', 'Set Excluded Directories', 'Set Permitted Groups', 'Set Permitted Group SIDs', 'Set Steering Groups', 'Set SSO Greeting Message', 'Set SSO Logoff String', 'Set Password Change URL', and 'Set Dialog Message' are visible.

4. Ensure that ESP is enabled.

5. Ensure that the Client Authentication mode is set to Form Based.

6. Enter the text that you would like to appear on the form within the **SSO Greeting Message** text box.

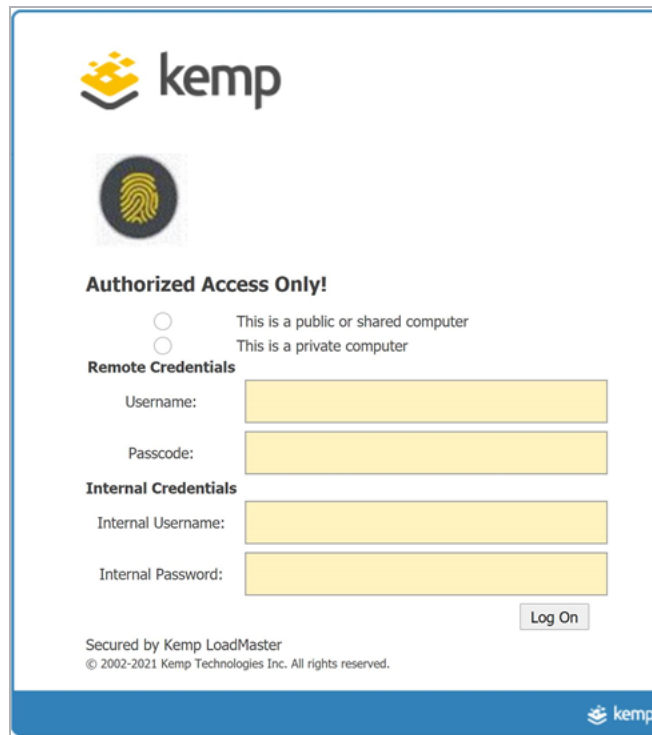
7. Click the Set SSO Greeting Message button.

The message can have up to 255 characters.

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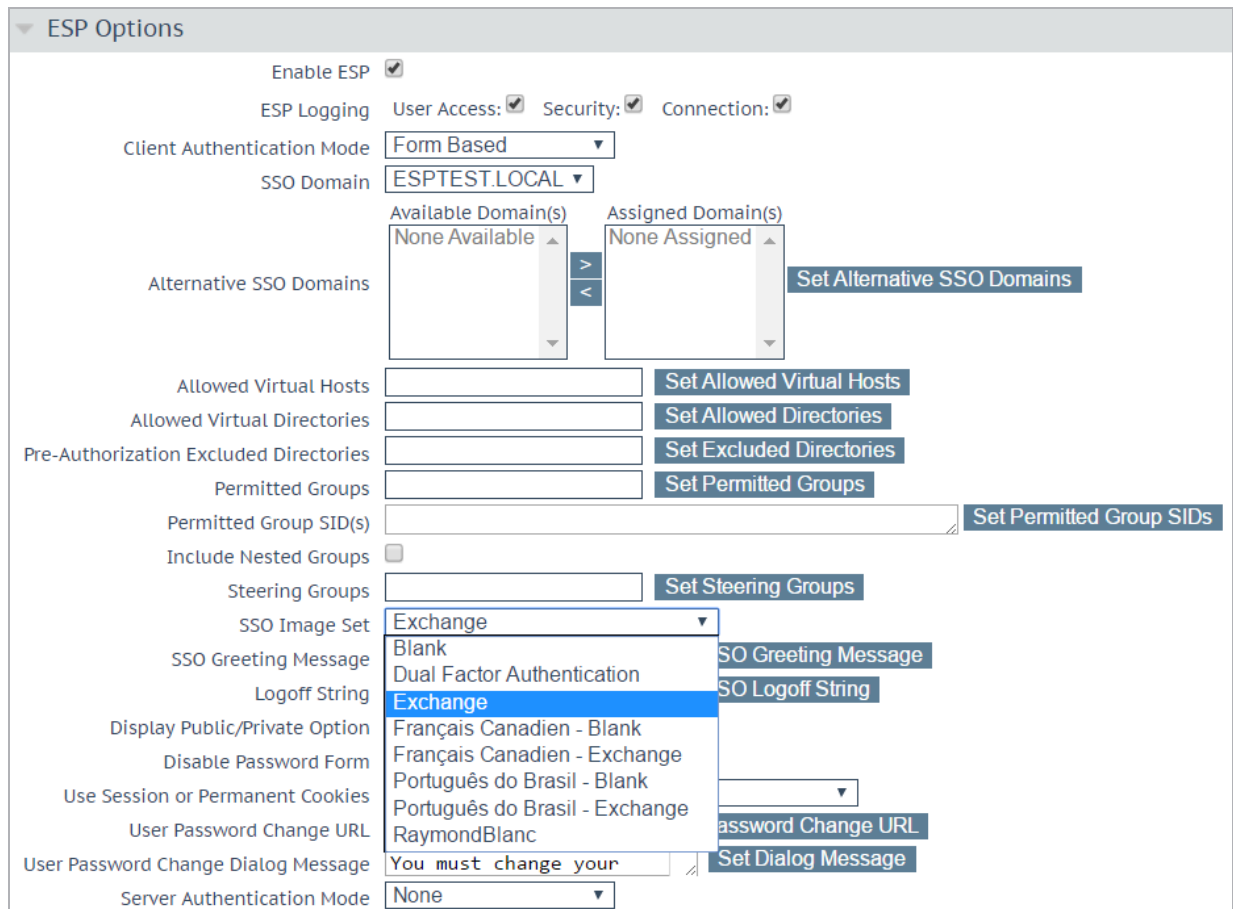
An example Exchange login form with an SSO greeting message is shown in the screenshot above.



The SSO Greeting Message field accepts HTML code, so you can insert an image if required.

However, there are several characters that are not supported. These are the grave accent character (`) and single quotes ('). If a grave accent character is used in the SSO Greeting Message, the character will not display in the output, for example a`b`c becomes abc. If a single quote is used, users will not be able to log in.

2.2 SSO Image Set



▼ ESP Options

Enable ESP ☒

ESP Logging User Access: ☒ Security: ☒ Connection: ☒

Client Authentication Mode Form Based

SSO Domain ESPTTEST.LOCAL

Alternative SSO Domains Available Domain(s) None Available Assigned Domain(s) None Assigned Set Alternative SSO Domains

Allowed Virtual Hosts Set Allowed Virtual Hosts

Allowed Virtual Directories Set Allowed Directories

Pre-Authorization Excluded Directories Set Excluded Directories

Permitted Groups Set Permitted Groups

Permitted Group SID(s) Set Permitted Group SIDs

Include Nested Groups ☐

Steering Groups Set Steering Groups

SSO Image Set Exchange

SSO Greeting Message SO Greeting Message

Logoff String SO Logoff String

Display Public/Private Option Français Canadien - Blank

Disable Password Form Français Canadien - Exchange

Use Session or Permanent Cookies Português do Brasil - Blank

User Password Change URL Português do Brasil - Exchange Password Change URL

User Password Change Dialog Message RaymondBlanc Set Dialog Message

Server Authentication Mode None

The **SSO Image Set** option is only available if **Form Based** is selected as the **Client Authentication mode**. The SSO image sets available are:

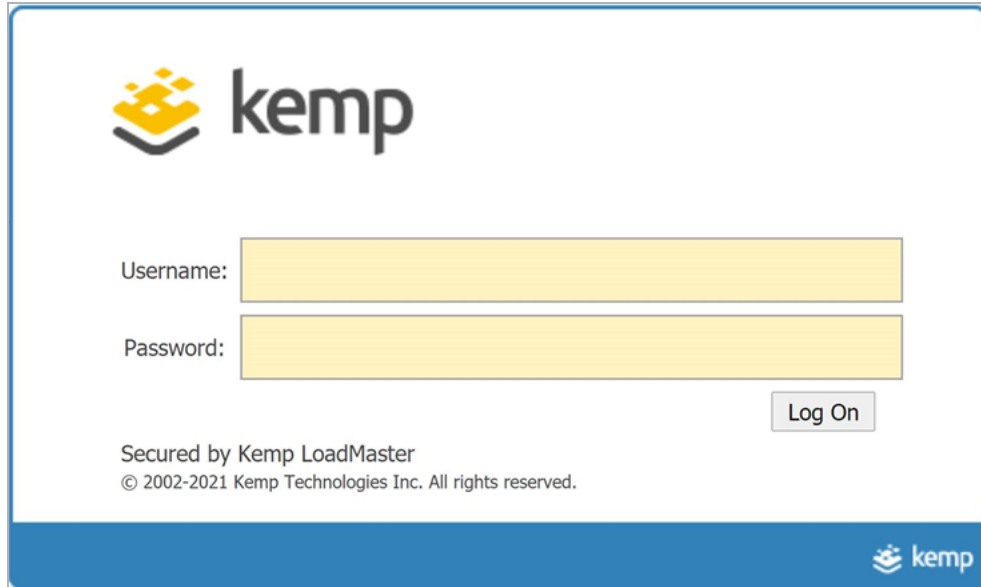
- Blank
- Dual Factor Authentication
- Exchange

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- French Canadian - Blank
- French Canadian - Exchange
- Brazilian Portuguese - Blank
- Brazilian Portuguese - Exchange
- Any custom SSO image sets which have been uploaded

When using the Exchange image set, you must select the image set in the **LM_Auth_Proxy**, **OWA**, and **ECP** SubVSs.

Exchange Form

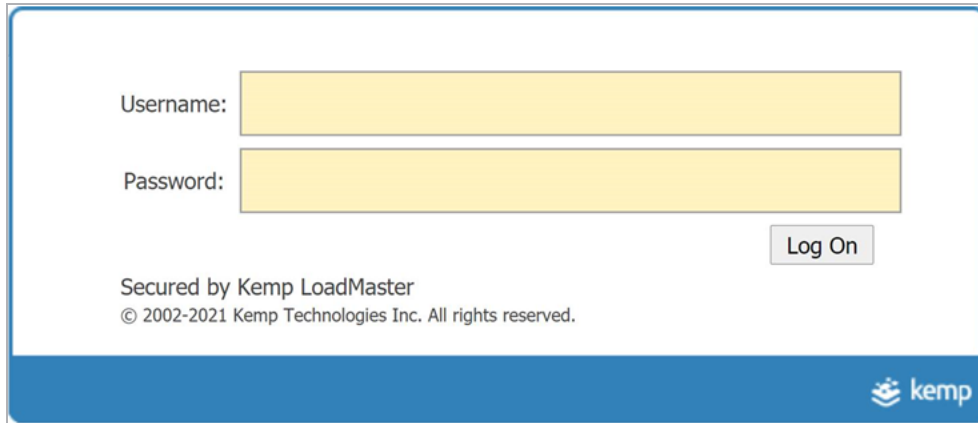


The screenshot shows the Kemp Exchange Form. At the top left is the Kemp logo, consisting of a yellow icon and the word "kemp" in black. Below the logo are two yellow input fields: the first is labeled "Username:" and the second is labeled "Password:". To the right of the password field is a grey "Log On" button. At the bottom left, the text "Secured by Kemp LoadMaster" and "© 2002-2021 Kemp Technologies Inc. All rights reserved." is displayed. At the bottom right, there is a blue bar with the Kemp logo.

The **Exchange Form** contains the Kemp logo.

Blank Form

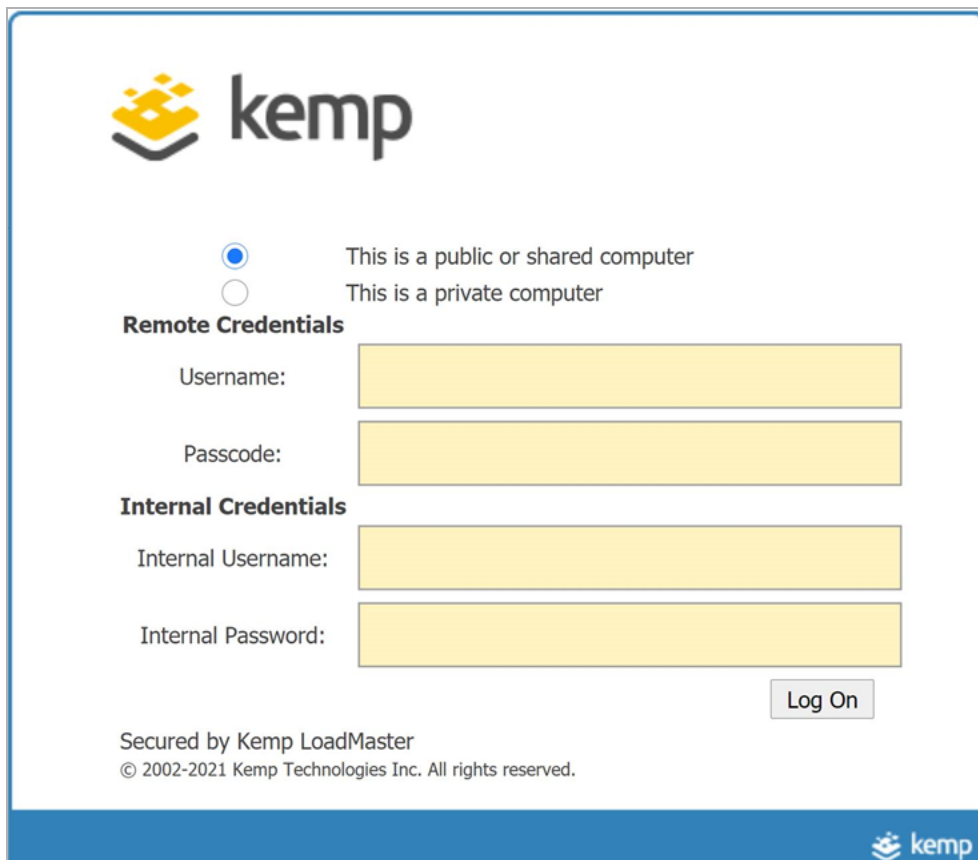
2 Customizing the Login Form



A screenshot of a blank authentication form. It features a light blue border. Inside, there are two yellow input fields: the first is labeled 'Username:' and the second is labeled 'Password:'. To the right of the password field is a grey 'Log On' button. Below the input fields, the text 'Secured by Kemp LoadMaster' and '© 2002-2021 Kemp Technologies Inc. All rights reserved.' is displayed. At the bottom right, there is a blue bar containing the Kemp logo.

The **Blank Form** does not contain the large Kemp logo.

Dual Factor Authentication



A screenshot of a Dual Factor Authentication form. It features a light blue border. At the top left is the large Kemp logo. Below it are two radio buttons: the first is selected and labeled 'This is a public or shared computer', and the second is unselected and labeled 'This is a private computer'. Below the radio buttons is the section header 'Remote Credentials', followed by 'Username:' and a yellow input field, and 'Passcode:' and another yellow input field. Below that is the section header 'Internal Credentials', followed by 'Internal Username:' and a yellow input field, and 'Internal Password:' and another yellow input field. To the right of the password field is a grey 'Log On' button. At the bottom, the text 'Secured by Kemp LoadMaster' and '© 2002-2021 Kemp Technologies Inc. All rights reserved.' is displayed. At the bottom right, there is a blue bar containing the Kemp logo.

The **Dual Factor Authentication** form contains four fields - two for the remote credentials and two for the internal credentials.

Remote Credentials are credentials that are used to authenticate against remote authentication servers such as RADIUS, before allowing the user to authenticate against Domain Servers such as Active Directory servers.

Internal Credentials are credentials that are used to authenticate against the internal domain servers such as Active Directory Servers.

If the **Authentication Protocol** of the relevant **SSO Domain** is set to **RADIUS and LDAP**, the **SSO Image Set** must be set to **Dual Factor Authentication**.

2.2.1 Custom SSO Image Set Guidelines

It is possible to add your own SSO image set to customize the look and feel of the login form. The custom SSO image set must be in the format of a .tar file. Template .tar files are available from the Kemp Documentation site: <https://kemptechnologies.com/loadmaster-documentation/>. There is one template for regular login forms and one for dual factor authentication.

These templates can be modified to gain the desired look and feel. Guidelines on the tar file are below:

- The .tar file should have the following folder structure:

```
imagesets/  
    <IMAGESETNAME>/  
        lm_initial.html  
        lm_logout.html  
        MANIFEST  
        ...
```

When compressing the .tar file, please ensure to compress the **imagesets** folder, not the folder above or beneath it.

- Multiple image sets can be included:
 - imagesets/<IMAGESETNAME_1>/<files>

`</IMAGESETNAME_2></files>`

- The name that you specify as `<IMAGESETNAME_*>` is the name that will appear in the **SSO Image Set** drop-down list in the WUI. This name can contain Unicode characters.

If the name of the custom SSO image set is the same as one of the default SSO image set names, the default one has precedence.

- All image set resources should contain non-encoded characters, that is, ASCII.
- The full list of required files for the image set is as follows:

```
# Default manifest of all files that are part of the logon
# screens.
#ident "$Id: EN-Blank.manifest,v 1.1.2.2 2014/01/30 08:57:05 phil
Exp $ phil"
#
# Format is "filename filetype".
# The first file is the initial login screen
# The second file is the logout screen.
#
lm_initial.html
lm_logout.html
lm_sso.js
espblank.gif
espbottom.gif
favicon.ico
kmgerror.gif
kmgexleft.gif
kmgexlogo.gif
kmgexright.gif
kmgleft.gif
kmgright.gif
kmgstyle.css
|
```

- A file called **MANIFEST** is mandatory. This file should contain a list of files that exist in the directory that should be loaded as part of the set. If the **MANIFEST** file does not exist, the image set will not work. Lines in this file can be commented out by adding # to the start of the line. Blank lines are ignored. The last line of the MANIFEST file must be a new line.

- The first uncommented line should contain the file for the main login page
- The second uncommented line should contain the file for the logout page
- All other files defined in the file, for example image, CSS or Javascript files, can be used by the login and logout pages
- If a listed file is missing, it will simply not be present on the page. For example, if a line in the **MANIFEST** refers to **image.jpg** and that image file is missing from the tar, it will be a broken image on the page.

The logical format of the main login page cannot be changed. If the format is not maintained, problems will occur. The formatting and any CSS can be changed at will.

- A file called **INFO** is read. This is a simple text file which contains a description of the image set and perhaps a version number. The contents of this file are displayed on the admin WUI to help identify which package/version has been installed. For example, this could contain version information.

The **INFO** file is not mandatory. If it does not exist or if it is blank, only the installed date is displayed in the WUI.

- The maximum size restriction on images is approximately 100 MB. This is dependent on the amount of space on /tmp for storing the file as it is being downloaded. There is also an additional limit for how much space is available on the flash (the 512 MB boot partition). Multiple large image sets can cause problems.
- Image file names can be a maximum of 31 characters long.
- The syntax for adding an image to a custom authentication form is as follows:

Replace **URL** with the URL of the image.
Replace **NN** for **width** and **height** with the desired values.
- If a package is installed multiple times, the older packages are overwritten.
- It is the responsibility of the package builder to verify that all components included are valid. A missing file will not be displayed. Broken pages may cause problems.

2.2.2 Uploading a Custom SSO Image Set

To upload the custom SSO image set to the LoadMaster, follow the steps below in the LoadMaster WUI:

1. In the main menu, select **Virtual Services** and **Manage SSO**.
2. Click **Choose File**.
3. Browse to and select the .tar file.
4. Click **Add Custom Image Set**.

After adding the file, the supplied image set(s) is listed on this page. It will also be available to select in the **SSO Image Set** drop-down list in the **ESP Options** section of the Virtual Service modify screen.

2.3 Backing Up and Restoring a Custom SSO Image Set

Any custom SSO image sets that exist on the LoadMaster are contained in any LoadMaster backups that are taken. They are restored when **VS Configuration** is selected when restoring a backup file.

References

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

ESP, Feature Description

Custom SSO Image Set Template

<https://support.kemptechnologies.com/hc/en-us/articles/360048332092>

Last Updated Date

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