Customize End-User Web Portals

End-User Portals

Cisco ISE provides web-based portals for three primary sets of end users:

- Guests who need to temporarily access your enterprise network using the Guest portals (Hotspot and credentialed Guest portals)

- Employees who are designated as sponsors who can create and manage guest accounts using the Sponsor portal.

- Employees who are using their personal devices on the enterprise network using the various non-guest portals such as the Bring Your Own Device (BYOD), Mobile Device Management (MDM), and My Devices portals.

Customization of End-User Web Portals

Cisco provides a number of default portals, and lets you edit, duplicate, and create additional portals. You can also fully customize the portal appearance and, therefore, the portal experience. You can customize each individual portal without affecting other portals.

You can customize various aspects of the portal interface that apply to the entire portal or to specific pages of the portal, such as:

- Themes, images, colors, banners, and footers

- Languages used for displaying portal text, error messages, and notifications

- Titles, content, instructions, and field and button labels

- Notifications sent to guests via email, SMS, and printer (applies only to the Self-Registered Guest and Sponsor portals)

- Error and informational messages displayed to users

- Custom fields to gather guest information specific to your needs (applies only to the Self-Registered Guest and Sponsor portals)

For more information about customizing web portals, see
http://www.cisco.com/c/dam/en/us/td/docs/security/ise/how_to/HowTo-43_ISE_Web_Portal_Customization_Options.pdf.

Figure 1: Portal Page Layout for Customization
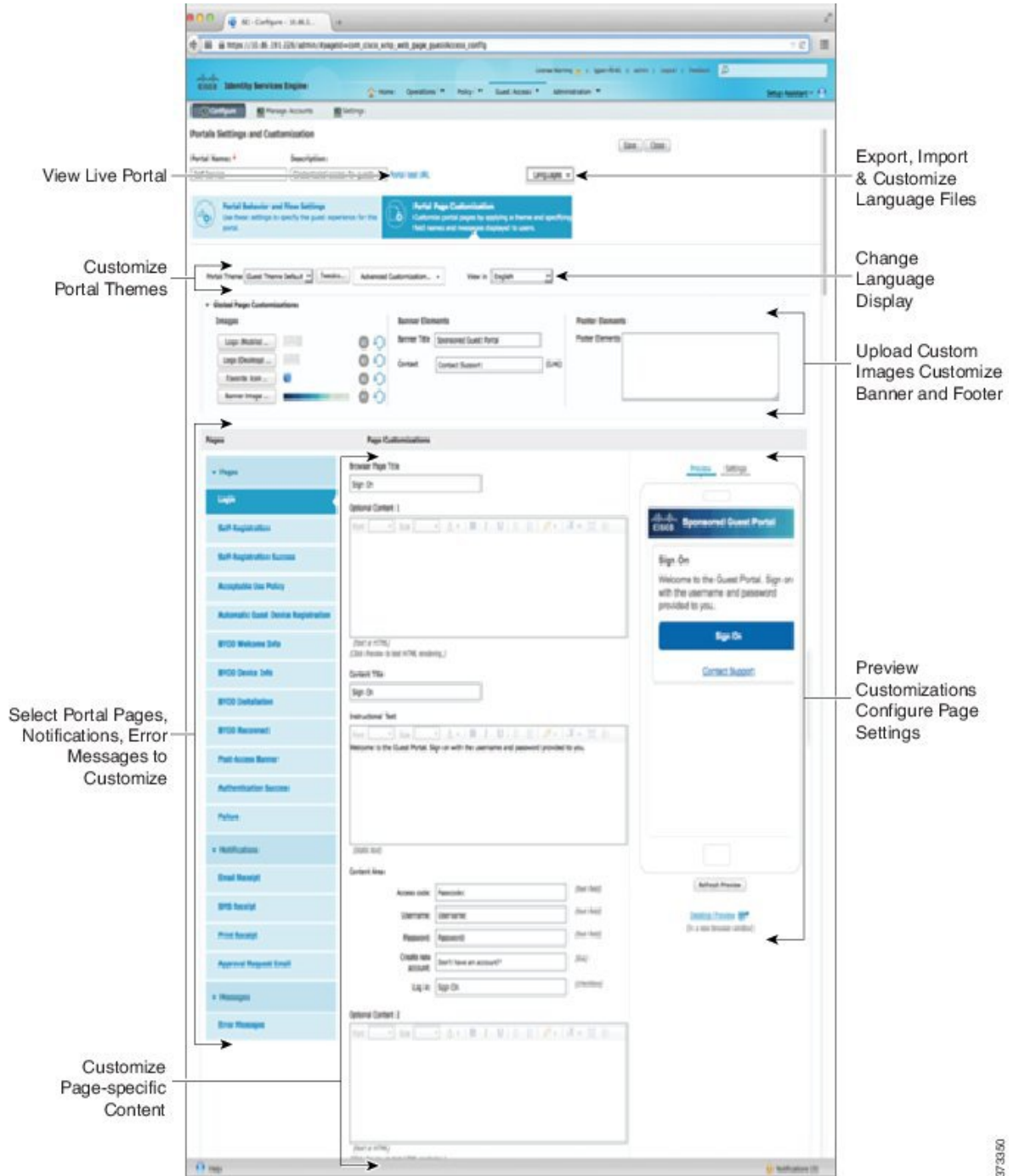
Customization Methods

There are several different ways to customize the end-user portals pages, which require different levels of knowledge.

- Basic: All modifications are done on the portal Customization page, where you can:
  - Upload banners and logos.
  - Change some colors (except for buttons).
  - Change the text on the screens, and the language used on the entire portal.

- Intermediate
  - Use the mini-editor to add HTML and Javascript.
  - Use the jquery mobile theme roller to change the color of all page elements.

- Advanced
  - Manually modify properties and CSS files.

After you customize your portal, you can create multiple portals (of the same type) by duplicating it. For example, if you customized your Hotspot Guest portal for one business entity, you can duplicate it and make minor changes to create custom Hotspot Guest portals for other business entities.

Tips for Customizing Portals with the Mini Editors

- Long words in a mini-editor box may scroll off the screen area of the portal. To prevent this, us e the HTML paragraph attribute style="word-wrap: break-word". For example:

```
<p style="word-wrap:break-word">

thisisaverylonglineoftextthatwillexceedthewidthoftheplacethatyouwanttoputitsousethisstructure

</p>
```

- When you use HTML or javascript to customize portal pages, make sure you use valid syntax. The tags and code that you enter into a mini-editor is not validated by ISE. Invalid sytax may cause problems during the portal flow.

Portal Themes, Images, and Banners

Cisco ISE provides a default set of portal themes that you can use "as is" or customize by using the existing CSS files as models to create new custom files. However, you can alter the appearance of the portals without using customized CSS files.

For instance, if you want to use unique corporate logos and banner images, you can simply upload and use these new image files. You can customize the default color scheme by changing the color of the different elements and areas of the portals. You can even choose the language in which you want to view the custom changes as you make them.

When you design images to replace the logos and banner, make the images as close to the following pixel size as you can:

Banner	1724 X 133

Desktop Logo	86 X 45
Mobile Logo	80 X 35

Note that ISE will resize the images to fit the portal, but images that are too small may not look right after resizing.

If you want to perform advanced customization, such as change the page layout or add video clips or advertisements to your portal pages, you can use your own custom CSS files.

These types of changes within a specific portal are applied globally to all the pages of that portal. Changes to the page layout can be applied either globally or to just one specific page in the portal.

Portal Page Titles, Content, and Labels

You can customize the titles, text boxes, instructions, field and button labels, and other visual elements that the guest views on the end-user web portal pages. While you are customizing the page, you can even edit the page settings on the fly.

These changes are applied only to the specific page that you are customizing.

Basic Customization of Portals

Select a predefined theme that best suits your needs, and use most of its default settings. You can then do some basic customization, such as:

- Modify the Portal Theme Colors, on page 5
- Change the Portal Icons, Images, and Logos, on page 7
- Update the Portal Banner and Footer Elements, on page 7
- Change the Portal Display Language, on page 6
- Change the Titles, Instructions, Buttons, and Label Text, on page 8
- Format and Style Text Box Content, on page 8

Tip You can View Your Customization, on page 9 as you make the updates.

Modify the Portal Theme Colors

You can customize the default color scheme in the default portal themes and change the color of the different elements and areas of the portals. These changes apply to the entire portal that you are customizing.

If you plan to change the portal colors, be aware of the following:

• You cannot use this option to change the color scheme in any of the custom portal themes that you may have imported for use with this portal. You must edit the custom theme CSS file to change its color settings.

• After changing the colors in a portal theme, if you select another portal theme from the **Portal Theme** drop-down menu, the changes are lost in the original portal theme and it reverts to its default colors.

• If you tweak the colors of a portal theme with an already modified color scheme and then reset its colors before saving it, the color scheme reverts to its default colors and any previous modifications are lost.

Step 1   Navigate to these portals:

• For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

• For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

• For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   Select one of the default themes from the **Portal Theme** drop-down list.

Step 3   Click **Tweaks** to override some of the color settings in the selected default portal theme.

a) Change the color settings for the banner and page backgrounds, text, and labels.

b) If you want to revert to the theme's default color scheme, click **Reset Colors**.

c) Click **OK** if you want to view the color changes in **Preview**.

Step 4   Click **Save**.

Change the Portal Display Language

You can choose the language in which you want to view the custom changes as you make them. This change applies to the entire portal that you are customizing.

Step 1   Navigate to these portals:

• For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization** > **Global Customization**.

• For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization** > **Global Customization**.

• For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization** > **Global Customization**.

Step 2   From the **View In** drop-down list, choose the language in which you want to view the text while customizing the page. The drop-down list includes all languages in the language file associated with the specific portal.

What to Do Next

Make sure that you update any changes made in the selected language while customizing the portal page into all the supported language properties files.

Change the Portal Icons, Images, and Logos

If you want to use unique corporate logos, icons, and banner images, you can simply replace the existing images by uploading your custom images. Supported image formats include .gif, .jpg, .jpeg, and .png. These changes apply to the entire portal that you are customizing.

Before You Begin

To include images in the footer of the portal, for instance in an advertisement, you should be able to access an external server that has these images.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.
- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.
- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2 Under **Images**, click any of the logos, icons, and image buttons and upload your custom images.

Step 3 Click **Save**.

Update the Portal Banner and Footer Elements

You can customize the information that appears in the banner and footer sections of every page in the portal. These changes apply to the entire portal that you are customizing.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.
- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   Change the **Banner title** that appears on every portal page.

Step 3   Include these links for the guests who use your portals:

- **Help**—Online help (provided for only the Sponsor and My Devices portals).

- **Contact**—Technical support (set up the Support Information page to enable this).

Step 4   Add a disclaimer or a copyright notice in the **Footer Elements** to appear on the bottom of every portal page.

Step 5   Click **Save**.

Change the Titles, Instructions, Buttons, and Label Text

You can update all the text that is displayed in the portal. Each UI element on the page that you are customizing has a minimum and maximum range for the number of characters that you can enter. When available in some of the text blocks, you can use a mini-editor to apply visual styling to the text. These changes apply only to the specific portal page you are customizing. These page elements are different for email, SMS, and print notifications.

Step 1   Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   Under **Pages**, choose the page that you want to change.

Step 3   Under **Page Customizations**, update any of the displayed UI elements. All pages contain **Browser Page Title**, **Content Title**, **Instructional Text**, **Content**, and two **Optional Content** text blocks. The fields in the **Content** area are specific to each page.

Format and Style Text Box Content

Use the mini-editor that is available in the **Instructional Text**, **Optional Content 1**, and **Optional Content 2** text boxes to do basic formatting of the text. These changes apply only to the specific portal pages that you are customizing.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2 Under **Pages**, choose the page that you want to change.

Step 3 Under **Page Customizations**, in the **Instructional Text** and **Optional Content** text blocks, you can:

- Change the font, size, and color of the text.

- Style the text as bold, italics, or underlined.

- Create bulleted and numbered lists.

You can also use the **Toggle HTML Source** button to view the HTML tags that were applied to the text that you formatted using the mini-editor.

View Your Customization

You can view how your customization will display to the portal users (guests, sponsors, or employees).

- Click **Portal test URL** to view your changes.

Note The test portal does not support Radius sessions, so you won't see the entire portal flow for all portals. BYOD and Client Provisioning are examples of portals that depend on Radius sessions.

- Click **Preview** to dynamically view how your changes appear on various devices:

  ◦ Mobile devices—View your changes under **Preview**.

  ◦ Desktop devices—Click **Preview** and then **Desktop Preview**. A new tab opens, and all the changes that you make are displayed on this tab.

  If the changes are not displayed, click **Refresh Preview**. The portal displayed is only meant for viewing your changes; you cannot click buttons or enter data.

Custom File Upload

The custom file upload menu lets you upload your own files to the ISE server, which you can use to customize Guest and BYOD portals. The files you upload will be stored on the PSN, and synchronized on all PSNs.

Supported file types are:

- .png, .gif, .jpg, .jpeg - For backgrounds, announcements, advertisements
- .htm, .html, .js, .json - For advanced customization, for example, the portal builder

File sizes are limited to:

- 20 MB per file
- 200 MB total of all files

Uploaded files can be referenced by all portal types, except the admin portal, in the mini-editors under portal page customization. Toggle to the HTML Source view, and create an href to an uploaded file. The path column displays the link to the file, which you can paste into the mini-editor. If the file is an image, when you click the link, it opens a new window that displays the image.

Advanced Customization of Portals

If you do not want to use one of the default portal themes provided by Cisco ISE, you can customize the portal to suit your needs. To do so, you should have experience working with CSS and Javascript files and the jQuery Mobile ThemeRoller application.

You are not allowed to alter the default portal themes, but you can:

- Export a Portal's Default Theme CSS File, on page 15, and use it as a base for creating a custom portal theme.
- Create a Custom Portal Theme CSS File, on page 16, by editing the default portal theme and saving it as a new file.
- Import the Custom Portal Theme CSS File, on page 27, and apply it to the portal.

Based on the extent of your expertise and requirements, you can perform various types of advanced customization, such as use predefined variables to enable consistency in displayed information, add advertisements to your portal pages, use HTML, CSS and Javascript code to customize your content, and modify the portal page layout.

Configure Portal Customization

Cisco ISE offers you the ability to customize the content that displays on your end-user portals using HTML and Javascript code in the text boxes on the different pages listed under **Portal Page Customization**.

Step 1 Choose **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization**.

Step 2 Verify that **Enable portal customization with HTML** is checked by default. This setting enables you to include HTML tags in the **Instructional Text**, **Optional Content 1** and **Optional Content 2** text boxes.

Step 3 Check **Enable portal customization with HTML and Javascript** if you want to do advanced JavaScript customization by including <script> tags in the **Instructional Text**, **Optional Content 1** and **Optional Content 2** text boxes.

What to Do Next

You can then access the various portals and enter HTML and Javascript code in the text boxes based on the option you enabled here.

Portal Theme and Structure CSS Files

If you have experience with working with CSS files, you can customize the default portal theme CSS files to alter the portal presentation and manipulate elements such as the page layout, colors, and fonts. Customizing the CSS files provides you with flexibility and control in specifying the presentation characteristics, it enables you to share formatting across multiple pages, and it reduces the complexity and repetition in the structural content.

Cisco ISE end-user portals use two distinct types of CSS files: structure.css and *theme*.css. Every portal theme has its own *theme*.css file, but there is only one structure.css file per portal type; for example guest.structure.css for Guest portals, sponsor.structure.css for Sponsor Portals, and mydevices.structure.css for My Devices portals.

The structure.css provides the styling for the page layout and structure. It defines the positioning of elements on each page and also includes jQuery Mobile structure styles. You can only view the structure.css file, but you cannot edit it. However, when you change the page layout within *theme*.css files, import these files into the portal, and apply them, the most recent changes take priority over the structure.css styles.

The *theme*.css files specify styles such as fonts, button colors, and header background. You can export the *theme*.css files, change the theme settings, and import them to use as custom themes for your portal. Any page layout style changes made to the *theme*.css files take priority over the styles that are defined in the structure.css file.

You cannot alter any of the Cisco provided default portal *theme*.css files. However, you can edit the settings in the files and save them to a new custom *theme*.css*theme*.css file. You can make further edits to the custom *theme*.css file, but when you import it back into Cisco ISE, remember to use the same theme name you originally used for it. You cannot use two different theme names for the same *theme*.css file.

For example, you can use a default *green theme.css* file to create a new custom *blue theme.css* file and name it as *Blue*. You can then edit the *blue theme.css* file, but when you import it again, you must reuse the same *Blue* theme name. You cannot call it *Red*, since Cisco ISE checks for the relationship between a filename and its name and the uniqueness of the theme's name. You can however edit the *blue theme.css* file, save it as *red theme.css*, import the new file, and name it as *Red*.

About Changing Theme Colors with jQuery Mobile

The color scheme of Cisco's end-user portals is compatible with jQuery ThemeRoller. You can easily edit the colors for an entire portal using the ThemeRoller web site.

ThemeRoller color "swatches" each contain a unique color scheme, which defines the colors, textures, and font settings for the primary UI elements, such as toolbars, content blocks, buttons, list items, and font text-shadow. A color scheme also defines the settings for various interaction states of the buttons: normal, hover, and pressed.

Cisco uses three swatches:

- Swatch A—The default swatch.

- Swatch B—Defines emphasized elements, such as an **Accept** button.

- Swatch C—Defines critical elements such as alerts, error messages, invalid input fields, and delete buttons.

You cannot apply additional swatches, unless you add HTML code (to the Optional Content, for example) with elements that use the newly added swatches.

To edit the default Cisco-provided CSS files or create new files based on the CSS classes and structures defined in the default themes, use the required version of jQuery Mobile ThemeRoller (Release 1.3.2).

For additional information on swatches and themes in jQuery Mobile ThemeRoller, see "Theming Overview" in Creating a Custom Theme with ThemeRoller. Use the online help in jQuery Mobile ThemeRoller to learn how to download, import, and share your custom themes.

For tutorials on how to use HTML, CSS, and Javascript code to customize the text and content that appears on your portal pages, visit Code Academy.

Example of a Theme That Shows Cisco Swatches

To demonstrate how swatches are used, the default theme for the Guest Portal was edited in ThemeRoller to show the differences in color.
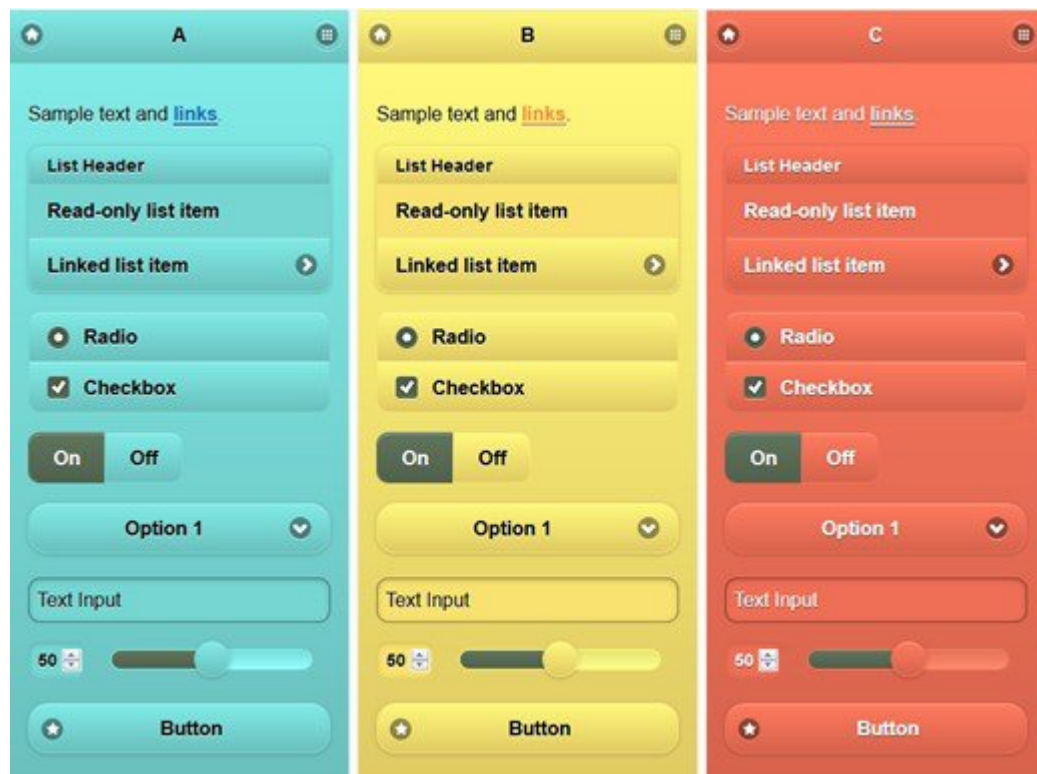
The following screen shows a guest portal logon error (swatch C) along with a button that takes an action from the user (swatch B), and the rest of the screen is Swatch A.
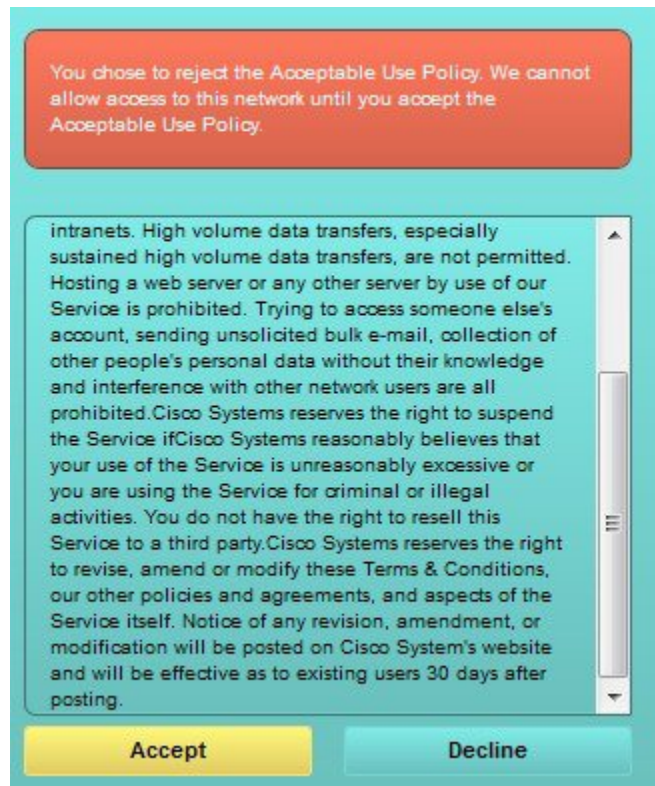
## Change Theme Colors with jQuery Mobile

Before You Begin

Make sure you are using version 1.3.2 of jQuery Mobile ThemeRoller. The version you are using is displayed in the top-left corner of the screen, as shown below.

Step 1 Export an existing them from the portal you wish to change by clicking the **Configuration** tab on the portal, then **Advanced Customization** > **Export/Import Themes**.

Step 2 In the Custom Theming dialog, export the theme you want to update.

Step 3 Open that theme in a text editor, select all, and copy.

Step 4 Paste that text (CSS) into the jQuery web site's Import Theme box.

Step 5 Make your changes in the jQuery Mobil web-based application.

Step 6 Export the updated theme from the jQuery website (the export format is ZIP).

Step 7 Unzip the updated theme, and extract the updated theme in themes folder to your PC. The name of the theme is the one you provided on the jQuery website.

Step 8 Import the extracted CSS theme file into your portal in the portal configuration page's Custom Theming dialog.
You can switch back and forth between the old theme and the new theme by clicking the Portal Theme drop-down on the portal configuration page.
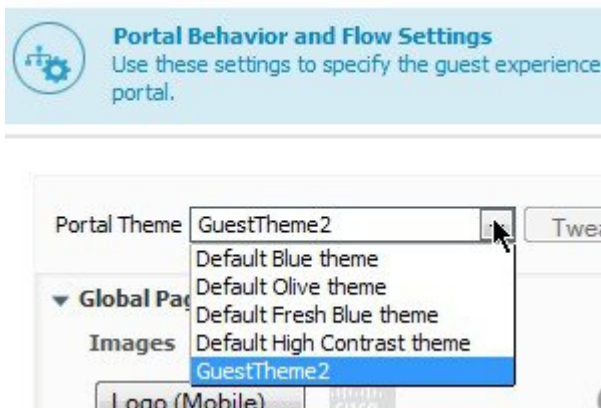
Location Based Customization

When guest accounts are created, you can associate them with a location and specify a Service Set Identifier (SSID) attribute. Both the location and SSID are available as CSS classes that you can use to apply different CSS styles to portal pages, based on the guest's location and SSID.

Note This information applies only to the credentialed Guest portals after the guests log in.

For example:

- Guest location—When guests with accounts that have *San Jose* or *Boston* as their locations log into a credentialed Guest portal, one of these classes is available on every portal page: **guest-location-san-jose** or **guest-location-boston**.

- Guest SSID—For an SSID named *Coffee Shop Wireless*, the following CSS class is available on every portal page: **guest-ssid-coffee-shop-wireless**. This SSID is the one you specified on the guest account and not the SSID that the guests connected to when they logged in.

You can also specify locations when you add devices such as switches and Wireless LAN Controllers (WLCs) to a network. This location is also available as a CSS class that you can use to apply different CSS styles to portal pages depending on the network device's location.

For example, if a WLC is assigned to *Seattle* and guests are redirected to Cisco ISE from the Seattle-WLC, the following CSS class is available on every portal page: **device-location-my-locations-usa-seattle**.

User Device Type Based Customization

Cisco ISE detects the type of client device used by users (guest, sponsor, or employee) to access your company's network or end-user web portals (Guest, Sponsor, and Device). It is detected either as a mobile device (Android, iOS and so on) or a desktop device (Windows, MacOS and so on). The device type is available as a CSS class that you can use to apply different CSS styles to portal pages based on the user's device type.

When a user logs into any of the Cisco ISE end-user web portals, the following class is available on their portal pages: **cisco-ise-mobile** or **cisco-ise-desktop**.

Export a Portal's Default Theme CSS File

You can download a default portal theme provided by Cisco and customize it to suit your needs. You can use it as a base for performing advanced customization.

Step 1   Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization** > **Pages**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization** > **Pages**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization** > **Pages**.

Step 2   From the **Advanced Customization** drop-down list, choose **Export/Import Themes**.

Step 3   In the **Custom Theming** dialog box, use the drop-down list to select the theme that you want to customize.

Step 4   Click **Export Theme CSS** to download a default *theme.css* file to customize.

Step 5   Click **Save** to save the file to your desktop.

Create a Custom Portal Theme CSS File

You can create a custom portal theme by customizing an existing default portal theme and saving the changes in a new portal *theme*.css file. You can modify the default theme settings and the swatches to make global changes to the selected portal.

Before You Begin

- You should download to your desktop the *theme*.css file from the portal that you want to customize.

- You should have experience working with HTML, CSS, and Javascript code.

- You should have access to jQuery Mobile ThemeRoller, Release 1.3.2.

Step 1   Import the downloaded portal *theme*.css file contents into the jQuery Mobile ThemeRoller tool.

   Tip   You can View Your Customization, on page 28 as you make your changes.

Step 2   (Optional) Embed Links in Portal Content, on page 16

Step 3   (Optional) Insert Variables for Dynamic Text Updates, on page 17

Step 4   (Optional) Use Source Code to Format Text and Include Links, on page 18

Step 5   (Optional) Add an Image as an Advertisement, on page 19

Step 6   (Optional) Customize Greetings Based on Guest Location, on page 22

Step 7   (Optional) Customize Greetings Based on User Device Type, on page 23

Step 8   (Optional) Set Up Carousel Advertising, on page 20

Step 9   (Optional) Modify the Portal Page Layout, on page 24

Step 10   Save the customized file as a new *theme*.css file.

   Note   You cannot save the edits to the default CSS theme files. You can only create new custom files with any edits you have made.

Step 11   When your new *theme*.css file is ready, you can import it into Cisco ISE.

Embed Links in Portal Content

You can add links to enable guests to access various websites from the portal pages. These changes apply only to the specific portal page that you are customizing.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Step 1   Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

• For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   Under **Pages**, choose the page that you want to update.

Step 3   Under **Page Customizations**, use the mini-editor provided with the **Optional Content** text blocks to add links to portal pages.

Step 4   Click the **Create Link** button.
A **Link Properties** dialog box displays.

Step 5   Enter the **URL** and the text you want to hyperlink in the **Description** window for the URL.
For the link to work correctly, include the protocol identifier in the URL. For example, use http://www.cisco.com instead of www.cisco.com.

Step 6   Click **Set** and then **Save**.
You can use the **Toggle HTML Source** button to view the HTML tags that were applied to the text that you formatted using the mini-editor.

Insert Variables for Dynamic Text Updates

You can also create templates for text displayed on the portal by substituting predefined variables ($variable$) that dynamically update the content. This enables consistency in the text and information that you display to guests. These changes apply only to the specific portal pages that you are customizing.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Step 1   Navigate to these portals:

• For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

• For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

• For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   Under **Pages**, choose the page you want to update.

Step 3   Under **Page Customizations**, use the mini-editor provided with the **Instructional Text**, **Optional Content 1**, and **Optional Content 2** text boxes to create text templates for the portal pages.
For example, you can create a single welcome message template for multiple guests, but personalize the message that displays to the guests after they successfully log in and connect to the network.

Step 4   Enter the information in the text boxes as you normally would.
For example, you could enter a welcome message for your portal:
```
Welcome to our company's Guest portal,
```

Step 5   At the point where you want to substitute a variable for the text, click the **Insert Variable** button.
A list of variables appears in the pop-up menu.

Step 6   Select the variable that you want to substitute in your text.

In this example, choose **First name** to display each guest's first name in the welcome message. The variable **ui_first_name** is inserted at your cursor position:

```
Welcome to our company's Guest portal,$ui_first_name$.
```

This is the welcome message that would appear on the portal welcome page for guests whose first name is John: **Welcome to our company's Guest portal, John**.

Step 7 Continue to use the list of variables as needed until you have completed entering the information in the text boxes.

Step 8 Click **Save**.
You can use the **Toggle HTML Source** button to view the HTML tags that were applied to the text that you formatted using the mini-editor.

Use Source Code to Format Text and Include Links

Besides using the mini-editor's formatting and link icons with plain text, you can also use HTML, CSS and Javascript code to customize text that displays on the portal pages. These changes apply only to the specific portal pages that you are customizing.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Before You Begin

Ensure that **Enable portal customization with HTML** is enabled by default in **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization**.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2 Under **Pages**, choose the page that you want to update.

Step 3 Under **Page Customizations**, use the mini-editor provided with the **Instructional Text**, **Optional Content 1**, and **Optional Content 2** text boxes to enter and view source code.

Step 4 Click the **Toggle HTML Source** button.

Step 5 Enter your source code.
For example, to underline your text, enter:

```
<p style="text-decoration:underline;">Welcome to Cisco!</p>
```

For example, to include a link using HTML code, enter:

```
<a href="http://www.cisco.com">Cisco</a>
```

Important When inserting an external URL in the HTML code, make sure that you enter the absolute (entire) URL path, including "http" or "https".

Step 6 Click **Save**.

Add an Image as an Advertisement

You can include images and advertisements to appear in specific areas of the portal pages.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Before You Begin

Ensure that **Enable portal customization with HTML** is enabled in **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization**.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2 Under **Pages**, choose the page that you want to update.

Step 3 Under **Page Customizations**, use the mini-editor provided with the **Instructional Text**, **Optional Content 1**, and **Optional Content 2** text boxes to enter and view source code.

Step 4 Click the **Toggle HTML Source** button.

Step 5 Enter your source code.
For example, to include a product advertisement and its image using HTML code on the Hotspot Guest portal post-access banner, enter this code in the **Optional Content 1** text box on the **Post-Access Banner** page:

```
<p style="text-decoration:underline;">Optimized for 10/40/100 Campus Services!</p>
<img  src="http://www.static-cisco.com/assets/prod/root/catalyst_6800.jpg" width="100%" />
```

Note　　　When inserting an external URL in the HTML code, make sure that you enter the absolute (entire) URL path, including "http" or "https".

Figure 2: Sample Image for an Advertisement
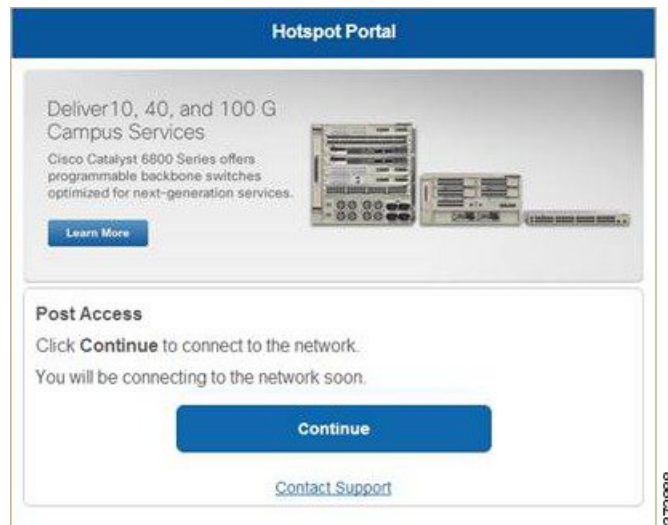
Step 6　　　Click **Save**.

Set Up Carousel Advertising

Carousel advertising is an advertisement format in which several product images or text descriptions are displayed and rotate in a repeating loop within a banner. Use carousel advertising on your guest portals to promote several related products or a variety of different products offered by your company.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Before You Begin

Choose **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization** and check **Enable portal customization with HTML and Javascript**.

Step 1　　　Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

• For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2 Under **Pages**, choose the page that you want to update.

Step 3 Under **Page Customizations**, use the mini-editor provided with the **Instructional Text**, **Optional Content 1**, and **Optional Content 2** text boxes to enter and view source code.

Step 4 Click the **Toggle HTML Source** button.

Step 5 Enter your source code.

For example, to implement carousel advertising using product images on the Guest portals, enter the following HTML and Javascript code in the **Optional Content 1** text box on the Post-Access Banner (for Hotspot portals) or Post Login Banner (for credentialed Guest portals) pages:

```
<script>
var currentIndex = 0;
setInterval(changeBanner, 5000);

function changeBanner(){
var bannersArray = ["<img src='http://www.cisco.com/c/en/us/products/routers/index/_jcr_content/
content_parsys/overview/layout-overview/gd12v2/gd12v2-left/n21v1_cq/
n21v1DrawerContainer.img.jpg/1379452035953.jpg' width='100%'/>",
"<img src='http://www.cisco.com/c/en/us/products/routers/index/_jcr_content/
content_parsys/overview/layout-overview/gd12v2/gd12v2-left/n21v1_cq_0/
n21v1DrawerContainer.img.jpg/1400748629549.jpg' width='100%' />",
"<img src='http://www.cisco.com/c/en/us/products/routers/index/_jcr_content/
content_parsys/overview/layout-overview/gd12v2/gd12v2-left/n21v1_cq_1/
n21v1DrawerContainer.img.jpg/1376556883237.jpg' width='100%'/>"

];
  var div = document.getElementById("image-ads");
  if(div){
     currentIndex = (currentIndex<2) ? (currentIndex+1) : 0;
      div.innerHTML = bannersArray[currentIndex];
   }
}
</script>
<style>
.grey{
color: black;
background-color: lightgrey;
}
</style>
<div class="grey" id="image-ads">
<img src='http://www.cisco.com/c/en/us/products/routers/index/_jcr_content/
content_parsys/overview/layout- overview/gd12v2/gd12v2-left/n21v1_cq/
n21v1DrawerContainer.img.jpg/1379452035953.jpg'/>
</div>
```

For example, to implement carousel advertising using text product descriptions on the Guest portals, enter the following HTML and Javascript code in the **Optional Content 2** text box on the Post-Access Banner (for Hotspot portals) or Post Login Banner (for credentialed Guest portals) pages:

```
<script>
```

```
var currentIndex = 0;
setInterval(changeBanner, 2000);

function changeBanner(){
var bannersArray = ["Optimize branch services on a single platform while delivering an optimal
application experience across branch and WAN infrastructure", "Transform your Network Edge to
deliver high-performance, highly secure, and reliable services to unite campus, data center,
and branch networks",  "Differentiate your service portfolio and increase revenues by delivering
end-to-end scalable solutions and subscriber-aware services"];

var colorsArray = ["grey", "blue",  "green"];
  var div = document.getElementById("text-ads");
  if(div){
     currentIndex = (currentIndex<2) ? (currentIndex+1) : 0;
      div.innerHTML = bannersArray[currentIndex];
              div.className = colorsArray[currentIndex];
   }
}
</script>
<style>
.grey{
color: black;
background-color: lightgrey;
}
.blue{
color: black;
background-color: lightblue;
}
.green{
color: black;
background-color: lightgreen;
}
</style>
<div class="grey" id="text-ads">
Optimize branch services on a single platform while delivering an optimal application
experience across branch and WAN infrastructure
</div>
```

Note   When inserting an external URL in the HTML code, you must enter the absolute (entire) URL path, including "http" or "https".

Step 6   Click **Save**.

Customize Greetings Based on Guest Location

This example shows how to customize the successful login message that your guests see after they log into a credentialed Guest portal (not Hotspot), based on the locations configured in their guest type.

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Step 1   Navigate to one of these portals:

  • For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

  • For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

Step 2   Under **Pages**, choose the **Authentication Success** page.

Step 3   Under **Page Customizations**, use the mini-editor provided with the **Optional Content 1** text box to enter and view HTML source code.

Step 4   Click the **Toggle HTML Source** button.

Step 5   Enter your source code.
For example, to include a location-based greeting, enter this code in the **Optional Content 1**:

```
<style>
    .custom-greeting {
        display: none;
    }
    .guest-location-san-jose .custom-san-jose-greeting {
        display: block;
    }
    .guest-location-boston .custom-boston-greeting {
        display: block;
    }
</style>
<div class="custom-greeting custom-san-jose-greeting">
    Welcome to The Golden State!
</div>
<div class="custom-greeting custom-boston-greeting">
    Welcome to The Bay State!
</div>
```
Guests will see a different message after successful logon, depending on their specific location.

Customize Greetings Based on User Device Type

You can customize the greetings that you send to your users (guest, sponsor, or employee) after they log into any of the Cisco ISE end-user web portals (Guest, Sponsor and Device), based on their client device type (mobile or desktop).

Use the **Toggle Full Screen** button to increase and decrease the size of the text boxes as you work in them.

Step 1   Navigate to these portals:

  • For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

  • For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   Under **Pages**, choose the page that you want to update.

Step 3   Under **Page Customizations**, use the mini-editor provided with the **Optional Content 1** text box to enter and view HTML source code.

Step 4   Click the **Toggle HTML Source** button.

Step 5   Enter your source code.
For example, to include a device type-based greeting on the AUP page, enter this code in the **Optional Content 1** text box on the AUP page:

```
<style>
    .custom-greeting {
        display: none;
    }
    .cisco-ise-desktop .custom-desktop-greeting {
        display: block;
    }
    .cisco-ise-mobile .custom-mobile-greeting {
        display: block;
    }
</style>
<div class="custom-greeting custom-mobile-greeting">
    Try our New Dark French Roast! Perfect on the Go!
</div>
<div class="custom-greeting custom-desktop-greeting">
    We brough back our Triple Chocolate Muffin!
    Grab a seat and dig in!
</div>
```

Users will see a different greeting on the AUP page depending on the type of device they used to gain access to the network or portal.

Modify the Portal Page Layout

You can manipulate the overall layout of the pages; for example, you can add a sidebar to an AUP page that provides additional information or links to information.

Step 1   Add the following CSS code to the bottom of the custom *theme*.css file that you create and plan to apply to your portal. This changes the AUP page layout so that the **Optional Content 1** text box appears as:

- A side bar in the desktop device mode

- A sidebar in the mobile device mode

```
#page-aup .cisco-ise-optional-content-1 {
        margin-bottom: 5px;
}
```

```
@media all and ( min-width: 60em ) {
        #page-aup .cisco-ise-optional-content-1 {
                float: left;
                margin-right: 5px;
                width: 150px;
        }
        #page-aup .cisco-ise-main-content {
                float: left;
                width: 800px;
        }
        #page-aup .cisco-ise-main-content h1,
        #page-aup .cisco-ise-main-content p {
                margin-right: auto;
                margin-left: -200px;
        }
}
```

You can then add links using HTML code in the **Optional Content 1** text box for the AUP page for that portal.

Step 2 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 3 Under **Pages**, choose the page for which you want to include a side bar.

Step 4 Under **Page Customizations**, use the mini-editor provided with the **Optional Content 1** text box to enter and view source code.

Step 5 Click the **Toggle HTML Source** button.

Step 6 Enter your source code.

For example, to include a side bar for the AUP page, enter this code in the **Optional Content 1** text box on the AUP page:
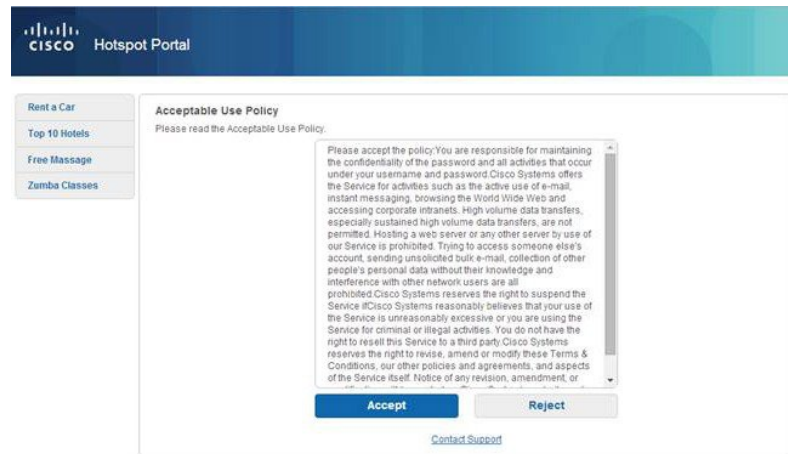
```
<ul data-role="listview">
    <li>Rent a Car</li>
    <li>Top 10 Hotels</li>
    <li>Free Massage</li>
```
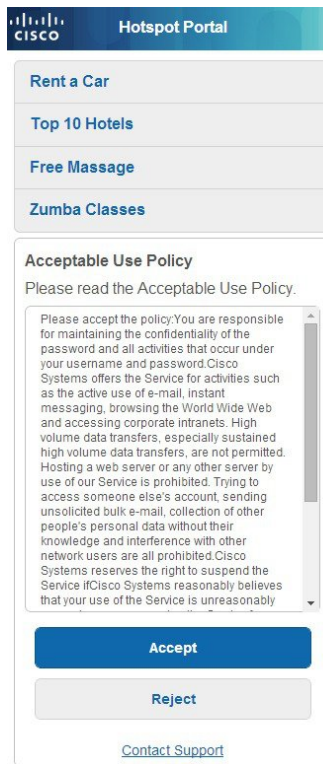
```
    <li>Zumba Classes</li>
</ul>
```

Figure 3: View of a Side Bar on a Sample AUP Page (on a Desktop Device)

Figure 4: View of a Side Bar on a Sample AUP Page (on a Mobile Device)

Step 7   Click **Save**.

What to Do Next

You can customize other pages by entering different text or HTML code in the **Optional Content** text boxes.

Import the Custom Portal Theme CSS File

You can upload any custom *theme*.css file that you have created and apply it to any of your end-user portals. These changes apply to the entire portal that you are customizing.

Any time you edit a custom *theme*.css file and import it back into Cisco ISE, remember to use the same theme name you originally used for it. You cannot use two different theme names for the same *theme*.css file.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2 From the **Advanced Customization** drop-down list, choose **Export/Import Themes**.

Step 3 In the **Custom Theming** dialog box, click **Browse** to find your new *theme*.css file.

Step 4 Enter a **Theme Name** for the new file.

Step 5 Click **Save**.

What to Do Next

You can apply this custom portal theme to the portal that you want to customize.

1 Choose the updated theme from the **Portal Themes** drop-down list to apply to the entire portal.

2 Click **Save**.

Delete a Custom Portal Theme

You can delete any custom portal theme that you have imported into Cisco ISE, unless it is being used by one of your portals. You cannot delete any of the default themes provided by Cisco ISE.

Before You Begin

The portal theme that you want to delete should not be used by any of the portals.

Step 1 Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customization**.

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization**.

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** > **Portal Page Customization**.

Step 2   From the **Advanced Customization** drop-down list, choose **Delete Themes**.

Step 3   Select the portal theme that you want to delete from the **Theme Name** drop-down list.

Step 4   Click **Delete** and then **Save**.

View Your Customization

You can view how your customization will display to the portal users (guests, sponsors, or employees).

- Click **Portal test URL** to view your changes.

Note   The test portal does not support Radius sessions, so you won't see the entire portal flow for all portals. BYOD and Client Provisioning are examples of portals that depend on Radius sessions.

- Click **Preview** to dynamically view how your changes appear on various devices:

   ◦ Mobile devices—View your changes under **Preview**.

   ◦ Desktop devices—Click **Preview** and then **Desktop Preview**. A new tab opens, and all the changes that you make are displayed on this tab.

   If the changes are not displayed, click **Refresh Preview**. The portal displayed is only meant for viewing your changes; you cannot click buttons or enter data.

Customization of a Portal Language File

By default, each portal type supports 15 languages that you can use to display text to guests using the portal. These languages are available as individual property files bundled together in a single zipped language file. Including all the supported languages in a single language file lets you easily use it for customization, translation, and localization purposes.

The language file also contains the mapping to the particular browser locale setting (for example, for French: fr, fr-fr, fr-ca) along with all of the string settings for the entire portal in that language. If you change the browser locale setting for one language, the change is applied to all the other end-user web portals. For example, if you change the French.properties browser locale from fr,fr-fr,fr-ca to fr,fr-fr in the Hotspot Guest portal, the change is applied to the My Devices portal also.

You can export the zipped language file and make updates to it, including adding new languages or deleting existing ones you do not need.

Export the Language File

You can export the language file available for each portal type to edit and customize the existing values specified in it, and add or delete a language.

Note   Only some of the dictionary keys in the language properties files support HTML in their values (text).

Step 1   Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** .

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** .

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** .

Step 2   Click **Language File** and choose **Export** from the drop-down list.

Step 3   Save the zipped language file to your desktop, for example: Hotspot.zip, Self-Registered.zip, and so on.

Add or Delete Languages from the Language File

If a language you want to use for your portal type is missing from the language file, you can create a new language properties file and add it to the zipped language file. If there are languages you do not need, you can delete their language properties files.

Before You Begin

You must export the zipped language file available with each portal type in order to add or delete language properties files.

Step 1   Use any editor that displays UTF-8 (such as Notepad ++) to open the predefined language file for the portal type to which you want to add or delete languages.
If you want to add or delete languages for more than one portal type, you should use all the appropriate portal properties files.

Step 2   To add a new language, save an existing language properties file as the new language properties file using the same naming convention of the other files in the zipped language file. For example, to create a new Japanese language properties file, save the file as Japanese.properties (*LanguageName*.properties).

Step 3   Associate the new language with its browser locale by specifying the browser local value in the first line of the new language properties file. For example, LocaleKeys= ja,ja-jp (LocaleKeys=*browser locale value*) should be the first line in the Japanese.properties file.

Step 4   Update all the values (text) of the dictionary keys in the new language properties file.
You cannot change the dictionary keys; just their values.

Note   Only some of the dictionary keys support HTML in their values
            (text).

What to Do Next

1   Zip all the properties files (new and existing) and create a new zipped language file. Do not include any folders or directories.

2   Use a new name or its original name for the zipped language file.

3   Import the zipped language file into the specific portal you exported it from.

Import the Updated Language File

You can import an edited language file that you have customized by adding or deleting language properties files or by updating text in existing properties files.

Step 1   Navigate to these portals:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** .

- For Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** .

- For Device portals, choose **Administration** > **Device Portal Management** > **(any Portals)** > **Edit** .

Step 2   Click **Language File** and choose **Import** from the drop-down list.

Step 3   Browse to find the new zipped language file on your desktop.

Step 4   Import it back for the portal type from where you exported it.

What to Do Next

To display the changed text or the new language you added, select the specific language from the **View In** drop-down list.

Customization of Guest Notifications, Approvals, and Error Messages

Within in each portal, you can customize how guests receive notifications via email, SMS text messages, and print. Use these notifications to email, text, or print the login credentials:

- When guests use the Self-Registration Guest portal and successfully register themselves.

- When sponsors create guest accounts and want to provide the details to guests. When you create sponsor groups, you can determine whether to authorize sponsors to use SMS notifications. They can always use email and print notifications, if these facilities are available.

You can also customize email notifications to sponsors requesting that they approve a self-registering guest trying to gain access to the network. Additionally, you can customize the default error messages that display to guests and sponsors.

Customize Email Notifications

You can customize the information that is sent via email to guests.

Before You Begin

- Configure the SMTP server to enable email notifications. Choose **Administration** > **System** > **Settings** > **SMTP Server**.

- Configure support for email notifications to guests. Choose **Guest Access** > **Settings** > **Guest Email Settings**. Check **Enable email notifications to guests**.

- Ensure that **Enable portal customization with HTML** is enabled by default in **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization**.

Step 1 For Self-Registered Sponsor portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customization** > **Email Receipt or Email Notification**.

Step 2 You can change the default **Logo (Email)** that was specified under **Global Page Customizations**.

Step 3 Specify the **Subject** and **Email body**. Use predefined variables to specify the guest account information to be included in the email message. Use the mini-editor and HTML tags to customize the text.

Step 4 Under **Settings**, you can:

- **Send username and password separately** in different emails. If you select this option, two separate tabs appear in **Page Customizations** for customizing the **Username Email** and **Password Email** notifications.

- **Send Test Email** to your email address to preview your customization on all devices to ensure that the information appears as it should.

Step 5 Click **Save** and then **Close**.

Customize SMS Text Message Notifications

You can customize the information that is sent via SMS text messages to guests.

Before You Begin

- Configure the SMTP server, which is used to send emails to the SMS gateway to deliver the SMS text message. Choose **Administration** > **System** > **Settings** > **SMTP Server**.

- Configure the sponsor groups to support the SMS text notification.

- Set up an account with a third-party SMS gateway. Choose **Administration** > **Systems** > **Settings** > **SMS Gateway**. Cisco ISE sends the text messages as email messages to the gateway, which forwards the messages via the SMS provider to the specified user.

- Ensure that **Enable portal customization with HTML** is enabled by default in **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization**.

Step 1 For Self-Registered Guest or Sponsor portals, choose **Guest Access** > **Configure** > **Guest or Sponsor Portals** > **Edit** > **Portal Page Customization** > **SMS Receipt or SMS Notification**.

Step 2 Use the mini-editor and HTML tags to customize the **Message Text**. Use predefined variables to specify the guest account information to be included in the SMS text message.

Step 3 Under **Settings**, you can:

- **Send username and password separately** in different text messages. If you select this option, two separate tabs appear in **Page Customizations** for customizing the **Username Message** and **Password Message** notifications.

- **Send Test Message** to a cell phone to preview your customization to ensure that the information appears as it should. The supported phone number formats include: +1 ### ### ####, ###-###-####, (###) ### ####, ##########, 1########## and so on.

Step 4 Click **Save** and then **Close**.

Customize Print Notifications

You can customize the information that is printed for guests.

Note Within each portal, the print notification logo is inherited from the email notification logo setting.

Before You Begin

Ensure that **Enable portal customization with HTML** is enabled by default in **Administration** > **System** > **Admin Access** > **Settings** > **Portal Customization**.

Step 1 For Self-Registered Guest and Sponsor portals, choose **Guest Access** > **Configure** > **Guest or Sponsor Portals** > **Edit** > **Portal Page Customization** > **Print Receipt or Print Notification**.

Step 2 Specify the **Print Introduction Text**. Use predefined variables to specify the guest account information to be included in the email message. Use the mini-editor and HTML tags to customize the text.

Step 3 Preview your customization in the thumbnail or click **Print Preview**. You cannot view any HTML customization in the thumbnail.

If you select the **Print Preview** option, a window appears from which you can print the account details to ensure that the information appears as it should.

Step 4   Click **Save** and then **Close**.

Customize Approval Request Email Notifications

You can require sponsors to approve self-registering guests before their accounts are created and before they can obtain their login credentials. You can customize the information that is sent via email to sponsors requesting their approval. This notification only displays if you have specified that self-registering guests using the Self-Registered Guest portals require approval before they are granted network access.

Before You Begin

- Configure the SMTP server to enable email notifications. Choose **Administration** > **Systems** > **Settings** > **SMTP Server**.

- Configure support for email notifications to guests. Choose **Guest Access** > **Settings** > **Guest Email Settings**. Check **Enable email notifications to guests**.

- If you want a Sponsor to approve self-registered account requests, check **Require self-registered guests to be approved** under Self-Registration Page Settings on the Portal Behavior and Flow Settings tab. That enables the Approval Request Email tab under Notifications in Portal Page Customization, where you can customize the email that goes to the Sponsor.

Step 1   Choose **Guest Access** > **Configure** > **Self-Registered Guest Portals** > **Edit** > **Portal Page Customization** > **Approval Request Email**. Here you can:

a) Change the default **Logo** that is specified under **Global Page Customizations**.

b) Specify the **Subject** and **Email body**. Use predefined variables to specify the guest account information to be included in the email message. Use the mini-editor and HTML tags to customize the text. For example, to include a link to the Sponsor portal in the request approval email, click the Create a Link button, add the FQDN to the Sponsor portal.

c) Preview your customization on all devices using **Send Test Email** to ensure that it appears as it should.

d) Don't forget to click **Save** and then **Close**.

Step 2   Customize the content of the approval email sent by the Sponsor. Choose **Guest Access** > **Configure** > **Sponsor Portals**, choose **Portal Page Customization**, and then the **Email Notification** tab.

Edit Error Messages

You can fully customize the error messages that appear on the Failure pages displayed for guests, sponsors and employees. Failure pages are available with all end-user web portals, except the Blacklist portal.

Step 1 Do one of the following:

- For Guest portals, choose **Guest Access** > **Configure** > **Guest Portals** > **Edit** > **Portal Page Customizations** > **Messages** > **Error Messages**.

- For Sponsor Portals, choose **Guest Access** > **Configure** > **Sponsor Portals** > **Edit** > **Portal Page Customizations** > **Messages** > **Error Messages**.

- For Device portals, choose **Adminsitration** > **Device Portals Management** > **(any portals)** > **Edit** > **Portal Page Customizations** > **Messages** > **Error Messages**.

Step 2 From the **View In** drop-down list, choose the language in which you want to view the text while customizing the messages. The drop-down list includes all the languages in the language file associated with a specific portal. Make sure that you update any changes made while customizing the portal page into the supported languages properties files.

Step 3 Update the error message text. You can search for specific error messages by typing in keywords such as **aup** to find AUP related error messages.

Step 4 Click **Save** and **Close**.