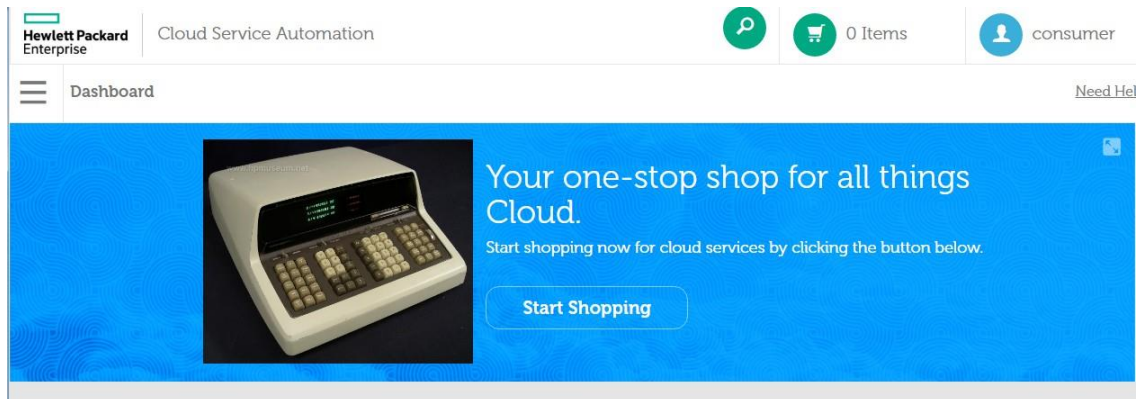

Whitepaper

Marketplace portal customization

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Overview



Cloud Service Automation (CSA) allows customers to modify the way the Marketplace Portal appears to their end users through several different customization options. Some of these options are simple to change and are built into the Service Management Console (SMC), while other options require programming skills in JavaScript, HTML, and CSS.

This document describes the following levels of customization:

- **Simple customizations** are all part of the standard SMC Organizational configuration user interface and do not require any programming experience.
- **Advanced level customizations** are made through the widget view of the Organizational view. Development of complex mashup widgets can require expert level programming skills.
- **Expert level customizations** require modifications to programming code files on the CSA server. The developer not only must have programming skills, she will also need access rights to the server and the CSA program directory. Any customizations of this type are not part of the normal CSA environment and are potential areas that might be vulnerable to update conflicts and functionality failures. As a best practice, Hewlett Packard Enterprise recommends that you follow good backup procedures, as you would with any upgrade process.

Use Cases

A CSA customer has certain visual (user interface) and functional expectations of the Marketplace Portal, such as:

- A customer might want to hide aspects of the portal to create a simpler user interface to browse, order, and monitor CSA on-demand services.
- A customer might need a more sophisticated user interface that includes access to service approvals and custom display widgets.
- A customer might want to change the look of the portal to match their image or branding.
- A customer might want to create their own custom portal to include launch points to in-house applications or resources.

Use this document to customize the Marketplace Portal for your organization's requirements, including the visual look and feel and the definition of content that is displayed.

Preparing to Customize the Marketplace Portal

1. Before you modify any Marketplace Portal configuration, define and collect the elements you will need for your custom interface, such as:
 - a. Logos and icons
 - b. Background images
 - c. Custom fonts
 - d. Company copyright information
 - e. URLs to Privacy statements or Terms and Conditions web pages
 - f. URLs to applications and resources
2. Make a list of the CSA and non-CSA functions that you need to access in the Marketplace Portal. If your organization requires active approval for service requests, add the LDAP names or groups of users to this list.
3. Define what information you would like to be able to view, such as custom charts or web pages.
4. Define visual requirements:
 - a. You might want to align the Marketplace Portal display with your company's standards or at least common practices.
 - b. Define any special requirements, such as users with visual impairments.
 - c. Collect the graphics and fonts that you want to use in your portal.
5. Make a backup of files before you modify them. Several files used to create advanced customizations to the portal are server side files which if modified improperly can break the functionality of the Marketplace Portal. Creating a copy of these files before making modifications can prevent provide a quick means to get back to a working environment.

Simple Standard Portal Customizations

The following standard Marketplace Portal customization options are available in the General Information and Portal Customization views in the Service Management Console, under the Organizations section.

- Organization Logo
- Application Name (This is actually the name of the text that is displayed in the login screen and in the MPP Subscriber screen. It is not specific to a particular application.)
- Welcome messages, copyright statements, and disclaimer warnings
- Portal themes (CSA ships with three pre-built themes: Enterprise, Playful, and Simplified.)

Note: If you do not want to use one of these themes, you can create your own Marketplace Portal theme for your organization. See [Expert Level Customizations](#)

CSA does not provide a user interface to make extensive changes to the Marketplace Portal. These changes include use cases where customers want to hide aspects of the UI, change the look and feel of the UI, or change the order of the elements in the Dashboard view. However, the files that create these types of customizations are available to a developer who has access to the server where CSA is running. This allows the expert JavaScript/HTML web developer the ability to customize the Marketplace Portal to meet most customer needs.

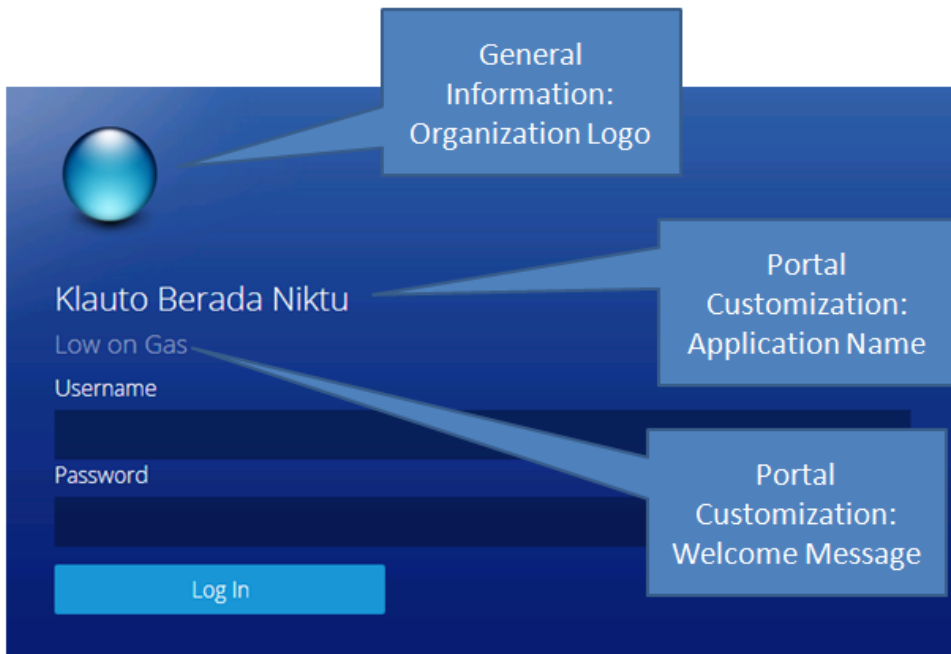
This section explains the following expert level customizations:

Creating and Customizing Your Own Theme

Creating Your Own Theme

Customizing CSS

Customizing Fonts



The screenshot displays the 'Consumer Organization' configuration page in the Cloud Service Automation (CSA) interface. The top navigation bar shows 'Organizations' and 'CLOUD SERVICE AUTOMATION'. The left sidebar lists various configuration options, with 'General Information' selected. The main content area is divided into sections: 'Organization Details' (with a sub-header 'Enter your organization's general information here'), 'Organization Identifier' (set to CONSUMER), 'Organization URL' (https://csaqa-vm22.ftc.hpeswlab.net:8089/org/CONSUMER), 'Organization Display Name' (input field containing 'Consumer'), 'Description' (input field containing 'Consumer organization'), and 'Organization Logo' (input field containing a URL). At the bottom, there are 'Save', 'Reset', and 'Delete' buttons.

Advanced SMC Customizations

CSA allows an administrator to add custom widgets to the Marketplace Portal. This supports use cases where customers want to expose links to other resources or to have dynamic data shown to their users. These types of customizations can be done through the Dashboard Widgets tab in the Service Management Console, under the Organizations section. By default, these customizations display in the Discover More section in the Marketplace Portal Dashboard.

The following widgets are available as customizations:

- **Link:** Standard web address URL (Easy)
- **Featured Service:** Adds a tile that shows random services from a selected category (Limited)
- **Mashup:** Customizable content to support dynamic data (Advanced)



2 Organizations



Consumer

Provider



Consumer



Consumer Organization

Consumer organization

Summary

General Information

Portal Customization

Dashboard Widgets

LDAP

SAML

Access Control

Email Notifications

Operations

Catalogs



Dashboard Widgets

Configure custom tiles for the Marketplace Portal dashboard

Mashup

5recentWidget



Mashup

Clock



Link

CSA



Add Link

Add Mashup

Add Featured Service

Organizations CLOUD SERVICE AUTOMATION adm

2 Organizations

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Provider (•)

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Consumer organization

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Application Labeling
Specify labels for different areas of the Marketplace Portal login screen

Application Name *
Low Vision Example

Portal Welcome Message
High Contrast and Big Fonts

Copyright Statement
Copyright 2017

External Organization Links
Personalize external links on the Marketplace Portal

Privacy Statement Link *
 Show Privacy Statement on Marketplace Portal

Terms and Conditions Link *
 Show Terms and Conditions on Marketplace Portal

Save Reset

Hewlett Packard Enterprise Cloud Service Automation

0 Items consumer

Dashboard [Need Help?](#)

All Subscriptions Expiring Soon

More Actions

Notifications My Services My Orders Review Requests

Discover More

Recent Subscriptions
No Recent Subscriptions Available

Wednesday
August
3, 2016
12:21 PM

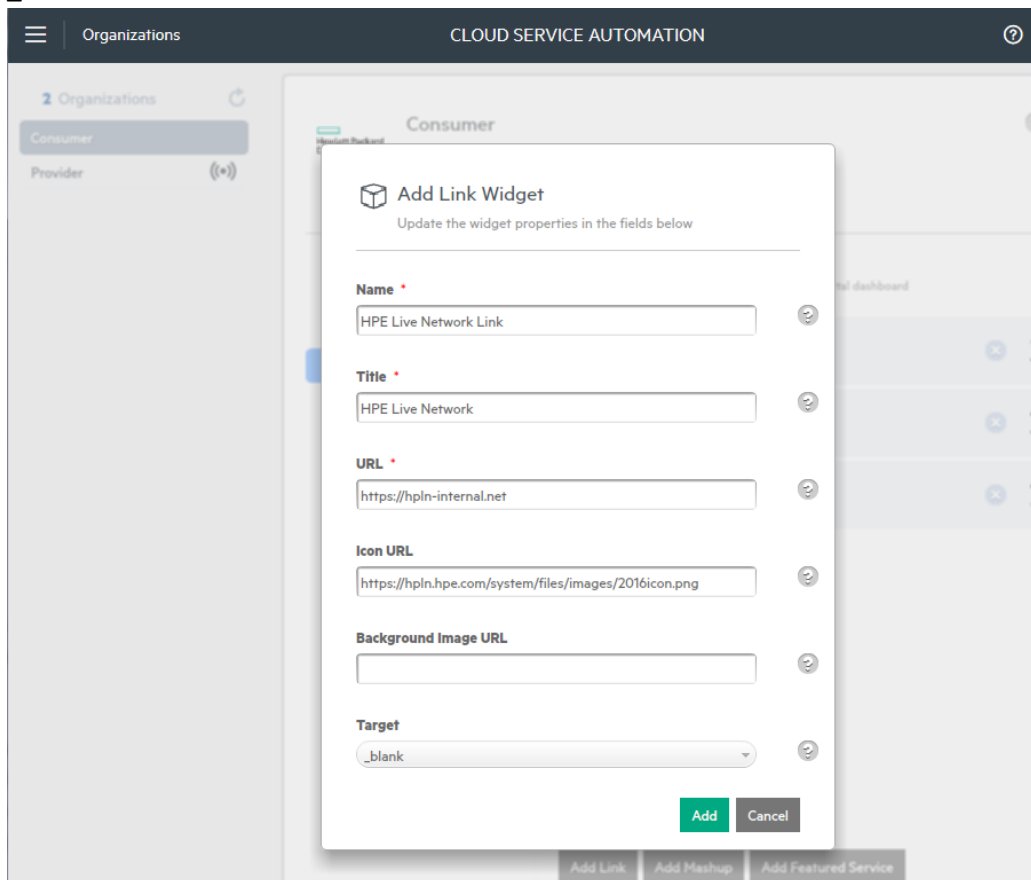
Hewlett Packard Enterprise
Cloud Service Automation

Creating Custom Links

A custom link widget allows the CSA administrator to create a clickable button in the Marketplace Portal, under the Discover More section, that will redirect the user to the provided URL. These links are very straightforward to create by defining the following information for the widget.

- **Name:** The name associated with this link in the Cloud Service Management Console.
- **Title:** The text that displays for the link in the Marketplace Portal.
- **URL:** The URL that the link references in the Marketplace Portal.
- **Icon URL:** The URL of an icon that displays near the center of the widget in the Marketplace Portal.
- **Background Image URL:** The URL of an image that fills the background of the widget in the Marketplace Portal.
- **Target:** The target attribute of the <link> element that appears in the Marketplace Portal. This controls the browser window in which the link will open. Valid values for the Target attribute include the following, as defined by the HTML specification.
 - **_blank:** Load the URL in a new browser window.
 - **_self:** Load the URL in the same frame where it was clicked.
 - **_parent:** Load the URL in the parent frame where it was clicked.
 - **_top:** Load the URL in the full body of the window.

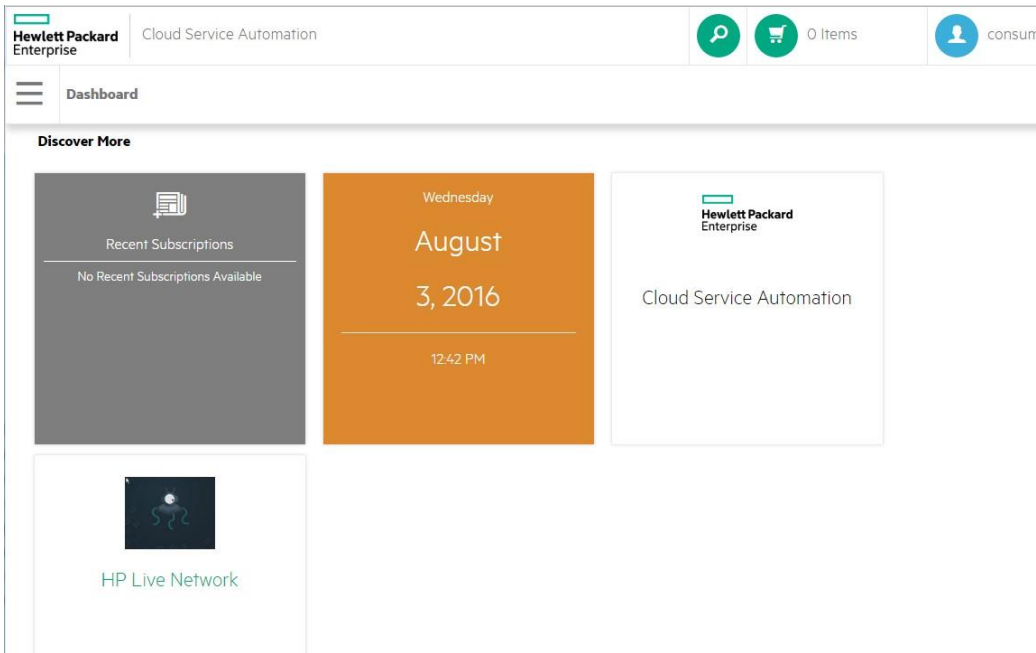
_new: Load the URL in a new window.



The screenshot shows the 'Add Link Widget' dialog box in the Cloud Service Automation console. The dialog is titled 'Add Link Widget' and contains the following fields:

- Name:** HPE Live Network Link
- Title:** HPE Live Network
- URL:** https://hpln-internal.net
- Icon URL:** https://hpln.hpe.com/system/files/images/2016icon.png
- Background Image URL:** (empty)
- Target:** _blank

At the bottom of the dialog, there are 'Add' and 'Cancel' buttons. The background shows the 'Organizations' section of the console, with 'Consumer' selected.

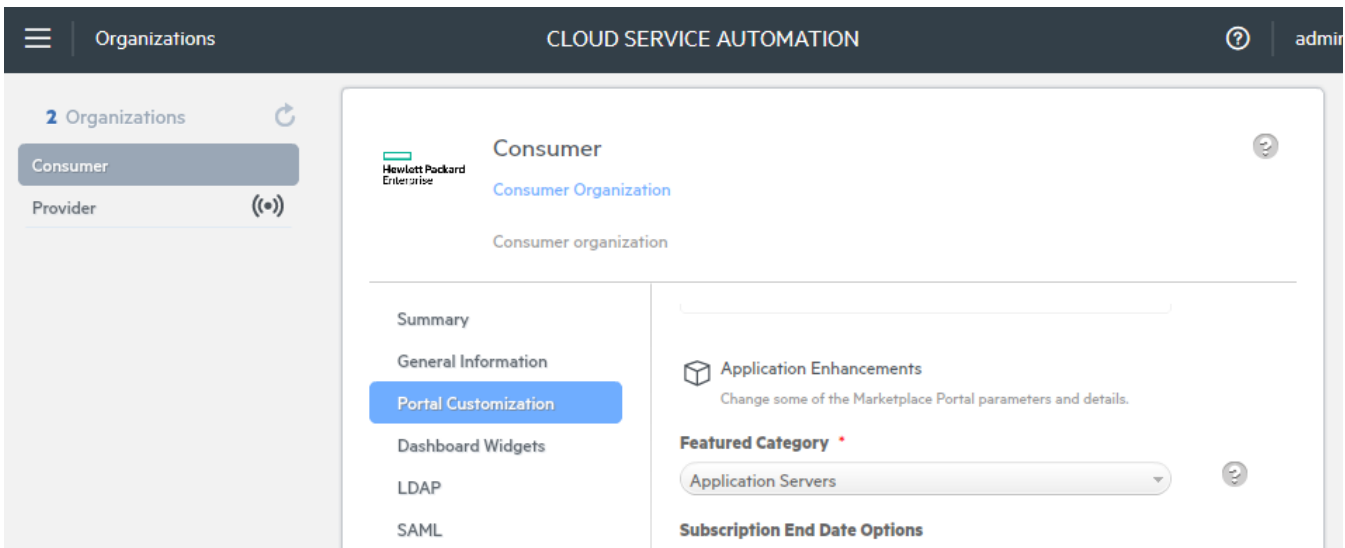


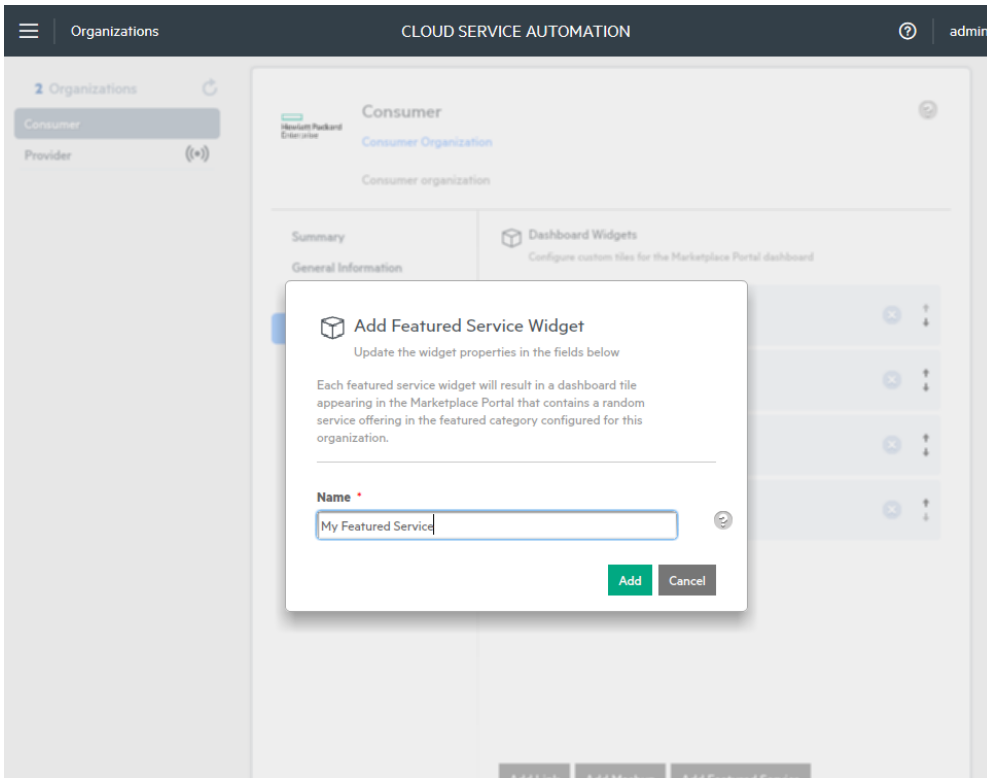
Adding a Featured Service Tile

Adding a Featured Service tile to the Dashboard allows for a dynamic tile element. This dynamic tile updates with random, published service offerings that have been assigned to the Featured Service offering catalog.

To add a Featured Service tile to the Dashboard:

1. In the Portal Customizations tab, select a Featured Category from the drop-down list.
2. In the Dashboard Widgets tab, add the widget.

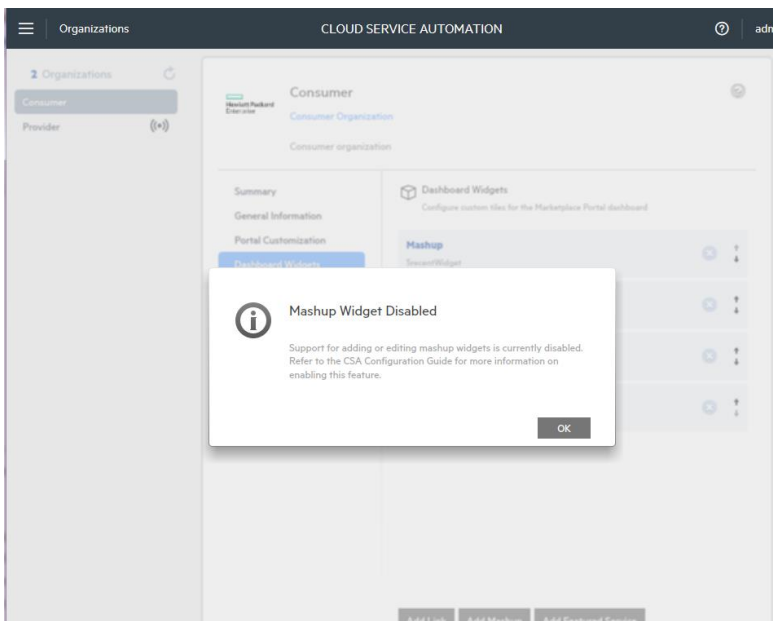




Creating Custom Mashup

A custom Mashup widget allows the CSA administrator to create a clickable button in the Marketplace Portal, under the Discover More section that provides dynamic content to the widget. These widgets require more advanced programming knowledge and also an understanding of security domains within a browser.

Note: By default, Mashup Widget creation is not allowed and the following message is displayed on trying to create a Mashup Widget. You need to manually enable it for creating Mashup Widgets.



Enabling Mashup Widget Creation

To enable the creation of mashup widgets, perform the following steps:

1. Edit the `csa.properties` file.
2. Change the following property value to true:

```
csa.ui.organizations.dashboardwidgets.enableEditingMashup=true
```

3. Restart the CSA service.

Name: The name associated with this widget in the Cloud Service Management Console.

Content: The HTML and JavaScript code for the mashup.

Note: You must understand the following information about using `IFrame` in a mashup widget:

- `IFrame` that serve HTML pages, which have the same URL structure as the Marketplace Portal, will work properly. The same URL structure means that the pages are placed in the following directory:

```
%CSA_HOME%\portal\node_modules\mpp-ui\dist
```

Example: To correlate to the following URL structure,

```
https://server:8089/widgets/sample/index.html
```

place your pages in the following location:

```
%CSA_HOME%\portal\node_modules\mpp-ui\dist\widgets\sample\index.html
```

- `IFrames` that serve external non-HTTPS content will be blocked by the browser. The specific error will vary, based on client browser security.
- `IFrames` that serve external HTTPS content that contains mixed HTTP and non-HTTPS content will be blocked by the browser. The specific error will vary, based on client browser security.
- `IFrames` that serve external HTTPS content will work only if the following are true:
 - The remote site must not specify `x-frame-options DENY` in the response header.
 - If the content is not of the same origin domain and the remote site has not specified `x-frame-options SAMEORIGIN`, the content will display properly.

The Clock Mashup Widget content is a combination of HTML and JavaScript that looks like the following: `<div`

```
style="background-color:#DC882F;background-image: url('');
```

```
color: #FFFFFF;font-family: inherit;
```

```
font-size: 18px;background-repeat: no-repeat;
```

```
padding-left: 20px;padding-top: 20px;padding-right: 20px;padding-bottom: 20px;line-height: .7;">
```

```
<p id="weekday" style="font-size: 18px;">-</p>
```

```
<h1 id="month" style="font-size: 36px;">-</h1>
```

```
<h1 style="font-size: 36px;"><span id="day">-</span>, <span id="year">-</span></h1>
```

```
<hr style="color: #FFF;"/>
```

```
<p style="font-size: 18px;"><span id="hmm">-</span> <span id="ampm">-</span></p>
```

</div>

<script type="text/javascript">

```
function startClock() {
    // inspired by http://www.tristanwaddington.com/2010/08/javascript-clock/
    var months = [ "January", "February", "March", "April", "May", "June",
"July", "August", "September", "October", "November", "December" ];
    var weekdays = ["Sunday", "Monday", "Tuesday", "Wednesday",
"Thursday", "Friday", "Saturday"];

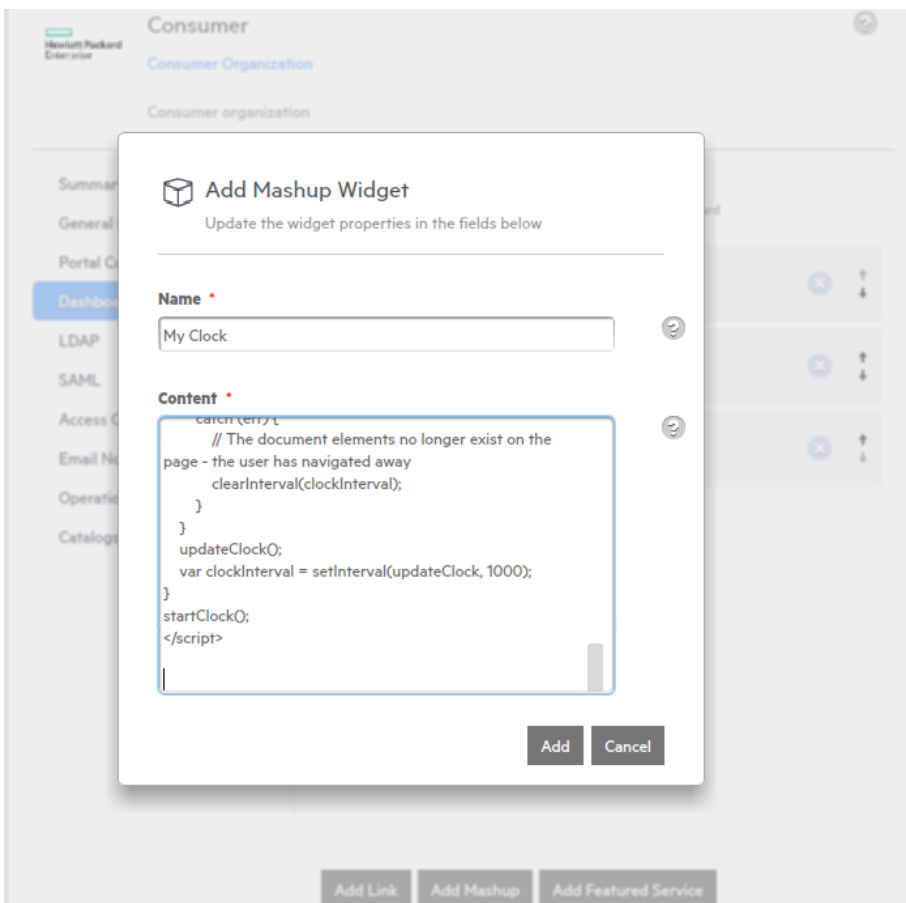
    function updateClock() {
        var now = new Date();
        var hours = now.getHours();
        var minutes = now.getMinutes();
        var ampm = "AM";
        // Convert hours to AM/PM format - see http://en.wikipedia.org/wiki/12-hour\_clock
        if (Math.floor(hours/12)==1) {
            ampm = "PM";
            hours = hours - 12;
        }
        if (hours == 0) {
            hours = 12;
        }
        var ms = "" + minutes;
        if (ms.length == 1) {
            ms = "0" + ms;
        }

        try {
            document.getElementById("weekday").textContent =
weekdays[now.getDay()];
            document.getElementById("month").textContent =
months[now.getMonth()];
            document.getElementById("day").textContent = now.getDate();
            document.getElementById("year").textContent = now.getFullYear();
        }
    }
}
```

```

        document.getElementById("hmm").textContent = hours + ":" + ms;
        document.getElementById("ampm").textContent = ampm;
    }
    catch (err) {
        // The document elements no longer exist on the page - the user has
        navigated away
        clearInterval(clockInterval);
    }
}
updateClock();
var clockInterval = setInterval(updateClock, 1000);
}
startClock();
</script>

```



Expert Level Customizations

CSA does not provide a user interface to make extensive changes to the Marketplace Portal. These changes include use cases where customers want to hide aspects of the UI, change the look and feel of the UI, or change the order of the elements in the Dashboard view. However, the files that create these types of customizations are available to a developer who has access to the server where CSA is running. This allows the expert JavaScript/HTML web developer the ability to customize the Marketplace Portal to meet most customer needs.

This section explains the following expert level customizations:

- Creating and Customizing Your Own Theme
- Creating Your Own Theme
- Customizing CSS
- Customizing Fonts



WARNING

Upgrades of CSA will not take into consideration any expert level customizations made to the Marketplace Portal code. This includes change of functions and even loss of files during the upgrade process. As a best practice, keep a backup copy of any code changes you make to ensure your customizations are not lost during a CSA upgrade process.

Creating and Customizing Your Own Theme

Themes are used to define many of the colors, fonts, and graphics used in the Marketplace Portal. In CSA, the administrator can select a theme (in the Service Management Console, under the Portal Customization tab for the organization) that will be used by every member of an organization. The following step-by-step instructions explain how to create a copy of an existing theme that the CSA administrator can then customize and select in the Service Management Console.

To create a custom theme for your organization, you must complete the following tasks:

1. Create a copy of an existing theme.
2. Add the new theme name to the Modules file to link the association of the new theme.
3. Change the Organization's theme to your new theme.
4. Modify the new theme's `main.css` file.
5. Review your changes in the Marketplace Portal.

Creating Your Own Theme

The following three themes are located in the `CSA/portal/node_modules/mpp-ui/dist/bower_components` directory on the CSA server, in the following folders:

| Theme | Folder |
|------------|----------------------|
| Enterprise | mpp-enterprise-theme |
| Playful | mpp-pilot-theme |
| Simplified | mpp-theme |



WARNING

You will be modifying files that if not formatted correctly or contain invalid content can break the functionality of the CSA Marketplace Portal. As a best practice, make backup copies of all files you modify, in case your changes create problem with the original file and you need to revert to the backup copy.

To create a new theme:

1. Copy one of the existing theme folders to a new folder with the name for the new theme you want to create.

Note: Each *main.css* style sheet is approximately 8,000 lines long and is kept in a minimized format. You can edit this file with a special CSS editor or you can expand it with an online CSS beautifier.

- a. Using a text editor, open the `[version hash].modules.js` file in the `mpp-ui/dist/scripts` directory. The `modules.js` filename has a different version hash prefix for each release of CSA; however, it should be the only `modules.js` file in this directory. This file contains the names and locations of the elements used by the Marketplace Portal, to match the theme names defined in the CSA Service Management Console.
 - b. Search for the array theme section by using the string `Playful`.
2. Add a new theme object to the array by following the same pattern for the Playful theme. The new array should look like the following if you have copied the theme in step 1 to a new folder named `MyNewTheme`. The new array object will be `{displayName:"MyNewTheme", value:"MyNewTheme"}`.
 3.

```
var r,s=[{displayName:"Simplified",value:"mpp-theme"},{displayName:"Playful",value:"mpp-pilot-theme"},{displayName:"Enterprise",value:"mpp-enterprise-theme"},{displayName:"MyNewTheme",value:"MyNewTheme"}]
```
 4. Save the `modules.js` file.

```
.html",restrict:"E",scope:{widget:"=widget"}}).directive("linkWidget",function(){return{templateUrl:"views/directives/widgets/li
nkWidget.html",restrict:"A",scope:{widget:"=widget"}}).directive("mashUpWidget",function(){return{templateUrl:"views/directives/
widgets/mashUpWidget.html",restrict:"E",scope:{widget:"=widget"},controller:["$scope","$sce",function(a,b){a.trustedHTML=b.trustA
SHTML(a.widget.attributes.code_snippet)}}},angular.module("mppApp").directive("navbar",function(){return{templateUrl:"views/dir
ectives/navbar.html",restrict:"E",transclude:true,scope:{hideSidebar:"=?",navTitle:"@",itemCount:"=",backUrl:"@",backLabel:"@",hide
BackBtn:"=?",hasFooter:"=",backClick:"&"},link:function(){var a=angular.element(document.querySelector("#navbar")),b=angular.elen
ent(document.querySelector("#scrollbox"));b.bind("scroll",function(){b[0].scrollTop?a.addClass("navbar-shadow"):a.removeClass("na
vbar-shadow")});},angular.module("mppApp").service("themeSvc",["$http","$translate","$session","$locale","rtISu
c","$rootScope",function(a,b,c,d,e,f,g){function h(a){return d.get(j(a))}function i(a,b){d.set(j(a),b)}function j(a){return e.id+
":"+a}function k(){return angular.element("#styleLink").attr("href")}function l(a){angular.element("#styleLink").attr("href",a)}f
unction m(a,b){var c=a+"/dist/main";return c+b?"-rtl.css":".css"}function n(a){var b=s.find(function(b){return b.displayName===a
});return b?b.value:a}function o(a){return c===k()}function p(a,c,d){d=d||function(){};var e=h(a);e?l(e):(e=m(a,c),o(e)?i(a,e):b.
get(e,tracker:"theme$et")).success(function(){l(e),i(a,e)}.error(function(){d("Could not load theme "+a)}))}function q(a){a.fet
ch().then(function(a){var b=a.themeName||"mpp-theme",c=n(b);p(c,f.isRTL(),function(a){console.error(a),f.isRTL()}&&p(c,t)}))}var
r,s=[{displayName:"HP Simplified",value:"mpp-theme"},{displayName:"theme1",value:"theme1"},{displayName:"HP Playful",value:"mpp-
pilot-theme"},{displayName:"HP Enterprise",value:"mpp-enterprise-theme"}];this.init=function(){r||r=g.$on("rtl:changeSuccess",fu
nction(){q()}))};var settings={DATETIME_FORMATS:{AMPHS:["AM","PM"],DAY:["Sunday","Monday","Tuesday","Wednesday","Thursday","Fr
iday","Saturday"],MONTH:["January","February","March","April","May","June","July","August","September","October","November","Dece
mber"],SHORTDAY:["Sun","Mon","Tue","Wed","Thu","Fri","Sat"],SHORTMONTH:["Jan","Feb","Mar","Apr","May","Jun","Jul","Aug","Sep","Oc
t","Nov","Dec"],FullDate:"EEEE, MMMM d, y",longDate:"MMMM d, y",medium:"MMM d, y h:mm:ss a",mediumDate:"MMM d, y",mediumTime:"h:m
:ss a",short:"M/d/yy h:mm a",shortDate:"M/d/yy",shortTime:"h:mm a"},NUMBER_FORMATS:{CURRENCY_SYM:"$",DECIMAL_SEP:".",GROUP_SEP
:"",PATTERNS:[{gSize:"3",lgSize:"3",macFrac:"0",maxFrac:"3",minFrac:"0",minInt:"1",negPre:"- ",negSuf:" ",posPre:" ",posSuf:" "},
{gSize:"3",lgSize:"3",macFrac:"0",maxFrac:"2",minFrac:"2",minInt:"1",negPre:"(R)",negSuf:")",posPre:"R",posSuf:" "}]};angular.m
odule("mppApp").service("localeConfig",["$rootScope","$locale","$translate",function(a,b,c){this.init=function(){a.$on("$translat
/Play
```

5. In the **Organizations/Portal Customization** view in the Service Management Console, scroll down to the **Themes** section.
6. In the drop-down menu, enter the name of your new theme.

Note: You can save only one single custom theme that replaces the default Custom dropdown entry. Press **Enter** to save the new theme name or click outside of the dropdown and then click **Save**.



2 Organizations



Consumer

Provider



Consumer

Consumer Organization

Consumer organization

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History Details

Show Verbose Errors

Themes

Select a theme for the Marketplace Portal

Theme

Security Settings

Specify the security settings for your organization

Security Classification

Disclaimer

Customizing CSS

1. Find the `main.css` file in the `dist` directory of your new theme directory.

Note: Modifications to any style sheet element requires you to log out of the Marketplace Portal and then log back in to see your changes. This is because many elements of the Marketplace Portal content are not cached and downloaded after a successful authentication.

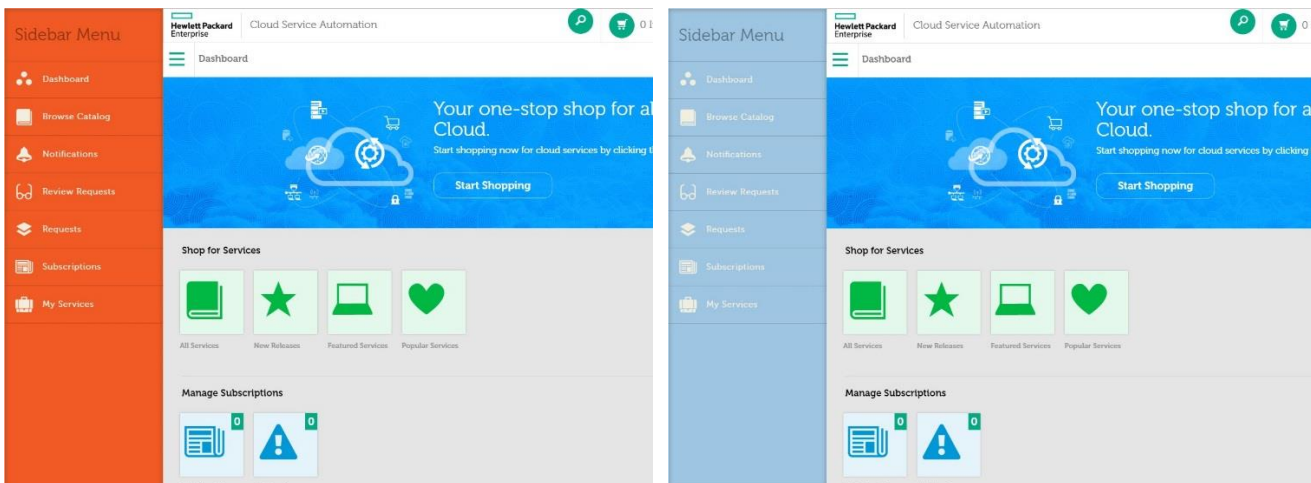
2. Make a simple modification to the document's background color.
3. Find the following section in your `main.css` file and set the background to a different color. The `main.css` file has been compressed for efficiency, but you can still find the `css` elements and values you need to set. Search for the `.st-menu` element to locate the section that resembles the following:

1.

```
.st-menu{position:absolute;top:0;left:0;z-index:9999;visibility:hidden;width:300px;height:100%;background:#f15a24;-webkit-transition:all .5s;-o-transition:all .5s;transition:all .5s;box-shadow:inset 0 0 12px 0 rgba(0,0,0,.3)}
```

2. The following example changes the side menu color from orange to blue:

```
.st-menu{position:absolute;top:0;left:0;z-index:9999;visibility:hidden;width:300px;height:100%;background:#9EC5E2;-webkit-transition:all .5s;-o-transition:all .5s;transition:all .5s;box-shadow:inset 0 0 12px 0 rgba(0,0,0,.3)}
```



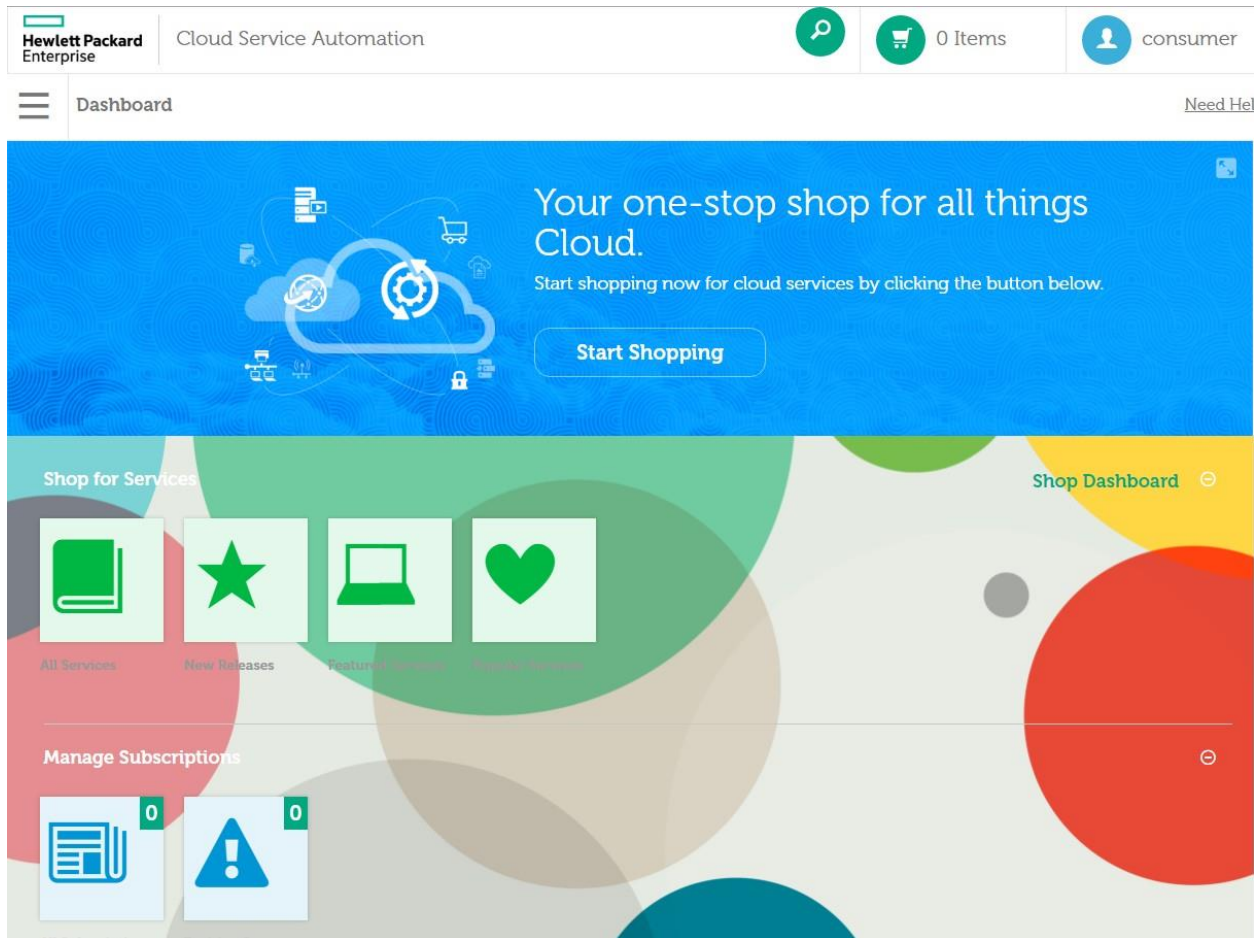
Note: The very top of the Marketplace Portal view is a *custom angular component*, which is commonly known as a *navbar*. By default, the navbar is partially transparent that allows your main background color to bleed through.

3. To add a custom background image, modify the background body section to include a background URL. The following example uses an out-of-the box image (`image-dots.png`) file, but you can save any image to the `mpp-theme\images` directory in your new theme folder.

Important: There are common elements that make up the views for all themes. The file and folder names have been replicated for out-of-the box themes. Changing the name or file structure naming can break the other Marketplace Portal theme views.

4. Search for the `.bg-body` element and then add a `url` element for the path to the image you want to use. Refresh your browser cache to see the background image appear on the Dashboard.

```
.bg-body{background:url(mpp-theme/images/image-dots.png)repeat center fixed;
background-size: cover;color:#fff}
```



Customizing Fonts

Selective global text throughout the Marketplace Portal can be customized by modifying the font family, font size, and font color settings in the `main.css` file.

The following text heading settings show how these entries can be customized to change the font size and font color of the Marketplace Portal:

```
h3, .h3 {
  font-size: 5em;
  line-height: 1.1;
}

h1, h2, h3, h4, h5, h6, .h1, .h2, .h3, .h4, .h5, .h6 {
  font-family: inherit;
  font-weight: 500;
  line-height: 1.1;
  color: red;
}
```

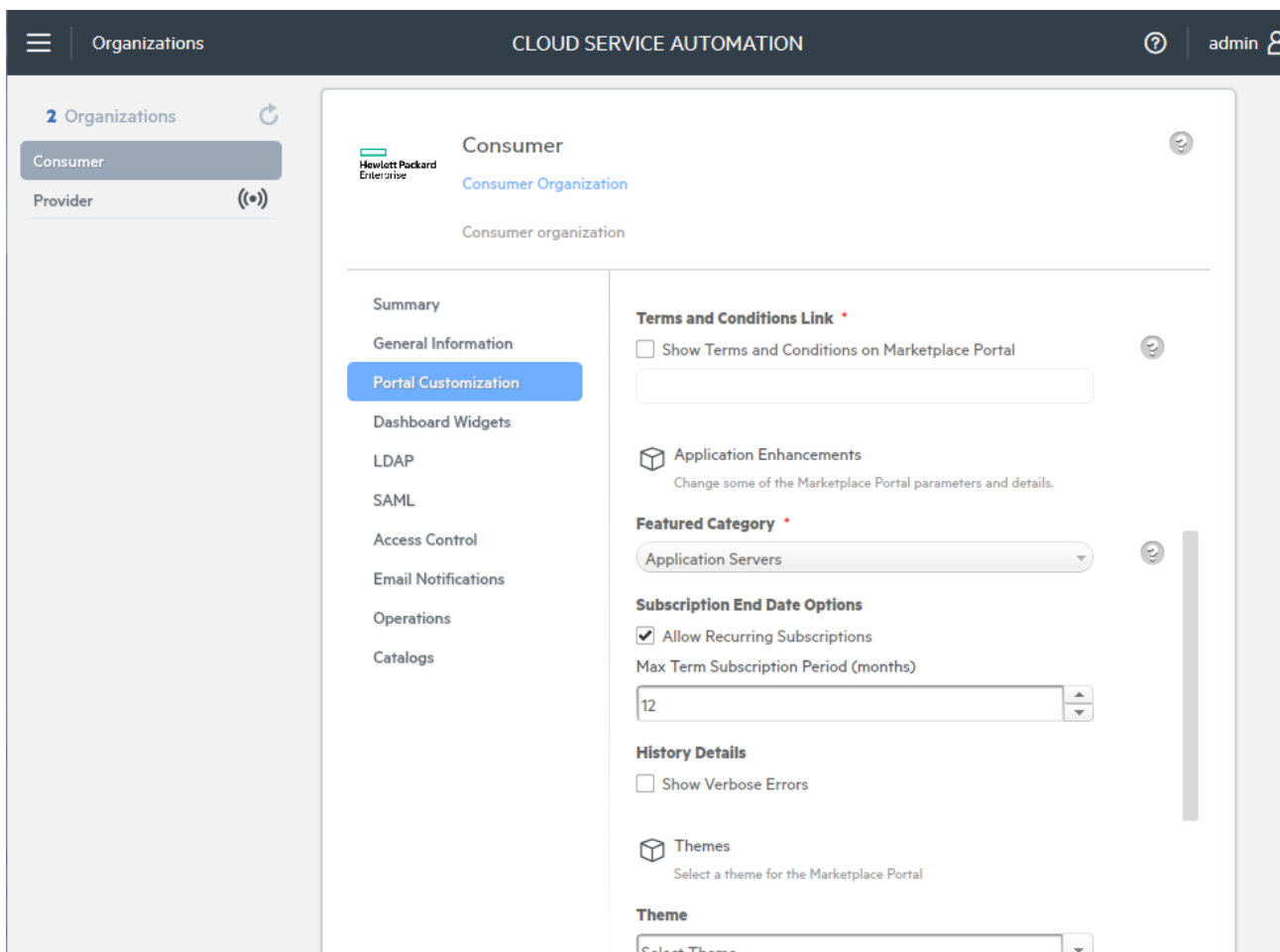
Customizing the Portal Login Page in IDM

Content customizations of the login page are performed using the SMC Organization Portal dialog, which supports changing user interface elements, such as the disclaimer in the footer and the organization logo. If extensive styling changes are desired, such as changing the background color and image or changing the login button color, you must create a new login page theme.

The login page for the consumer portal exists outside of the CSA/portal area, in a parallel structure in IDM, and requires a separate set of steps for customization. These steps are partially similar to the steps described in Expert Level Customizations. As a best practice, it is recommended that each time a custom theme is created for the portal in the CSA/portal/node_modules/mpp-ui/dist/bower_components directory, a similar custom theme should be created in the IDM directory, under CSA/jboss-as/idm-service.war/ui/bower_components.

This section explains the following login page customizations:

- Creating and Customizing Your Own Theme in IDM
- Creating Your Own Theme
- Creating a New Theme in IDM
- Choosing a Base Theme for a Custom Theme
-
- Customizing CSS in IDM



Creating and Customizing Your Own Theme in IDM

Themes are used to define many of the colors, fonts, and graphics used in the login page. In CSA, the administrator can select a theme (in the Service Management Console, under the Portal Customization tab for the organization) that will be used by every member of an organization. The following step-by-step instructions explain how to create a copy of an existing theme that the CSA administrator can then customize and select in the Service Management Console.

To create a custom theme for your organization, you must complete the following tasks:

1. Create a copy of an existing theme.
2. Change the Organization's theme to your new theme.
3. Modify the new theme's `app.css` file.
4. Log in to the Marketplace Portal to confirm your changes.

Creating Your Own Theme in IDM

The following two themes are located in the `CSA/jboss-as/idm-service.war/ui/bower_components` directory on the CSA server, in the following folders:

| Theme | Folder |
|------------|---------------|
| Enterprise | HP Enterprise |
| Playful | HP Playful |

The default theme, which corresponds to the Simplified theme, exists as the base style in a separate directory, `CSA/jboss-as/idm-service.war/ui/styles`.



WARNING

You will be modifying files that, if not formatted correctly or contain invalid content can break the functionality of the CSA login page. As a best practice, make backup copies of all files you modify, in case your changes create problem with the original file and you need to revert to the backup copy.

Creating a New Theme in IDM

Copy one of the existing theme folders to a new folder. The new folder name must match the name of the custom theme being used in the Organizations Portal customization dialog Theme input, including any spaces and capitalization. For example, if the theme is named `MyNewTheme`, then the `CSA/jboss-as/idm-service.war/ui/bower_components/MyNewTheme` directory must be created.

The main theme file is the `app.css` file in the theme directory. Unlike the `main.css` theme files used with the Marketplace Portal, the `app.css` file has been delivered in human-readable format. Also, unlike the portal theme customization, no mappings need to be created in IDM between the theme name and the theme ID.

Choosing a Base Theme for a Custom Theme

The HP Playful theme is an example of changing the background image, color, and fonts. The folder contains an `app.css` file with the style changes, an `images` directory with the background image, and a `fonts` folder with the different font files.

The HP Enterprise theme has changes to the background color and fonts, but no changed images. It only contains an `app.css` file and a `fonts` folder.

Choose the existing theme that is closest to the kinds of changes desired in the new custom theme and copy it to the new theme folder.

Customizing CSS in IDM

The example below is the HP Playful `app.css` file, which is broken down into the following sections:

1. The `@import` loads all of the base styles as a starting point. The `../../styles/app.css` path refers to the `CSA/jboss-as/idm-service.war/ui/styles/app.css` file.
2. The `@font-face` sections define the overriding fonts used in the custom theme.
3. The `body` element defines the new background image to use (`./images/cloudpilot-background.png`). Note the relative path with the `./images/`, which is the images directory in the HP Playful folder.
4. The `.button` styles override the default button styles.

For example, to customize the background image:

1. Copy the new background image into the `images/` folder.
2. Change the `./images/cloudpilot-background.png` to the name of the new image.

```
/*  
Place this file under the INSTALL_PATH\jboss-as\standalone\deployments\idm-  
service.war\ui\bower_components\HP Playful folder
```

Be sure to include the image and font assets in that folder as well.

```
*/  
  
@import url("../..../styles/app.css");  
  
@font-face {  
    font-family: 'OpenSans';  
    src: url('../fonts/OpenSans-Light.ttf') format('truetype');  
    font-weight: normal;  
    font-style: normal;  
}  
  
@font-face {  
    font-family: 'OpenSans';  
    src: url('../fonts/OpenSans-LightItalic.ttf') format('truetype');  
    font-weight: normal;  
    font-style: italic;
```

```
}

@font-face {
  font-family: 'OpenSans';
  src: url('./fonts/OpenSans-Bold.ttf') format('truetype');
  font-weight: bold;
  font-style: normal;
}

@font-face {
  font-family: 'OpenSans';
  src: url('./fonts/OpenSans-BoldItalic.ttf') format('truetype');
  font-weight: bold;
  font-style: italic;
}

body {
  background: url(./images/cloudpilot-background.png) no-repeat center center
  fixed;
  background-size: cover;
  color: #fff;
  font-family: OpenSans,Helvetica,Arial,sans-serif;
}

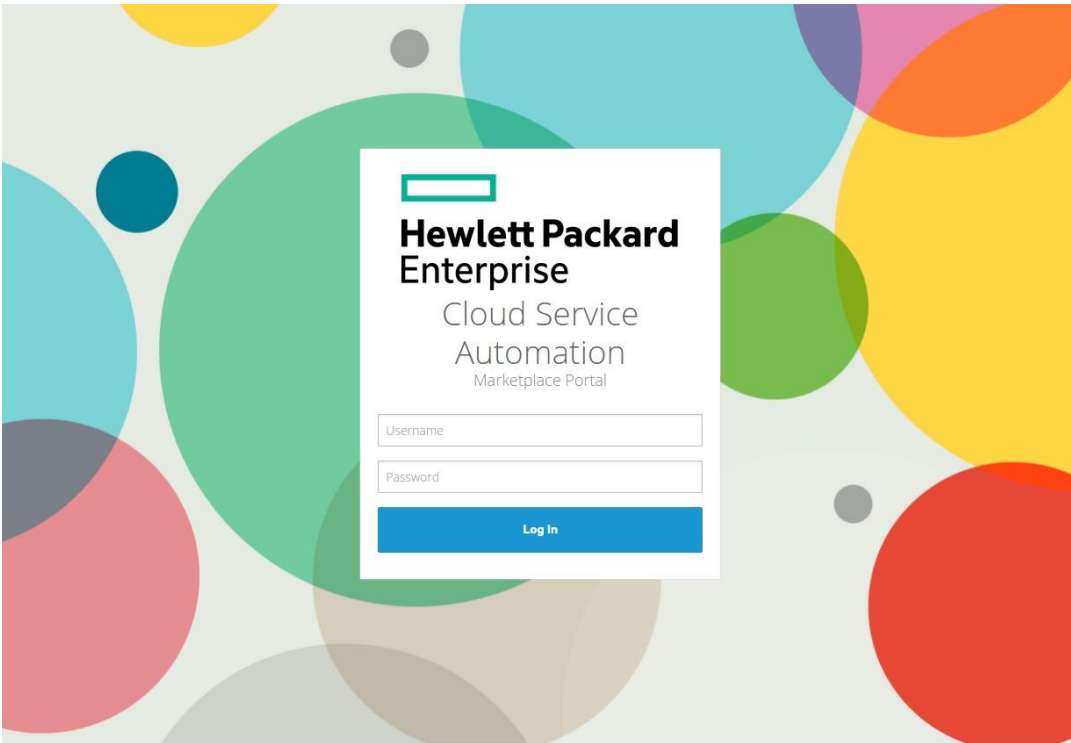
h1, h2, h3, h4, h5, h6 {
  font-family: OpenSans,Helvetica,Arial,sans-serif;
}

.button.primary {
  color: #fff;
  background-color: #1897d3;
  border-color: #1897d3;
  border-top-left-radius: 2px;
  border-top-right-radius: 2px;
  border-bottom-left-radius: 2px;
  border-bottom-right-radius: 2px;
}
```



```
}  
  
.button.primary:hover {  
    background-color: #1376a5;  
    border-color: #12709c;  
}  
}
```

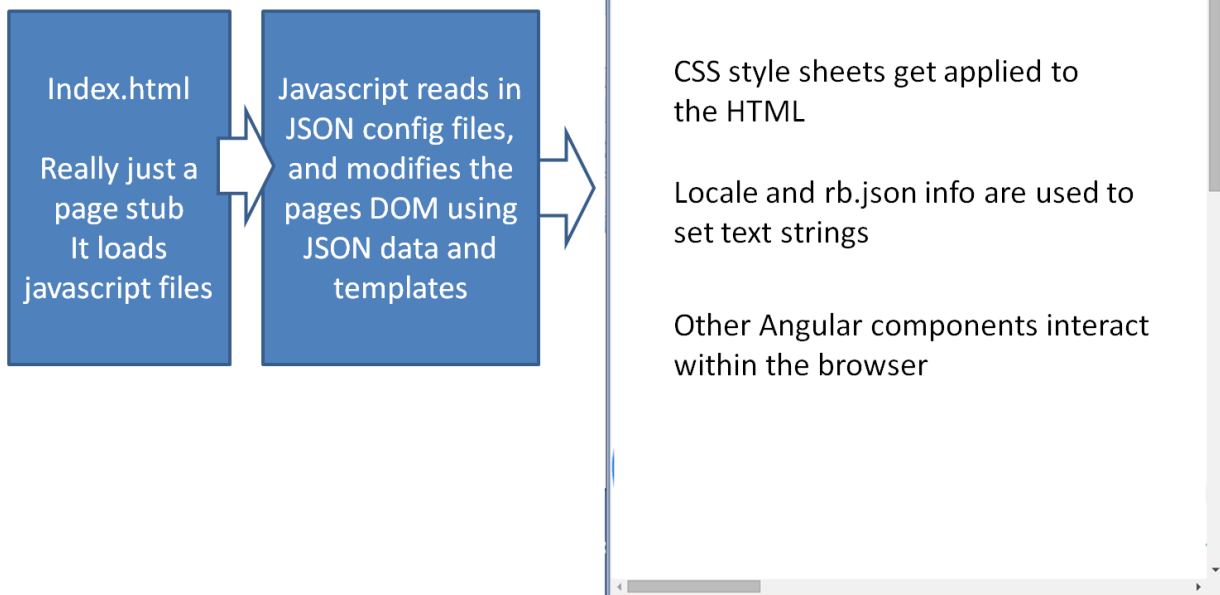
The following graphic is an example login page with the HP Playful theme customization:



Creating Custom Components and Page Layout

Understanding the MPP Rendering Process

To create custom components and make changes to the basic page layout, you must understand how the server side of the Marketplace Portal creates portal view content. The following diagram illustrates this rendering process:



The following files can be modified to customize the Marketplace Portal; however use caution when modifying these server side files:

- **Index.html** contains very little content and most of the content gets overwritten later in the process. This file loads a sequence of JavaScript files. If you are going to eventually create custom widgets that depend on local JavaScript libraries, load those libraries here.

Important: Some of the JavaScript files that are loaded are common libraries. Others are JavaScript files that contain embedded HTML templates that define Marketplace Portal sub-page content. Modifying these files is not recommended.

- **Dashboard.json** is the client-side definition file for the Marketplace Portal Dashboard view. This file defines the rows and content (tiles) that your subscriber sees in the Marketplace Portal Dashboard.



WARNING

The `dashboard.json` file is a *global* configuration file that defines the layout and content structure for all users in **all** organizations. Modifying this file will change the layout and content for all Marketplace Portal users.

- **mpp.json** configures server-side behavior of the Marketplace Portal. It does not configure the CSA JBoss server backend.

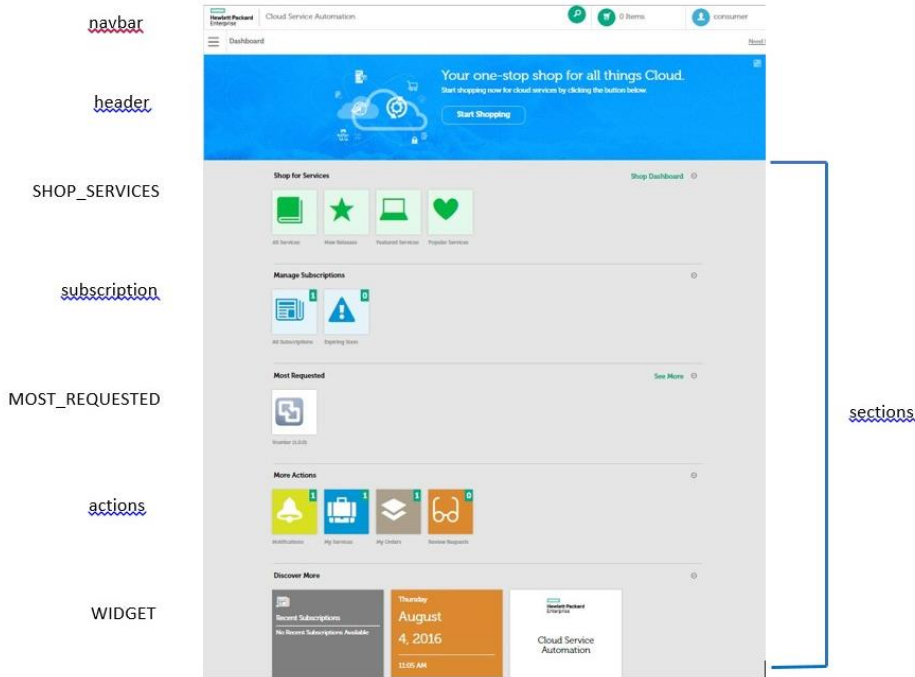
Customizing the Header and Tiles

To customize the layout and behavior of the dashboard for all users, you can edit the following major code structures in the `dashboard.json` file that is in the `csa/portal/node_modules/mpp-server/conf/directory`:

- The “header” structure

- The “sections” structure

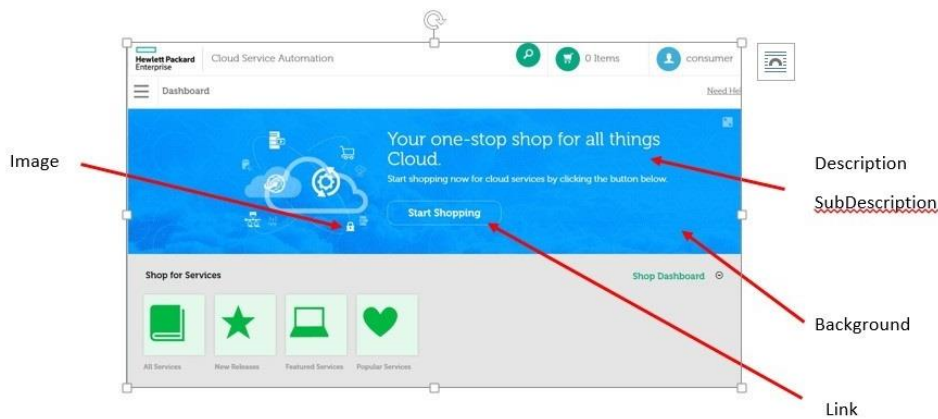
The follow graphic outlines the dashboard layout and which sections are specified by certain structures in the dashboard.json file:



Modifying Header Content

The header structure includes the following configuration elements that align with the header section:

- Icon – See Header Icon.
- Description – See Header Descriptions.
- SubDescription – See Header Descriptions.
- Link – See Header Link.
- Background – See Header Background.
- Search – Enables the global search feature in the Marketplace Portal.



Header Icon

The header icon section points to a specific path that is relative to the `csa\portal\node_modules\mpp-ui\dist\bower_components\mpp-theme` folder. The icon is a foreground image and is not affected by a CSS class mapping. You can add a new graphic to the `mpp-theme images` folder and change the name in `dashboard.json` or just change the contents of the specified file.

Important: The icon URL reference is common to all themes. Do not break the link to the image for all other themes, including the out-of-the-box themes. When you change the URL for the icon, make sure you create a matching directory and filename for each theme.

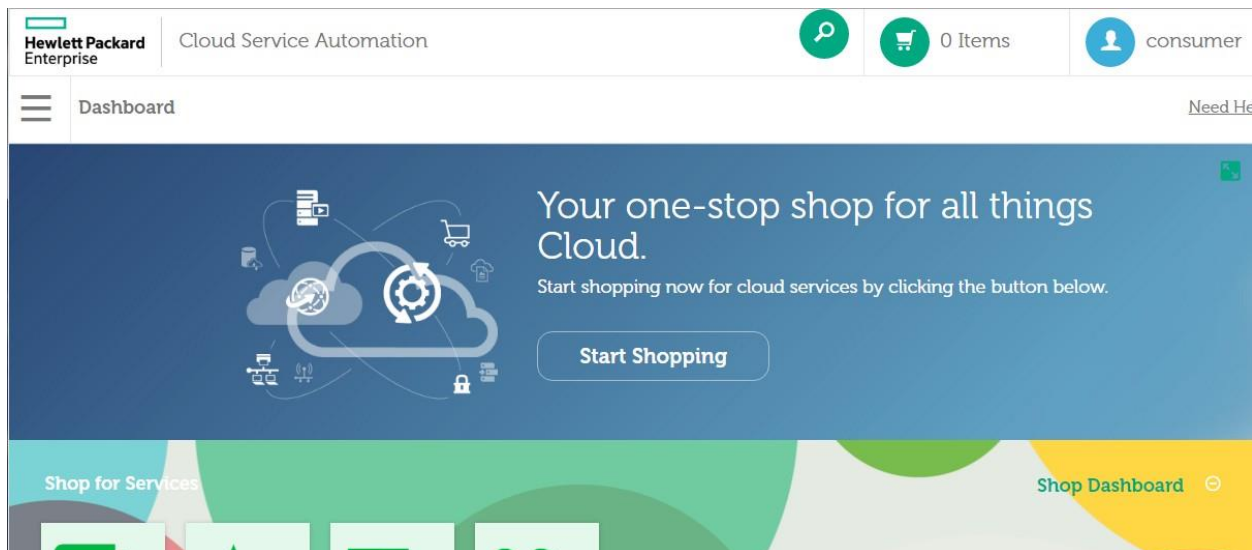
Header Background

The `background` section specifies a bitmap that will be displayed behind the icon image, descriptions, and link button. This configuration value is a reference described as a CSS class that resolves to the theme's style sheet in `main.css`. By default, the mapping is to `mpp-theme/images/csa-dashboard-background.png`.

To change the background image for the header, change the CSS class URL in your theme's `main.css` file. Search for the `.bg-clouds` element.

The following code changes the header background to the clouds image:

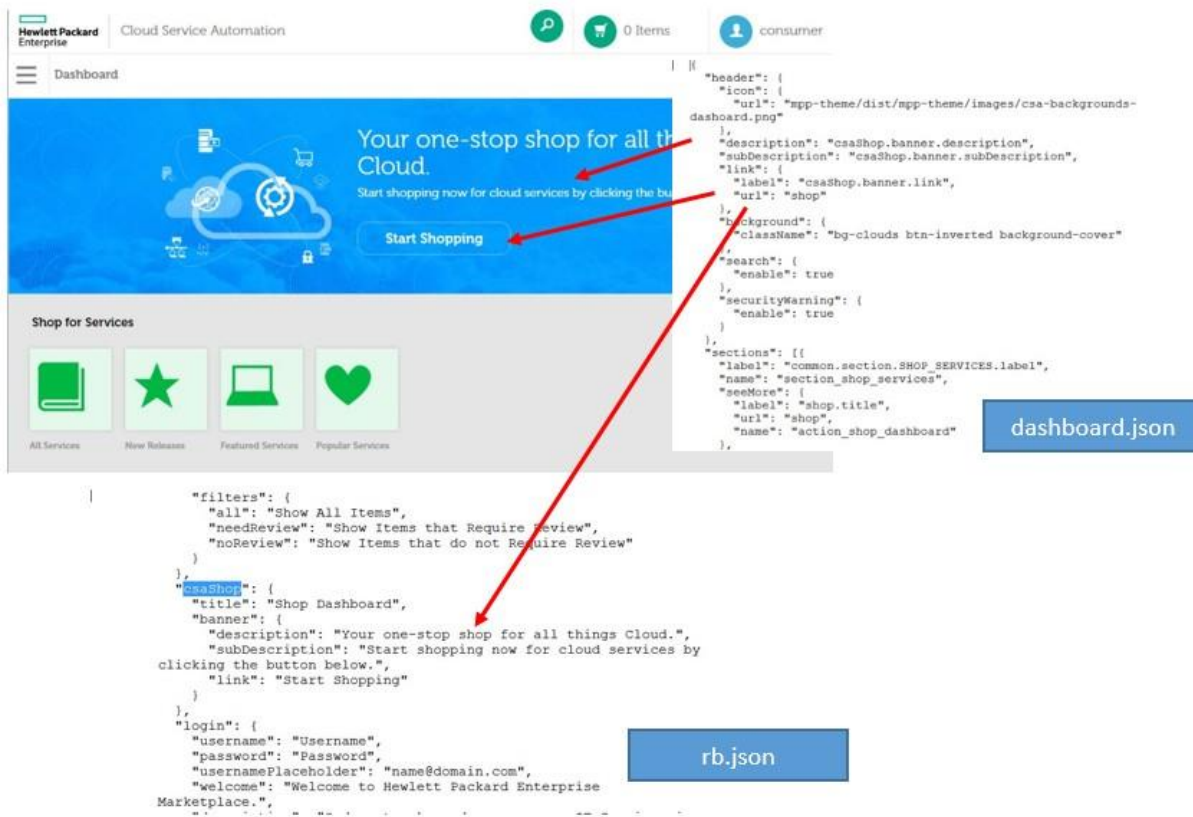
```
.bg-clouds{background:url(mpp-theme/images/image-02.png) no-repeat;background-size:100%;color:#fff}
```



Header Descriptions

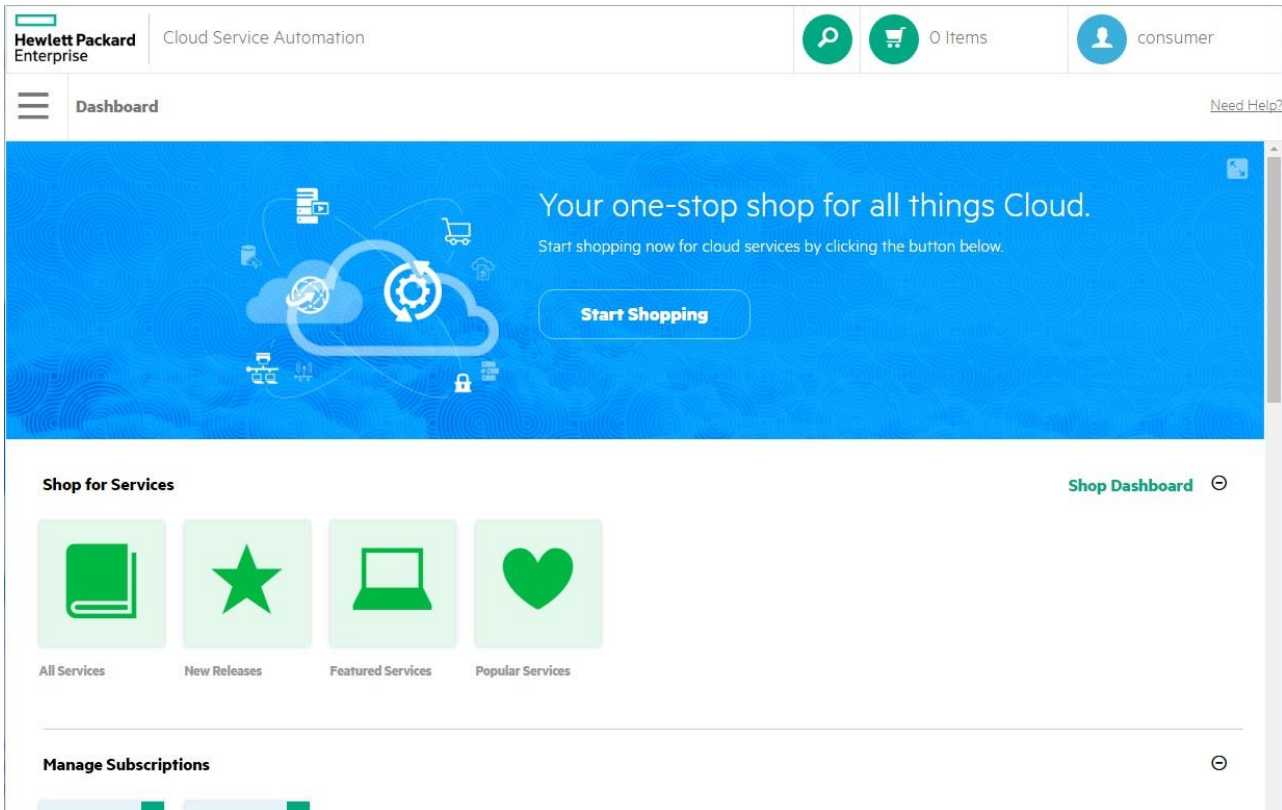
There are two lines of text available for customization in the header of the Dashboard. The Marketplace Portal is designed to support localization that uses resource files. These files include reference objects that allow text to be localized for different languages. These resource files are in `csa\portal\node_modules\mpp-ui\dist\locales\`.

The following graphic shows how the name reference matches the `rb.json` file objects.



To customize the description of the header text, change the following entries in the `rb.json` file:

```
"csaShop": {
  "title": "Service Automation Dashboard",
  "banner": {
    "description": "Your next step into the future of Automation!",
    "subDescription": "Cloud Service Automation at the heart of automating all
your business process needs.",
    "link": "Get Started"
  }
},
```



Header Link

The Header link section has two entries: one for the text label shown in the header and one for the URL to where the user is directed when the action button is clicked. As with the description, the text label is localized through the use of a property tag in the `rb.json` file. The `#/shop` entry denotes the view of the Marketplace Portal Dashboard, however, it can be any custom view you create and add to the server.

```
{
  "header": {
    "icon": {
      "url": "mpp-theme/dist/mpp-theme/images/csa-backgrounds-dashoard.png"
    },
    "description": "csaShop.banner.description",
    "subDescription": "csaShop.banner.subDescription",
    "link": {
      "label": "csaShop.banner.link",
      "url": "#/shop"
    }
  },
}
```

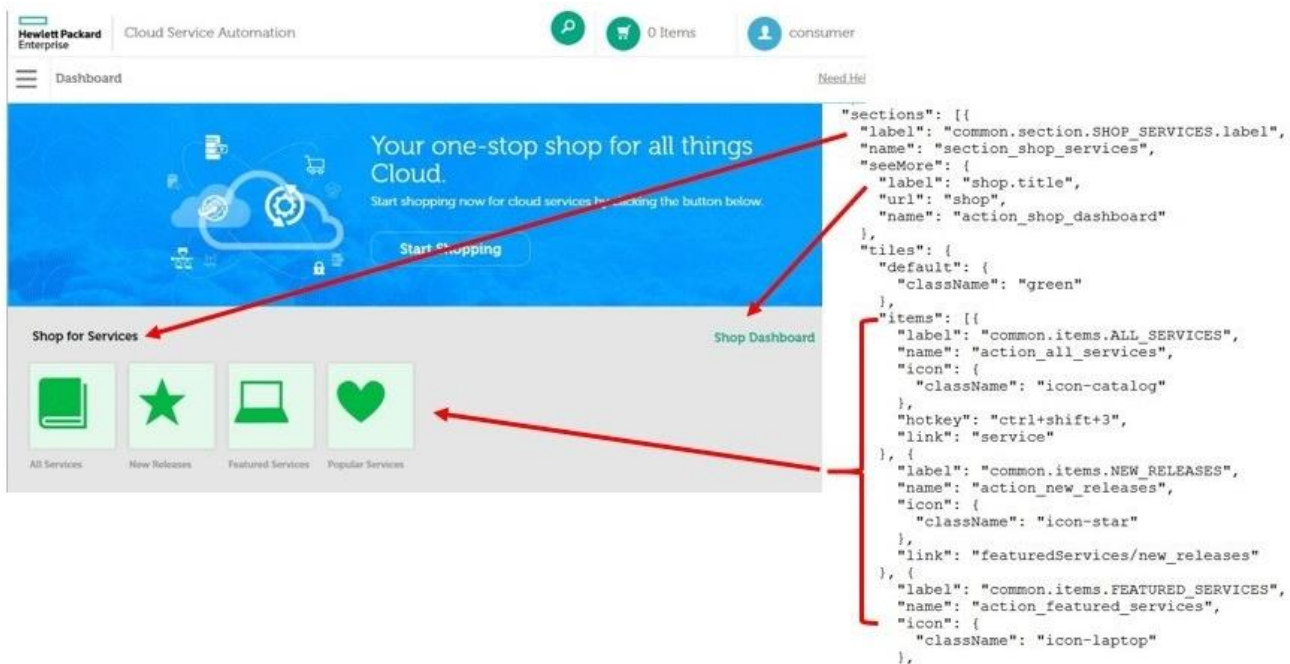
Customizing Dashboard Sections

The `dashboard.json` file defines the layout (rows and tiles) of the Marketplace Portal Dashboard. These rows and tiles are defined as object descriptions under the `sections` label. The layout of sections and order of tiles in each section are determined by the order of the section and tile items.

The following graphic shows how the first section of the Dashboard is defined. Similar to the Marketplace Portal Header descriptions, text fields are reference tags to labels and values in the `rb.json` file, to support localization.

Important: Because the Marketplace Portal content definition is specified in `dashboard.json`, the settings are global. All users in all organizations will have exactly the same content.

Note: For an unmodified version of the `dashboard.json` file, see Appendix A: Unmodified `dashboard.json` File. This appendix describes all default sections and items that are shipped with CSA.



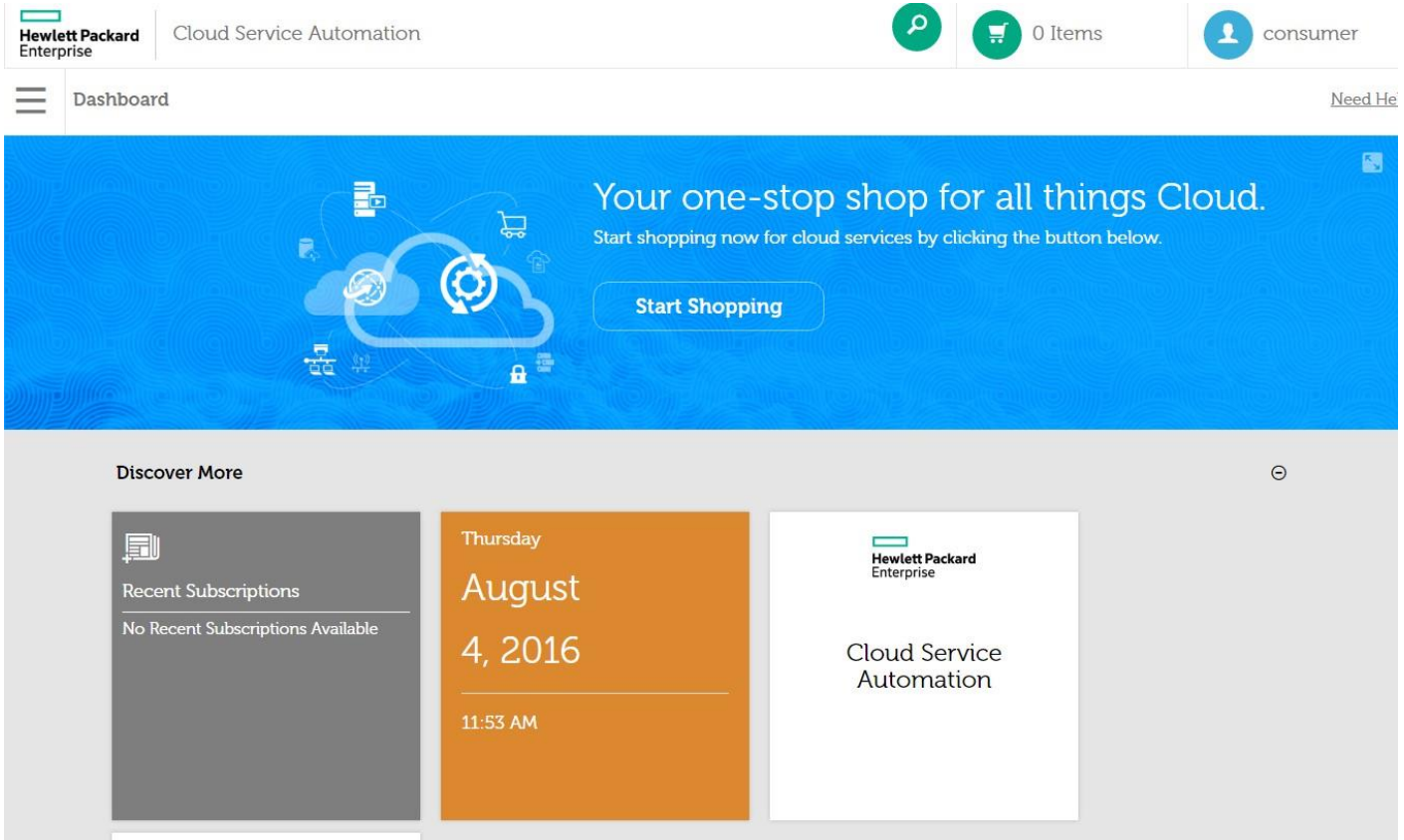
Ordering Section Objects

Important: When you modify the `dashboard.json` file, you must stop and restart the `hpmarketplaceportal` service.

The default `dashboard.json` file includes the following sections, in the following order:

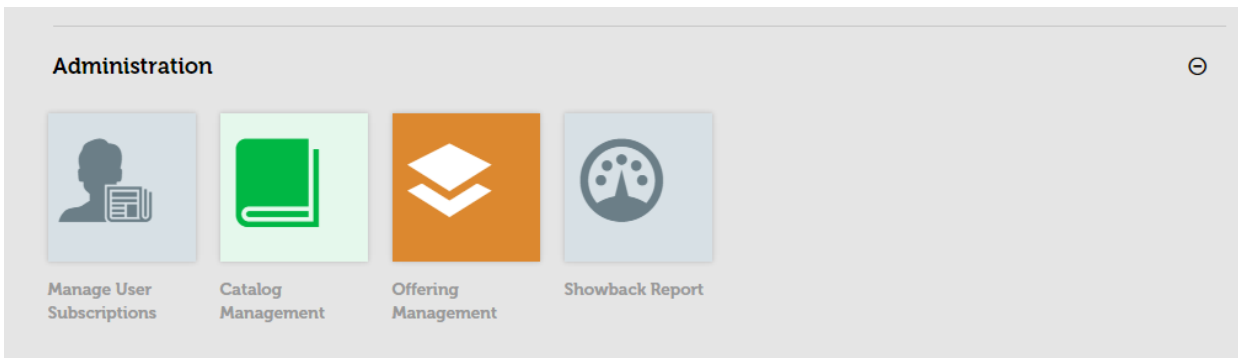
- Shop for Services - `common.section.SHOP_SERVICES.label`
- Manage Subscriptions - `common.section.subscription.label`
- More Actions - `common.section.actions.label`
- Administration – `common.section.ADMINISTRATION.label`
- Wizard - `WIZARD`
- Widgets – `WIDGETS`

Each section is defined independently within the `sections` tag and can be moved within the `sections` array to change the order of layout. For example, the following graphic shows the effect on the Marketplace Portal Dashboard when you move the Widget section to the top of the `sections` array.



Defining Role-Based Visibility

In the Dashboard view, the Administration section is visible only to users assigned to the consumer organization administrator role.



Use the "role" attribute to control visibility for any tile or section by adding the following line to the tile or section:

```
"role": ["CONSUMER_ORGANIZATION_ADMINISTRATOR"],
```

In the following example snippet from the `dashboard.json` file, you can see how the Administration section and how the "role" attribute has been used to hide the entire section:

```
{
  "label": "common.section.ADMINISTRATION.label",
  "role": ["CONSUMER_ORGANIZATION_ADMINISTRATOR"],
```



```

"tiles": {
  "default": {
    "className": "light-gray"
  },
  "items": [{
    "label": "common.items.MANAGE_USER_SUBSCRIPTIONS",
    "icon": {
      "className": "icon-manage-subscriptions"
    },
    "link": "#/user/manage"
  }, {
    "label": "common.items.MANAGE_CATALOGS",
    "icon": {
      "className": "icon-catalog"
    },
    "className": "green",
    "link": {
      "url" : "consumption/catalogs/ ",
      "target": "_self"
    }
  }, {
    "label": "common.items.MANAGE_OFFERINGS",
    "icon": {
      "className": "icon-services"
    },
    "className": "orange",
    "link": {
      "url" : "consumption/offerings/ ",
      "target": "_self"
    }
  }, {
    "label": "common.items.SCORECARD",
    "icon": {
      "className": "icon-status"
    },
    "link": {

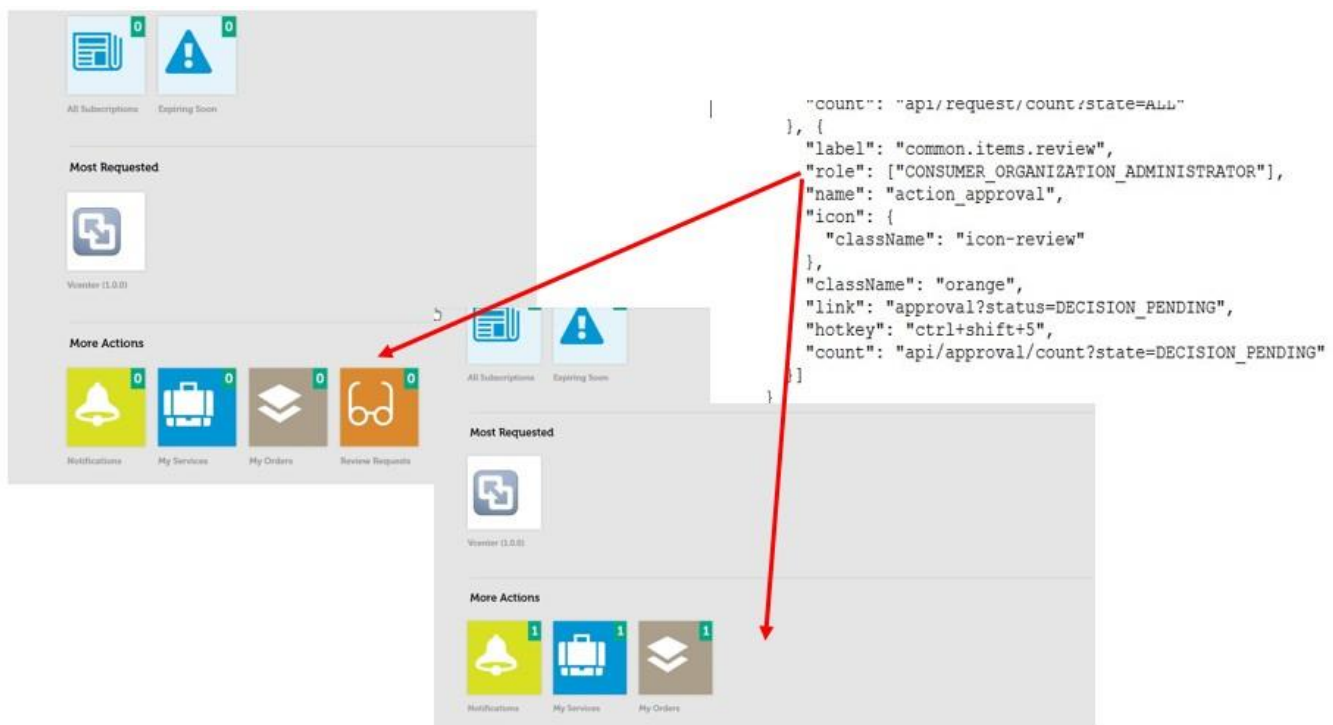
```

```

        "url":
"https://<CONFIGURE_HOST_NAME>/fndwar/loadEmbeddedPage.jsp?com.hp.bsm.uim.pageUID
=ef63ab7f-b86b-43c8-b8d8-bb81869b73dc",
        "target": "_blank"
    }
}]]
}
}

```

The following graphic shows how to hide the Review Requests tile so that it is visible only to a user who has been assigned as a consumer organization administrator:



The Widgets section is automatically generated by the widgets defined in the Service Management Console.

Moving or Deleting a Tile

Moving a tile to a different section is just a matter of copying the tile object and pasting it in another section.

Deleting a tile is just as simple by removing the tile object. The biggest challenge is making sure that you are cutting or deleting the object's descriptive containment. Verifying that the proper brackets and braces are maintained is just as important in the `dashboard.json` file as it is with any other programming language.

The following example shows how to remove the Review Requests tile. If your organization does not require approvals for service subscription, then you can remove the Review Requests tile by deleting the following tile object from the "Actions" section.

```

{
  "label": "common.items.review",
  "icon": {
    "className": "icon-review"
  },
  "className": "orange",
  "link": "#/approval?status=DECISION_PENDING",
  "hotkey": "ctrl+shift+5",
  "count": "api/approval/count?state=DECISION_PENDING"
}]

```

Caution: Make sure that curly brackets (`{ }`), square brackets (`[]`), and commas (`,`) remain balanced in the `dashboard.json` file.

Customizing Tiles

The tiles in the Marketplace Portal are stylized by using standard CSS classes and properties. This means that you can customize the tiles to fit your purpose or branding. The `main.css` file includes class objects labeled `mpp-tile`. If you look through the CSS file, you will find several, pre-defined settings. For example, if you search the `main.css` file for `mpp-tile`, you will find a base set of colors already defined, including: green, dark-blue, light-blue, light-gray, rock, lemon, and orange. These classes can be used for all tiles in a section, as shown in the following subscription section example:

```

{
  "label": "common.section.subscription.label",
  "tiles": {
    "default": {
      "className": "light-blue"
    },
    "items": [{
      "label": "common.items.ALL_SUBSCRIPTIONS",
      "link": "#/subscription",
      "icon": {
        "className": "icon-subscription"
      },
      "hotkey": "ctrl+shift+7",
      "count": "api/subscription/count?state=ALL"
    }...
  }
}

```

Or, a class can be assigned to a specific tile like the yellow Notifications tile configuration.

```

"tiles": {
  "items": [{

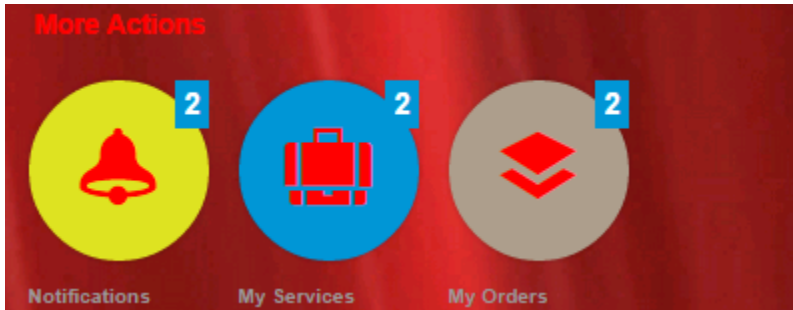
```

```
"label": "notification.list.title",
"className": "lemon",
"icon": {
  "className": "icon-notification"
},
"link": "#/notification",
"hotkey": "ctrl+shift+4",
"count": "api/notification/total-count"
}, {
```

Changing a Tile Image

CSA icons are typically specified in the `main.css` file by pointing to glyphs. These are compact bitmap images that are referenced by location in custom font files. A glyph entry in the `main.css` style sheet looks like the following example, where `"\e11a"` is a reference to its location in the font file:

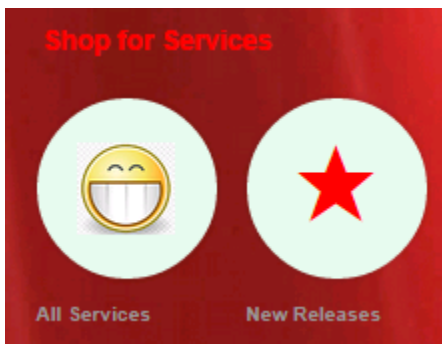
```
.icon-catalog-option:before {  
    content: "\e11a";  
}
```



Note: Icons do not have to be glyphs. Icons can be any image bitmap that you want to put in your images directory. Once again, you will be specifying a theme-relative directory where the new bitmap is stored.

The following example uses a `smile.png` file to replace the service catalog icon.

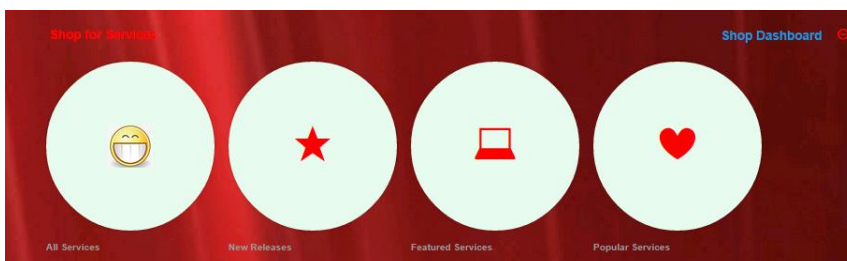
```
.icon-catalog:before {  
    content: url (mpp-theme/images/smile.png);  
}
```



Changing a Tile Size

The size of the tiles in the Marketplace Portal tiles are customized by modifying the `mpp-tile.tile` class in the `main.css` file, such as the static `width` property in the following example:

```
mpp-tile.tile {  
    width: 240px;  
}
```



You can also specify a relative size for tiles. If you specify a large tile size, the page layout will wrap content vertically.

Changing a Tile Link

Within the `dashboard.json` file, you can change the link that will be called when the tile is clicked. This can be a specific URL, as shown in the following SCORECARD tile example:

```
}, {  
    "label": "common.items.SCORECARD",  
    "icon": {  
        "className": "icon-status"  
    },  
    "link": {  
        "url":  
"https://<CONFIGURE_HOST_NAME>/fndwar/loadEmbeddedPage.jsp?com.hp.bsm.uim.pageUID  
=ef63ab7f-b86b-43c8-b8d8-bb81869b73dc",  
        "target": "_blank"  
    }  
}
```

You can also specify the path to specific views in the Marketplace Portal. The following example links to the Offerings view in the Service Management Console. Only the SMC catalog views and offering views are available in CSA 4.5 links.

```
}, {  
    "label": "common.items.MANAGE_OFFERINGS",  
    "icon": {  
        "className": "icon-services"  
    },  
    "className": "orange",  
    "link": {  
        "url" : "consumption/offerings/ ",  
        "target": "_self"}  
}, {
```

Experiment!

While there are known limitations to customizing the Dashboard, you still have meaningful options available to customize and style the Marketplace Portal for your organization.

There are many different tools available to help customize CSS. Your browser's Inspect feature can be a great source to identify elements that you might want to modify. Just remember that the modifications you make are most likely not going to be upgrade-aware — keeping a backup copy and restoring those modifications are likely in your future.

Additional Documentation

For more information about cloud management software, go to <http://www.hpe.com/software/csa>.

To help us improve our documentation, please send feedback to clouddocs@hpe.com.

Appendix A: Unmodified dashboard.json File

```
{
  "header": {
    "icon": {
      "url": "mpp-theme/dist/mpp-theme/images/csa-backgrounds-dashoard.png"
    },
    "description": "csaShop.banner.description",
    "subDescription": "csaShop.banner.subDescription",
    "link": {
      "label": "csaShop.banner.link",
      "url": "#/shop"
    },
    "background": {
      "className": "bg-clouds btn-inverted background-cover"
    },
    "search": {
      "enable": true
    }
  },
  "sections": [{
    "label": "common.section.SHOP_SERVICES.label",
    "seeMore": {
      "label": "shop.title",
      "url": "#/shop"
    }
  },
  "tiles": {
    "default": {
      "className": "green"
    },
    "items": [{
      "label": "common.items.ALL_SERVICES",
      "icon": {
        "className": "icon-catalog"
      },
      "hotkey": "ctrl+shift+3",
      "link": "#/service"
    }, {
      "label": "common.items.NEW_RELEASES",
      "icon": {
        "className": "icon-star"
      },
      "link": "#/featuredServices/new_releases"
    }, {
      "label": "common.items.FEATURED_SERVICES",
```

```

    "icon": {
      "className": "icon-laptop"
    },
    "link": "#/service?category={featuredCategory}&featured=true"
  }, {
    "label": "common.items.POPULAR_SERVICES",
    "icon": {
      "className": "icon-heart"
    },
    "link": "#/featuredServices/most_requested"
  ]
}
}, {
  "label": "common.section.subscription.label",
  "tiles": {
    "default": {
      "className": "light-blue"
    },
    "items": [{
      "label": "common.items.ALL_SUBSCRIPTIONS",
      "link": "#/subscription",
      "icon": {
        "className": "icon-subscription"
      },
      "hotkey": "ctrl+shift+7",
      "count": "api/subscription/count?state=ALL"
    }, {
      "label": "common.items.EXPIRING",
      "icon": {
        "className": "icon-alert"
      },
      "count": "api/subscription/count?state=EXPIRING_SOON",
      "link": "#/featuredSubscriptions/expiring_soon"
    }
  ]
}
}, {
  "type": {
    "name": "CATALOG_CATEGORY",
    "category": "MOST_REQUESTED"
  },
  "seeMore": "#/featuredServices/most_requested"
}, {
  "label": "common.section.actions.label",
  "tiles": {
    "items": [{
      "label": "notification.list.title",
      "className": "lemon",
      "icon": {
        "className": "icon-notification"
      },
      "link": "#/notification",
      "hotkey": "ctrl+shift+4",

```



```

    "count": "api/notification/total-count"
  }, {
    "label": "myservice.list.title",
    "className": "dark-blue",
    "icon": {
      "className": "icon-mystuff"
    },
    "link": "#/myservice",
    "hotkey": "ctrl+shift+8",
    "count": "api/myservice/count?state=ALL"
  }, {
    "label": "common.items.orders",
    "className": "rock",
    "icon": {
      "className": "icon-services"
    },
    "link": "#/request",
    "hotkey": "ctrl+shift+6",
    "count": "api/request/count?state=ALL"
  }, {
    "label": "common.items.review",
    "icon": {
      "className": "icon-review"
    },
    "className": "orange",
    "link": "#/approval?status=DECISION_PENDING",
    "hotkey": "ctrl+shift+5",
    "count": "api/approval/count?state=DECISION_PENDING"
  ]
}
}, {
  "label": "common.section.ADMINISTRATION.label",
  "role": ["CONSUMER_ORGANIZATION_ADMINISTRATOR"],
  "tiles": {
    "default": {
      "className": "light-gray"
    },
    "items": [{
      "label": "common.items.MANAGE_USER_SUBSCRIPTIONS",
      "icon": {
        "className": "icon-manage-subscriptions"
      },
      "link": "#/user/manage"
    }, {
      "label": "common.items.MANAGE_CATALOGS",
      "icon": {
        "className": "icon-catalog"
      },
      "className": "green",
      "link": {
        "url": "consumption/catalogs/ ",
        "target": "_self"
      }
    }
  ]
}

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    }, {
      "label": "common.items.MANAGE_OFFERINGS",
      "icon": {
        "className": "icon-services"
      },
      "className": "orange",
      "link": {
        "url" : "consumption/offerings/ ",
        "target": "_self"}
    }, {
      "label": "common.items.SCORECARD",
      "icon": {
        "className": "icon-status"
      },
      "link": {
        "url":
"https://<CONFIGURE_HOST_NAME>/fndwar/loadEmbeddedPage.jsp?com.hp.bsm.uim.pageUID=ef63ab7
f-b86b-43c8-b8d8-bb81869b73dc",
        "target": "_blank"
      }
    }
  ]
}
}, {
  "type": {
    "name": "WIZARD",
    "category": "WIZARD"
  },
  "tiles": {
    "default": {
      "className": "black background-cubes background-repeat",
      "icon": {
        "className": "icon-monitor"
      }
    }
  }
}
}, {
  "type": {
    "name": "WIDGET",
    "category": "WIDGET"
  }
}
}]
}

```

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