HP Cloud Service Automation

Software Version 4.50

Customize the Marketplace Portal

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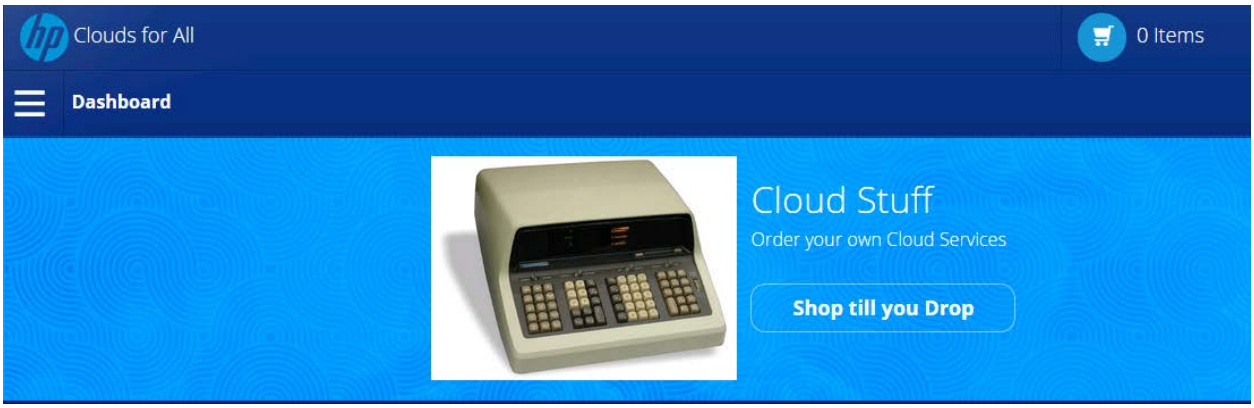
Document release date: June 2015

Software release date: June 2015

Overview



HP Cloud Service Automation 4.50 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 in to the Service Management Console (SMC), while other options require programming skills in JavaScript, HTML, and CSS.

This document outlines three levels of customization, including simple, advanced, and expert level customizations:

- **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, HP recommends that you follow good backup procedures, as you would with any upgrade process.

Use Cases

An HP Cloud Service Automation (HP 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 HP 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 HP CSA and non-HP 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

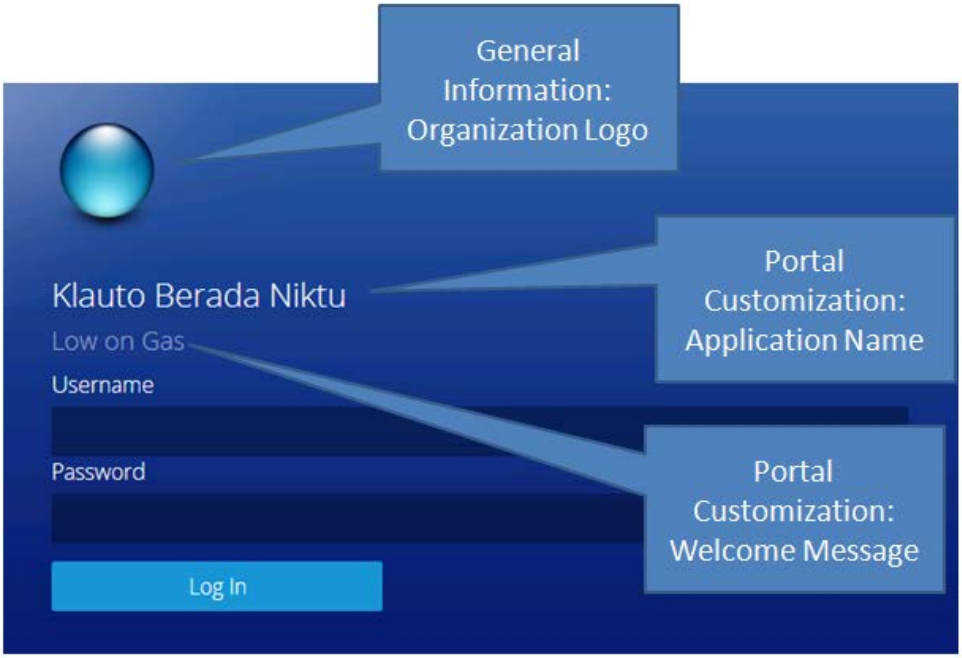
The following standard Marketplace Portal customization options are available in the General Information and Portal Customization views in the Service Management Console, under the Organizations section.

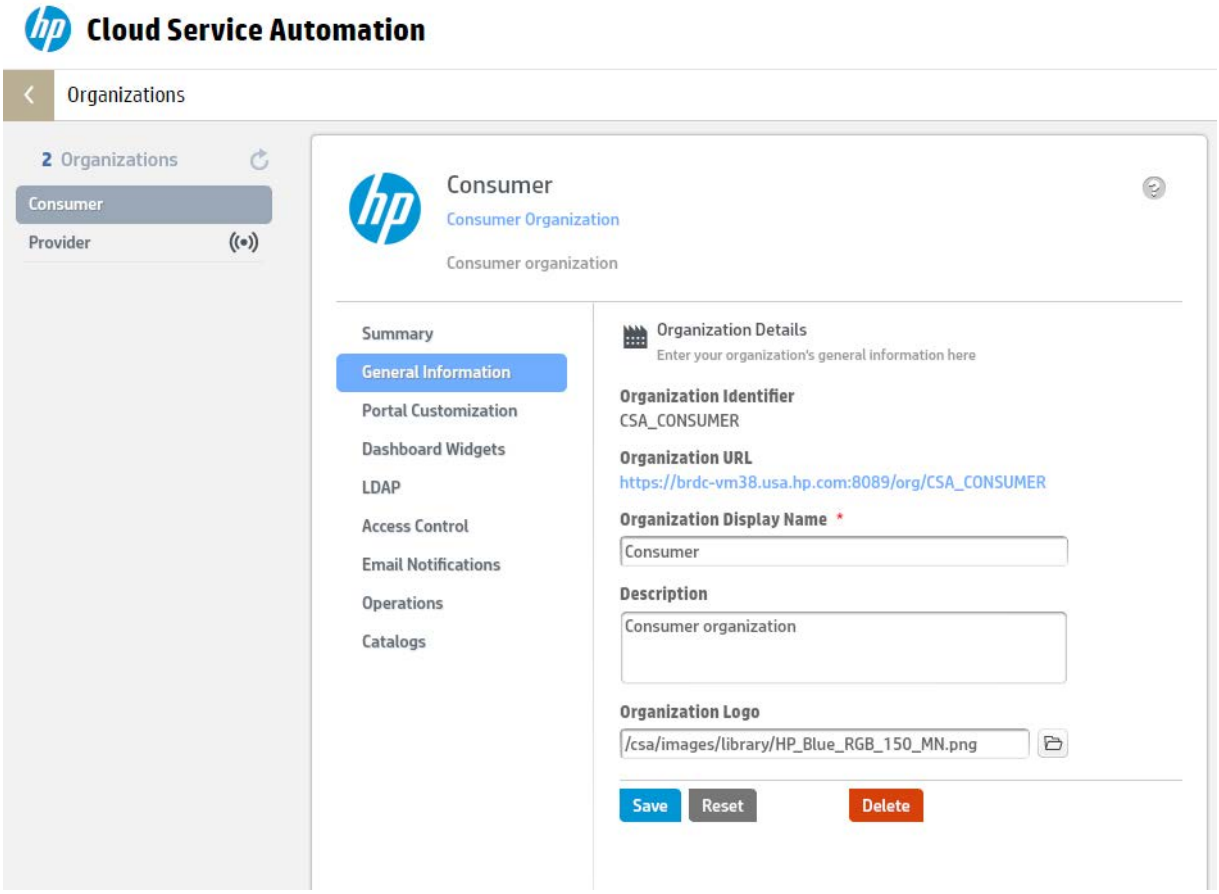
- Organization Logo
- Application Name (This is actually the name of the text that is displayed in the login screen and in the MPP Subscriber screen. It is not specific to a particular application.)
- Welcome messages, copyright statements, and disclaimer warnings
- Portal themes (HP CSA 4.50 ships with three pre-built themes: HP Enterprise, HP Playful, and HP Simplified.)

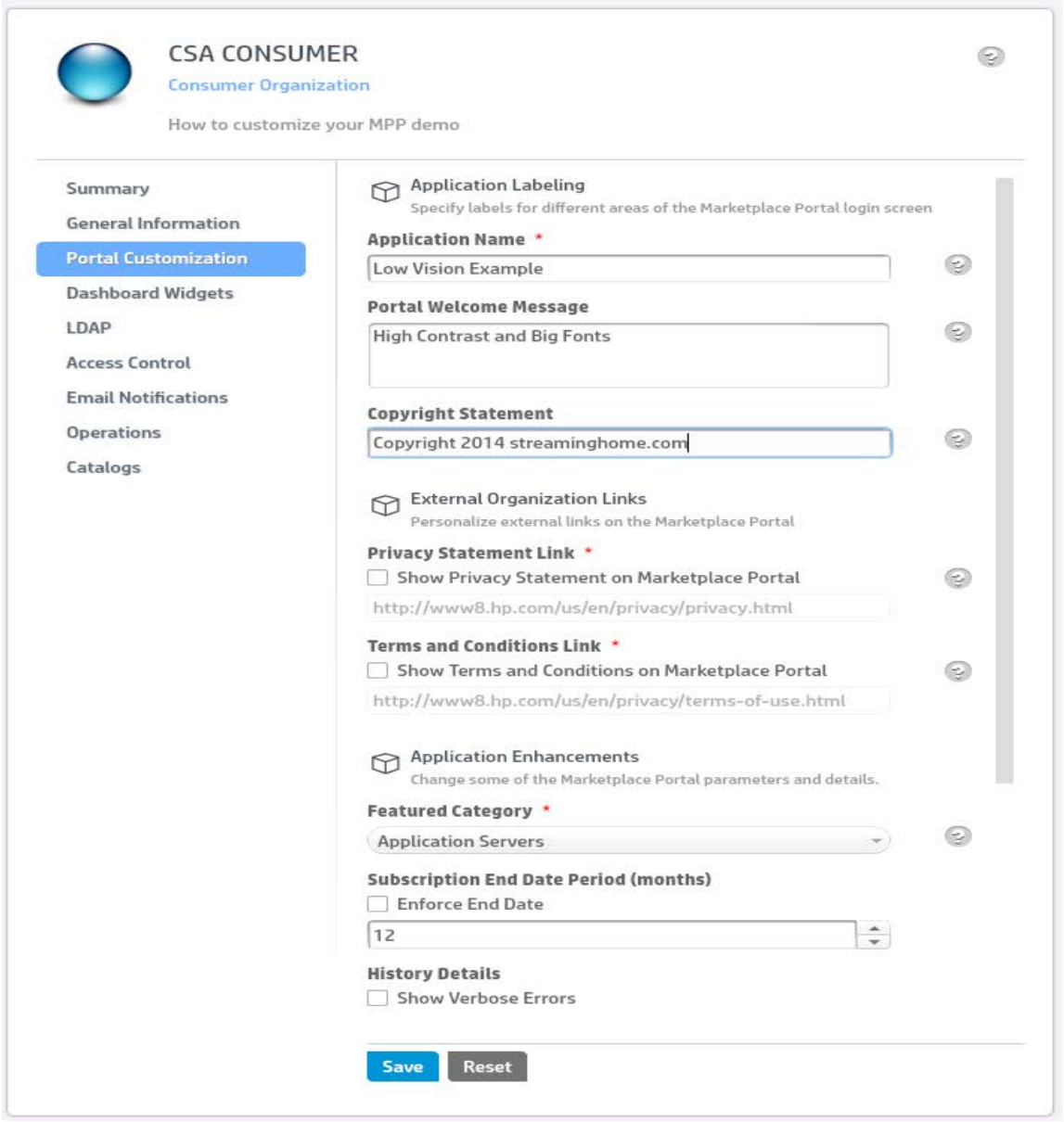
Note: If you do not want to use one of these themes, you can create your own Marketplace Portal theme for your organization. See Customizing your own with theme.

WARNING

In the General Information tab, there is an option to set the **Organization Display Name**.
The **Organization Display Name** is not a visible property in the Marketplace Portal.
It actually *renames* the organization in the database and changes the URL to the login view. If you change this value after you have saved the organization the first time and the directory service associated with the organization is not correctly modified, all users for the organization will be locked out.




Cloud Service Automation
Organizations
2 Organizations
Consumer
Provider
Consumer
Consumer Organization
Consumer organization
Summary
General Information
Portal Customization
Dashboard Widgets
LDAP
Access Control
Email Notifications
Operations
Catalogs
Organization Details
Enter your organization's general information here
Organization Identifier
CSA_CONSUMER
Organization URL
https://brdc-vm38.usa.hp.com:8089/org/CSA_CONSUMER
Organization Display Name *
Consumer
Description
Consumer organization
Organization Logo
/csa/images/library/HP_Blue_RGB_150_MN.png
Save
Reset
Delete

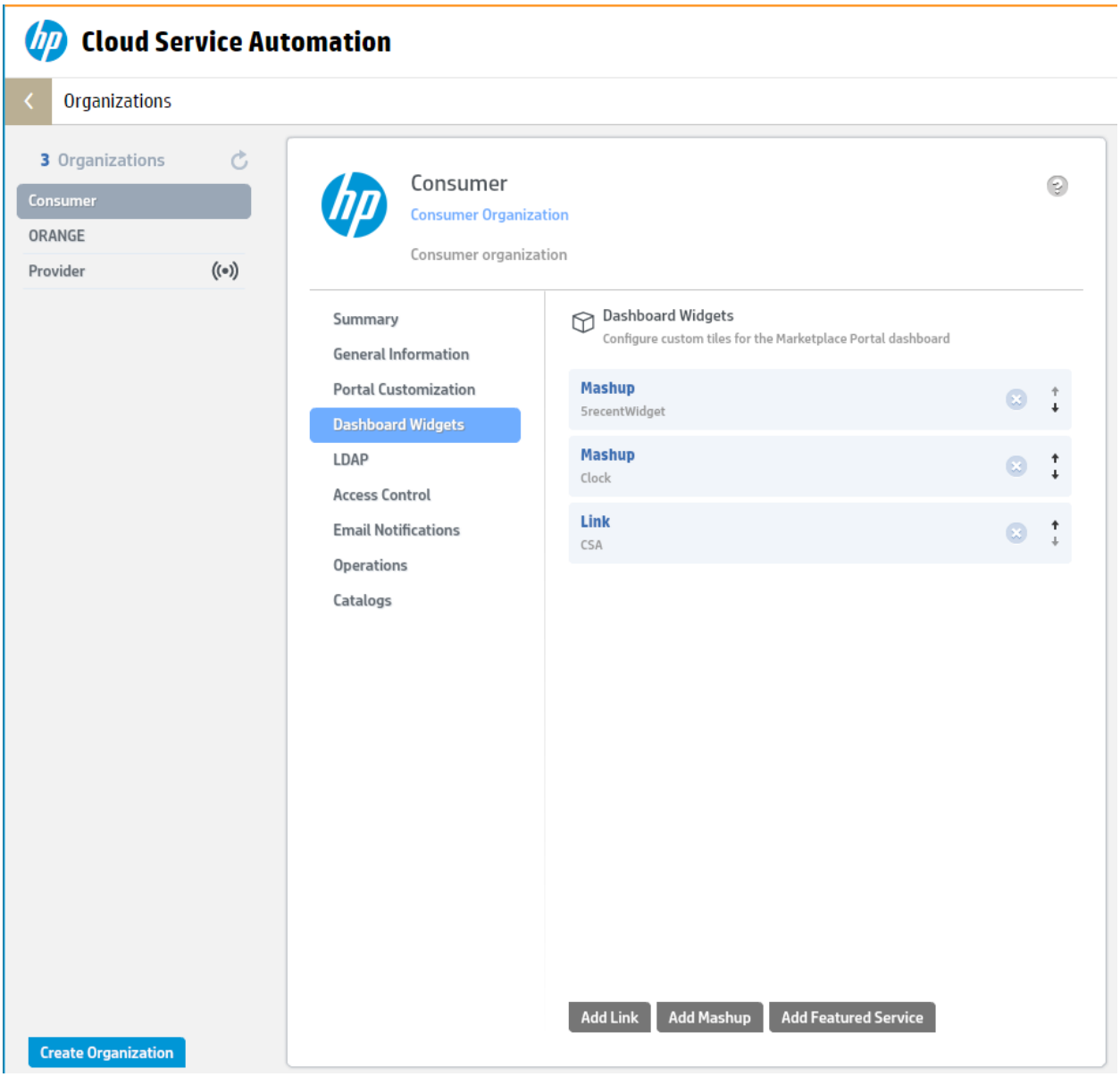

CSA CONSUMER
Consumer Organization
How to customize your MPP demo
Summary
General Information
Portal Customization
Dashboard Widgets
LDAP
Access Control
Email Notifications
Operations
Catalogs
Application Labeling
Specify labels for different areas of the Marketplace Portal login screen
Application Name *
Low Vision Example
Portal Welcome Message
High Contrast and Big Fonts
Copyright Statement
Copyright 2014 streaminghome.com
External Organization Links
Personalize external links on the Marketplace Portal
Privacy Statement Link *
Show Privacy Statement on Marketplace Portal
http://www8.hp.com/us/en/privacy/privacy.html
Terms and Conditions Link *
Show Terms and Conditions on Marketplace Portal
http://www8.hp.com/us/en/privacy/terms-of-use.html
Application Enhancements
Change some of the Marketplace Portal parameters and details.
Featured Category *
Application Servers
Subscription End Date Period (months)
Enforce End Date
12
History Details
Show Verbose Errors
Save
Reset

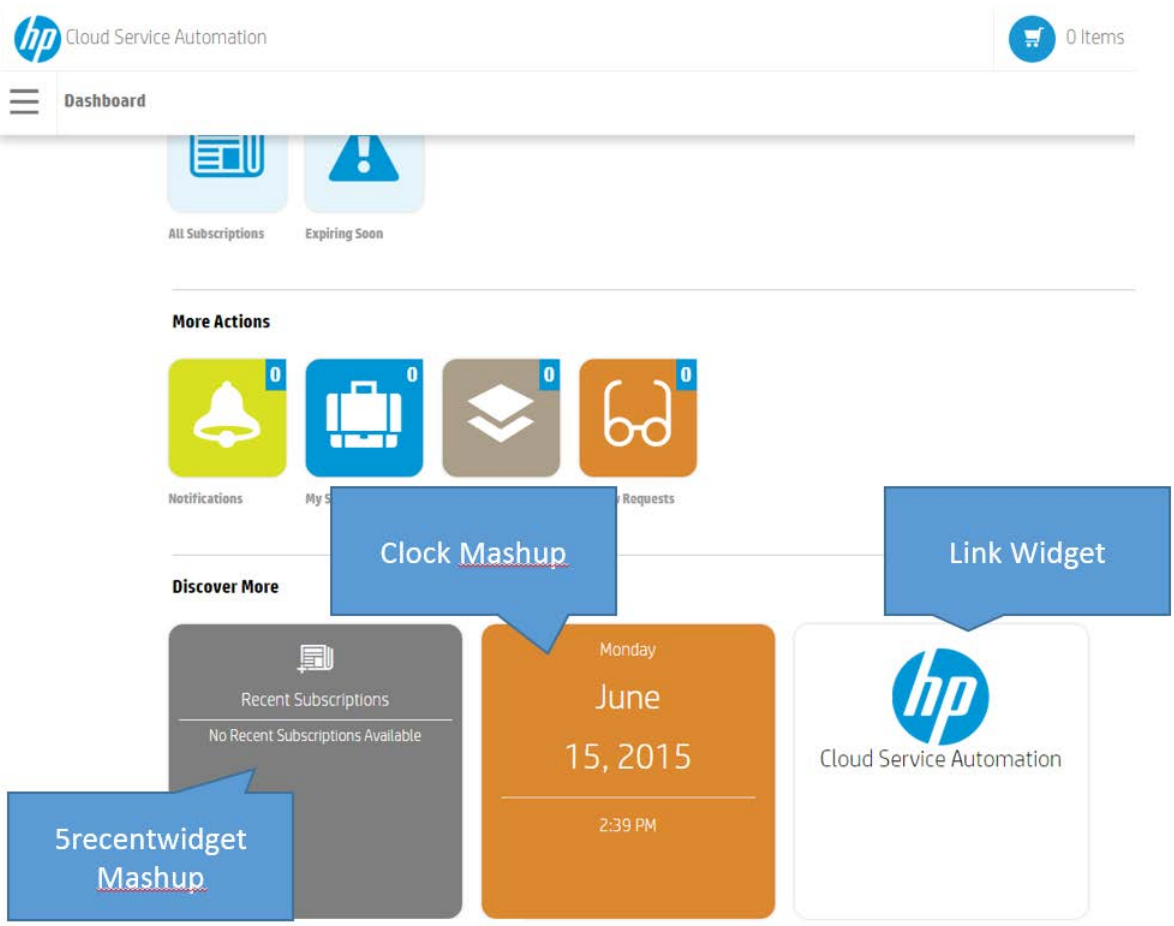
Advanced SMC Customizations

CSA 4.50 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:

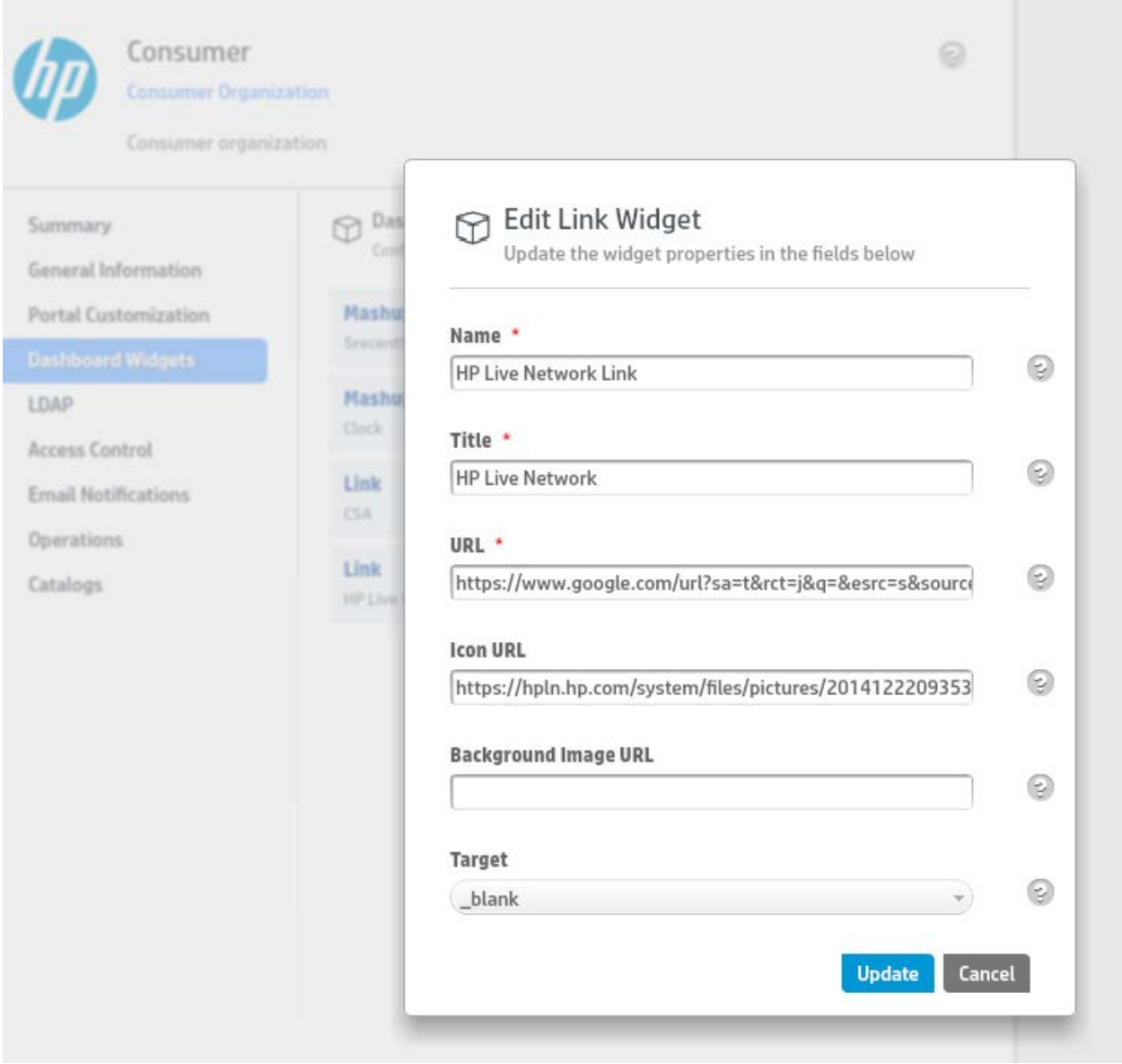
- **Link:** Standard web address URL (Easy)
- **Featured Service:** Adds a tile that shows random services from a selected category. (Limited)
- **Mashup:** Customizable content to support dynamic data (Advanced)





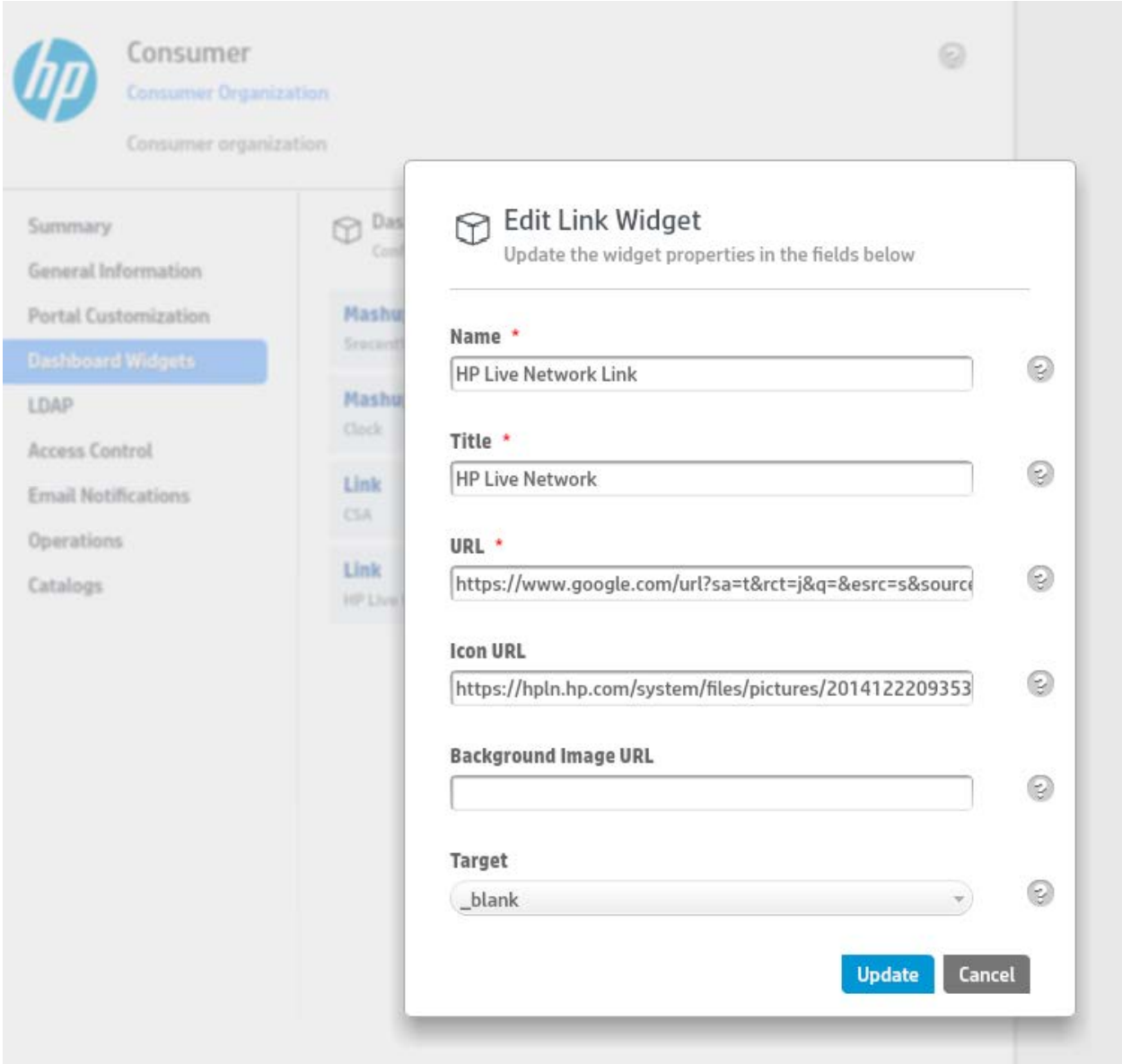
Creating Custom Links

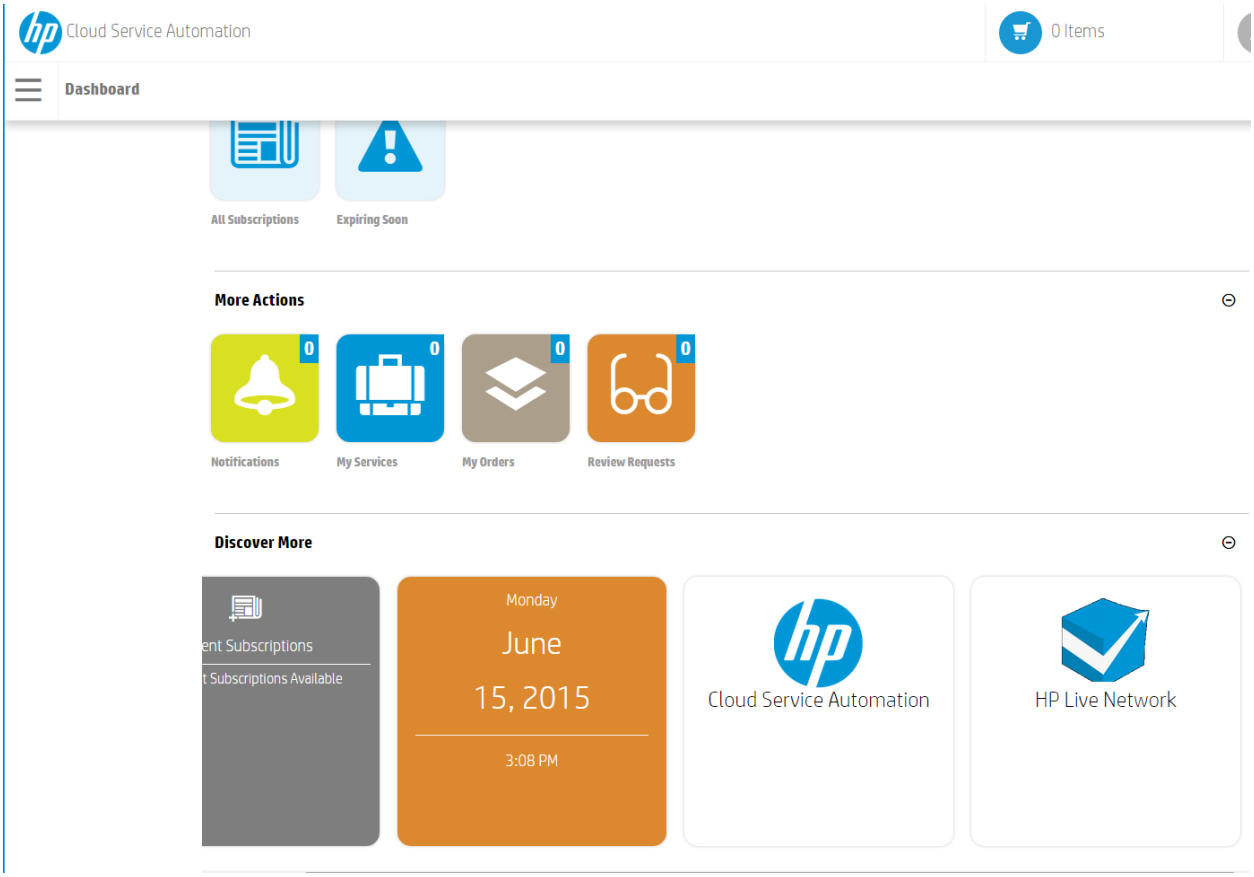
A custom link widget allows the CSA administrator to create a clickable button in the Marketplace Portal, under the Discover More section, that will redirect the user to the provided URL. These links are very straightforward to create by defining the following information for the widget.



- **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.



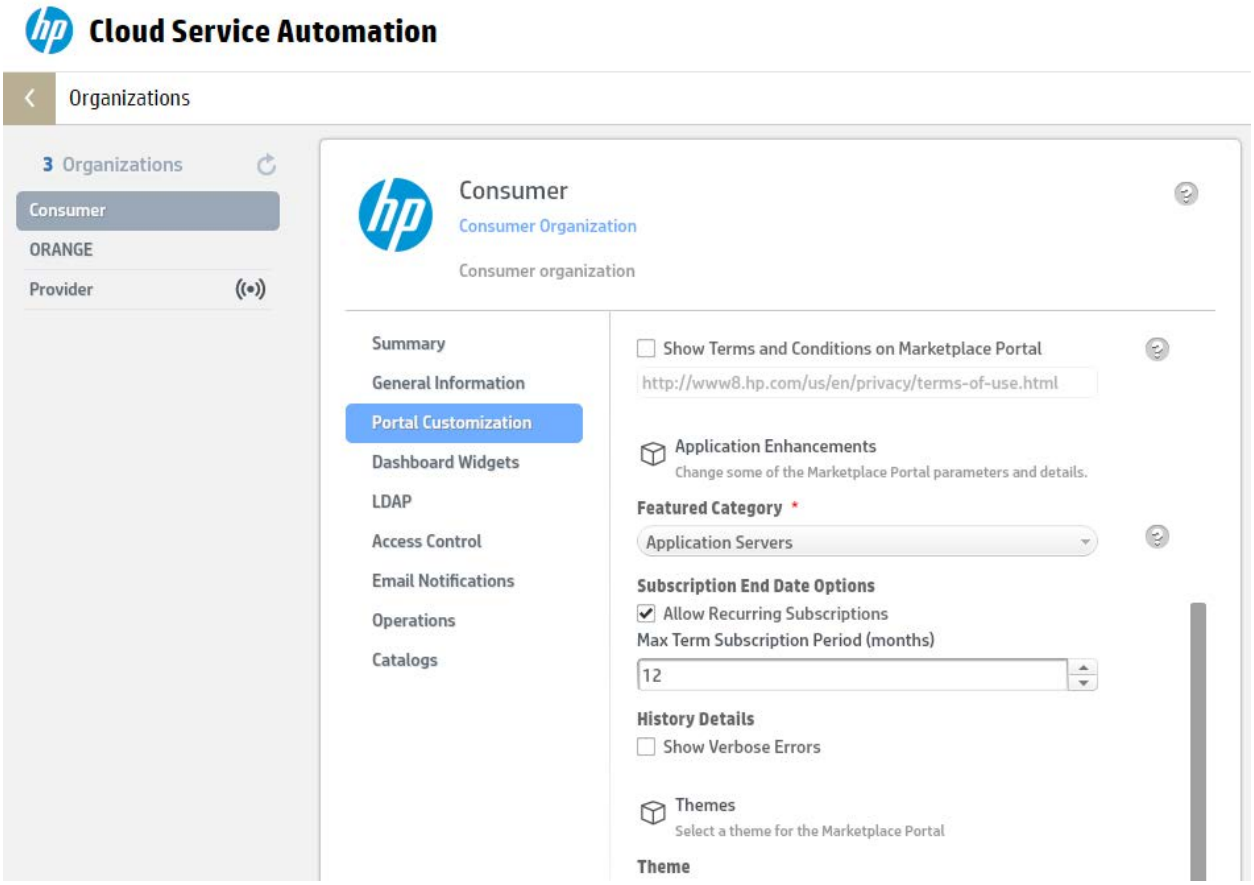


Adding a Featured Service Tile

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.

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\mppui\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:

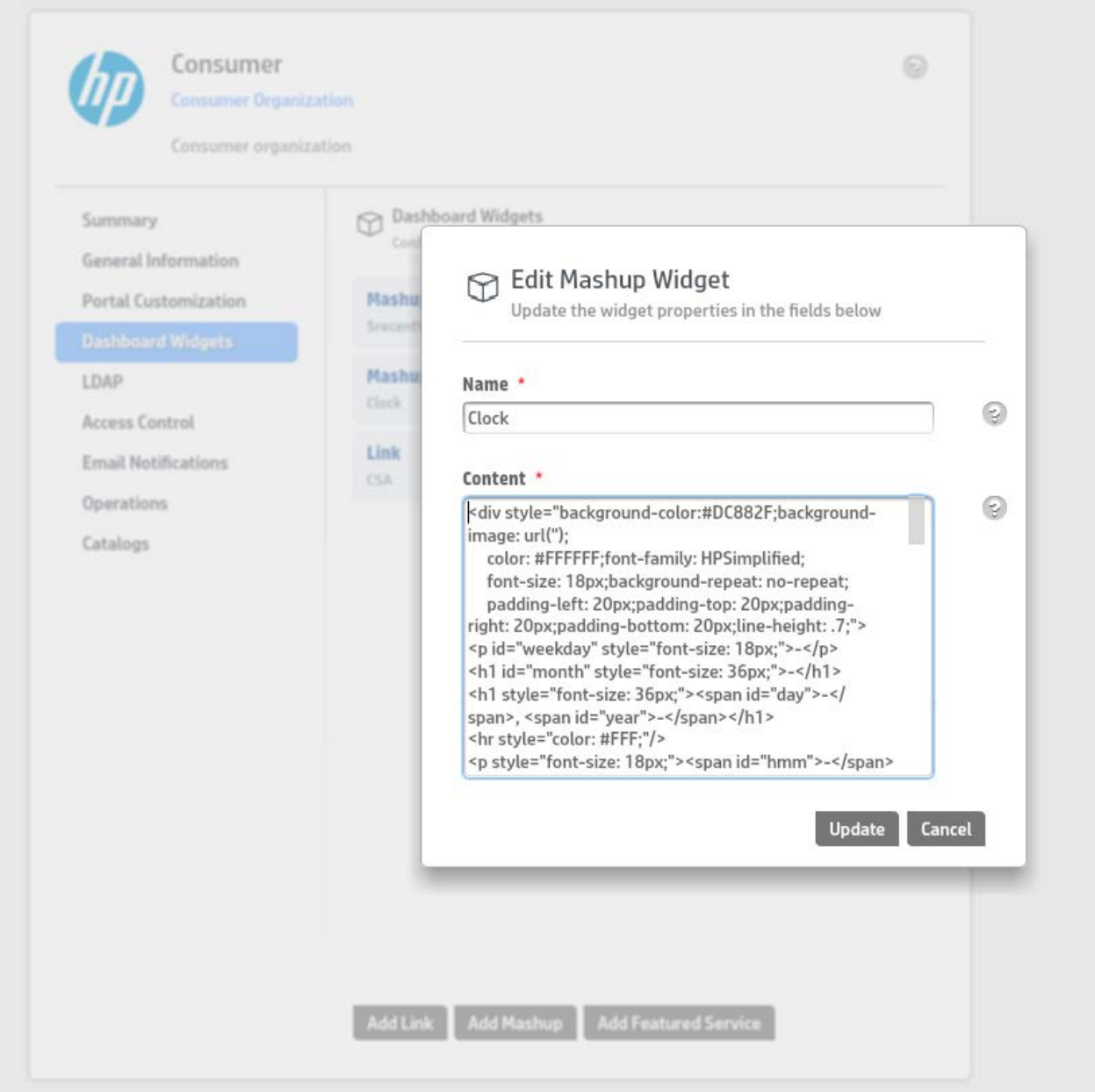
```
<div style="background-color:#DC882F;background-image: url('');
     color: #FFFFFF;font-family: HPSimplified;
     font-size: 18px;background-repeat: no-repeat;
     padding-left: 20px;padding-top: 20px;padding-right: 20px;padding-bottom: 20px;line-height:
.7;">
<p id="weekday" style="font-size: 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>
```


Consumer
Consumer Organization
Consumer organization
Summary
General Information
Portal Customization
Dashboard Widgets
LDAP
Access Control
Email Notifications
Operations
Catalogs
Dashboard Widgets
Edit Mashup Widget
Update the widget properties in the fields below
Name *
Clock
Content *
<div style="background-color:#DC882F;background-image: url(");
color: #FFFFFF;font-family: HPSimplified;
font-size: 18px;background-repeat: no-repeat;
padding-left: 20px;padding-top: 20px;padding-right: 20px;padding-bottom: 20px;line-height: .7;">
-
<h1 id="month" style="font-size: 36px;">-</h1>
<h1 style="font-size: 36px;">-, -</h1>
<hr style="color: #FFF;"/>
-
Update
Cancel
Add Link
Add Mashup
Add Featured Service

Expert Level Customizations

CSA 4.50 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
- Create 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 HP CSA 4.50, 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
HP Enterprise	`mpp-enterprise-theme`
HP Playful	`mpp-pilot-theme`
HP 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.

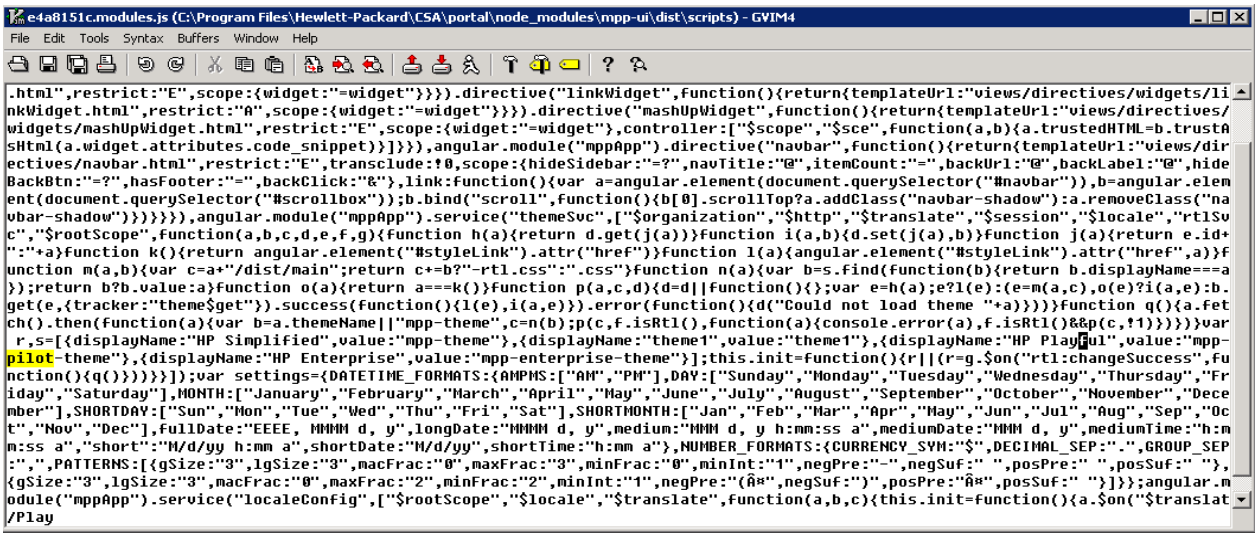
2. Using a text editor, open the `[version hash].modules.js` file in the mpp-ui/dist/scripts directory. The `modules.js` filename has a different version hash prefix for each release of CSA; however, it should be the only `modules.js` file in this directory. This file contains the names and locations of the elements used by the Marketplace Portal, to match the theme names defined in the CSA Service Management Console.

3. Search for the array theme section by using the string `HP Playful`.

   Add a new theme object to the array by following the same pattern for the HP 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"}`.

   ```
   var r,s=[{displayName:"HP Simplified",value:"mpp-theme"},{displayName:"HP Playful",value:"mpp-pilot-theme"},{displayName:"HP Enterprise",value:"mpp-enterprise-theme"},{displayName:"MyNewTheme", value:"MyNewTheme"}]
   ```

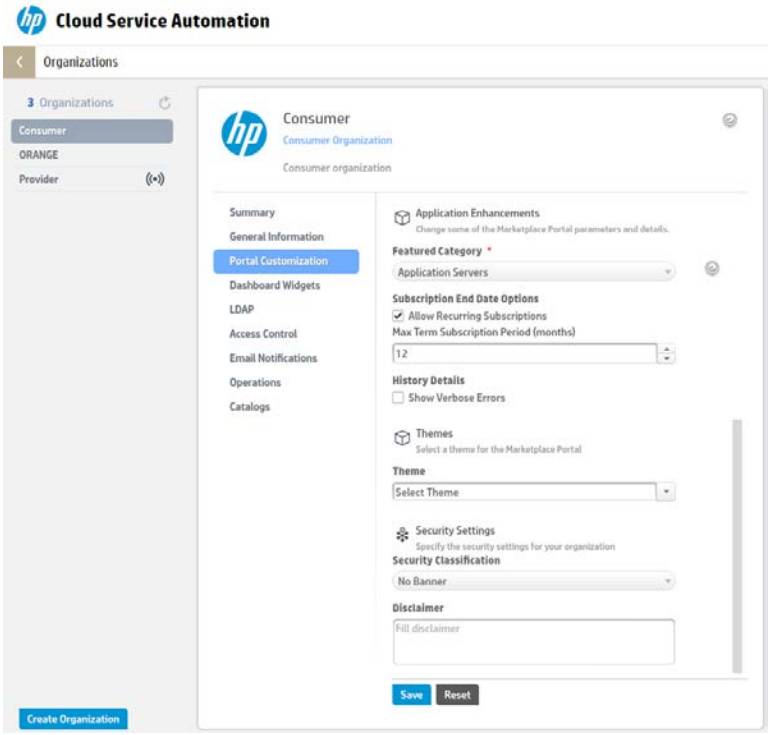
4. Save the `modules.js` file.



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.

7. **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**.



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.

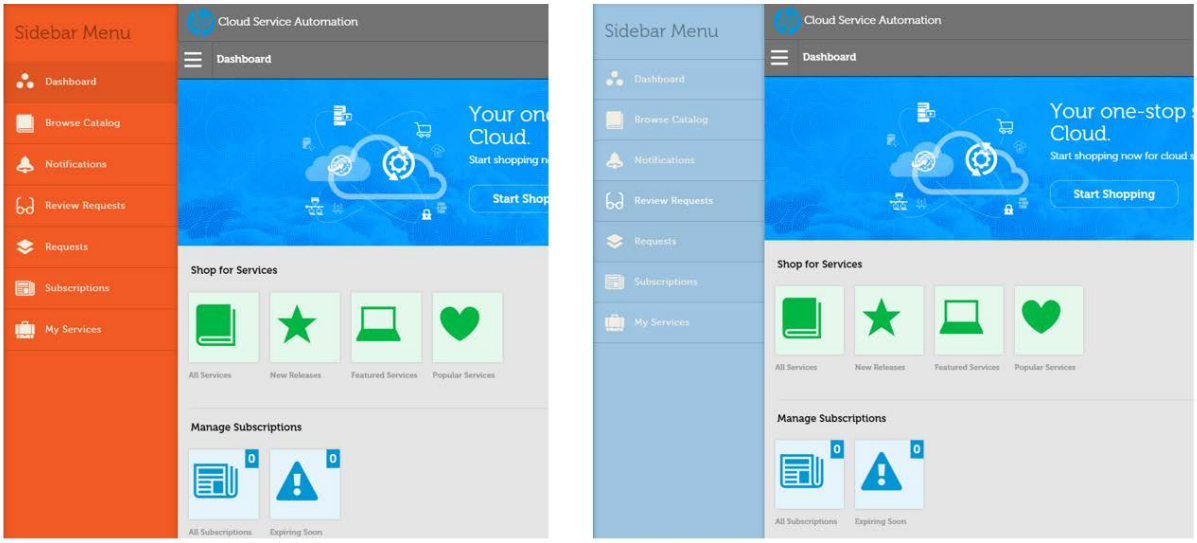
2. Make a simple modification to the document's background color.

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:

```
.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)}
```

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)}
```



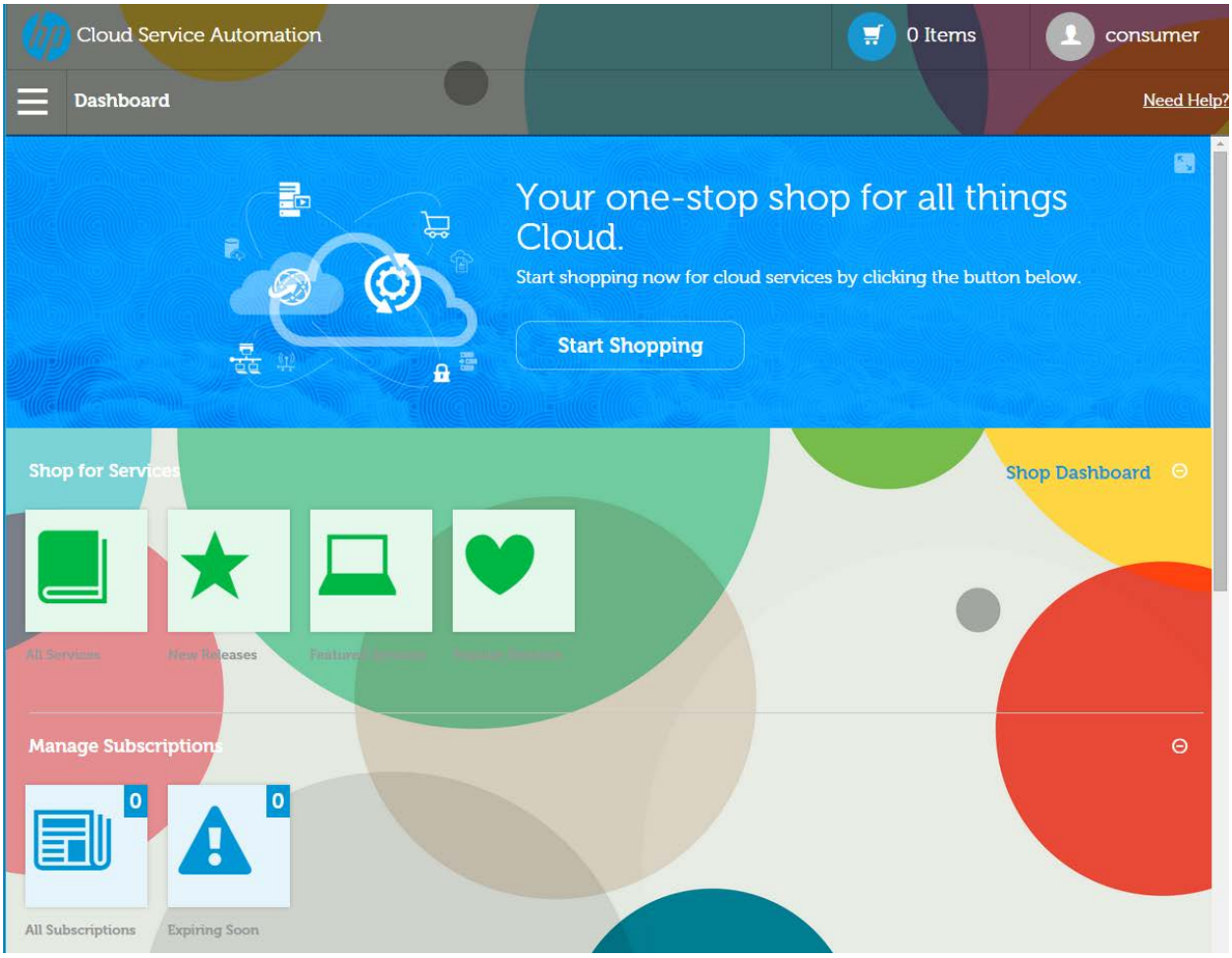
Note: The very top of the Marketplace Portal view is *a custom angular component*, which is commonly known as a *navbar*. By default, the navbar is partially transparent that allows your main background color to bleed through.

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;
}
```

Enabling Global Search

The global search feature allows Marketplace Portal users the capability to search for service offerings and subscriptions by names, descriptions, property labels, and values. This feature has been disabled by default until further development allows the global search service to find objects from all the CSA database entries. When enabled, this feature displays a search icon in the top navbar.

To enable global search, you must modify the following files:

- `Dashboard.json` – Enables the Marketplace Portal Dashboard search widget.
- `Csa.properties` – Enables the global search service.

Enabling the Marketplace Portal Search Widget

The `dashboard.json` file is located in the `csa/portal/node_modules/mpp-server/conf/`directory. To enable Marketplace Portal to display the search icon in the top navbar, modify the search object enable attribute in the `dashboard.js` file. Enabling this alone does not enable the search feature and the search icon will not display until the service is available.

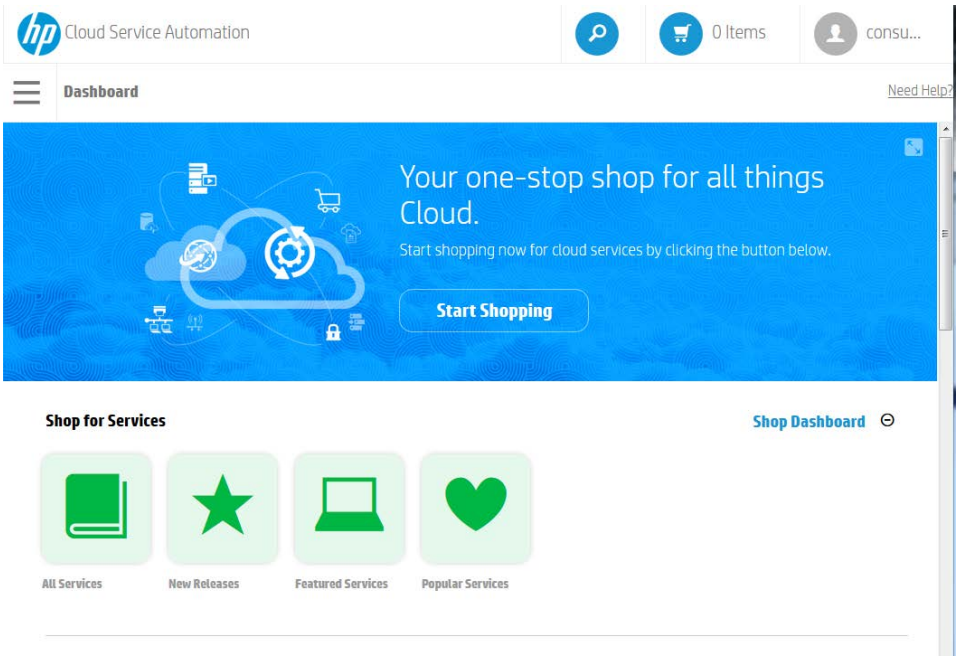
```
"header": {
    "icon": {
      "url": "mpp-theme/dist/mpp-theme/images/csa-backgrounds-dashoard.png"
    },
    "description": "csaShop.banner.description",
    "subDescription": "csaShop.banner.subDescription",
    "link": {
      "label": "csaShop.banner.link",
      "url": "#/shop"
    },
    "background": {
      "className": "bg-clouds btn-inverted background-cover"
    },
    "search": {
      "enable": true
    }
  },
```

Enabling the Global Search Service

The `csa.properties` file is located in the `CSA\jboss-as\standalone\deployments\csa.war\WEB-INF\classes` directory. To enable the global search service, change the `csa.provider.es.exists` property value to `yes` and then restart the CSA and Marketplace Portal services.

```
csa.provider.es.exists=yes
```

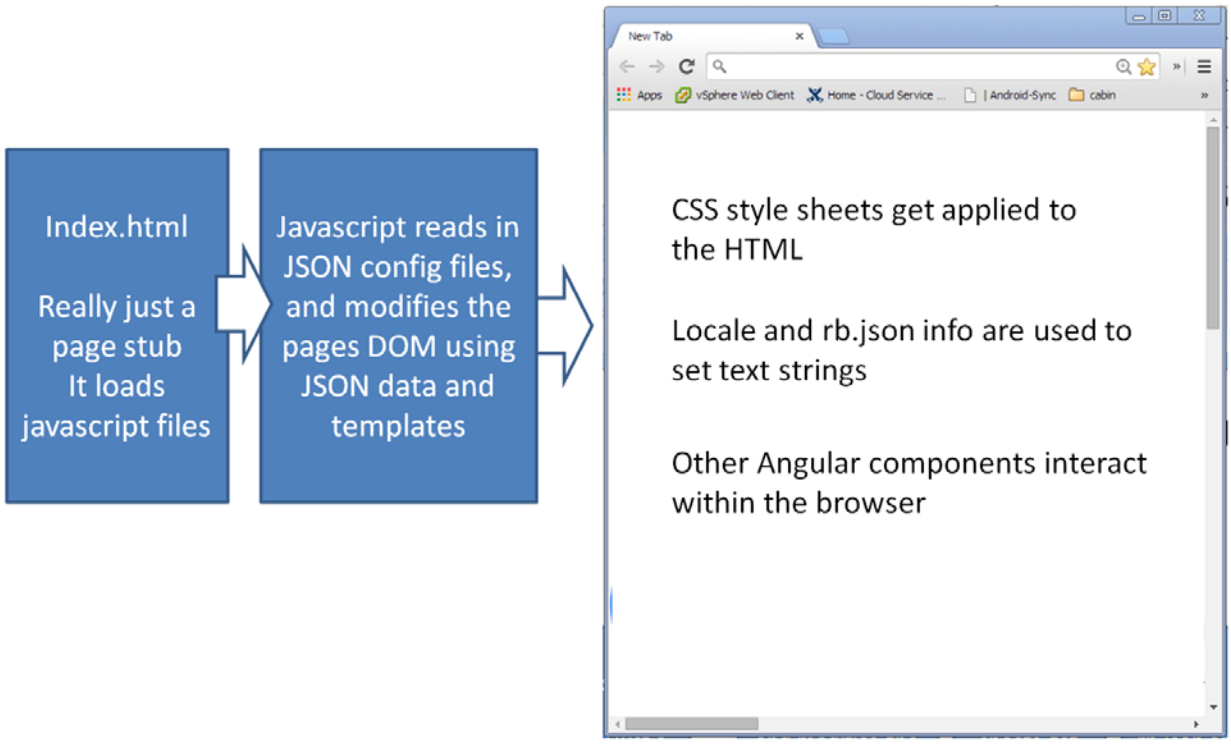
After the services have been restarted you should see the search icon in the top navbar, as shown in the following graphic:


Cloud Service Automation
0 Items
consu...
Dashboard
Need Help?
Your one-stop shop for all things Cloud.
Start shopping now for cloud services by clicking the button below.
Start Shopping
Shop for Services
Shop Dashboard
All Services
New Releases
Featured Services
Popular Services

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.

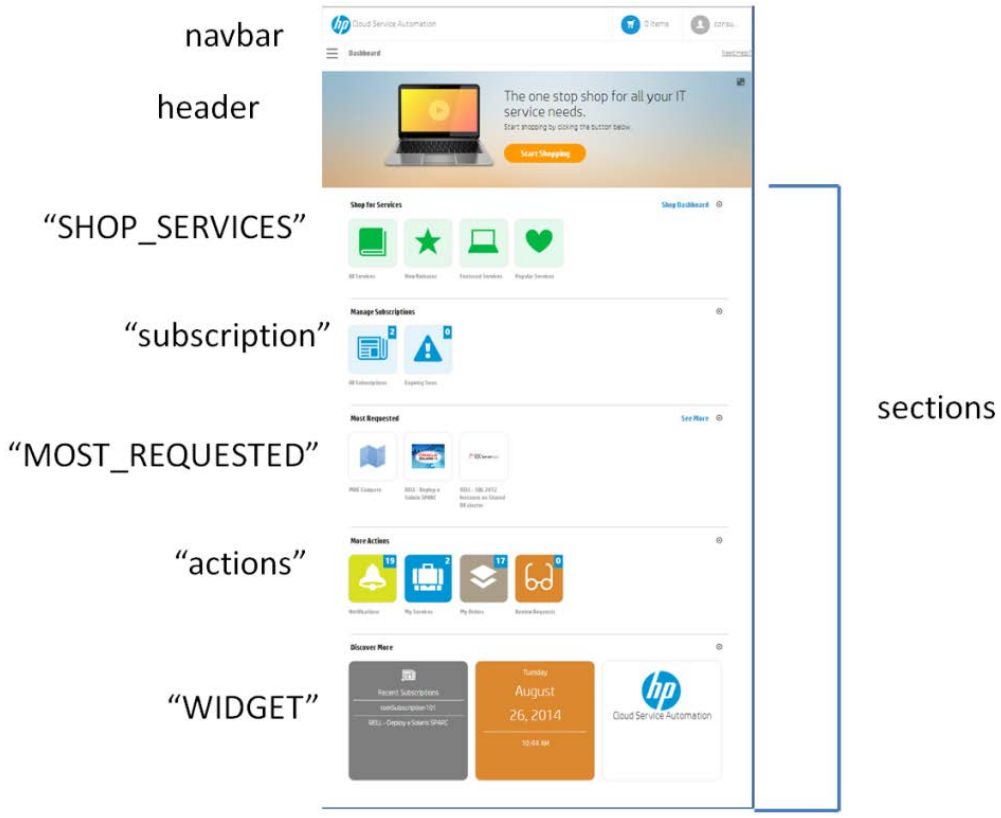
- **mpp.json** configures server-side behavior of the Marketplace Portal. It does not configure the CSA server backend. Settings include port number, key file, providers, HA, logging, cef, and proxy.

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

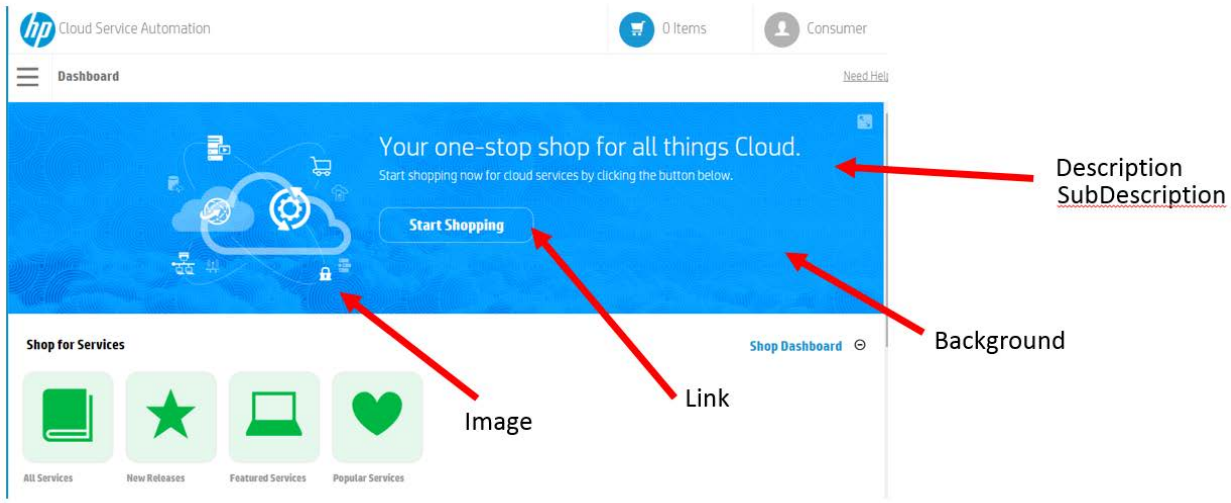
The follow graphic outlines the dashboard layout and which sections are specified by certain structures in the `dashboard.json` file:



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 HP 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.

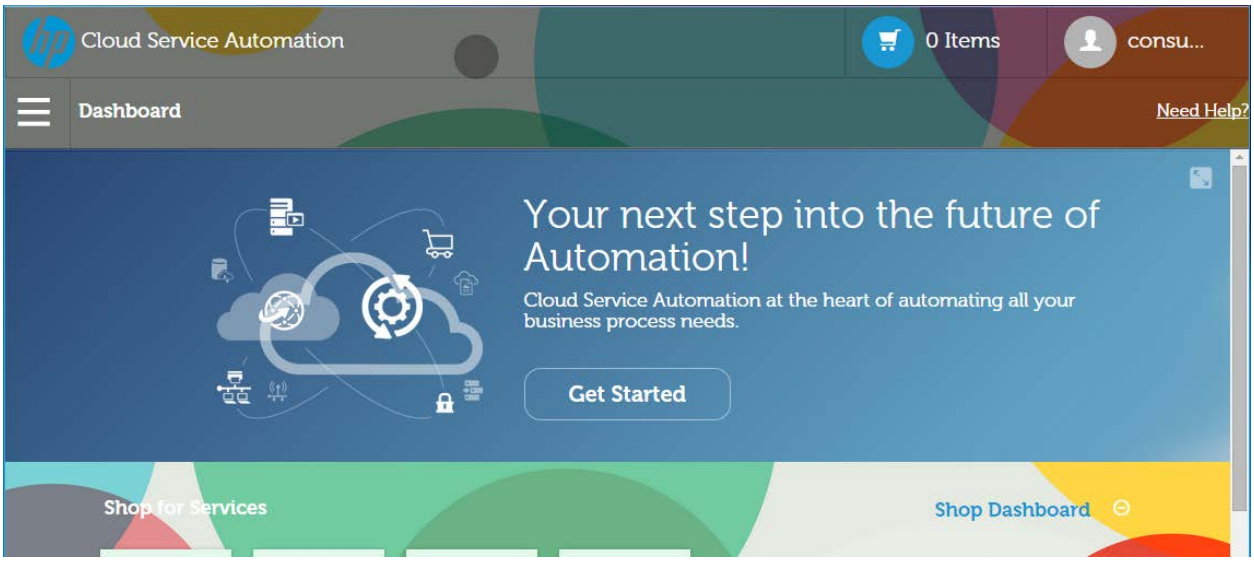
Header Background

The background section specifies a bitmap that will displayed behind the icon image, descriptions, and link button. This configuration value is a reference described as 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:

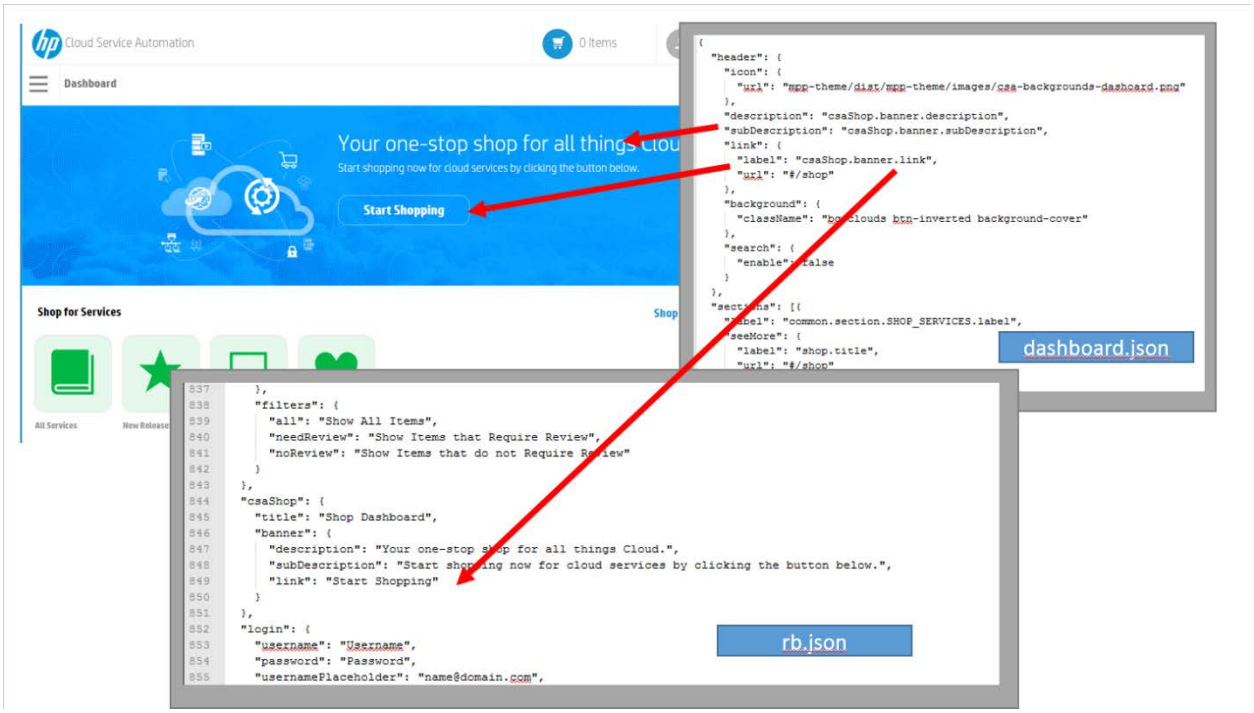
```
.bg-clouds{background:url(mpp-theme/images/image-02.png) no-repeat;background-size:100%;color:#fff}
```



Header Descriptions

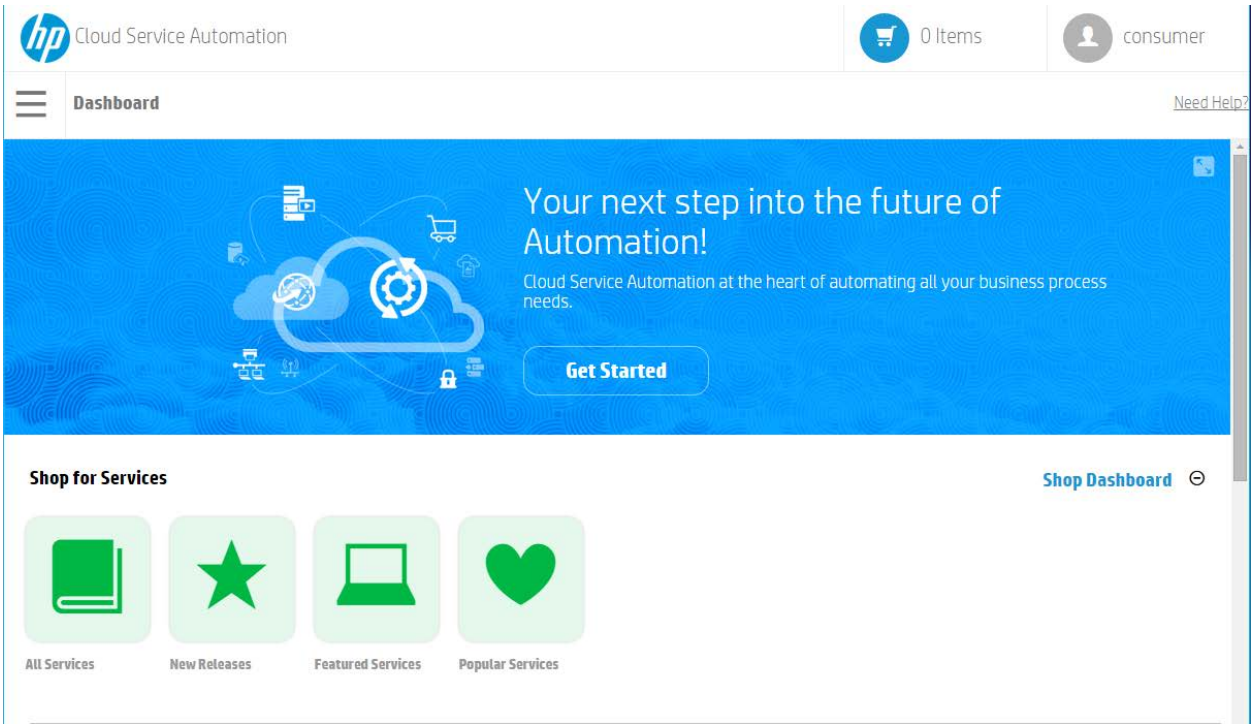
There are two lines of text available for customization in the header of the Dashboard. The Marketplace Portal is designed to support localization that uses resource files. These files include reference objects that allow text to be localized for different languages. These resource files are in `csa\portal\node_modules\mpp-ui\dist\locales\`.

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"
    },
```

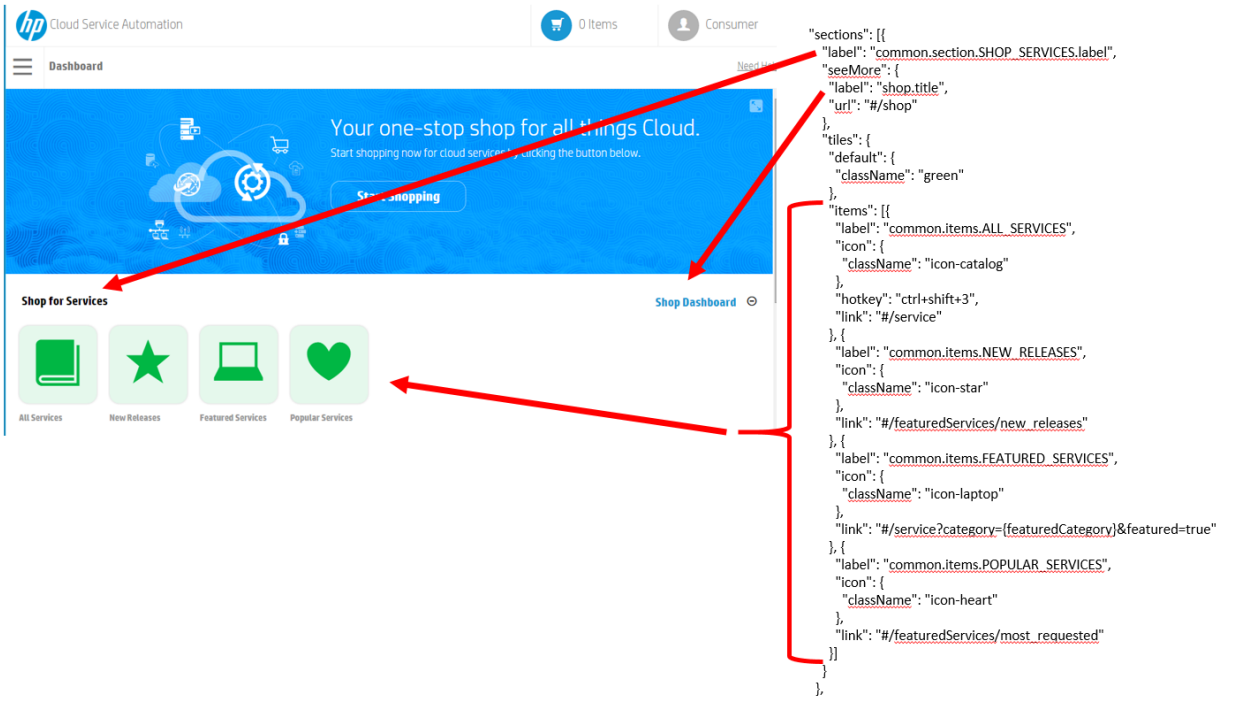
Customizing Dashboard Sections

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 HP CSA 4.50.



Ordering Section Objects

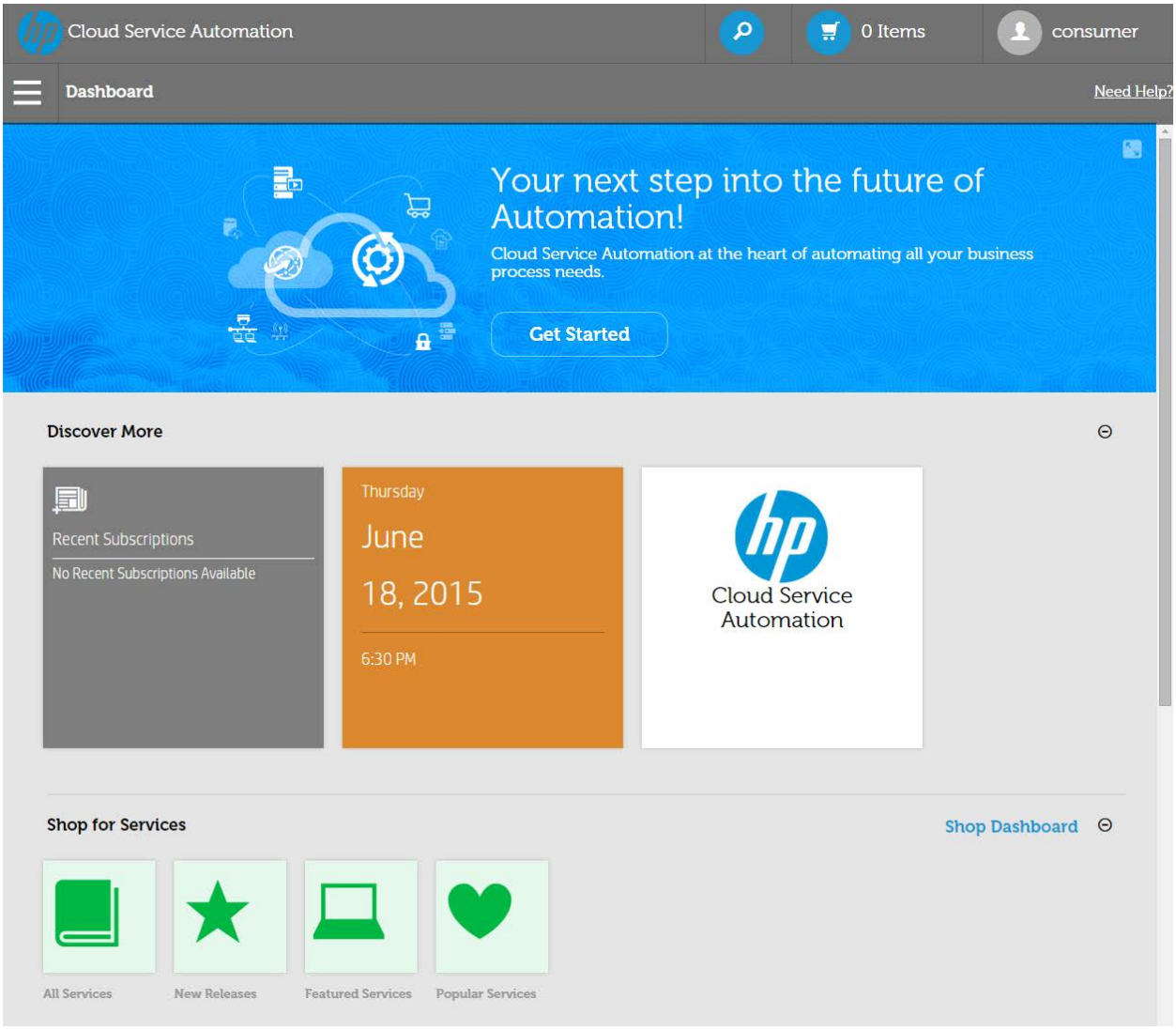
Important: When you modify the `dashboard.json` file, you must stop and restart the *hpmarketplaceportal* service.

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`

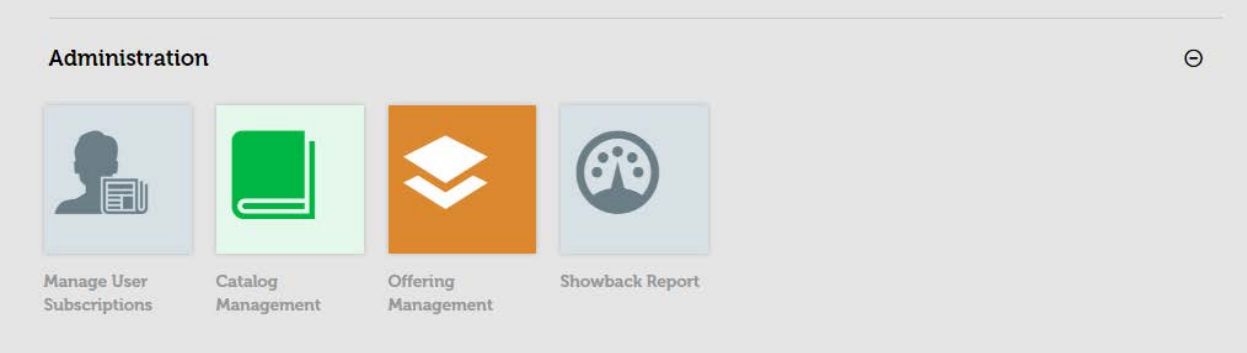
- Widgets – `WIDGETS`

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:

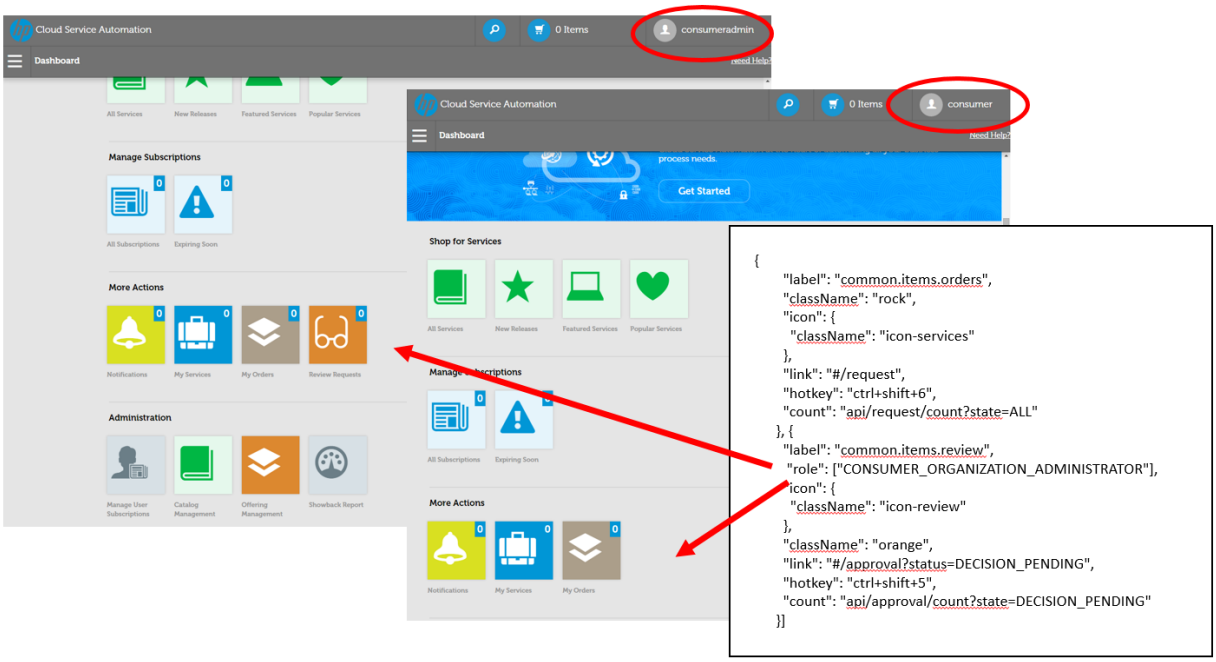
```
"role": ["CONSUMER_ORGANIZATION_ADMINISTRATOR"],
```

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

HP 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.

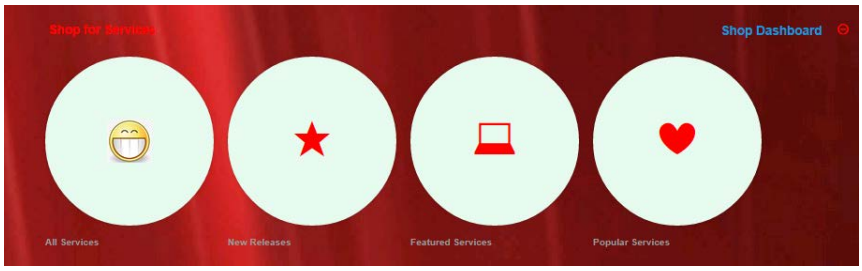
The following example uses a `smile.png` file to replace the service catalog icon.

```
.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

To access other toolkits to design and extend cloud services running on HP CloudSystem, go to **http://www.hp.com/go/csdevelopers**.

For more information about HP CloudSystem, visit **http://www.hp.com/go/cloudsystem**

HP software product documentation can be found at **https://softwaresupport.hp.com/**

You need to sign-in or register to use this site. Use the **Search** function at the top of the page to find documentation, whitepapers, and other information sources.

To help us improve our documents, please send feedback to **CSAdocs@hp.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"}
    }, {
      "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"
        }
      }]
    }
  }, {
    "type": {
      "name": "WIZARD",
      "category": "WIZARD"
    },
    "tiles": {
      "default": {
        "className": "black background-cubes background-repeat",
        "icon": {
          "className": "icon-monitor"
        }
      }
    }
  }, {
    "type": {
      "name": "WIDGET",
      "category": "WIDGET"
    }
  }]
}
```