HP Propel

Software version 1.11

Customizing the Marketplace Portal

Contents

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Introduction

Your administrator can customize the display of the Propel Marketplace Portal to meet your organization's needs. We'll begin by looking at information that applies broadly to portal customization. Subsequent topics will address customization of specific areas of the Marketplace Portal.

Dashboard Configuration File
One of the primary configuration files involved in Marketplace Portal customization is the Dashboard configuration file: /opt/hp/propel/mpp/conf/dashboard.json. See **Appendix A: Example Dashboard Configuration File Format**.

Note: The **HP Marketplace Portal** service must be restarted after changes are made to the dashboard.json file. To do this, enter `service mpp restart` from the command prompt. Portal users must log out, clear their browser cache, and log in again to see the changes.

Glyph Icons
The Marketplace Portal styling framework provides a collection of glyph icons that can be used throughout the application. To reference these, use the appropriate HTML class names. The available icons are listed in **Appendix B: Glyph Icons**.

Custom images
Unless specified otherwise, store your custom Marketplace Portal images in `/opt/hp/propel/jboss-as/standalone/deployments/consumption.war/images/library/<imagefile>`.

To reference an image file named pic,png placed in this directory, the URL would be `https://<hostname>:<port>/consumption/images/library/pic.png`, .and the html would be `<img src="https://<hostname>:<port>/consumption/images/library/pic.png">`.

Portal-wide Customization

Themes

Themes define colors, fonts and the general look-and-feel of the Marketplace Portal. Select from out-of-the-box themes or create a custom theme.

Out-of-the-box Themes

The following out-of-the-box, or pre-packaged, themes are available:
- HP Simplified
- HP Playful
- HP Enterprise

Change the selected theme as follows:
- Access the Organization Administration User Interface. (Select **Organizations** from the HP Propel Management Console.)
- Create a new organization or select an existing organization to modify.
- Select **Customization**.
- Enter the desired theme's name in the **themeName** box.
- Click on **Save**.

Figure 1: Selecting a theme

Following are example Dashboard screenshots of the three out-of-the-box themes.

Figure 2: HP Simplified

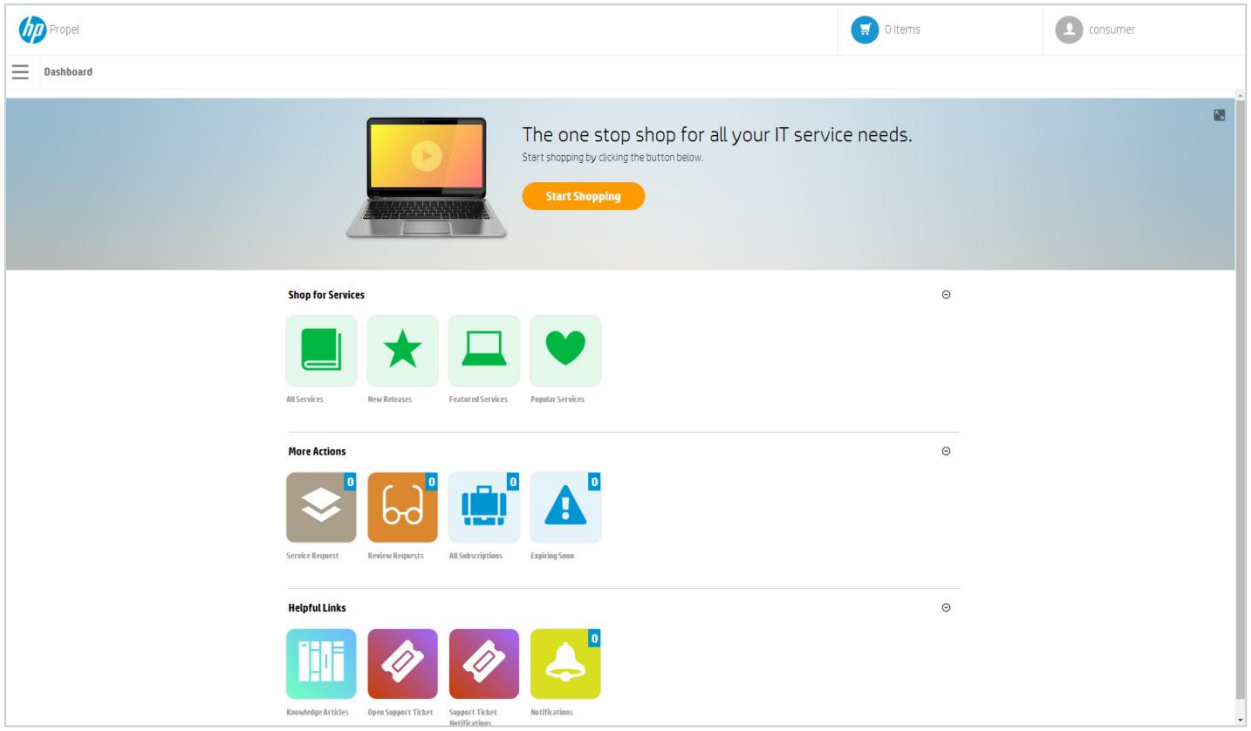


Figure 3: HP Playful

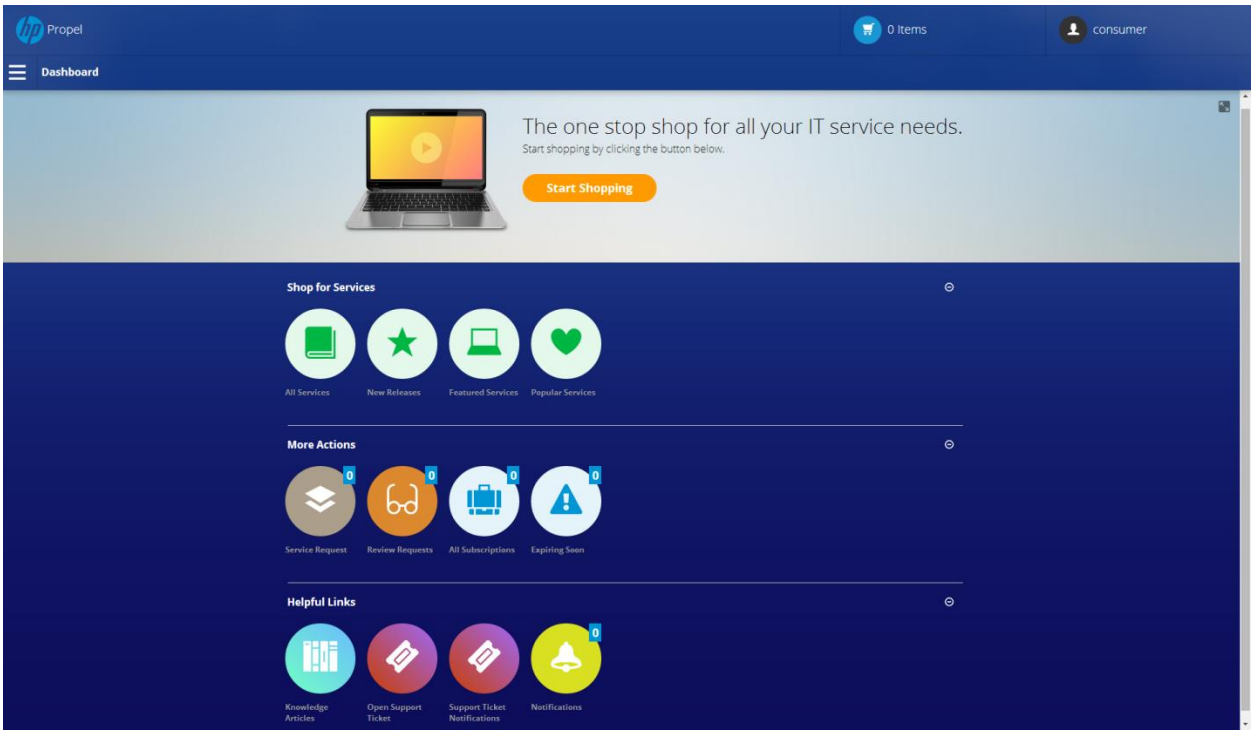
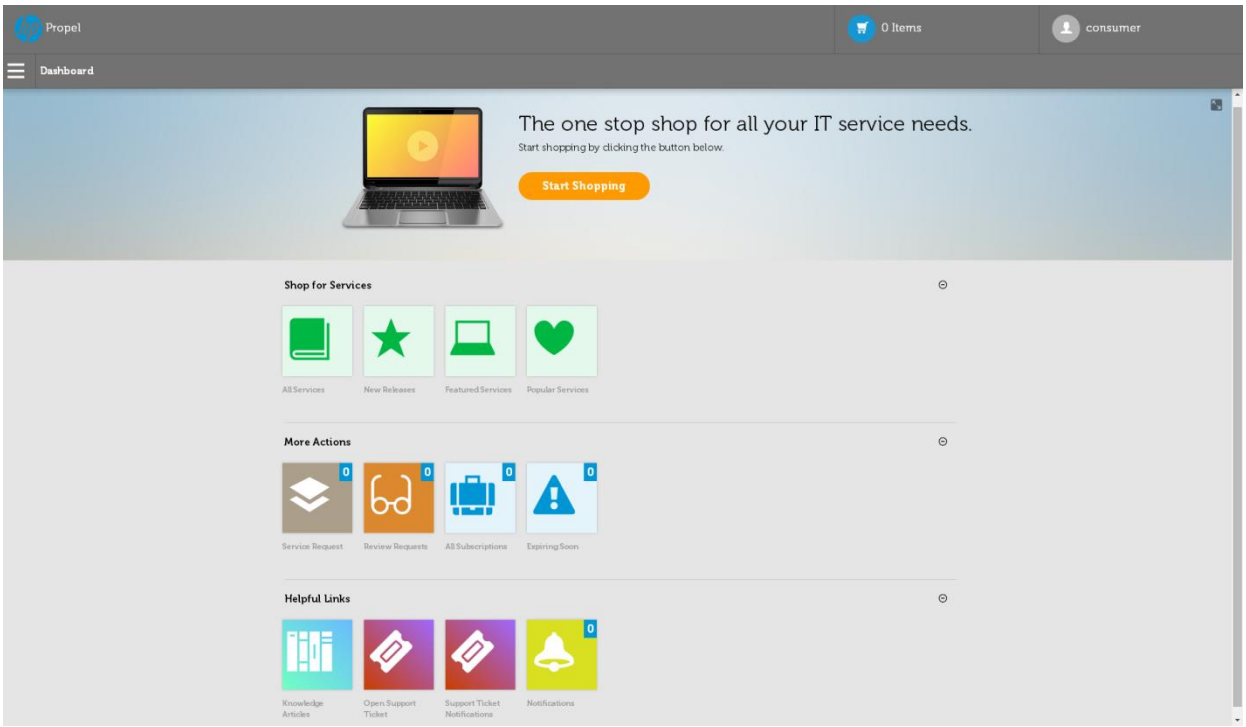


Figure 4: HP Enterprise



Custom Themes

In addition to out-of-the-box themes, HP Propel allows custom themes to be created. The administrator specifies the custom theme name (see Figure 1: Selecting a theme) and provides the content needed as described in the following.

The Marketplace Portal will look for the custom theme content in the following directory:

```
/opt/hp/propel/mpp/node_modules/mpp-ui/dist/bower_components/<THEME NAME>/dist/
```

The login page (IDM Service) has its own theme content which can be found in the following directory:

```
/opt/hp/propel/jboss-as/standalone/deployments/idm-service.war/bower_components/<THEME NAME>/dist/
```

Example: In the Propel Management Console, if **Custom** is entered for the custom theme name, the Marketplace Portal will look for the following files:

```
hp/propel/jboss-as/standalone/deployments/idm-service.war/themes/Custom/styles/main.css
```

The Login page (IDM service) will also look for the following location:

```
hp/propel/jboss-as/standalone/deployments/idm-service.war/themes/Custom/styles/main.css
```

Store your custom theme images in `/opt/hp/propel/mpp/node_modules/mpp-ui/dist/bower_components/<THEME NAME>/`. To reference an image file named pic,png placed in this directory, the html would be `<img src="<theme name>/pic.png">`.

Best Practice: When creating a new theme directory, copy an existing theme directory, and then modify the new theme directory name and CSS files. To support customization, the CSS files must be named **main.css** and **main-rtl.css**.

Notes:

- Custom theme directories must model other theme directories. The directory **styles** contain all styling components, such as .CSS, images, and fonts.
- The CSS files **must be named main.css and main-rtl.css. main-rtl.css** is used for locales that read right-to-left.
- Out-of-the-box themes might be minified to reduce or exclude whitespace. When you duplicate these files you will want an IDE/tool to help unminify the CSS content to make it more readable. An example of this tool can be found at **http://mrcoles.com/blog/css-unminify.**

Theming Framework

The Marketplace Portal theming framework models the open source project Bootstrap at **http://getbootstrap.com**. Review the Boostrap documentation to learn how the Marketplace Portal's components are structured with class labels.

All CSS rules used in Bootstrap are included in the main.css file for each out-of-the-box theme.

A CSS extension language used to create the framework is SASS (Syntactically Awesome Style Sheets), found at **http://sass-lang.com**. This extension language includes variables, nested rules, reusable mixins, and functions.

Portal Styling

The background and text color of the body, navigation bar, and sidebar of Marketplace Portal views can be customized through changes to the Portal CSS files. The Marketplace Portal will look for this content in the following directory:

```
hp/propel/mpp/node_modules/mpp-ui/dist/bower_components/<theme name>/dist/main.css
```

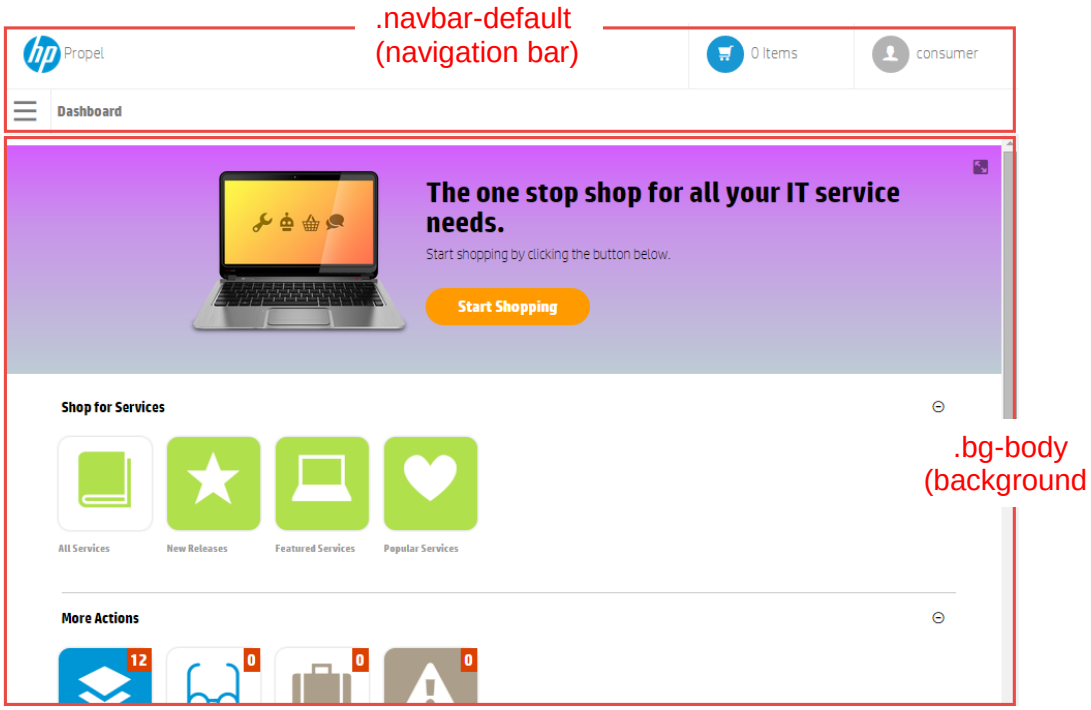
The Login page (IDM Service) has its own content which can be found in the following directory:

```
hp/propel/jboss-as/standalone/deployments/idm-service.war/themes/<theme name>/styles/main.css
```

See the **Custom Themes** section for more information on these files.

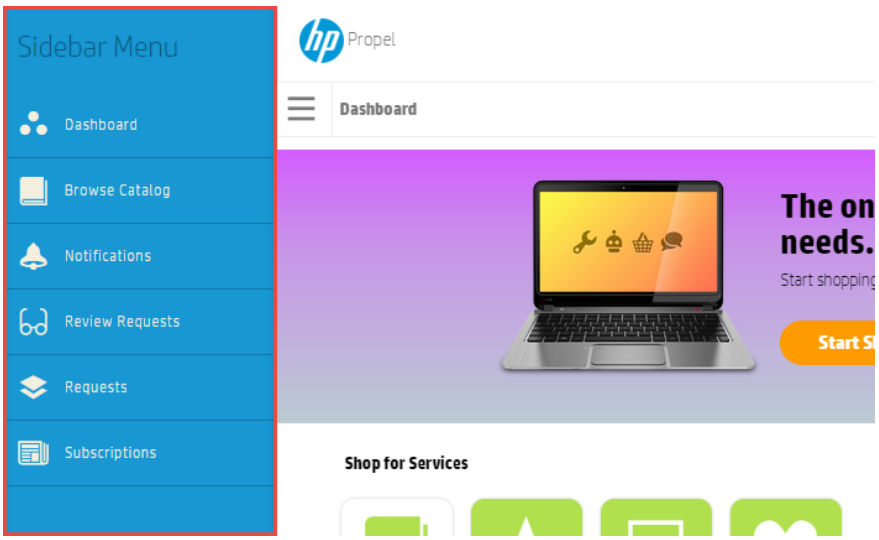
The portal styling properties include:

- View body: **.bg-body**
- Navigation bar: **.navbar-default**



- Sidebar: **.st-menu**

.st-menu (sidebar)



In the CSS content, specify **background** for the background color/image and **color** for the text color.

Example CSS content:

```
// Specify a background color for the body …
.bg-body {
  background: #000000 //black background
}

// … or specify an image for the background.
.bg-body {
  background: url('/mpp-theme/images/skyscrapers.png') no-repeat cover;
}

// Specify text color for the sidebar menu.
.st-menu {
  color: #000000 //black text
}
```

Corporate or Organization Logo

A logo or picture for your corporation or organization can be used in the HP Propel portal. It will be displayed on the portal login page, in the upper left-hand corner of portal views, and in administrator UIs where appropriate.

Add a logo or picture as follows:

- Access the Organization Administration UI. (Select **Identity** from the HP Propel Self-Service Portal.)
- Create a new organization or select an existing organization to modify.
- Select **General Information**.
- Enter the URL for a picture that represents the organization in the **Organization Picture URL** box.
- Click **Save**.

Note: The HP Corporate logo is not part of the out-of-the-box content. It is a custom image.

Dashboard Customization

Let's look at Marketplace Portal Dashboard banner, sections, tiles and widgets customization.

Dashboard banner, section and tile customization is achieved by modifying the Dashboard configuration file typically located at `/opt/hp/propel/mpp/conf/dashboard.json`. The file includes content for:

1. **header** (more commonly referred to as the "banner")
2. **sections**
3. **tiles**

A version of the `dashboard.json` file can optionally be customized for each organization. The filename should follow naming convention `dashboard.<organization name>.json`. For example, an organization named ACME would have a customized file named `dashboard.ACME.json`. The Marketplace Portal will automatically look for this file when a user in organization ACME logs in. If this file does not exist, the contents of `dashboard.json` will be used.

Roles The Dashboard can be configured to show selected tiles and sections only to users with specified roles. For example, the following could be included in the configuration file content for a tile or section: `"role": ["CONSUMER_ORGANIZATION_ADMINISTRATOR"`. See **Appendix A: Example Configuration File Format** for more details.

Note: The **HP Marketplace Portal** service must be restarted after changes are made to the dashboard.json file.

style property

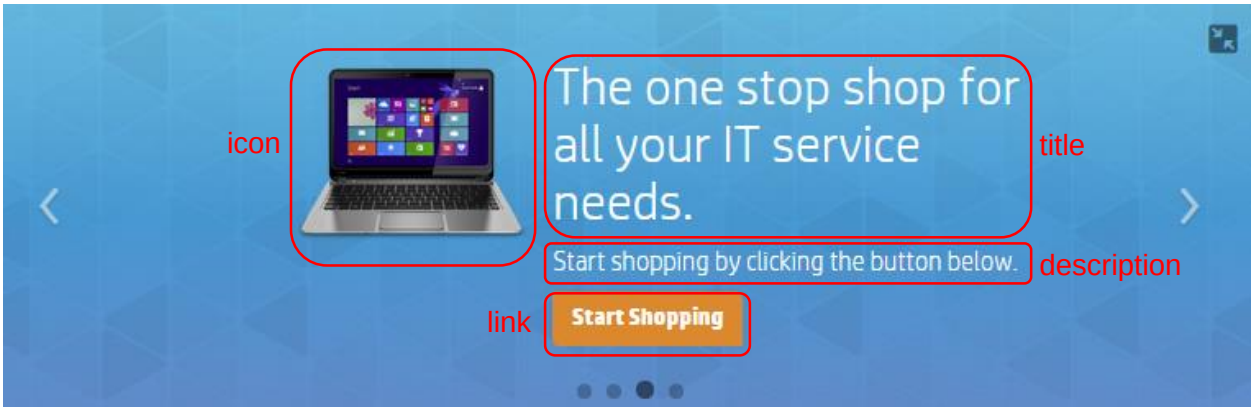
A ***style*** property is specified as part of each Dashboard element's configuration. Elements include header (banner), sections, and tiles, each of which is addressed in this document. A style property contains a space delimited string, for example, `className: "default my-selected-style"`. Style values must be predefined within the Marketplace Portal, and for visual appeal should be defined to work well with the overall styling of the portal.

Note: HP Propel supports only predefined styles. These will be described in detail in each topic as appropriate. Specific CSS styling is not supported.

Banner

Administrators can customize the Marketplace Portal Dashboard banner (also known as the "header"). Multiple banners can be defined. Each will be displayed for the specified time interval on a rotating basis. Customization is done by modifying the **header** content in the dashboard.json configuration file typically located at `/opt/hp/propel/mpp/conf/dashboard.json`. See **Appendix A: Example Configuration File Format** for more details.

Following is an example banner with properties labeled for easy identification.



Banner **header** configurations file properties:

Note: Configuration properties are typically optional. At least one entry in **items** must be defined for the banner to be useful. Values will be empty if **default** properties are not defined and individual **items** properties are also not defined.

Value Items	Description
default	Specifies the default value for the banner properties. Any **items** properties not specified will use these default values. Default: not specified.
Interval	If multiple banner **items** are defined, this value is the time in milliseconds to display one banner before switching to the next. Default: 5000 milliseconds.
items	Array or list of banners. Default: banner not displayed.
icon	Sub-property **url** will take precedence over **className**
className	Styling for the icon, for instance the icon color, or a predefined icon/glyph available in the Marketplace Portal. See **Appendix B: Glyph Icons** for more information.
url	URL reference to an image.
title	Title to be displayed on the banner. Default: “No data to show”.
description	Description to be displayed under the title. Default: no description displayed.
template	Template to use for the banner, either **default** or **halfColumn**. **default** uses all information defined for the banner. **halfColumn** ignores the **icon** property, and displays remaining content in the left half of the banner space. **halfColumn** display allows more of the background content to be viewed.
link	URL link, or a link from current page to another.
url	URL address of next page. Can be an internal or external link.
target	Optional. Web page or browser target for the URL link. **null** or undefined default to using the same page (“_self”). Possible values are: • _blank: Opens the link in a new browser window or tab. • _self: Opens the link in the current browser frame. • _parent: Opens the link in the browser parent frame. • _top: Opens the link in the full browser window. • <framename>: Opens the link in the named browser frame.
label	Text label displayed on the link. Can be a static text string or a localized string predefined in the application resource bundle.
background	Specify one or more className values and optional image URL. Default: gray background.

className	<See list of valid values following this table.>
url	URL reference to an image. Can be an internal or external link.

Banner className values

The following predefined **className** values are available:

- Text colors:
  - **text-white**
  - **text-black**
  - **text-green**
  - **text-dark-blue**
  - **text-light-blue**
  - **text-lemon**
  - **text-rock**
  - **text-orange**
  - **text-red**
  - **text-apple-green**
  - **text-pink**
  - **text-light-red**

- Background colors:
  - **green**
  - **dark-blue**
  - **light-blue**
  - **lemon**
  - **orange**
  - **rock**
  - **white**
  - **black**

- Background images:
  - **bg-blur**
  - **bg-red-sky**
  - **bg-dots**
  - **bg-success**
  - **bg-warning**
  - **bg-critical**
  - **bg-1** through **bg-21** – collection of background images

- Other background styling:
  - **background-stretch** – Stretch background image as needed to fill banner background. Requires that a background image be specified.
  - **background-repeat** – Repeat the background image horizontally and vertically to fill the area. Requires that a background image be specified.
  - **background-cover** – Scale the background image to cover the background. Note that some of the image might not be visible, depending on the image dimensions.

Example configuration file content format:

```
header: {
  default: Object,
  interval: Number, //in milliseconds
  items: [
    {
```

```
      "icon": {
        "url": String
        "className": String
      },
      "title": String,
      "description": String,
      "template": String,
      "link": {
        "label": String,
        "url": String"
        "target": String"
      },
      "background": {
        "className": String
        "url": String
      }
    },
    ...
  ]
}
```

Example configuration file content with three banners that each display for 5 seconds before switching to the next banner.

```
{
  "header": {
    "interval": 5000,
    "default": {

    },
    "items": [
      { //The first banner uses assets available in the portal, and uses the
default template.
        "icon": {
          "url": "mpp-theme/dist/mpp-theme/images/laptop.png"
        },
        "title": "shop.banner.description",
        "description": "shop.banner.subDescription",
        "link": {
          "label": "shop.banner.link",
          "url": "#/shop"
        },
        "background": {
          "className": "text-black bg-red-sky background-stretch"
        }
      },
      { //The second banner uses mostly external assets, and custom template
“halfColumn”.
        "icon": {
          "url": "http://sprout.hp.com/images/desktop/desktop-m2-product.png"
        },
        "title": "meet sprout",
        "description": "Blending the physical and digital worlds that you
live in, Sprout unleashes your creativity like never before. Assets come from
http://sprout.hp.com. This shows the page can use publicly available
assets.",
```

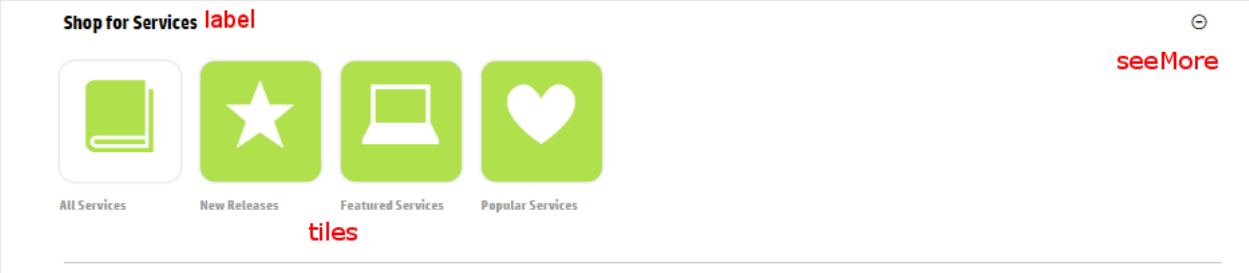
```
        "template": "halfColumn",
        "link": {
          "label": "See DEMO",
          "target": "_blank",
          "url": "http://sprout.hp.com/#"
        },
        "background": {
          "url": "http://sprout.hp.com/images/desktop/desktop-m2-bg.jpg",
          "className": "text-black"
        }
      },
      { //The third banner is empty. Uses default setting with title "No data
to show".

      }
    ]
  }
  ...
}
```

Sections

Sections are horizontal containers for tiles on the Dashboard. A section can contain an infinite number of tiles. If all the tiles cannot be shown in the given view area of the section, a horizontal scrollbar will appear. Sections can be collapsed or expanded by clicking the section name.

Following is an example section with several properties labeled for easy identification.



The label, background color, tiles and seeMore label/link are all customizable.

Section configurations file properties:

Note: Configuration properties are typically optional. At least one entry must be defined under **tiles** for the section to be displayed. Values will be empty if **default** properties are not defined and individual **tiles** properties are also not defined.

Value Items	Description
type	Section type. Used only when the section is predefined. Can be: • Default – **type** defined as empty or not declared at all. Specify other property values. • Pre-defined – typically used to show service offerings in the section. No other properties need to be specified as this category is predefined. See **category** description that follows. • Widget – section contains custom widgets. Note that these will appear as large tiles on the Dashboard.

	See example section types code following this table.
name	Specify **CATALOG_CATEGORY** or **WIDGET**.
category	Used only when **name** is **CATALOG_CATEGORY**. Select from: FEATURED_CATEGORY, NEW_RELEASES, MOST_REQUESTED, or CATEGORY_NAME.
label	Section label displayed on Dashboard. Can be a static text string or a localized string predefined in the application resource bundle. Default: no label.
seeMore	Clickable location on the right side of the section. By default this will be a plus or minus sign allowing the user to expand (show) or collapse (hide) the section content. Further customization is possibly by specifying sub-property: **String representation**, **Object representation**, or **url value**.
String representation	A simplified format for the link which contains the seeMore link URL Default attributes will be used for **target** and **label**.
Object representation	Allows more customization of the link property.
url	URL the seeMore link references. Can be an internal or external link.
target	Optional. Web page or browser target for the url link. **null** or undefined defaults to using the same frame ("_self"). Possible values are: • _blank: Opens the link in a new browser window or tab. • _self: Opens the link in the current browser frame. • _parent: Opens the link in the browser parent frame. • _top: Opens the link in the full browser window. • <framename>: Opens the link in the named browser frame.
label	Optional. Label displayed on the section seeMore button.
url value	URL. Can be to an internal or external location.

internal	Navigates to a subpage of the portal (staying on same page/tab in the browser). Can link to a specified subpage or to a pre-defined section as shown here:
	• Subpage examples: (Will be prepended with HP Propel instance location, typically https://<*propelhostname*>:8089.)
	  • /notification
	  • /myservice
	• Pre-defined section – navigates to the specified pre-defined content:
	  • FEATURED_SERVICES
	  • NEW_RELEASES_SERVICES
	  • SUBSCRIPTION_EXPIRING

external	Navigates to an external page (staying on same page/tab in the browser). Link should start with **http://** or should define the protocol of the link so browser handles the behavior automatically.
tiles	List of tiles that will appear in the Dashboard for this section. See the **Tiles** section in this document for details on **tiles** properties.

Example section types:

- Default:

```
"sections": [
  {
    ...
    "type": {}
     ...
  }
```

```
]
```

- Pre-defined:

```
"sections": [
  {
    "type": {
      "name": "CATALOG_CATEGORY",
      "category": "FEATURED_CATEGORY | NEW_RELEASES | MOST_REQUESTED |
[CATEGORY_NAME]"
    }
  }
]
```

  - Widget:

```
"sections": [
  {
    "type": {
      "name": "WIDGET",
      "category": "WIDGET"
    }
  }
]
```

Example section configuration file content format:

```
sections:[
  {
    label: "Example section"
    tiles:{
      default:{
        style: "green border-square"
      },
      items:[
        {
          label: "All Services"
          icon: {
            className:
          },
          url:
        },
        {...}
      ]
    }
  }
]
```

Dynamic Section

You can configure a Dynamic Section on the Dashboard by specifying the section type attribute as one of following:

- **FEATURED_CATEGORY** - Loads the services as tiles under featured category.
- **NEW_RELEASES** - Loads the new release services as tiles.
- **MOST_REQUESTED** - Loads the most requested services as tiles.
- Existing Category Name - Loads the services in the specified category as tiles.

The relevant tiles will be added to the section dynamically, updating this content each time the Dashboard is refreshed. Node.js will detect that this is a dynamic section and make the relevant call to load the services (depending on the **type** specified), create the appropriate tiles, and append them to the dynamic section.

Note: You can include a specific, fixed set of tiles in a dynamic section. The dynamically added tiles will be appended to that fixed set of tiles.

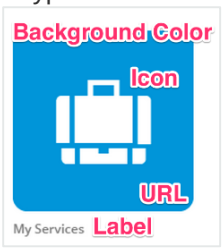
Example Dynamic section configuration file content format:

```
sections: [
  { // Tiles will be loaded dynamically on the Node.js depending on the
section type ;
    type: FEATURED_CATEGORY | NEW_RELEASES | MOST_REQUESTED | [CATEGORY_NAME]
// Pre-defined section
    label:
    seeMore: {
      url:
      [label]:
      [target]:
    }
    tiles: [ // Optional ; For a Dynamic section the appropriate tiles will
be appended it to this list
      {
        label:
        icon: {
          url:
        },
        url:
      },
      {
        label:
        icon: {
          url:
        },
        url:
      }
      ...
    ]
  },
  ...
]
```

Tiles

Tiles are clickable icons on the Dashboard. They can contain basic information on a feature, a shortcut to another page, or something user defined (mashup widget). The background color, icon, label, and associated URL are all configurable. The URL can be an internal or external link.

A typical tile – with properties labeled for clarification – looks as follows:



Count tile

A count tile includes a small counter in the upper right-hand corner of the tile. The count represents the number of items included in the group this tile represents. For example, if this tile linked to a collection of favorite service offerings, of which there were 12, the count on the tile would look as follows:

Tile configuration items:

Note: Configuration properties are typically optional. **label** and **link** should be defined for the tile to be useful. Values will be empty if **default** properties are not defined and individual **items** properties are also not defined.

Value Items	Description
default	Specifies the default values for **items** properties styling. This should follow the object structure of **items**. When a tile is defined, any **items** property not specified will use the default value. Default: not specified.
items	Collection of tile configurations
label	Label displayed on Dashboard for this item. Can be a static text string or a localized string predefined in the application resource bundle. Default: no label.
icon	Specify either sub-property **className** or **url**.
className	Predefined icon/glyph available in the application. See **Appendix B: Glyph Icons** for more information. Note that predefined font styles can also be applied, e.g. `text-white`, `text-black`. Default: the `icon-catalog` icon will be displayed.
url	URL reference to an image.
link	Specify either sub-property **String representation** or **Object representation**.
String representation	A simplified format for the link which contains the tile link URL Default attributes will be used for **target** and **label**. Default: tile will not have any link capability.
Object representation	Allows more customization of the link property.
url	URL the link references. Can be an internal or external link.
target	Web page or browser target for the url link. **null** or undefined defaults to using the same frame ("_self"). Possible values are: • _blank: Opens the link in a new browser window or tab. • _self: Opens the link in the current browser frame. • _parent: Opens the link in the browser parent frame. • _top: Opens the link in the full browser window. • <framename>: Opens the link in the named browser frame.
label	Text label displayed for the link. Can be a static text string or a localized string predefined in the application resource bundle. Default: no label.
count	Counter to be displayed in upper right corner of tile. Defaults to red background with white text.
url	API endpoint of where to get the count value. Is called each time the user refreshes/visits the page.
className	Space delimited predefined CSS style class name.

hotkey	Hotkey or keyboard shortcut for activating the tile. Results in the same behavior as clicking on the tile. Default: no hotkey.
role	Limits users who can view this tile. See **Roles** for more information.

Tile Styling

Default className properties for tiles are:

- **white** : white background
- **text-dark-blue**: dark blue text/icon
- **corner-rounded**: rounded corners
- **shadow-light**: border shadow
- **icon-catalog:** catalog icon

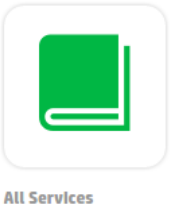
Available className values

The following predefined tile styles are available.
Note: Multiple className values can be specified, and are separated by one or more spaces.

- Tile background colors:
  - **white** (default background color)
  - **black**
  - **green** (example follows with **text-white** icon)

  - **dark-blue**
  - **light-blue**
  - **lemon**
  - **rock**
  - **orange**
  - **sky**
  - **bloody**

- Tile icon (“text”) colors:
  - **text-green** (example follows with **white** background)



  - **text-white**
  - **text-black**
  - **text-green**
  - **text-dark-blue** (default text color)
  - **text-light-blue**
  - **text-lemon**
  - **text-rock**

  - **text-orange**
  - **text-red**
  - **text-apple-green**
  - **text-pink**
  - **text-light-red**

- Tile shadows:
  - **shadow-default**
  - **shadow-light**
  - **shadow-dark**
  - **shadow-none**

- Tile corners:
  - **corner-rounded**
  - **corner-square**
  - **corner-circle**

Example tile configuration file content format:

```
//dashboard.json tile configuration
{
  label: "My Services",
  link: "http://someurl.com",
  icon: {
    className: "icon-briefcase"
  },

  style: "text-dark-blue"  // Specify dark-blue icon for tile.
  style: "border-rounded light-blue"  // Specify rounded corner border and
light-blue background for tile.
}

//html effect of configuration for styling
<tile ng-style="border-rounded blue" class="border-rounded blue"> ... </tile>
```

Hot Keys

A hot key can be defined to activate a tile without using a mouse click. Assign a string key value to the **hotkey** property in the tile content of the dashboard configuration file as shown in the following:

```
{
  label:
  link:
  role:
  hotkey: "ctrl+<selected string key>" // "ctrl+j", for example
  image:
  icon:
  style:
  backgroundImage:
}
```

Widgets

Let's look now at customizing widgets.

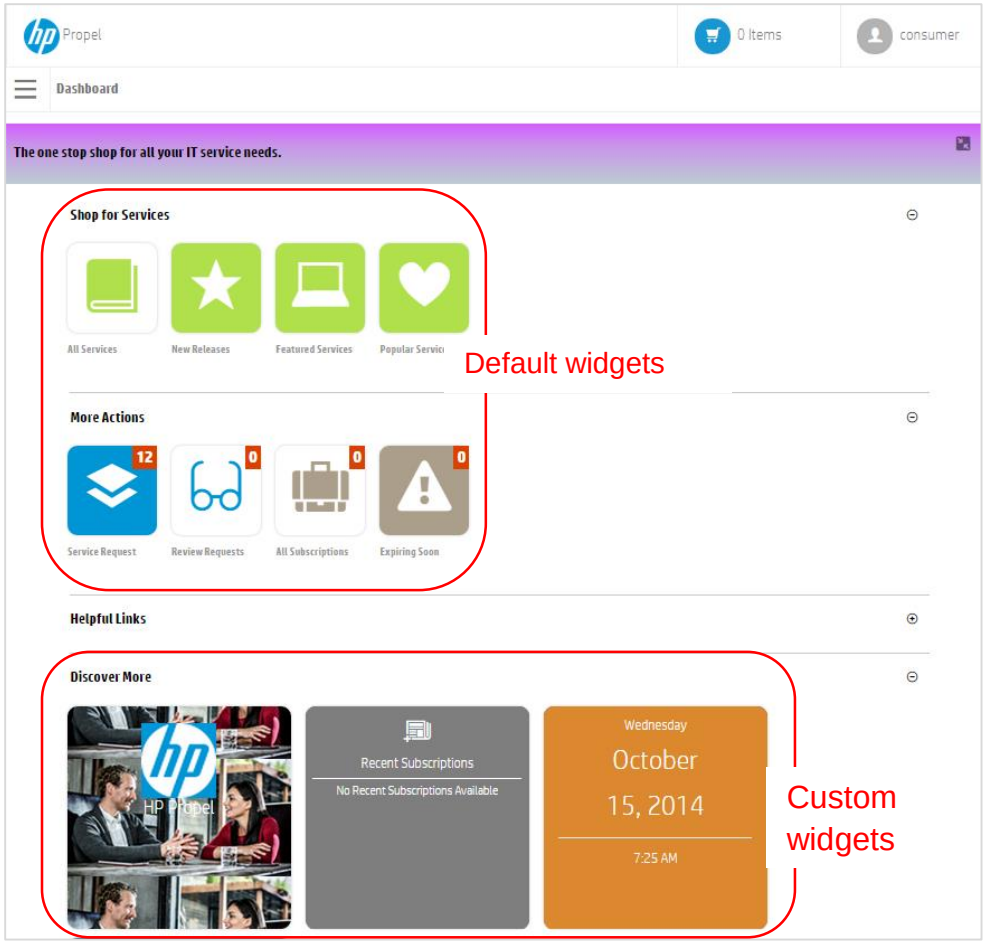
Default widgets

Default widgets are standard in HP Propel and are displayed in the first two sections of the Dashboard. They can be modified through the dashboard.json file, and are configured per installation, not per organization.

Note: The **HP Marketplace Portal** service should be restarted after changes are made to the dashboard.json file.

Custom widgets

Your administrator can add custom widgets to the Dashboard, such as the calendar, recent subscriptions, and HP link widgets shown in the following image. Widgets cannot be added to other pages or components in the Marketplace Portal, such as in the Sidebar Menu.

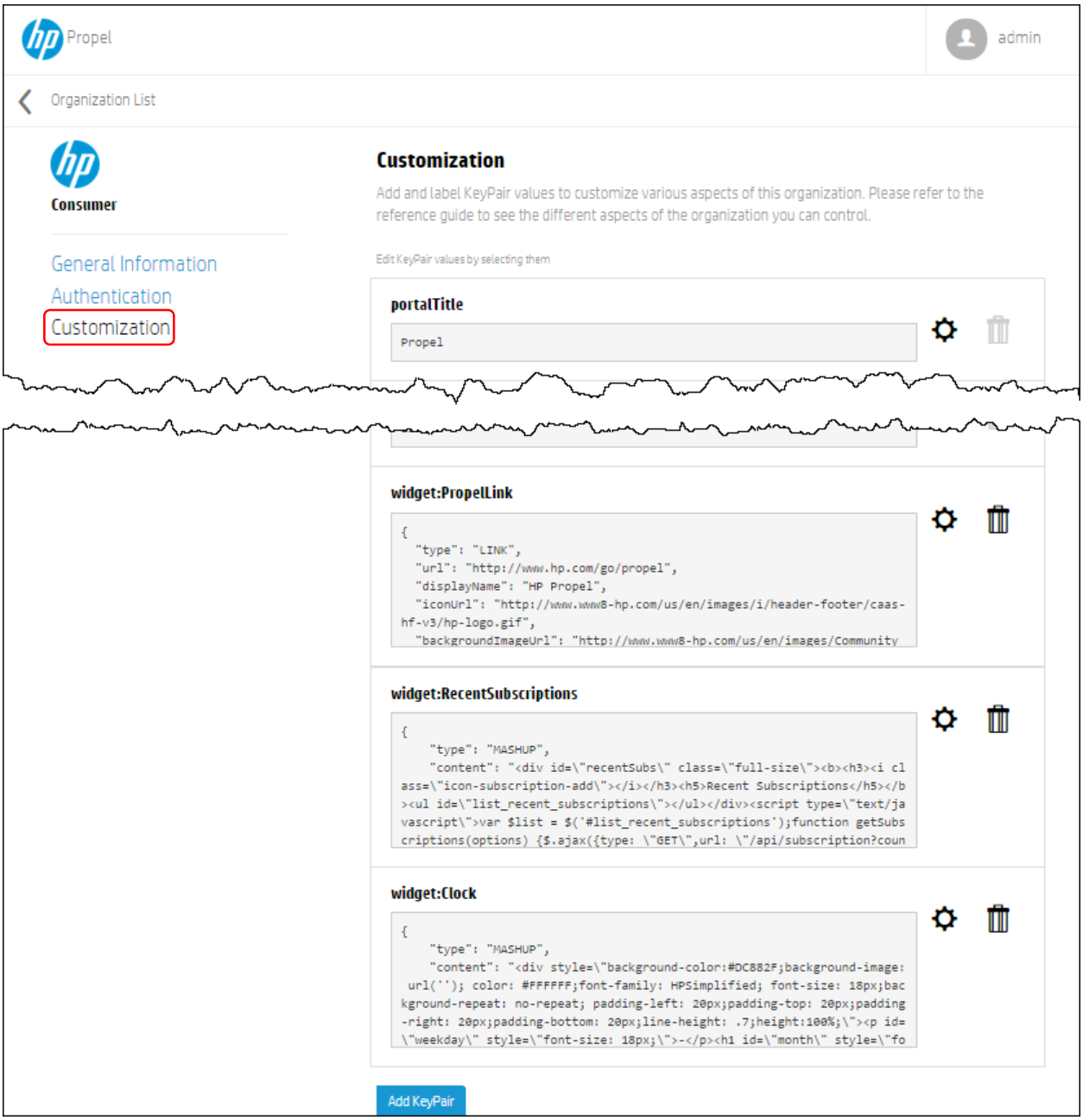


The Marketplace Portal supports the following types of custom widgets:

- Link Widget
- Featured Service Widget
- Mashup Widget

The size of a widget in the Dashboard is fixed. Note that it is recommended that you not change the size of even complex mashup widgets as unexpected behavior can result.

Custom widgets are defined per organization under **Customization** in the **Organization** area of the HP Propel Management Console as shown in the following, and will be available to all users in that organization. Click on the **Add KeyPair** button at the bottom of the Customization screen to create new widgets. See the *HP Propel Organizations Help* for more information.



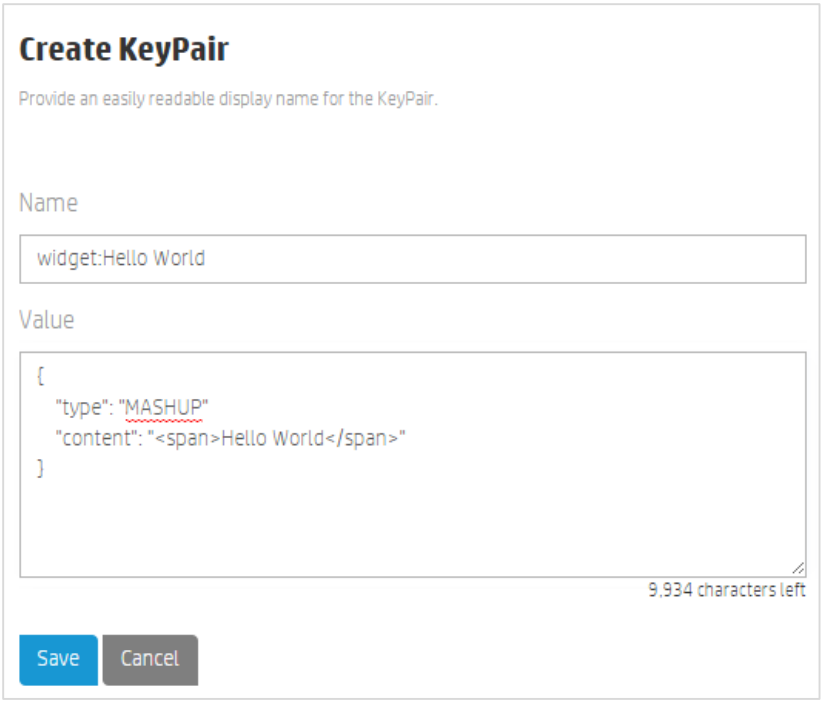
Note that there are entries for three custom widgets corresponding to the three custom widgets in the previous Dashboard image.

Creating Widgets

All widget types are created in HP Propel as key:value pairs in the Customization section of the Organization Administration tab.

The key, or name, provided must be prefixed with **widget:** in order to identify this key pair as a widget. The value of the key pair will always be a JSON object and specific values required will depend on the widget type as detailed in following sections.

Figure 5: Create KeyPair Example



Link Widget

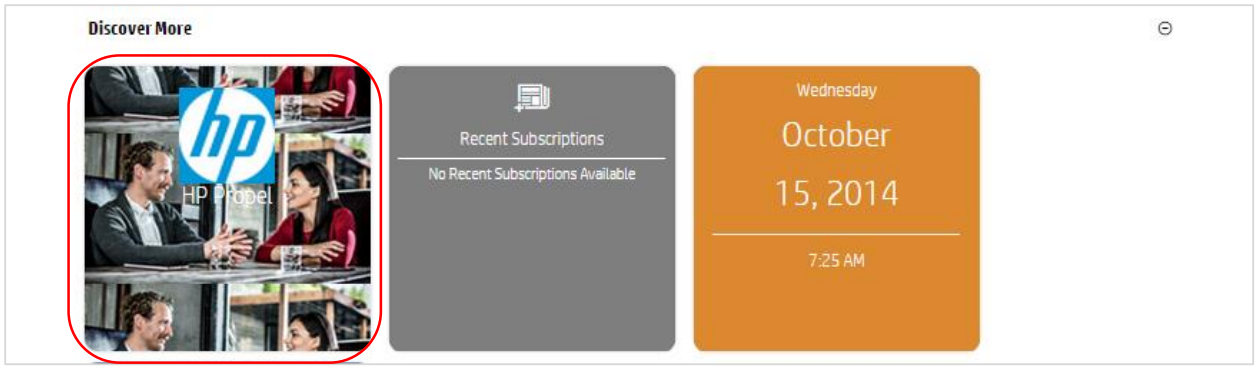
A link widget is a quick-and-easy shortcut to access a URL from the Marketplace Portal Dashboard. As with all custom widgets, link widgets display in the bottom row of the Dashboard.

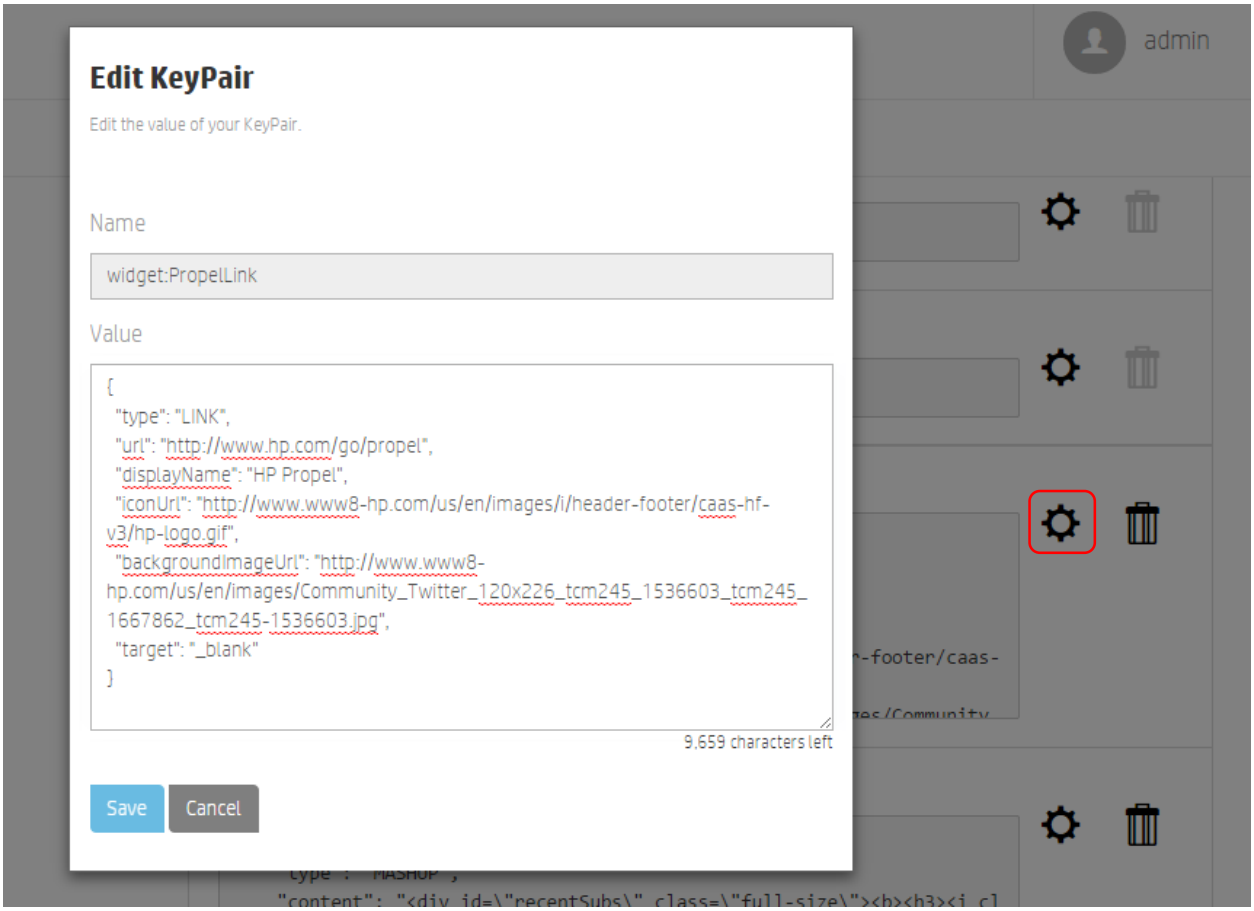
Use the **Create KeyPair** dialog to create a custom link widget. The **type** value must be set to **LINK**. With link widgets you customize the link URL, display name, icon image, background image, and the HTML target.

Value Items	Description
type	Must be set to **LINK**
url	URL that the link references in the Marketplace Portal.
displayName	Optional name to be displayed on the widget.
iconUrl	Optional URL of an icon that displays near the center of the widget.
backgroundImageUrl	Optional URL of an image that fills the background of the widget.
target	Optional target attribute of the <link> element that appears in the Marketplace Portal and that controls the browser window in which the link will open. Valid values for the target attribute are defined in the HTML specification.

Tip: If new to creating widgets, review existing custom widgets on the Dashboard and associated details in the **Edit KeyPair** dialog to help in creating new widgets.

Following is the content for the custom link widget on our Dashboard.





Featured Service Widget

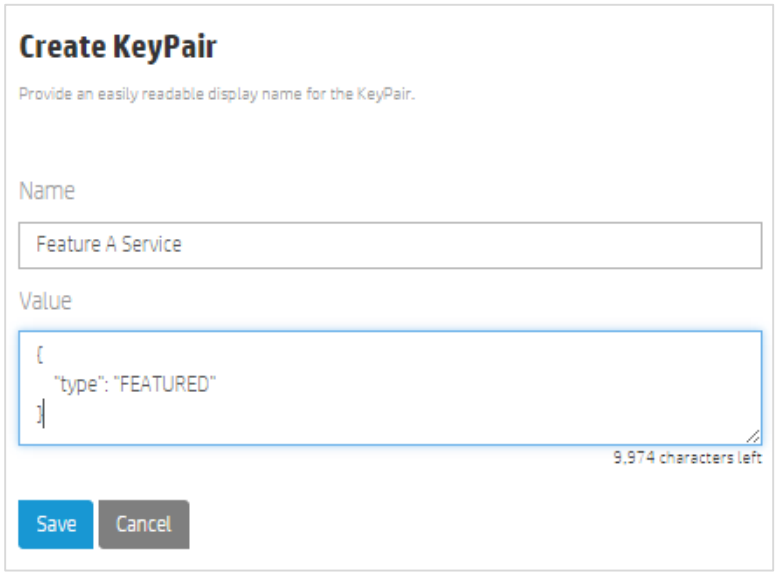
During organization creation and configuration, any category of services can be set as a featured category. Service offerings published under that category are treated as featured service offerings and can be viewed by selecting the default **Featured Services** widget in the **Shop for Services** area of the Dashboard.

You can further highlight these service offerings by creating a featured service custom widget. The featured service custom widget selects a random service from the featured services list and provides a link for easily viewing that service's details. The service selected will randomly change each time the Dashboard is refreshed.

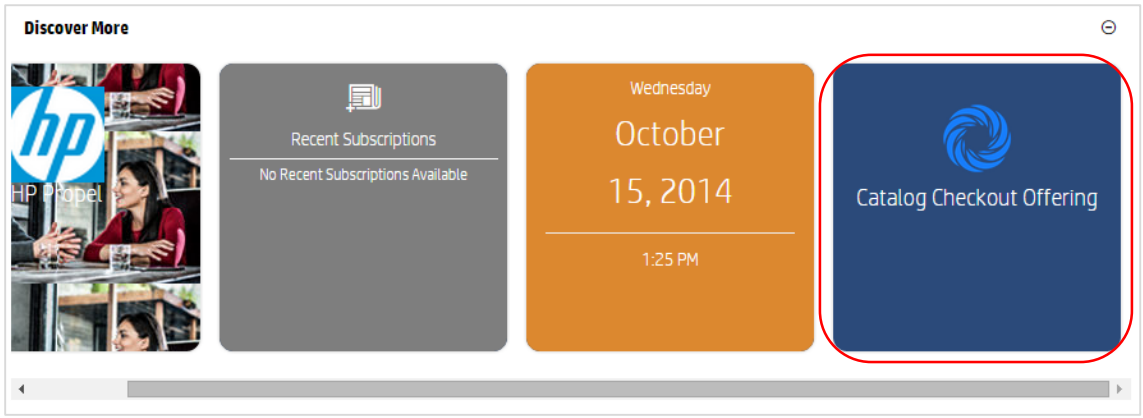
Note: The Marketplace Portal does not support pinning a specific featured service to this custom widget.

Use the **Create KeyPair** dialog to create a custom feature service widget. The **type** value should be set to **FEATURED**. There is no other JSON content for Featured Service widgets.

Value Items	Description
type	Must be set to **FEATURED**.



We now see a fourth custom widget in the Dashboard:



Mashup Widget

Mashup widgets give administrators the ability to define more complex widgets to meet an organization's needs. These might be generally useful widgets such a calendar or clock, or perhaps widgets for HP Propel-specific information such as recent subscriptions as shown in several examples in this document.

Mashups widgets require **type** be set to **MASHUP**. Mashup widgets contain one other key:value pair, **content**, which contains the source for your mashup.

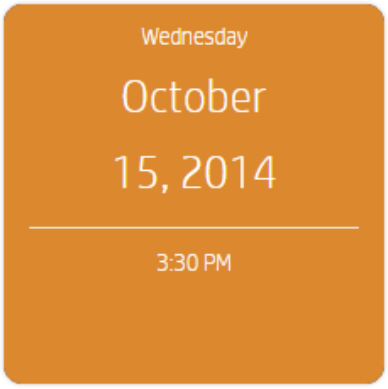
Note: All double quotation marks (“) must be escaped (\”) in the mashup widget content.

Value Items	Description
type	Must be set to **MASHUP**.

content	The HTML and JavaScript code for the mashup.
	When using iFRAME in a mashup widget, note the following:
	• iFrames that serve HTML pages that 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 Marketplace Portal directory:
	`/opt/hp/propel/mpp/node_modules/mpp-ui/dist`
	For example, to correlate to the following URL structure:
	`https://server:8089/widgets/sample/index.html`
	You would place your pages in the following location:
	`/opt/hp/propel/mpp/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 NONHTTPS 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.

Example custom widget: Clock

```
{
    "type": "MASHUP",
    "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;height:100%;\"><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() { 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\";
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) {
clearInterval(clockInterval); } } updateClock(); var clockInterval = setInterval(updateClock,
1000);}startClock();</script>"}
```

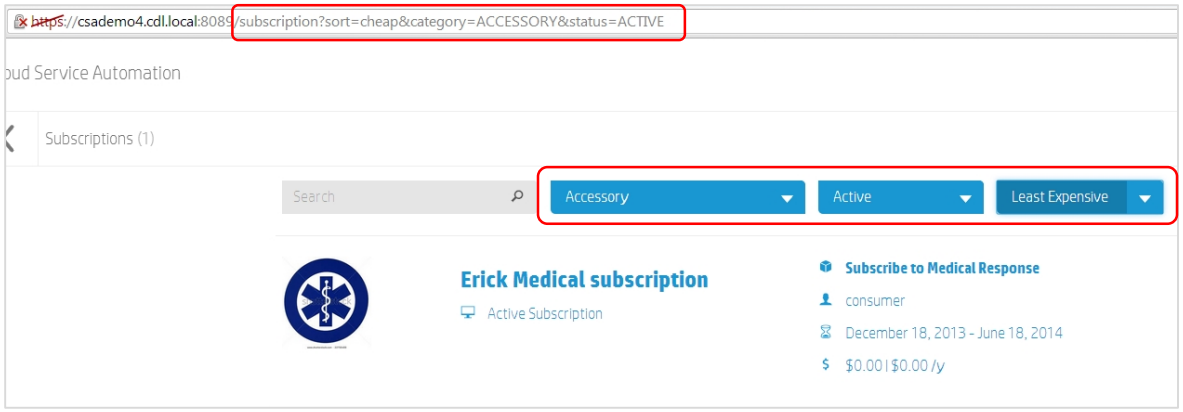


Example HP Propel-specific custom widget: 5 Most Recent Subscription

```
{
    "type": "MASHUP",
    "content": "<div id=\"recentSubs\" class=\"full-size\"><b><h3><i class=\"icon-subscription-add\"></i></h3><h5>Recent Subscriptions</h5></b><ul id=\"list_recent_subscriptions\"></ul></div><script type=\"text/javascript\">var $list = $('#list_recent_subscriptions');function getSubscriptions(options) {$.ajax({type: \"GET\",url: \"/api/subscription?count=5&offset=0&sort=newest\",success: function(data, textStatus, jqXHR) {if (options.success) {options.success(data);}},error: function(jqXHR, textStatus, errorThrown) {console.log(\"Widget Error: Failed to retrieve 5 recent subscriptions\");}});}function htmlEncode(value){return $('<div/>').text(value).html();} function htmlDecode(value){return $('<div/>').html(value).text();}function render() {$list.empty();getSubscriptions({success: function(data) {if (data && data.length > 0) {for (var i = 0; i < data.length; i++) {var name = data[i].name;var id = data[i].id;var url = \"/subscription/\" + id;if(i < data.length-1){$list.append(\"<li><a class='ellipses widget-label' target='_parent' href='\" + url + \"'><p>\" + htmlEncode(data[i].name) + \"</p></a></li>\");}else{$list.append(\"<li><a class='ellipses' target='_parent' href='\" + url + \"'>\" + htmlEncode(data[i].name) + \"</a></li>\");}}} else {$list.append(\"<li>No Recent Subscriptions Available</li>\");}} });}render(); </script><style type=\"text/css\">#recentSubs {font-family:HPSimplified,Helvetica,Arial,sans-serif;background-color: #7e7e7e;padding: 10px;color: white;font-weight: 500;}#recentSubs > b > h5 {margin: 0px;padding-bottom: 10px;border-bottom: 1px solid white;font-weight: 500;}#recentSubs > b > h3 {margin-top: 5px;}#recentSubs >ul {padding-left: 0px;margin: 0px;}#recentSubs > ul > li {display: block;padding-top: 5px;padding-bottom: 5px;border-bottom: 1px solid rgba(255,255,255,0.5);}#recentSubs > ul > li:last-child {border-bottom: none;}#recentSubs > a {color: white;text-decoration: none;}#recentSubs > ul > li > a > p {margin: 0 0 5px;word-wrap:normal;}#recentSubs > a:visited {color: white;}#recentSubs > a:hover, #recentSubs > a:focus {color: #1897d3;}</style>"
}
```

Note: The key function in the above HP Propel-specific widgets is the url: "/api/subscription?count=5&offset=0&sort=newest&status=Active".

The options to “/api/subscription?” can also be seen in the URL when the Subscriptions page is visited using the Marketplace Portal, as shown below.



Limitations and Requirements

From a performance perspective, additional widgets will take more time to retrieve the associated data. This will result in slower rendering of the Marketplace Portal Dashboard. This impacts actions such as:

- Login time.
- Refreshing the Dashboard view.
- Returning back to the Dashboard.

When you create custom widgets, be aware of the following limitations and requirements:

- Variables are shared by widgets. If you are using the same variable name, e.g. list, in multiple widgets, unexpected behavior will result if “list” is assigned different values in the widgets’ content.
- Widgets cannot be shared between organizations. Widgets must be created for each organization.

Additional Ways to Customize Widgets

There are several ways to customize widgets in the Marketplace Portal. As long as you adhere to the security restrictions around running external scripts on HTTPS you can implement widgets anyway you want. However, some approaches are simpler than others.

For convenience, custom widgets have access to jQuery and SugarJS. When you use the jquery.ajax() function to make calls to the Marketplace Portal APIs, the user session authorization token will be automatically included. You do not need to extract the user data from the session.

Optionally, you can extend this code to include an inline <style> tag for more complex CSS cases:

```
</script><style type=\"text/css\">#expensiveSubsDiv>p{color:black}</style>
```

When you append a style tag, wrap your widget in a top level div, such as `<div id=\"expensiveSubsDiv\">`. This will ensure help that your styling does not contaminate elements outside of your widget.

Using jQuery, combined with SugarJS, should make developing widgets relatively simple, even when you use data from HP Public APIs, as shown in the example above. However, there are limitations when running external scripts in an HTTPS environment. Do not expect to be able to copy and paste an iframe from a widget-generating website when running in an HTTPS environment. This is not supported at the browser level.

Using the IFrame Technique

Due to limitations of widgets you might find that trying to store your entire mashup widget in the **content** value of the body can be quite a challenge when having to escape (\) quotation marks in your source, e.g. "<div id=\"recentSubs\">…". Using the Iframe technique will enable you to create much more complicated widgets with much less frustration.

For example:

```
{
   "type": "MASHUP",
   "content": "<iframe src=\"widgets/IFrameSample/index.html\"
height=\"100%\" width=\"100%\"></iframe>"
}
```

This is an example of code that will leverage the IFrame technique in a mashup widget. It's important to note that the height and width of the IFrame should be set to 100% to fill the space available within the widget. You are still required to escape quotation marks within the **content***;* however the issue is significantly reduced by moving the bulk of your source code out of the widget's content in the Management Console's **Organization Customization** area, and onto your HP Propel system. The location for your files is: /opt/hp/propel/mpp/node_modules/mpp-ui/dist.

In the **dist** folder you can create a subfolder for your custom widgets. In the example above this subfolder was named **widgets**. The related files for this one widget were placed into subfolder **IFrameSample**. Add your .html, .css & .js files and reference the index.html file in your IFrame src attribute as shown above.

Note: When using the IFrame technique you will not have access to any scripts used by the Marketplace Portal (including jQuery, sugarJS & AngularJS), so you will need to reference a public version of any scripts or libraries your widget uses, or more ideally, search the mpp-ui/dist/bower_components folder and reference available libraries there.

Jquery: `<script src="/bower_components/jquery/dist/jquery.min.js"></script>`

SugarJS: `<script src="/bower_components/sugar/release/sugar.min.js"></script>`

AngularJS: `<script src="/bower_components/angular/angular.min.js"></script>`

MPP-Theme: `<link rel="stylesheet" href="/bower_components/mpp-theme/dist/main.css">`

You will have access to the HP Propel specific APIs as long as your IFrame source code is on the same domain as the Marketplace Portal (that is, as long as the source code for the IFrame is in the portal dist folder listed above)

Following is the content of the html, css & js files related to this sample IFrame widget.

widgets/IFrameSample/index.html:

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="style.css" />
  <!—You can optionally use the MPP-Theme styles by uncommenting the
following line -->
  <!-- <link rel="stylesheet" href="/bower_components/mpp-
theme/dist/main.css"> -->
```

```
  <script src="/bower_components/jquery/dist/jquery.min.js"></script>
</head>
<body>
  <script src="script.js"></script>
  <div id="recentSubs">
    <b>
    <h5>
      Recent Subscriptions
    </h5>
  </b>
    <ul id="list">
    </ul>
  </div>
</body>
</html>
```

Widgets/IFrameSample/style.css

```
body {
  background-color:#7e7e7e;
  padding:10px;
  color:white;
  font-weight:500;
}
h5 {
  margin:0px;
  padding-bottom:10px;
  border-bottom:1px solid white;
  font-weight:500;
}
ul {
  padding-left:0px;
  margin:0px;
}
ul > li {
  display:block;
  padding-top:10px;
  padding-bottom:10px;
  border-bottom:1px solid rgba(255,
  255,
  255,
  0.5);
}
ul > li:last-child {
  border-bottom:none;
}
a {
  color:white;
  text-decoration:none;
}
a:visited {
  color:white;
}
a:hover,
```

```
a:focus {
  color:#1897d3;
}
```

widgets/IFrameSample/script.js:

```
function getSubscriptions(options) {
  $.ajax({
    type: "GET",
    url: "/api/subscription?count=5&offset=0&sort=newest",
    success: function (data, textStatus, jqXHR) {
      if (options.success) {
        options.success(data);
      }
    },
    error: function (jqXHR, textStatus, errorThrown) {
      console.log("Widget Error: Failed to retrieve 5 recent subscriptions");
    }
  });
}

function htmlEncode(value) {
  //create an in-memory div, set its inner text(which jQuery automatically encodes)
  //then grab the encoded contents back out.  The div never exists on the page.
  return $('<div/>').text(value).html();
}

function htmlDecode(value) {
  return $('<div/>').html(value).text();
}

function render() {
  getSubscriptions({
    success: function (data) {
      var $list = $('#list');
      $list.empty();
      if (data && data.length > 0) {
        for (var i = 0; i < data.length; i++) {
          var name = data[i].name;
          var id = data[i].id;
          var url = "/subscription/" + id;
          if (i < data.length - 1) {
            $list.append("<li><a class='ellipses widget-label' target='_parent'
href='" + url + "'><p>" + htmlEncode(data[i].name) + "</p></a></li>");
          } else {
            $list.append("<li><a class='ellipses' target='_parent' href='" + url +
"'>" + htmlEncode(data[i].name) + "</a></li>");
          }
        }
      } else {
        $list.append("<li>No Recent Subscriptions Available</li>");
      }
    }
  });
}
```

```
render();
```

Appendix A: Example Configuration File Format

Following is example format of content that could be included in the Dashboard configuration file found at /opt/hp/propel/mpp/conf/dashboard.json.

```
{
  header: {
    label:
    image: // Image takes precedence when  both image and icon is set
    icon: {
      className: //predefined icon/glyphs available in the app
      url: //internal or external url to the image
    },
    description:
    link: { //see header section below for more info
      url:
      [target]: // url target for the link
      [label]:
    },
    style: // space delimited predefined styling class
    backgroundImage: // Image takes precedence when  both backgroundColor and
backgroundImage is set
  },
  sections: [
    {
    // Custom Section
      label: // used for customized section
      seeMore: { //see section details below for more info
        url: // specify internal or external url
        [label]:
        [target]:
      },
      style: // space delimited predefined styling class
      role:  // list of strings. See "Server Design" below for more detail
      tiles:
        default: {
          style: // space delimited predefined styling class
        },
        items: [
          {
            label:
            link: { //see tile details below for more info
              url: // specify internal or external url
              [label]:
              [target]:
            },
            role:  // list of strings. See below for more detail
            hotKey:  // hotkey to activate the tile. When used it behaves the
same way as clicking the tile
            image: //image takes precedence if image and icon are both
defined.
            icon: {
              className: //predefined icon/glyphs available in the app
              url: //internal or external url to the image
```

```
            },
            style: // space delimited predefined styling class
            backgroundImage: // backgroundImage takes precedence to what is
set on the style
            count: { // optional
              url: // specify an URL endpoint where it would return a count
              style:
            }
          }
          ...
        ]
      }
    },
    { // Tiles will be loaded dynamically on the Node.js depending on the
section type ;
      [type]: {
        name: [CATALOG_CATEGORY | WIDGET],
        [category]:  [FEATURED_CATEGORY | NEW_RELEASES | MOST_REQUESTED |
[CATEGORY_NAME] // only relevant if name is set to CATALOG_CATEGORY
      },
      label:
      seeMoreLabel:
      seeMoreUrl:
      tiles: [ // Optional ; In case of pre-defined section it will
automatically load the appropriate tiles and append it to this list
        {
          label:
          icon: {
            url: //internal or external url to the image
          },
          link:
        },
        {
          label:
          icon: {
            url: //internal or external url to the image
          }
          link:
        }
        ...
      ]
    },
    ...
  ]
}
```

Appendix B: Glyph Icons

The Marketplace Portal styling framework provides a collection of glyph icons that can be used throughout the application. To reference these, use the HTML class names shown in the following:

icon-zoom-out	icon-zoom-in	icon-youtube	icon-wifi
icon-web	icon-view	icon-video	icon-validation-denied
icon-validation-approve	icon-validation-alert	icon-user	icon-user-delete
icon-user-add	icon-unlock	icon-twitter	icon-tv
icon-trophy	icon-travel	icon-trash	icon-tools
icon-toolbox	icon-ticket	icon-target	icon-tag
icon-tablet	icon-surround	icon-subscription	icon-stop
icon-status	icon-star	icon-stamp	icon-spell-check
icon-speaker-mute	icon-speaker-medium	icon-speaker-max	icon-speaker-low
icon-shuffle	icon-sheild	icon-settings	icon-settings-verticle
icon-settings-horizontal	icon-services	icon-server	icon-search
icon-scissors	icon-rss	icon-rocket	icon-rewind
icon-repeat	icon-relationship	icon-refresh	icon-record
icon-radar	icon-quote-start	icon-quote-end	icon-prohibited
icon-process	icon-print	icon-power	icon-play
icon-phone	icon-pending	icon-payment	icon-pause
icon-page	icon-page-new	icon-page-multiple	icon-owner
icon-options	icon-notification	icon-network	icon-navigation
icon-mystuff	icon-mug	icon-mouse	icon-monitor
icon-microphone	icon-microphone-mute	icon-menu-expand	icon-menu-collapse
icon-mail	icon-loop	icon-logout	icon-login
icon-lock	icon-location	icon-locale	icon-loading
icon-list	icon-link	icon-like	icon-lightbulb
icon-library	icon-legal	icon-leaf	icon-laptop
icon-labs	icon-keyboard	icon-key	icon-information
icon-inbox	icon-image	icon-hybrid	icon-hp
icon-home	icon-heart	icon-hd	icon-hd-raid

icon-hammer	icon-grid	icon-globe	icon-git
icon-gift	icon-fox	icon-folder	icon-flame
icon-flag	icon-first-aid	icon-finder	icon-filter
icon-fast-forward	icon-facebook	icon-export	icon-export-option
icon-expand	icon-emoticon-surprised	icon-emoticon-sad	icon-emoticon-happy
icon-ellipses	icon-edit	icon-drop	icon-download
icon-download-option	icon-dot	icon-donut	icon-documents
icon-document	icon-dislike	icon-disconnect	icon-desktop
icon-delivery	icon-delete-circle	icon-date	icon-dashboard
icon-cube-solid	icon-cube-outline	icon-copyright	icon-contract
icon-contacts	icon-connections	icon-connection	icon-code
icon-cloud	icon-cloud-upload	icon-cloud-download	icon-close
icon-clipboard	icon-clip	icon-child	icon-checkout
icon-chat	icon-chat-session	icon-chart-pie	icon-chart-line
icon-chart-bar	icon-catalog	icon-cart	icon-carousel
icon-calendar	icon-calculation	icon-business	icon-bullseye
icon-bug	icon-bookmark	icon-blueprint	icon-barcode
icon-barcode-option	icon-attachment	icon-asterik	icon-assistance
icon-assistance-option	icon-arrow-up	icon-arrow-span	icon-arrow-pan
icon-arrow-forward	icon-arrow-forward-option	icon-arrow-down	icon-arrow-back
icon-arrow-back-option	icon-archive	icon-applications	icon-alert
icon-alert-option	icon-address-book	icon-add	icon-add-document
icon-add-circle	icon-access	icon-id	icon-arrow-down-option
icon-arrow-up-option	icon-checkmark	icon-home-2	icon-stop-option
icon-play-option	icon-restart	icon-cost	icon-approvals-option
icon-review-option	icon-arrow-dash-forward	icon-arrow-dash-back	icon-arrow-line-forward
icon-arrow-line-back	icon-black-beard	icon-halt	icon-pointer
icon-rocket-option	icon-traffic	icon-traffic-option	icon-plug

icon-plug-option	icon-magnet	icon-organization-option	icon-magic-wand
icon-layout	icon-bug-option	icon-sort-low	icon-sort-high
icon-sort	icon-brick	icon-link-option	icon-service-modify-fail
icon-infinate-option	icon-infinate	icon-windows	icon-apple
icon-linux	icon-date-option	icon-calendar-option	icon-checkout-complete
icon-linux	icon-date-option	icon-calendar-option	icon-checkout-complete
icon-checkout-next	icon-cart-option	icon-cart-next	icon-cart-complete
icon-measure	icon-measure-option	icon-weigh	icon-rule
icon-rule-option	icon-thermometer	icon-thermometer-option	icon-bookmark-option
icon-peace	icon-review	icon-approvals	icon-arrow-line-up
icon-arrow-line-down	icon-emoticon-happy-2	icon-emoticon-smile	icon-emoticon-angry
icon-emoticon-poo	icon-cpu	icon-subscription-add	icon-pause-option
icon-refresh-option	icon-saved	icon-square	icon-square-hp
icon-application-off	icon-applications-on	icon-application-on-option	icon-application-off-option
icon-star-half	icon-wallet	icon-basket-option	icon-basket
icon-umbrella	icon-radioactive	icon-expand-option	icon-contract-option
icon-chat-session-2	icon-conversation	icon-sun	icon-settings-option
icon-linkedin	icon-dropbox	icon-internet-explorer	icon-chrome
icon-firefox	icon-trash-option	icon-organiztion	icon-robot
icon-ghost	icon-diamond	icon-club	icon-sapde
icon-archive-option	icon-moon	icon-phase-complete	icon-phase-start
icon-phase-cresent	icon-phase-gibson	icon-share	icon-watch
icon-pin	icon-generic-user	icon-battery-full	icon-battery-half
icon-battery-empty	icon-in-progress	icon-new	icon-urgent
icon-edit-field	icon-active	icon-active-option	icon-inactive-option
icon-inactive	icon-dog	icon-halt-option	icon-service-offline
icon-service-reserved	icon-service-transitioning	icon-service-deploy	icon-edit-option
icon-service-modify	icon-service-fail	icon-service-active	