



HCL Digital Experience

HDX-DEV-100

Theme Development

HCLSoftware U

Creating a new generation of experts

Edition: January 2025

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Author(s)

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Bio

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Introduction

This hands-on lab guides you through creating a theme on HCL Digital Experience (DX). The theme manages the overall look & feel and layout of your page. In this lab, you will explore how to easily create, update, deploy, test and manage your DX theme using the **Theme Manager**, **Theme Editor**, **DXClient** and **HCL DX Extension for Visual Studio Code**. You will also learn how to do download and access your theme using **WebDAV**.

In this DX developer lab, you play the role of Gene, a developer for the fictitious Woodburn Studio company.



Gene Hayes, Developer

As a Web Developer, you will create a new **HCL DX Theme** theme using the Theme Manager. Then you will create a new **HCL DX Promotion** page and apply your theme to test it. You will then modify your theme online using the Theme Editor to show a different Web Content footer.

Finally, you will setup your local theme development environment to continue working on this theme. You will pull a local version, using DXClient livesync theme-pull, change it to show a different logo, synchronize it with the server using DXClient livesync theme-push and test it. As you are using Visual Studio Code, you will use the HCL DX Extensions to simplify using this.

Optionally, you may learn other ways to download or access your theme using WebDAV and deploy it.

Prerequisites

1. Completion of [HDX-INTRO](#) and [HDX-BU-100](#) courses, including the labs
2. Completion of [HDX-DEV-100 Introduction](#) lesson to set up and configure DXClient.
3. Access to download the Lab Resources. In the same place where you have found this lab, you will find corresponding resources which you may download and unzip in your Desktop. This helps you to run the lab more easily, and you may later replace them by your own ones.
4. A local code editor. This lab provides instructions with Visual Studio Code (VSC): <https://code.visualstudio.com>.

You will be using the following user IDs and passwords:

Purpose	User	Password
SoFy Login	Your official email id	Your password
Developer Gene Hayes	ghayes (or wpsadmin)	HCL-Dem0 (or wpsadmin)

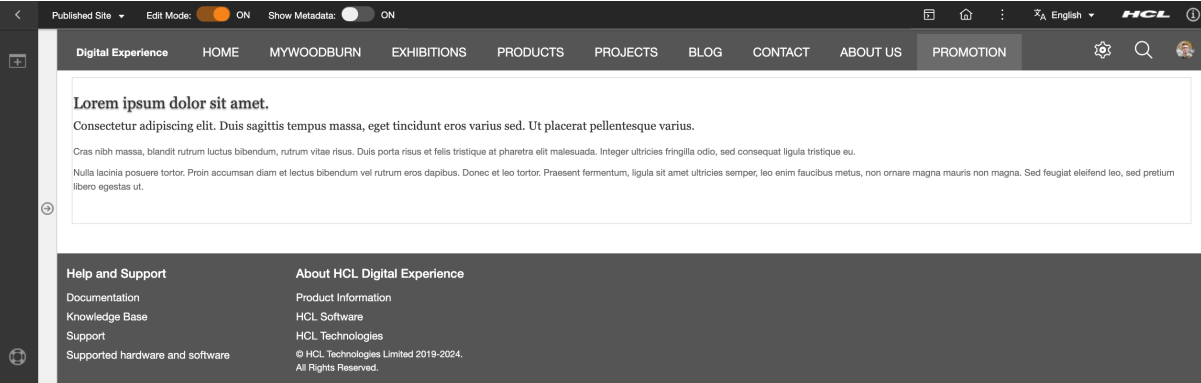
Lab Overview

In this lab you will use a typical retail portal, in this case we used a fictional website: Woodburn Studio, but you can also use your own.

In this lab, you will explore how to create, update, deploy, test and manage your DX theme using the **Theme Manager**, **Theme Editor** and locally Visual Studio Code (using the **HCL DX Extensions for Visual Studio Code** and **DXClient** LiveSync pull-theme and push-theme). And you learn how to download it, access using **WebDAV** and deploy it as an administrator using DXClient deploy-theme.

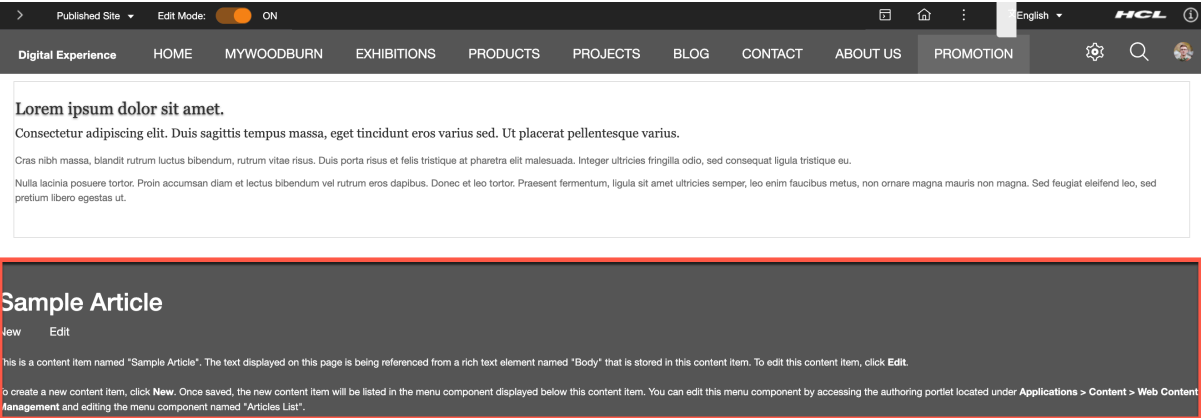
Part 1: Create new Theme and deploy on new Promotion Page

You will create a new theme **HCL DX Theme**, discover it in more details and then create and apply it on a new **Promotion** page.



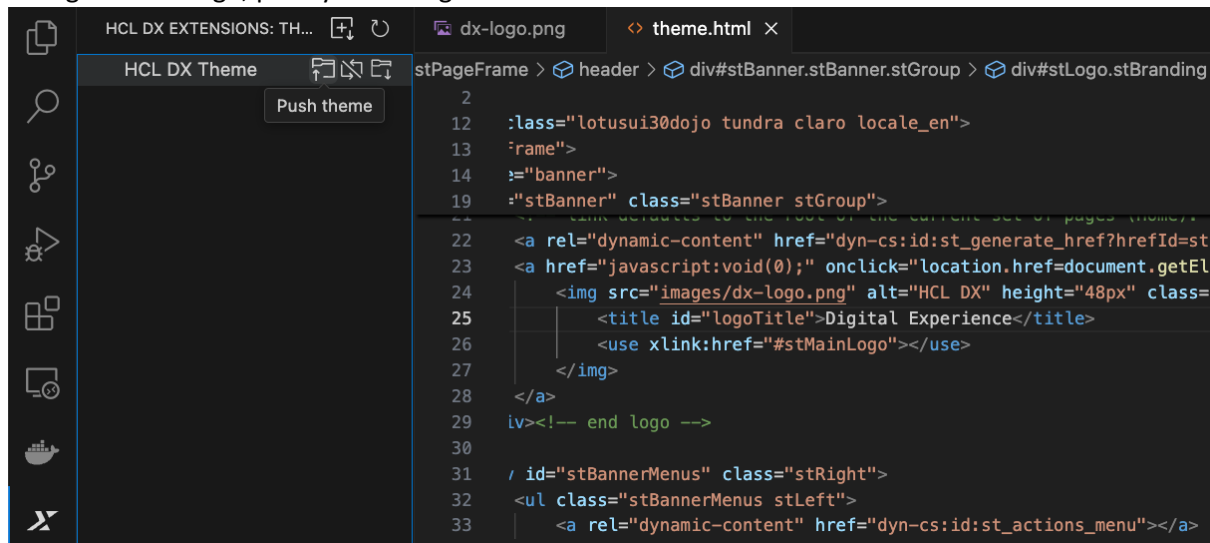
Part 2: Update the Theme Footer using the Theme Editor

You will use the Theme Editor to discover your theme and then change the footer to point to a Web Content, which may be easily managed by Business Users.

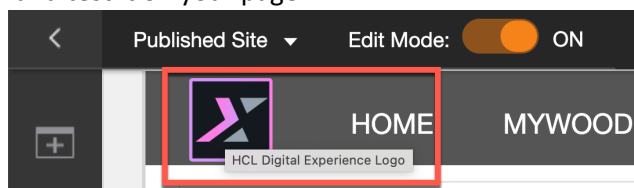


Part 3: Update the Theme Logo locally with Visual Studio Code

Use your favorite Integrated Development Environment to work locally on your theme. Learn how to use Visual Studio Code with its HCL DX Extensions for Visual Studio Code to pull the theme locally, make changes to the logo, push your changes

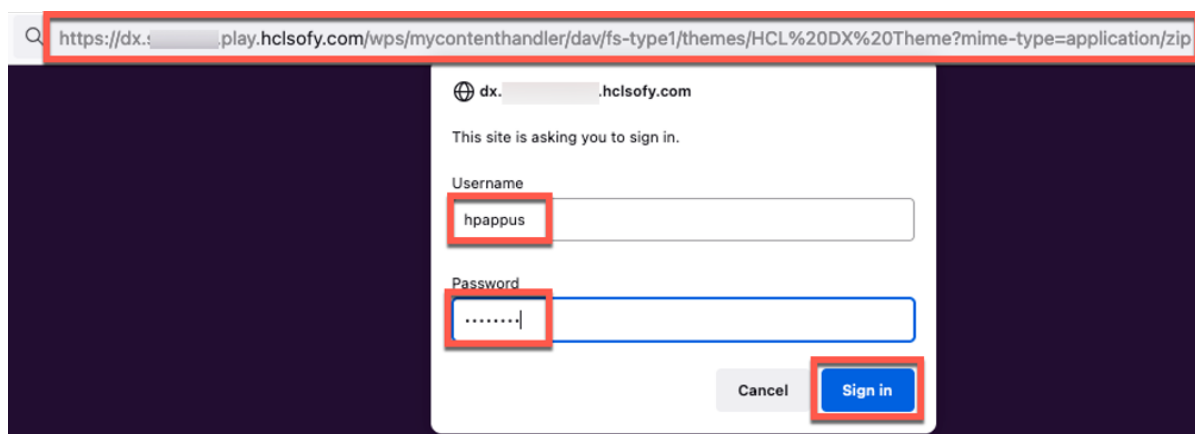


and test it on your page.

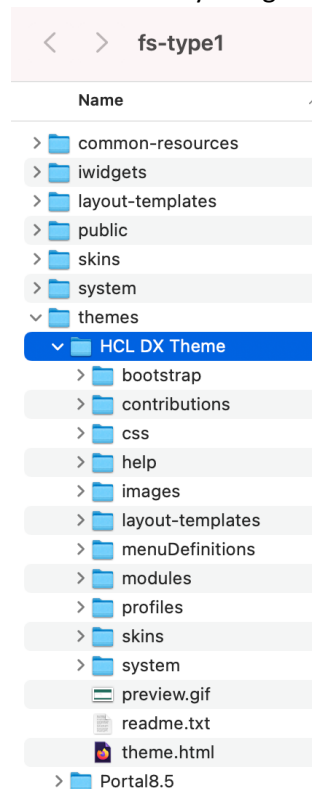


Optional Part 4: Use WebDAV to Access and Download and DXClient to Deploy

Optionally, learn how you may use other options to download the theme locally



access it directly using WebDAV,



make updates with any IDE, use DXClient to deploy it to your DX server and test it on your page.

```

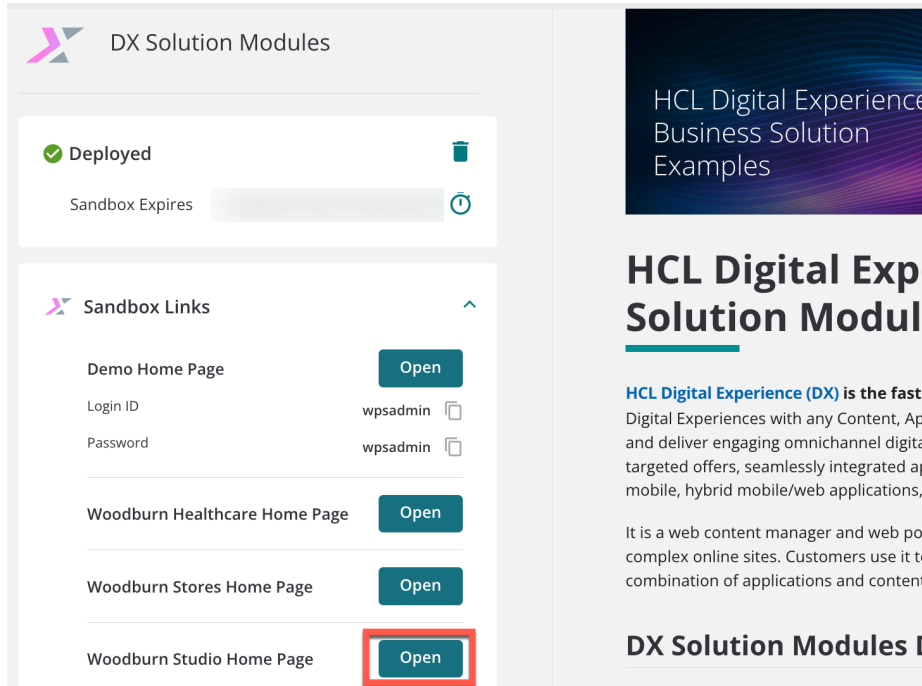
Hilhorst-MacBook-Pro:dxclient hilhorst2$ dxclient deploy-theme -themeName "HCL DX Theme" -themePath /Users/herberth
ilhorst/ /Users/herberth/Data/Themes/HCL_DX_Theme
2021-12-13 12:42:22 : Start to deploy theme in WebDav.
(node:1) Warning: Setting the NODE_TLS_REJECT_UNAUTHORIZED environment variable to '0' makes TLS connections and HT
TPS requests insecure by disabling certificate verification.
(Use `node --trace-warnings ...` to show where the warning was created)
2021-12-13 12:42:23 : The theme HCL DX Theme is available under WebDAV themes collection.
2021-12-13 12:42:26 : WebDAV theme back up has been taken and placed in : store/outputFiles/themes/backup/webdav/HCL
DX Theme-20211213124224.zip.
2021-12-13 12:42:34 : Files uploaded successfully to HCL DX Theme under WebDAV themes collection.
2021-12-13 12:42:34 : Deploy theme execution successful.
2021-12-13 12:42:34 :
Theme WebDAV deployment successful.
Hilhorst-MacBook-Pro:dxclient hilhorst2$

```

Part 1: Create new Theme and deploy on new Promotion Page

You will create a new theme **HCL DX Theme**, discover it in more details and then create and apply it on a new **Promotion** page.

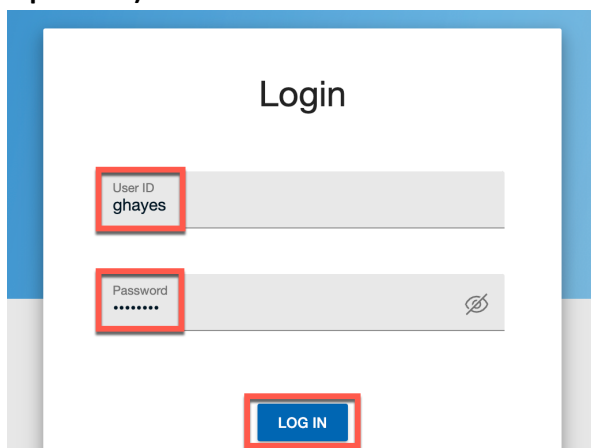
1. Start by creating a new theme using the existing Simple theme template. Go to the home page of Woodburn Studio first. On the server where the DX Solution Modules has been installed, next to **Woodburn Studio Home Page**, click **Open**.



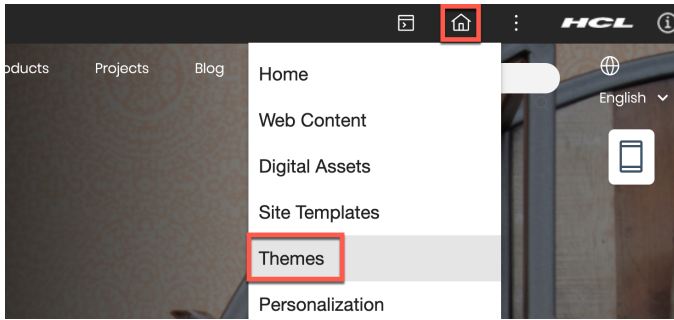
2. Log into your server as Gene Hayes. Click **Log in**.



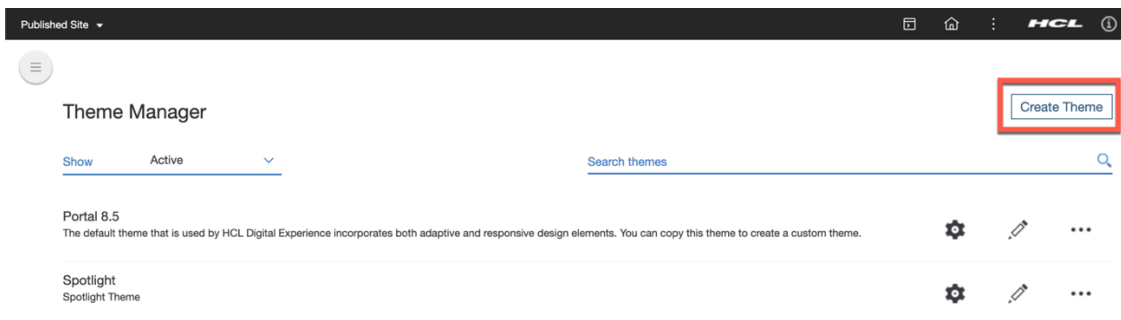
3. Use the credentials of Gene (User ID: **ghayes**, Password: **HCL-Dem0** – if you do not have these, you may use the default administrator account with User ID: **wpsadmin**, Password: **wpsadmin**)



4. Then go the Themes in the Practitioner Studio. Open the applications menu and click **Themes**.



5. You will land on the **Theme Manager**. You see the default Portal 8.5 theme and a Spotlight theme that is part of the DX Solution Modules on HCL SoFy. Now create the Theme. Click **Create Theme**.



6. Enter the theme title **HCL DX Theme** and enter the description **My first HCL Digital Experience theme**. Notice there are two out of the box theme template. The **Simple** is a clean version based on Bootstrap. Bootstrap is one of the many front-end open source toolkits, that allows you to build and customize with Sass, utilize prebuilt grid system and components, and bring projects to life with powerful JavaScript plugins. Learn more on <https://getbootstrap.com/>. Select **Simple** template and click **Create**.

Create Theme

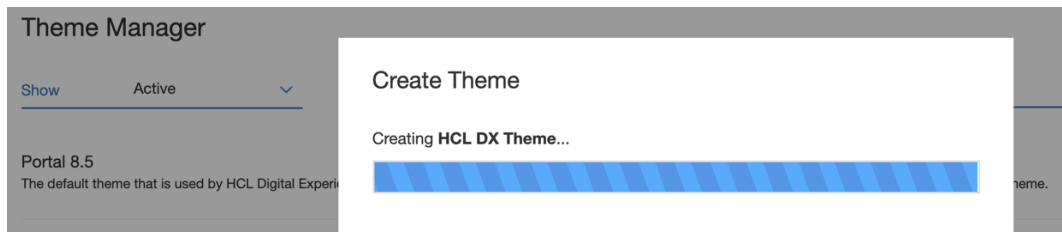
Title *
HCL DX Theme

Description
My first HCL Digital Experience theme

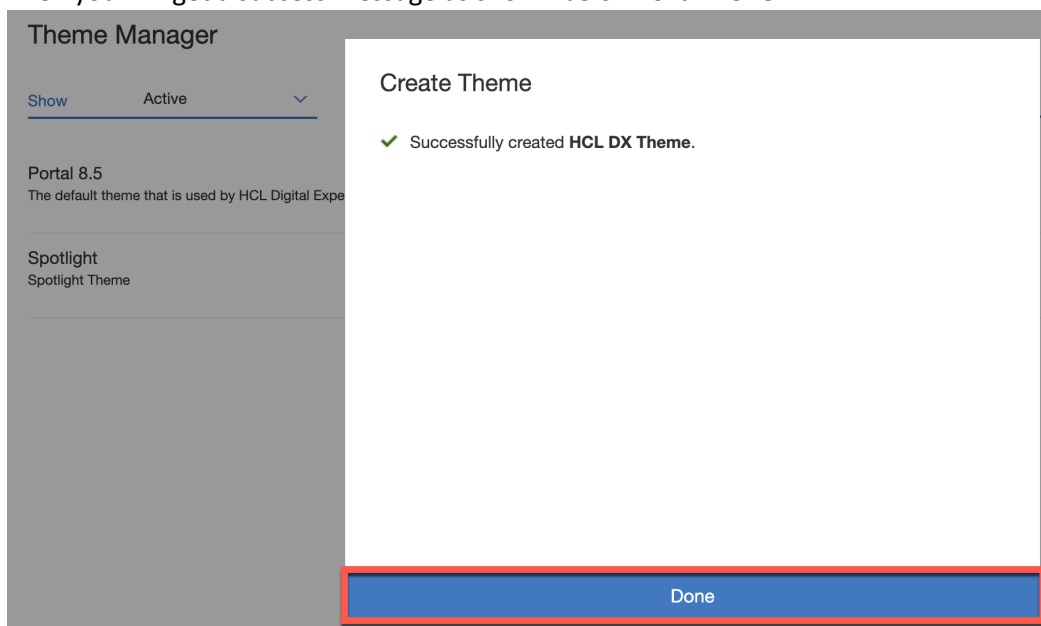
Template
Simple
Simplified theme which can be used as a starting point for the development of custom themes.

Cancel Create

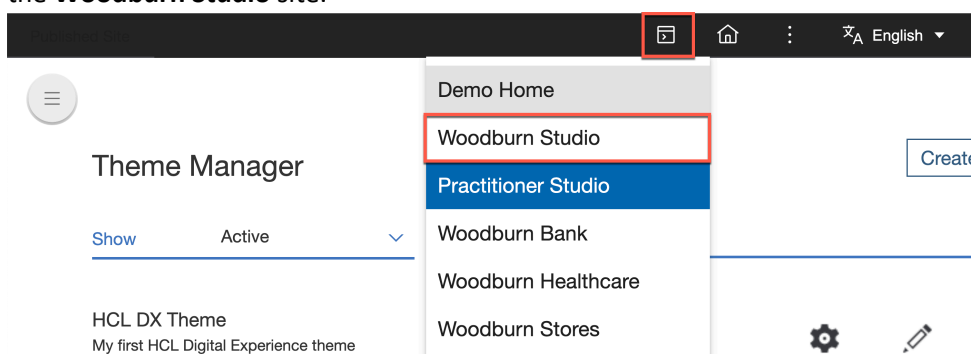
7. The theme creation will take a few seconds.



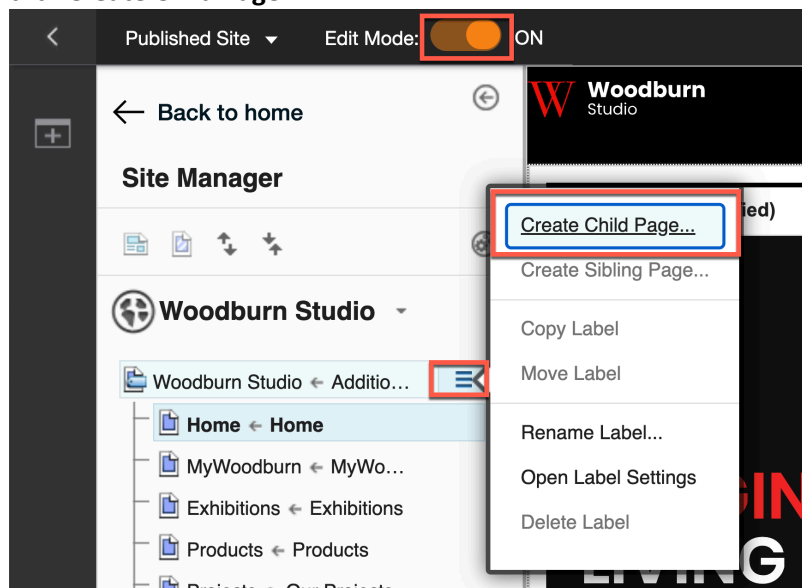
8. Then you will get a success message as shown below. Click **Done**.



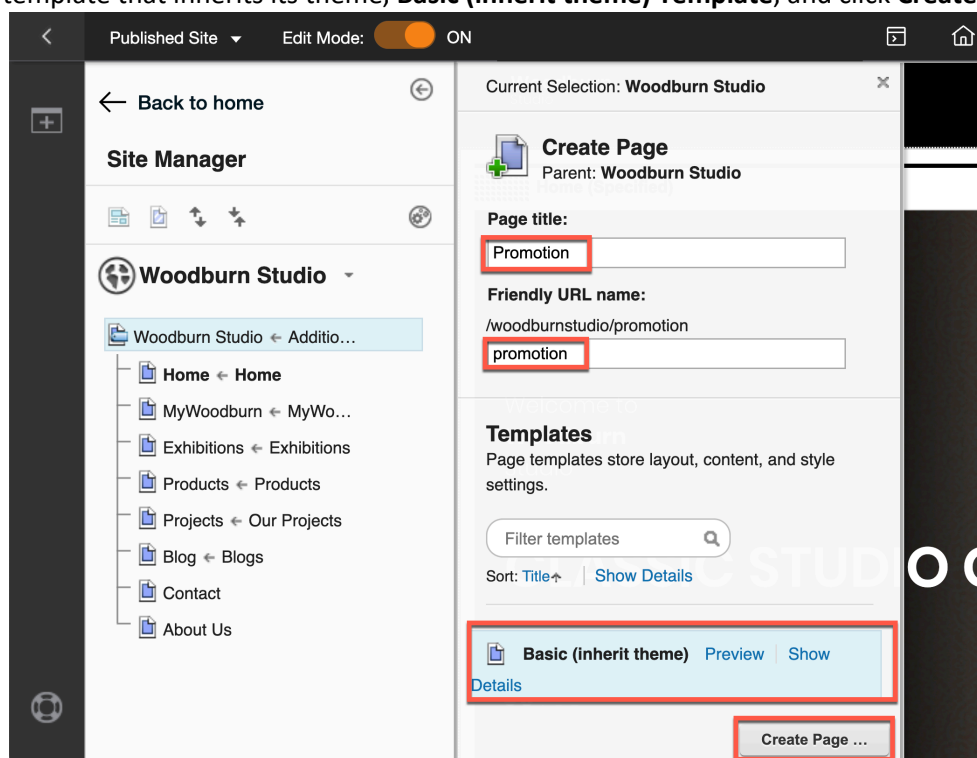
9. Your theme is now created and visible in the list of themes. Now create a Promotions test page where you apply your theme and check how it looks. From the **Site Menu** icon, select the **Woodburn Studio** site.



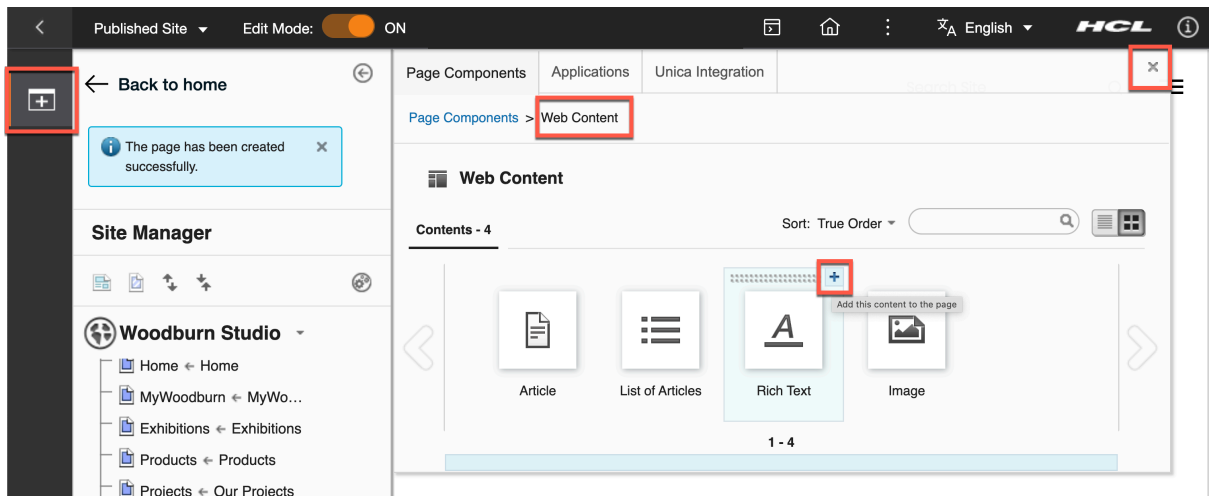
10. Create your **Promotions** page as a new child under the **Woodburn Studio** site. Turn on the **Edit mode** switch, open the to open the context menu of Woodburn Studio (not Home) and click **Create Child Page**.



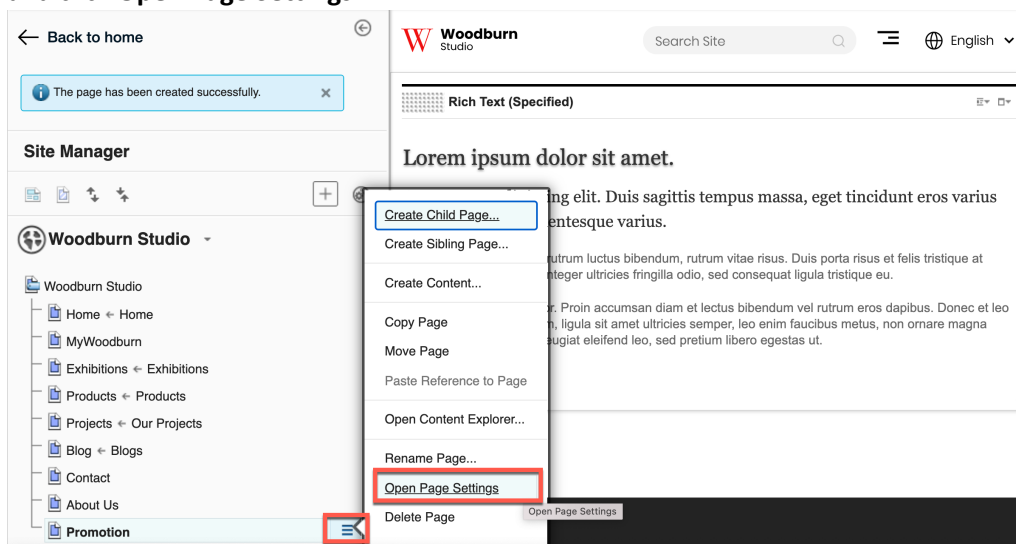
11. Enter the **Page Title** as **Promotion**, verify the **Friendly URL** as **promotion**, and select a template that inherits its theme, **Basic (inherit theme) Template**, and click **Create Page...**



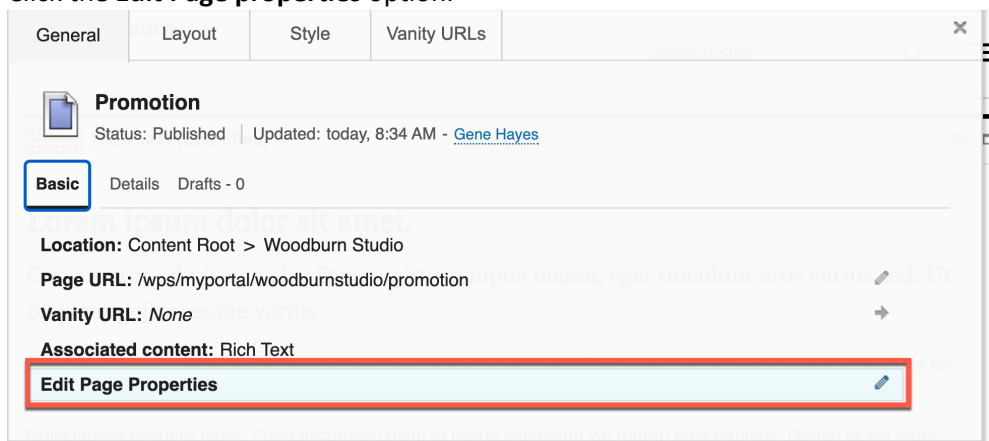
12. Then add a simple Rich Text Web Content to the page. Click + (**Add page components and applications**), click **Web Content** and + to add the **Rich Text** Page Component to your page and close the toolbar.



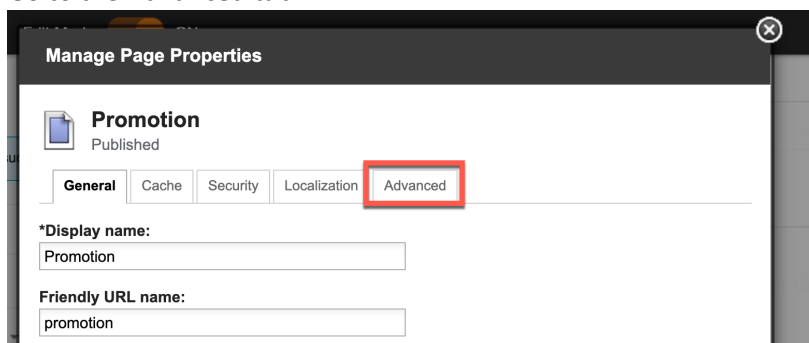
13. Now change the theme to yours for this page. Open the context menu of the **Promotion** page and click **Open Page Settings**.



14. Click the **Edit Page properties** option.

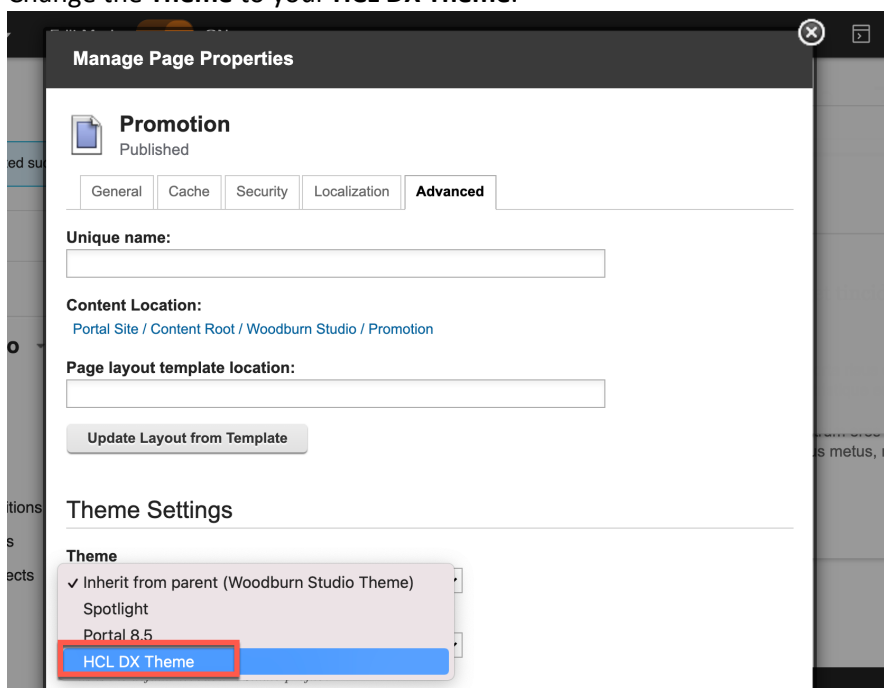


15. Go to the **Advanced** tab.



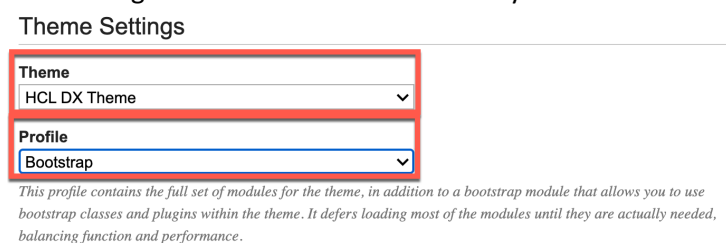
The screenshot shows the 'Manage Page Properties' dialog for a 'Promotion' page. The 'Advanced' tab is selected and highlighted with a red box. The 'General' tab is also visible. The 'Display name' field contains 'Promotion' and the 'Friendly URL name' field contains 'promotion'.

16. Change the **Theme** to your HCL DX Theme.



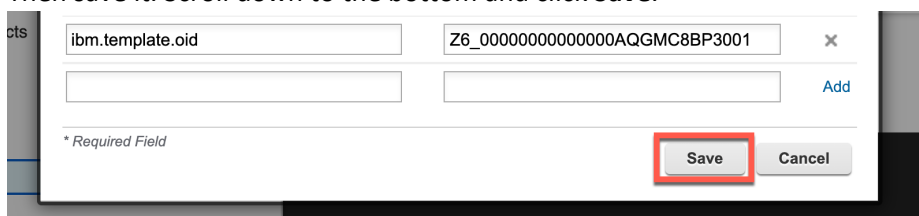
The screenshot shows the 'Manage Page Properties' dialog for a 'Promotion' page. The 'Advanced' tab is selected. The 'Theme Settings' section is visible, showing a dropdown menu for 'Theme'. The 'HCL DX Theme' option is selected and highlighted with a red box. Other options include 'Inherit from parent (Woodburn Studio Theme)', 'Spotlight', and 'Portal 8.5'.

17. Then change the **Profile** to use the one of your theme: **Bootstrap**.



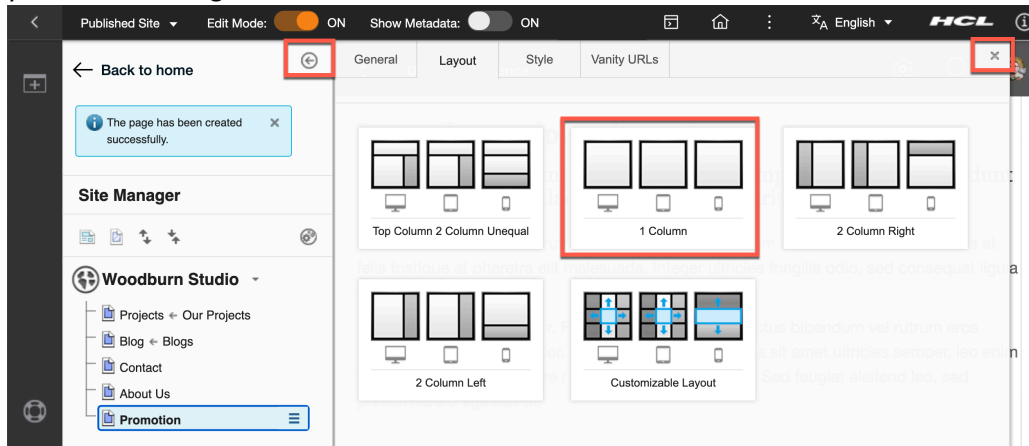
The screenshot shows the 'Theme Settings' section. The 'Theme' dropdown is set to 'HCL DX Theme' and the 'Profile' dropdown is set to 'Bootstrap'. Both dropdowns are highlighted with a red box. Below the dropdowns, there is a note: 'This profile contains the full set of modules for the theme, in addition to a bootstrap module that allows you to use bootstrap classes and plugins within the theme. It defers loading most of the modules until they are actually needed, balancing function and performance.'

18. Then save it. Scroll down to the bottom and click **Save**.

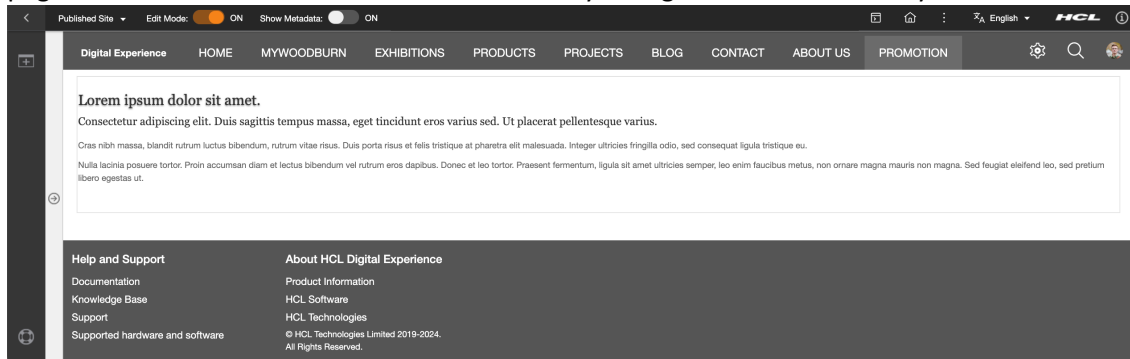


The screenshot shows the bottom of the 'Manage Page Properties' dialog. The 'Save' button is highlighted with a red box. The 'Cancel' button is also visible. The 'Required Field' label is present.

19. Set your page to use a single column layout. Click **Layout** and notice the out of the box layouts of your new theme. Click **1 Column**, close the Toolbar and Site Manager, and view your theme changes.



20. As the page was using a very different theme before, notice now the new look & feel of your page with a different header and footer. You may change the rich content if you want.

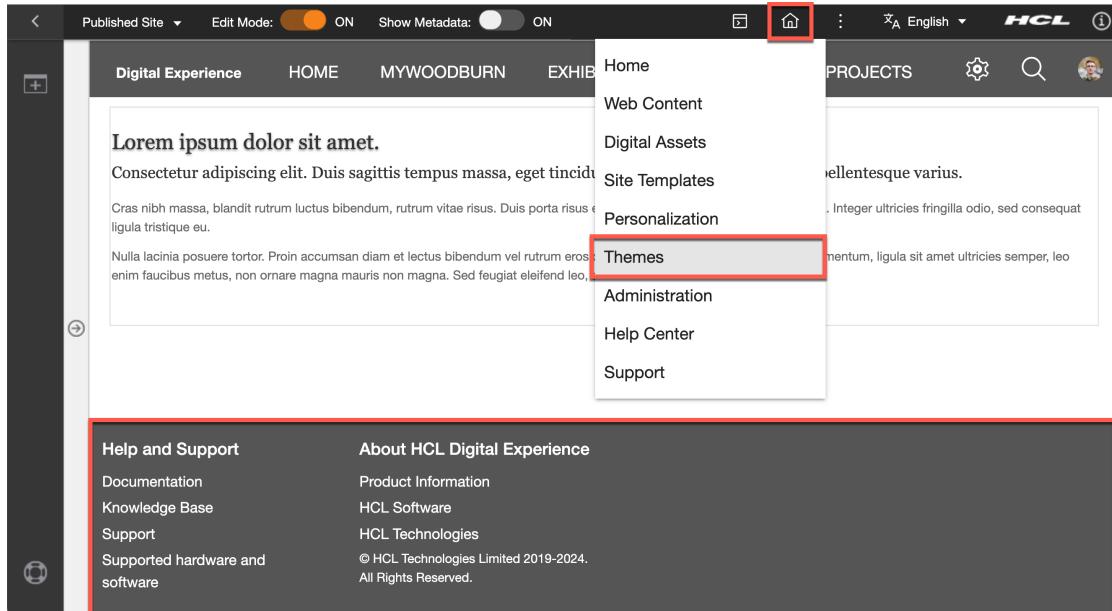


Congratulations!! You have created and deployed a new **DX Theme** on a new Promotion page!

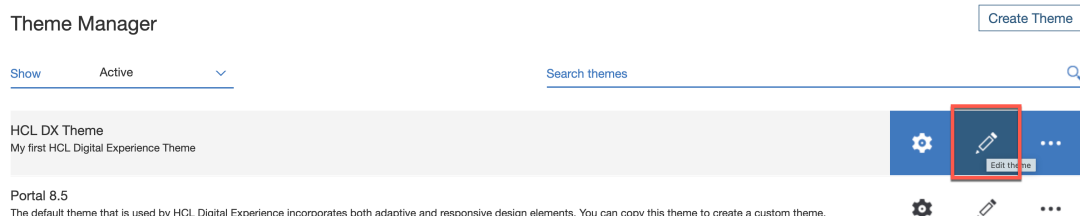
Part 2: Update the Theme Footer using the Theme Editor

You will use the Theme Editor to discover your theme and then change the footer to point to a Web Content, which may be easily managed by Business Users.

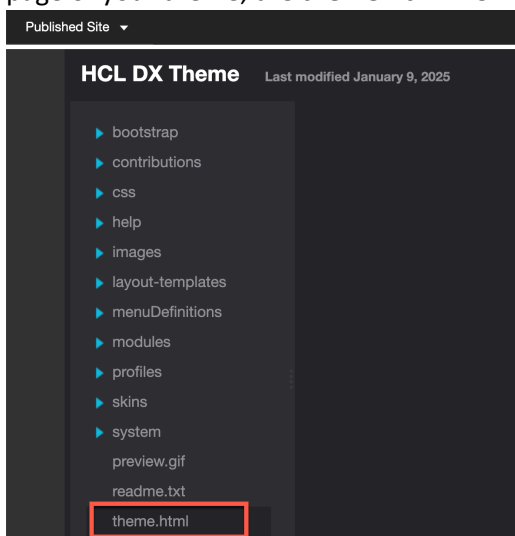
1. Check how the footer looks like now. Then edit your theme to change this. Open the application menu and select **Themes**.



2. In the **Theme Manager**, edit your theme. Click the **pencil/edit** icon of your **HCL DX Theme**.



3. Your theme is now available in editable mode on the **Theme Editor**. Open the main design page of your theme, the **theme.html** file.



- Change the footer now to show a Web Content. Scroll down to the part where you see the footer defined. Notice the site toolbar section with the logo, action menu with search, navigation configuration and the use of classes. The footer now points to a dynamic content spot (dyn-cs): `st_footer_HCL`.

```

theme.html x
92     <div id="layoutContainers" class="stLayoutContainers stLayoutContainersHidden stGroup wptl
93     <a rel="dynamic-content" href="lm:template"></a>
94     </div>
95     </div><!--end main content-->
96
97     <footer id="stFooter" aria-label="HCL Digital Experience Footer" role="contentinfo">
98     <div class="stFooterInner">
99     <a rel="dynamic-content" href="dyn-cs:id:st_footer_HCL"></a>
100    </div>
101    </footer><!-- page footer -->
102  </div>
103
104  <!-- This is responsible for bootstrapping the configuration for the javascript framework

```

- Replace this dynamic content spot with a Web Content. You may use an out of the box **Sample Article** Web Content, and normally you would create a dedicated Web Content footer that your Business User can easily update. You can have a look at it in the **Web Content** library under the **Articles** site area. The format to insert Web Content is

```

<a rel="dynamic-content" href="dyn-cs:id:st_wcm_content?path=<Web Content
Library>/<Site Area>/<Content>"></a>

```

Comment out the original footer and add your content spot:

```

<a rel="dynamic-content" href="dyn-
cs:id:st_wcm_content?path=Web+Content/Articles/Sample+Article"></a>

```

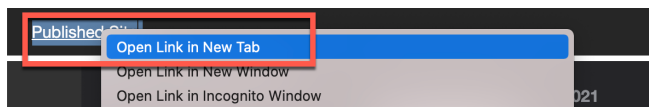
Your updated **theme.html** file should look like this. Then save it. Click the **save** icon.

```

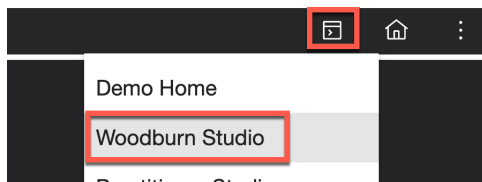
modified September 21, 2021
theme.html x
94     </div>
95     </div><!--end main content-->
96
97     <footer id="stFooter" aria-label="HCL Digital Experience Footer" role="contentinfo">
98     <div class="stFooterInner">
99     <!-- <a rel="dynamic-content" href="dyn-cs:id:st_footer_HCL"></a> -->
100    <a rel="dynamic-content" href="dyn-cs:id:st_wcm_content?path=Web+Content/Articles/Sample+Article"></a>
101    </div>
102    </footer><!-- page footer -->
103  </div>
104

```

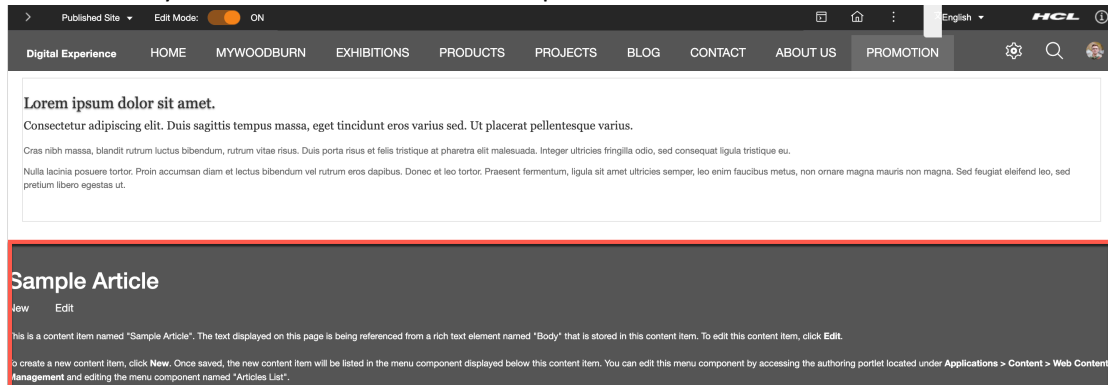
- Now try it out. Open a new tab. Do a right click on **Published Site** and then **Open Link in New Tab**.



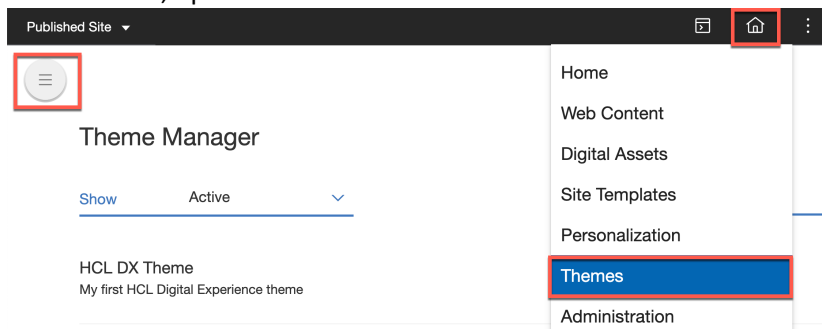
7. In the new tab go to your Promotion page. Open the site menu and then the Woodburn Studio site.



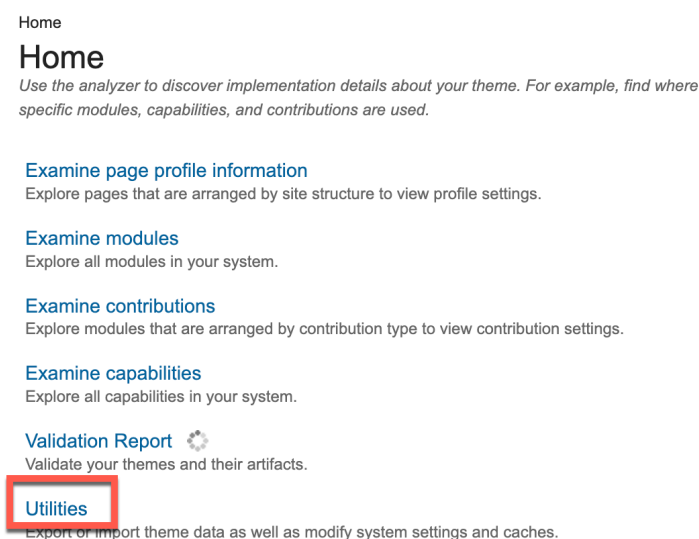
8. You see that your footer now shows the Sample Article.



9. If you do not see it, it may mean that your internal theme cache needs to be cleared. You can clear it with the Theme Optimization Analyzer. To access it, open the applications menu, click **Themes**, open the menu on the left.



10. Then click **Analyzer** and **Utilities**.



11. Click **Control Center**.[Home](#) > Utilities

Utilities

Export Theme Data

If you need help with a theme issue, you can export your data to share with IBM support or your local support organization. Support personnel are able to import and view your data to troubleshoot problems. Export display data as a compressed file. [Click here to export data.](#)

Import Theme Data

Import theme data to analyze and troubleshoot issues from another server. Only files that are exported from the Theme Analyzer can be imported.

Filename: No file chosen**Control Center**

Various system settings and modifications of the theme optimization framework.

Client Tracing

Enable and disable tracing for client side javascript.

Advanced Utilities

More system utilities around theme optimization

12. And under Invalidate Cache, click **Click to invalidate**. As a developer, you may also enable the development mode, which disables all caches and does not require you to go back here. Click Click to turn on.[Home](#) > [Utilities](#) > Control Center

Control Center

Invalidate Cache

This option allows to invalidate all theme optimization related caches such as profiles and modules. With this you can make changes to profiles or modules and after invalidating the caches the system will pick up the changes. [Click to invalidate.](#)

Remote Debugging

This option controls whether the system returns debug resources as defined by module contributions, which are usually uncompressed versions of javascript or css. This feature can be enabled for the complete server or an individual client. If the feature is enabled for the complete server, the debug resources are active for all users of this server and it stops the combiner from downloading multiple files in one request. Instead, each downloaded file is fetched in its own separate request.

Remote Debug (Server, all users, individual requests) is turned **off**. [Click to turn on.](#)

Remote Debug (Current browser only, combined) is turned **on**. [Click to turn off.](#)

Dynamic Content Spot Debugging

This option controls a visualization feature for dynamic content spots. It allows to pinpoint exactly which markup was contributed by which dynamic content spot. Please note that this setting is not persisted across a server restart.

Dynamic Content Spot (Default) Debug is turned **off**. [Click to turn on.](#)

Dynamic Content Spot (Inline) Debug is turned **off**. [Click to turn on.](#)

Development Mode

This option controls the development mode feature which disables all caches of the theme optimization framework.

Development mode is turned **off**. [Click to turn on.](#)

Reports

This option provides various reports about the theme optimization framework that are written into the trace file. Please note that these settings are not persisted.

13. It then should show it is turned on. This has of course an impact on your performance.

Hence, turn it off once you have completed your work.

Dynamic Content Spot (inline) Debug is turned **on**. [Click to turn on.](#)

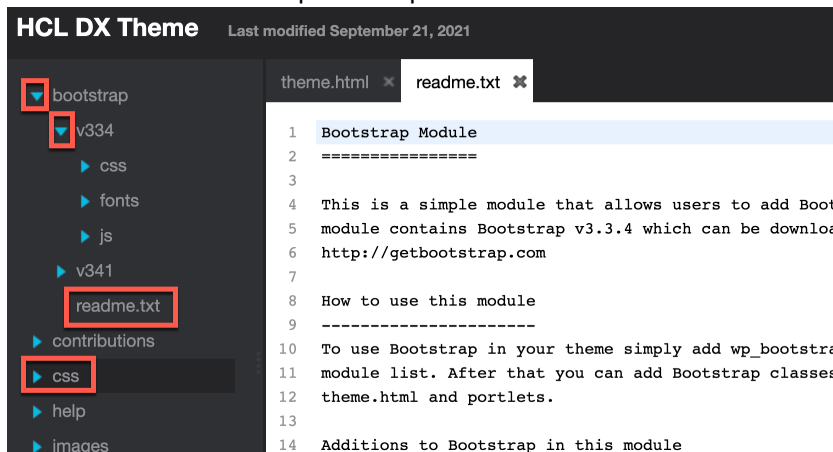
Development Mode

This option controls the development mode feature which disables all caches of the theme optimization framework.

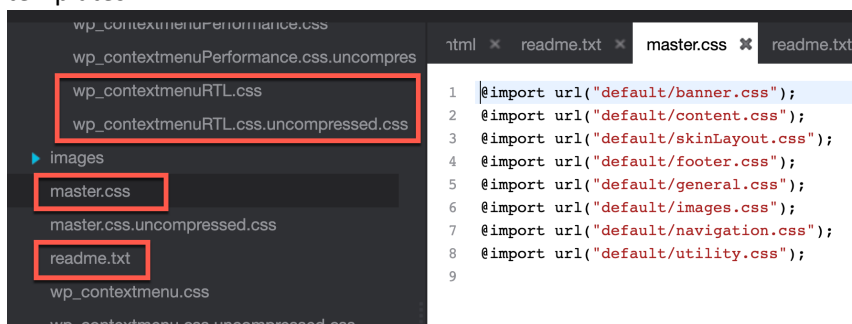
Development mode is turned **on**. [Click to turn off.](#)

Reports

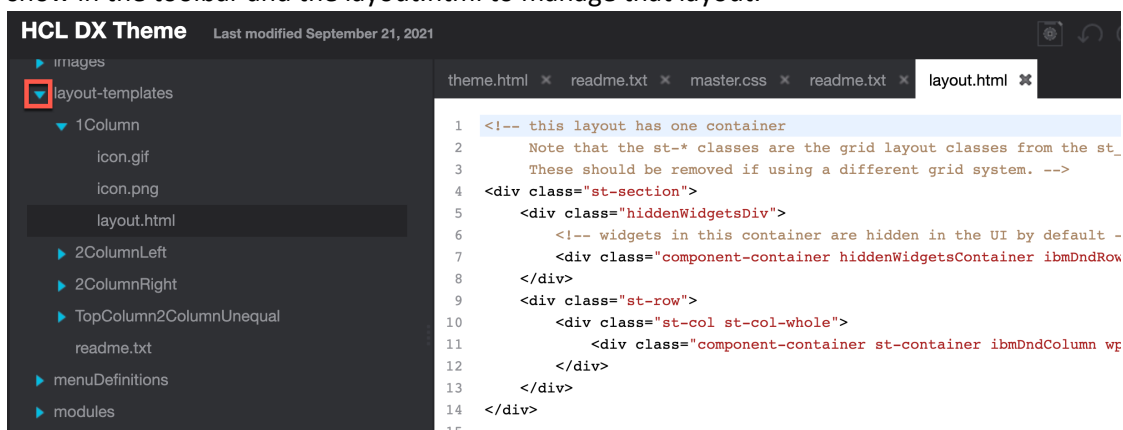
14. Now go back to the previous tab and have a look at a few more parts of your theme. Open the bootstrap folder. Click the **readme.txt** to learn details on this and notice the entries for two versions of bootstrap. Then open the **css** folder.



15. Again, there is a **readme.txt** file to explain the CSS. Note the master.css that combine the different CSS files from the default sub-folder. Also notice that there are standard compressed and uncompressed versions of each CSS file. The compressed ones are smaller and therefore load faster. You'll learn more on this in follow up courses. Then go to layout templates.



16. Here you see the different layouts you could choose from before. Each one has an image to show in the toolbar and the layout.html to manage that layout.



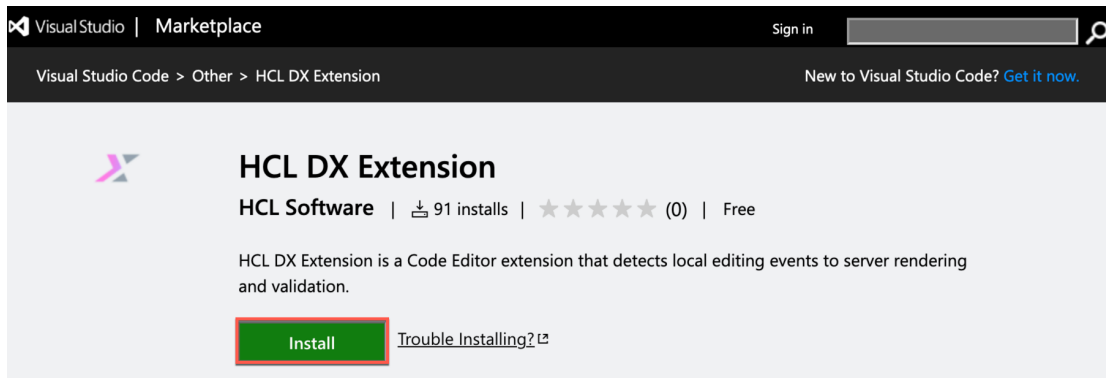
17. You may have a look at other parts. Use the readme.txt to learn more about it.

Congratulations!! You have updated your **HCL DX Theme** using the **Theme editor**, on the DX server.

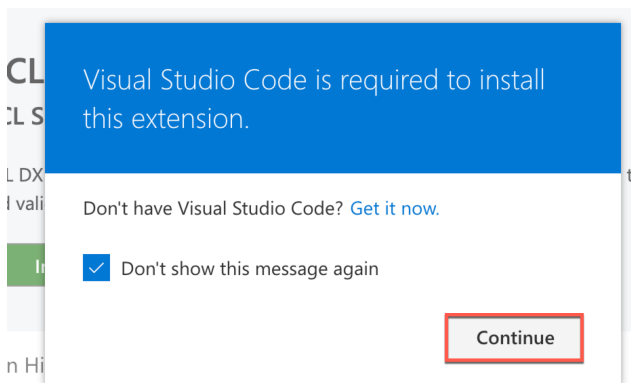
Part 3: Update the Theme Logo locally with your favorite IDE

Use your favorite Integrated Development Editor to work locally on your theme. Learn how to use Visual Studio Code with its HCL DX Extensions for Visual Studio Code to pull the theme locally, make changes to the logo, push your changes and test it on your page.

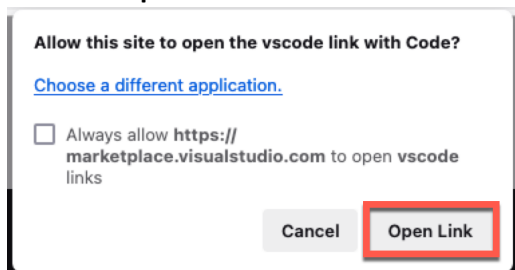
1. First create a theme parent folder where you may manage all your themes on your PC. Then get a local copy of your theme under this parent folder. There are several ways of doing this. The easiest is using the HCL DX Extension for Visual Studio Code. You may install this using <https://marketplace.visualstudio.com/items?itemName=HCLTechnologies.hcl-dx-extensions>. Click **Install**.



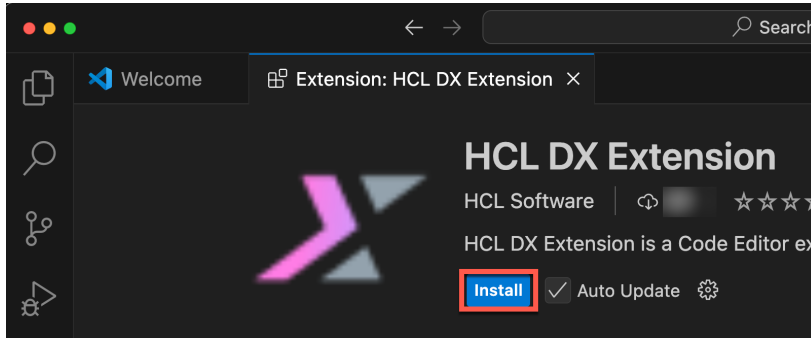
2. Then click **Continue**.



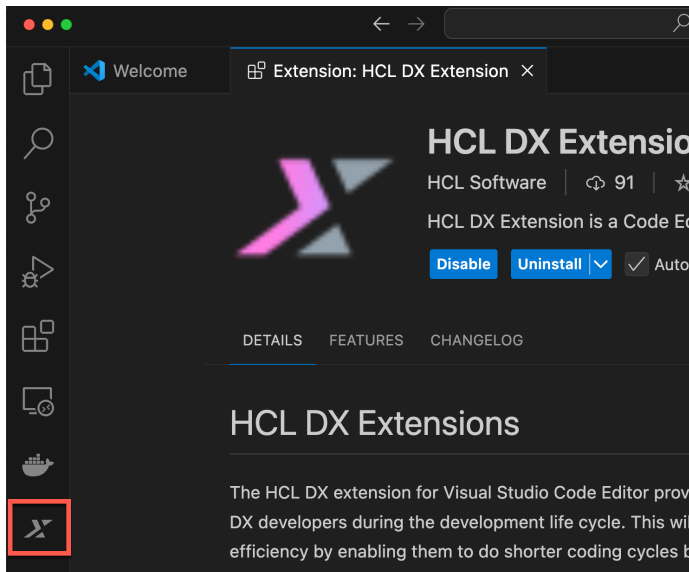
3. And click **Open Link**.



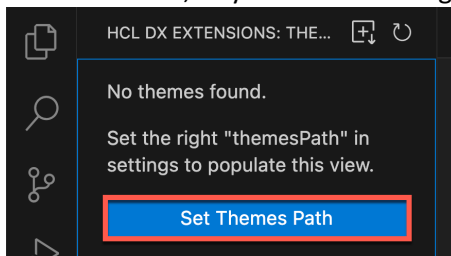
4. It should open Visual Studio Code and click **Install** again.



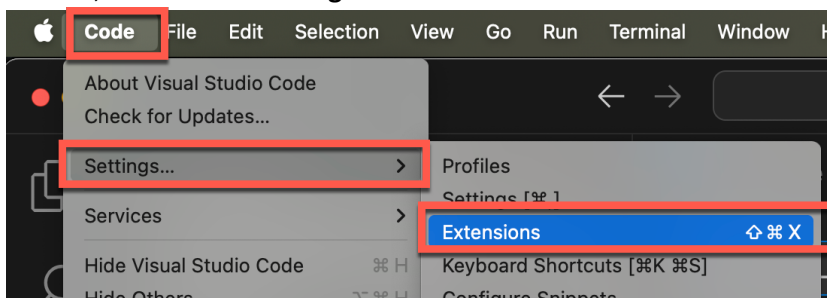
5. And click the new DX icon.



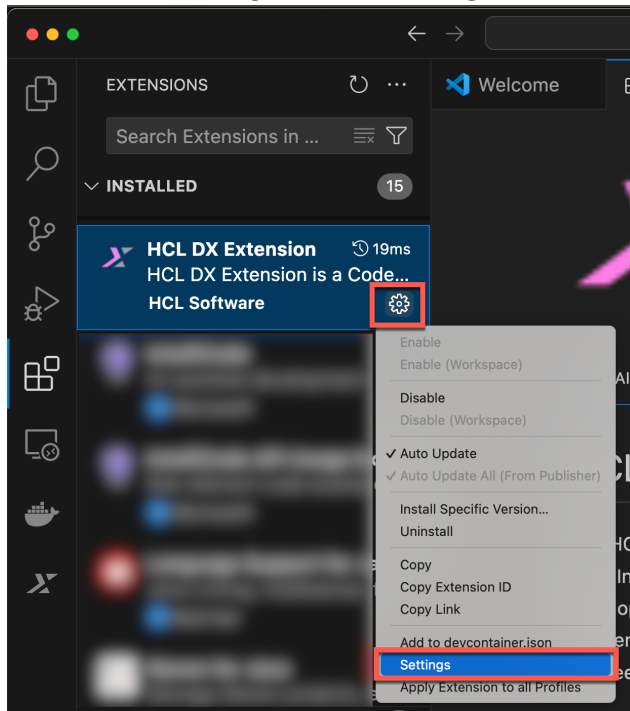
6. Now set the theme path to work on your themes locally. You could set it using **Set Themes Path**. However, as you need to configure more settings, do not use this.



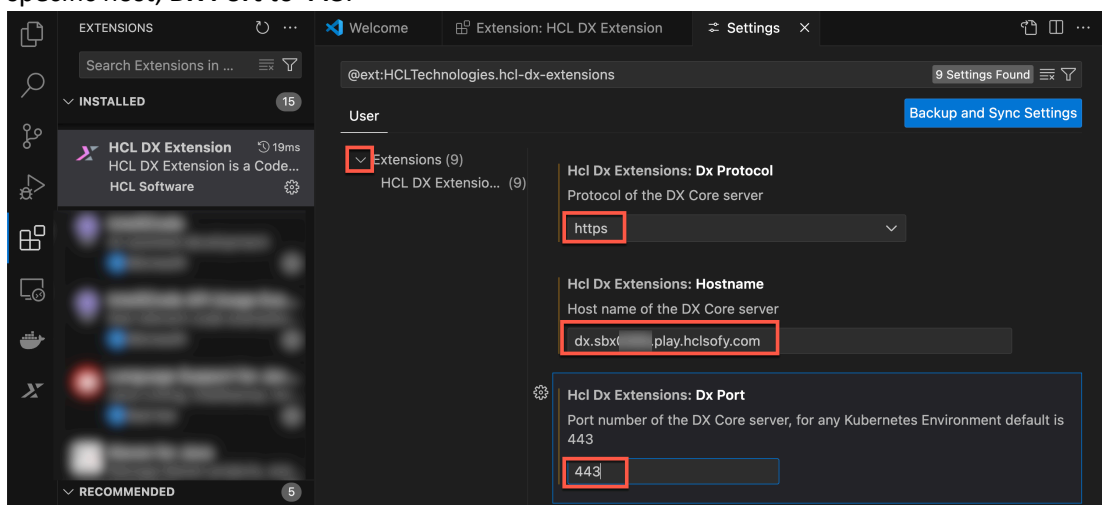
7. Instead, click **Code – Settings - Extensions**.



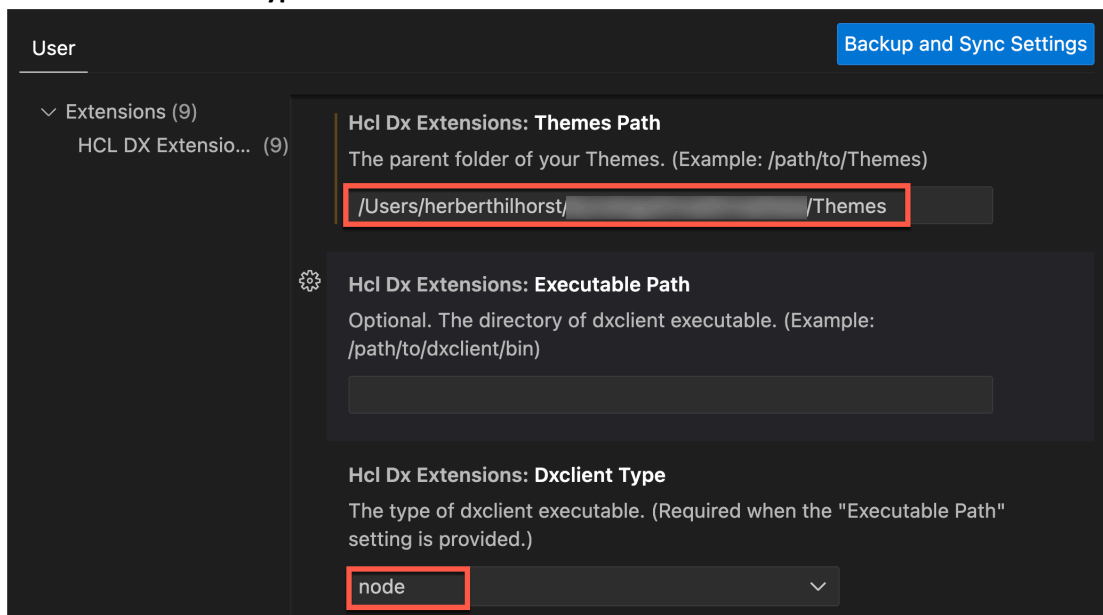
8. Then click the **Manage icon** and **Settings**.



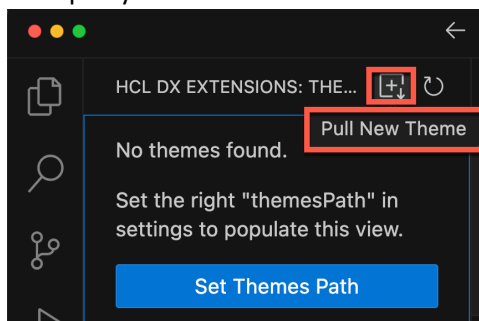
9. Update this to work with your DX server. Expand the Extensions. If you are using HCL SoFy, update the **DX Protocol** to **https**, **Hostname** to **dx.sbx0000.play.hclsofy.com** with your specific host, **DX Port** to **443**.



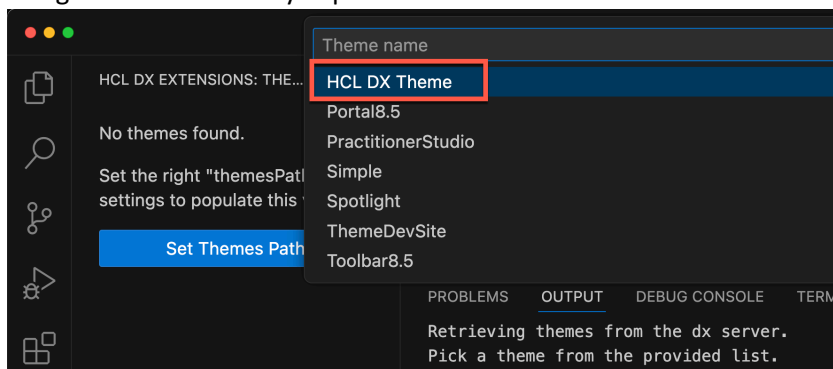
10. And here set the **Themes Path** with your local parent folder where you will manage the themes. If you have followed the DXClient installation from HDX-DEV-100, you are using the JavaScript (NodeJS) based one. In that case, you may leave the Executable path empty and ensure the **DXClient Type** is set to **node**.



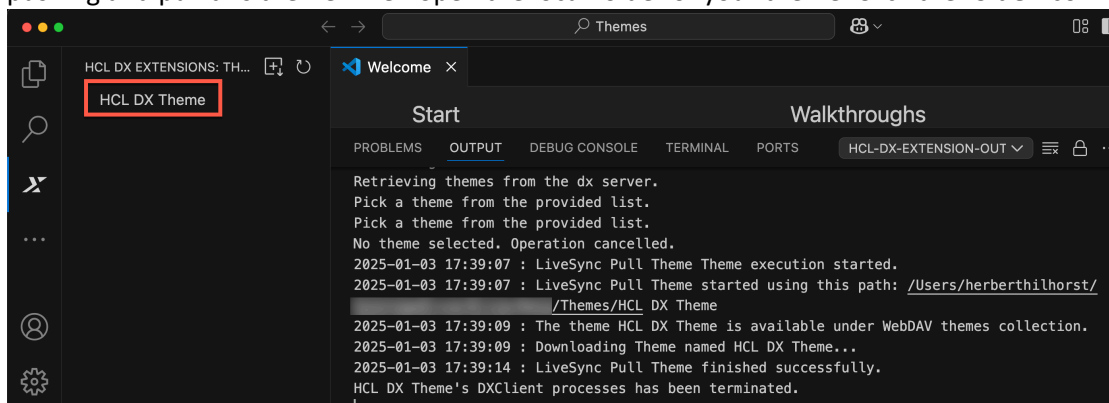
11. Now pull your HCL DX Theme from the server. Open the + and click **Pull New Theme**.



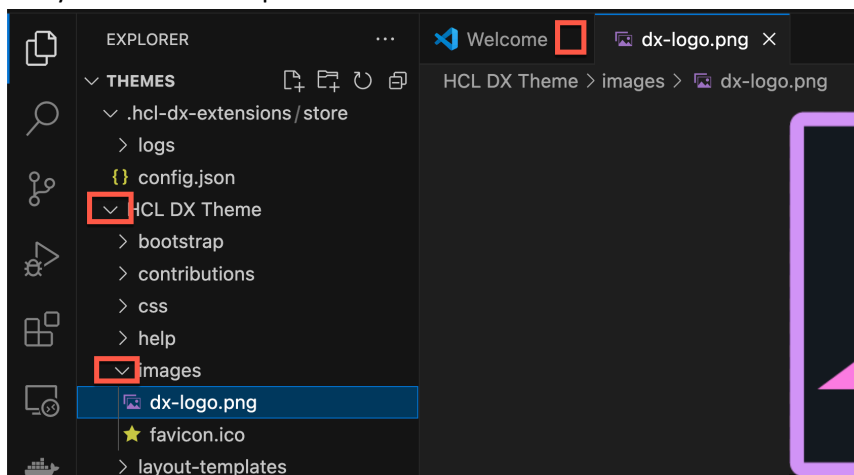
12. And select the **HCL DX Theme**. Notice that for other IDEs you may achieve this by manually using the DXClient livesync pull-theme command.



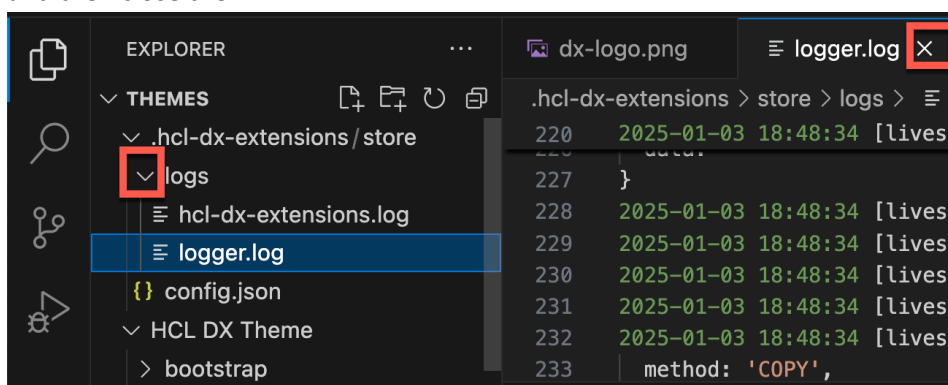
13. And your theme is added. Notice that if you hover over it, you have options to push, stop pushing and pull this theme. Then open the local folder of your theme. Click the **folder** icon.



14. Use **Open Folder** to browse your local **HCL DX Theme** folder under your parent Themes folder and expand it. Then copy the **dx-logo.jpg** from the **lab-resources/Theme Development Resources** folder into the **images** folder on your local drive as shown. You can use your Windows Explorer or Finder for that. Then close the **Welcome** page.

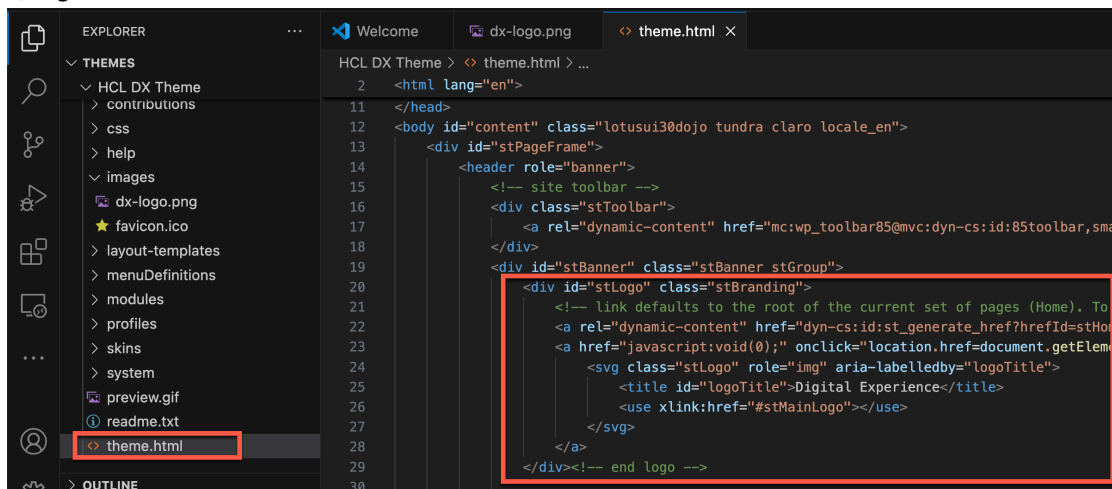


15. Notice you have access to the logs and config.json file for the DXClient. Have a look at them and then close them.



16. You will need to update the logo entry to point to the image you just added. Open the **theme.html** file and notice that the logo is currently managed with this code.

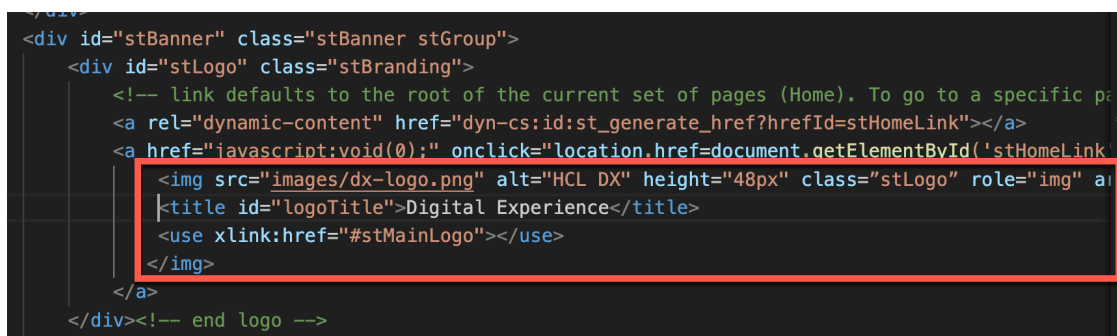
```
<svg class="stLogo" role="img" aria-labelledby="logoTitle">
  <title id="logoTitle">Digital Experience</title>
  <use xlink:href="#stMainLogo"></use>
</svg>
```



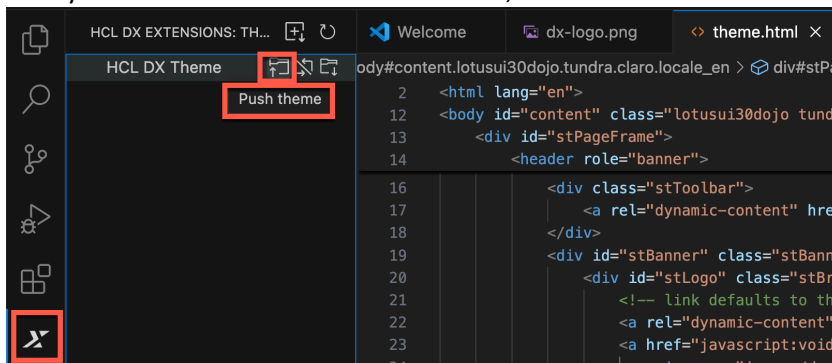
17. Replace it with the below line of code to make it point to the logo you just added with the right size and save your **theme.html** file. Make these changes and save it (**CTRL + S**).

```

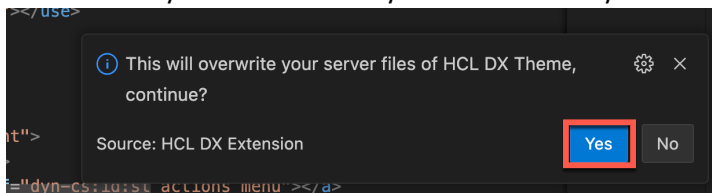
  <title id="logoTitle">Digital Experience</title>
  <use xlink:href="#stMainLogo"></use>
</img>
```



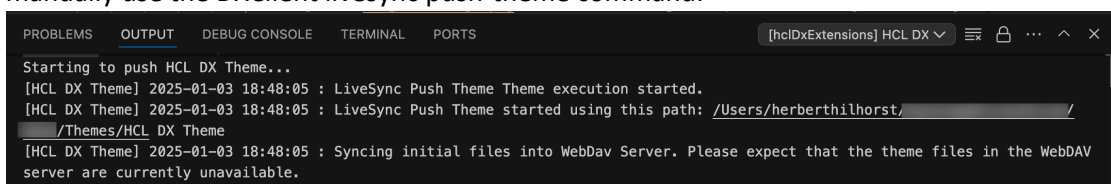
18. Now test it on your **Promotion** page. You need to push your changes using the DXClient LiveSync. Click the HCL DX Extensions icon, Push theme icon and **Push theme**.



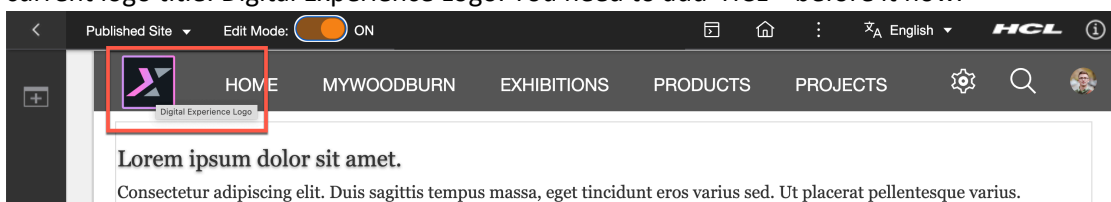
19. It warns that you will overwrite your server file of your theme. Click **Yes**.



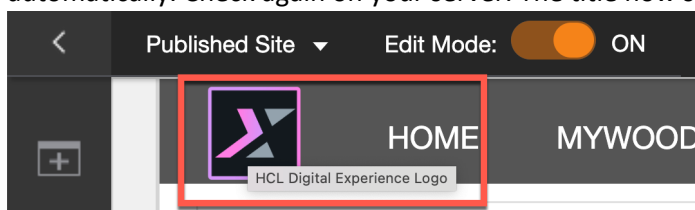
20. This kicks off the DXClient LiveSync push. It outputs it logs. With other IDEs, you may manually use the DXClient livesync push-theme command.



21. Then verify your changes. Open your **Promotion** page and view the updated logo. See the current logo title: Digital Experience Logo. You need to add 'HCL ' before it now.



22. Change the logo title to **HCL Digital Experience Logo** (add 'HCL ' before the title parameter), by updating line 23 at the end, as shown, and then notice it gets updated/pushed automatically. Check again on your server. The title now shows HCL Digital Experience Logo:



Congratulations! You have been able to work and update your theme logo locally with your Visual Studio Code and pull and push it with your DX server using the HCL DX Extension for Visual Studio Code that uses the DXClient.

Optional Part 4: Use WebDAV to Access and Download and DXClient to Deploy

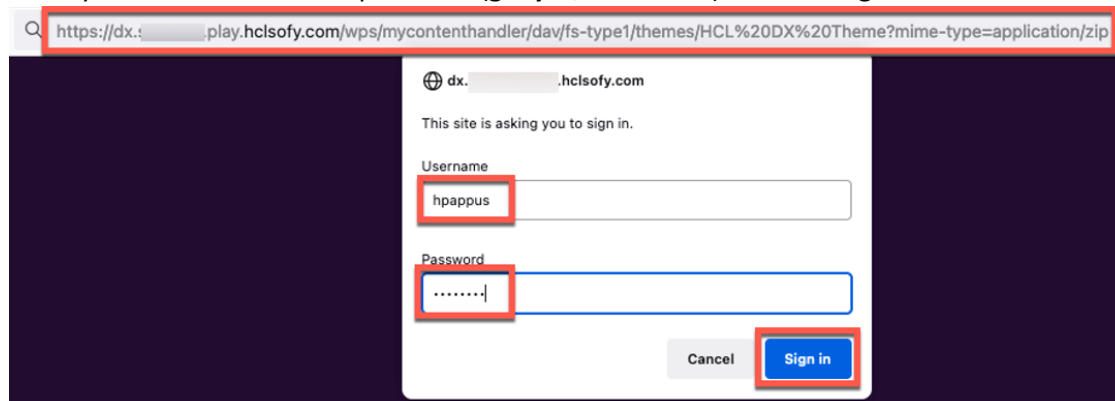
Optionally, learn how you may use other options to download the theme locally and access it directly using WebDAV, make updates with any IDE, use DXClient to deploy it to your DX server and test it on your page.

1. First use a web browser that allows you to download the theme directory as a zip file. Use this URL format:
https://<host>/wps/mycontenthandler/dav/fs-type1/themes/<theme folder name>?mime-type=application/zip

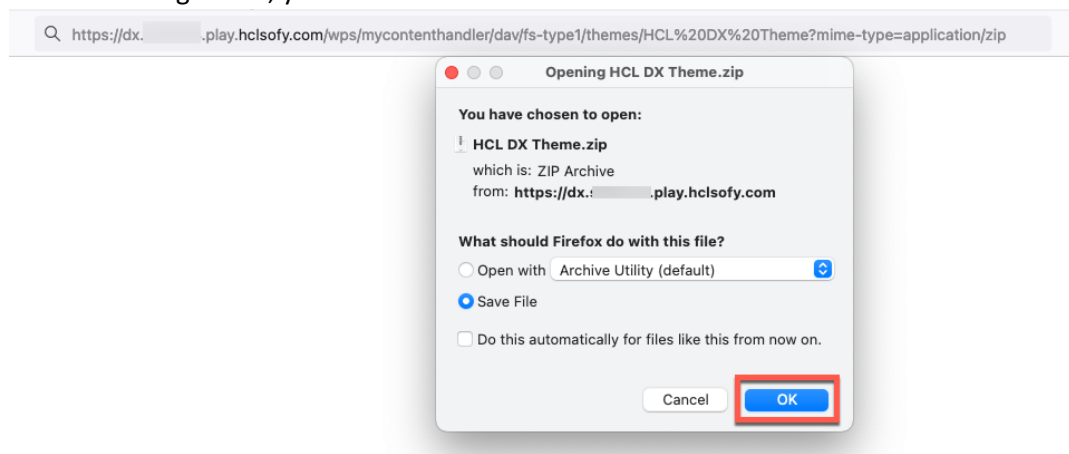
In the case of this lab running on SoFy, to download the HCL DX Theme theme you developed, this would be

https://dx.<SoFy specific>.play.hclsofy.com/wps/mycontenthandler/dav/fs-type1/themes/HCL DX Theme?mime-type=application/zip

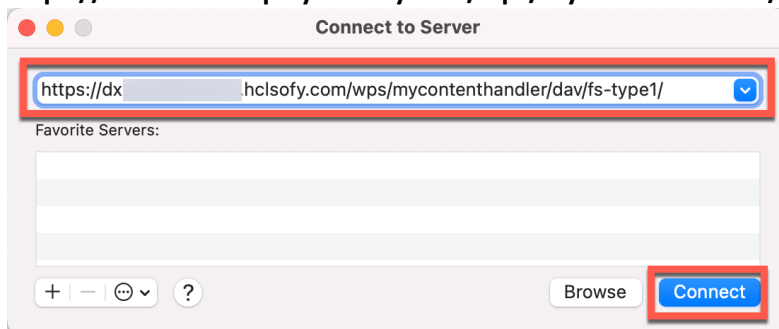
Enter your DX username and password (**ghayes/HCL-Dem0**) and click **Sign In**.



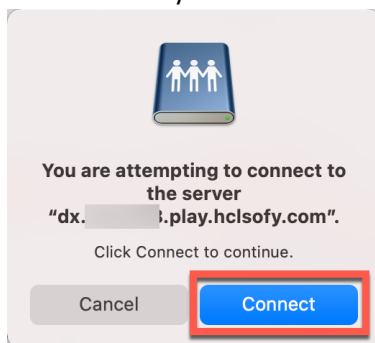
2. Then you can download the HCL DX Theme.zip file. Click **OK**, select the folder to download and unzip it (ensure it does not overwrite your theme from part 3). This will be your local theme working folder, you will use further in this lab.



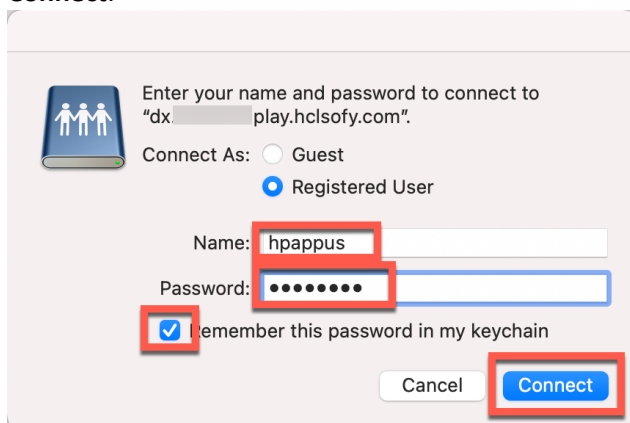
3. You may now go directly to step 9 to make updates to your theme. Another option to get a local copy of your theme is by using WebDAV. You may access your theme as a folder `https://<host>/wps/mycontenthandler/dav/fs-type/themelist/<theme_dir>`. Apply this for your theme on SoFy (or other server).
`https://dx.XXXXXXX.play.hclsofy.com/wps/mycontenthandler/dav/fs-type/themelist/<theme_dir>`. Use your favorite WebDAV client to first connect to your server (e.g. on a Mac you can use Finder Connect to Server under the Go menu). Enter the FileStore (fs-type) URL
`https://dx.XXXXXXX.play.hclsofy.com/wps/mycontenthandler/dav/fs-type1/`.



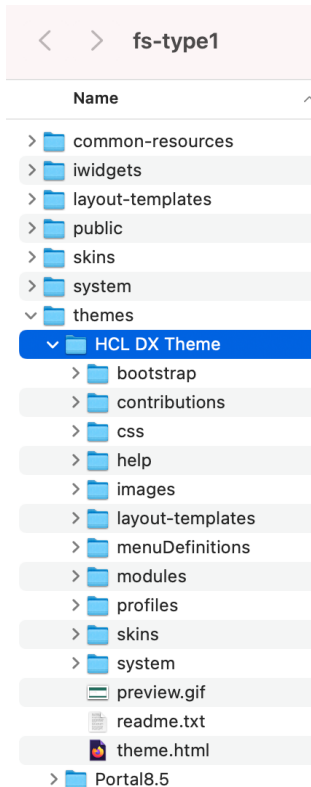
4. Then confirm you wish to connect. Click **Connect**.



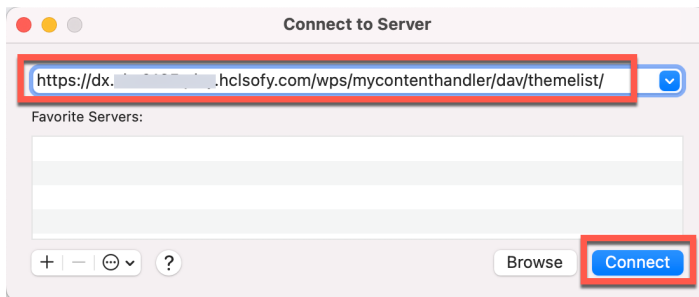
5. Provide your name and password (hpappus/HCL-Dem0), optional remember this and click **Connect**.



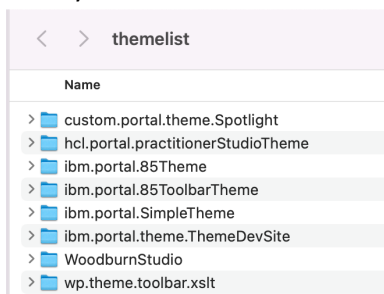
6. And then you should see all the available resources. Open the themes folder and you should see your theme you just created. You may open it here to directly work on it or create a copy of this folder and work on that copy. Again, this will be your working theme folder.



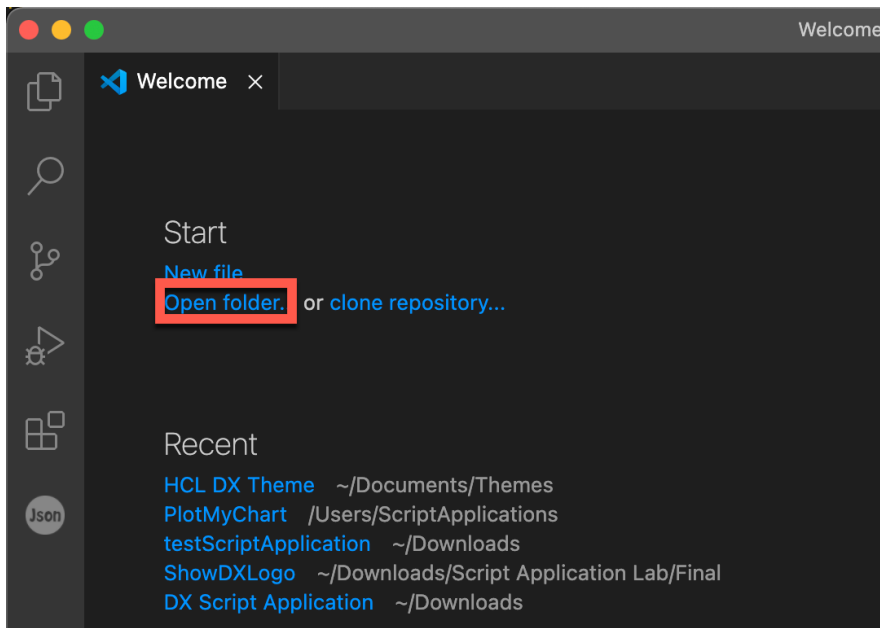
7. Alternatively, you connect with the themelist URL (here shown):
<https://dx.XXXXXXX.play.hclsofy.com/wps/mycontenthandler/dav/themelist/> and click **Connect**.



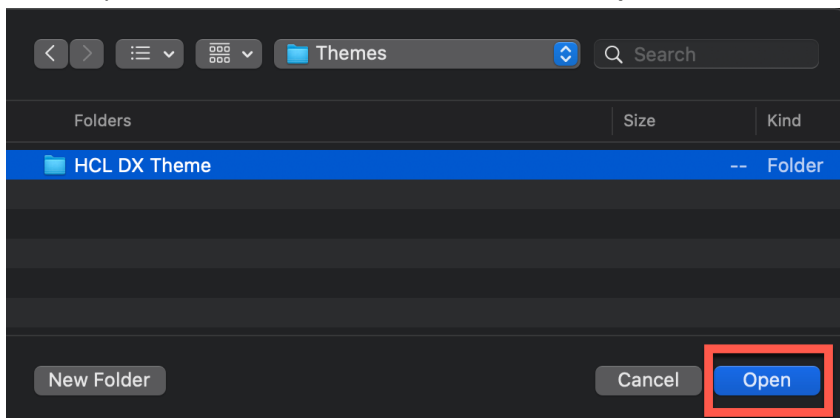
8. Then you will see this.



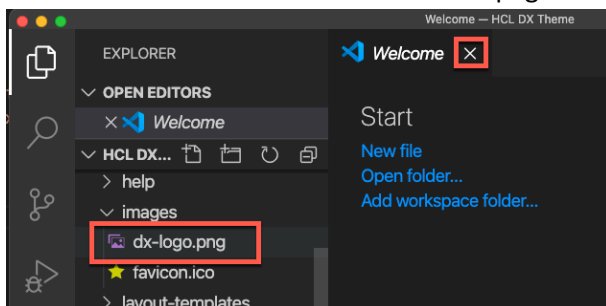
9. Now update your theme on your local system to add a new logo image. Open your favorite code editor (here shown with Visual Studio Code editor) and on the welcome page click on **Open folder**.



10. Browse your local **HCL DX Theme** folder and click **Open**.

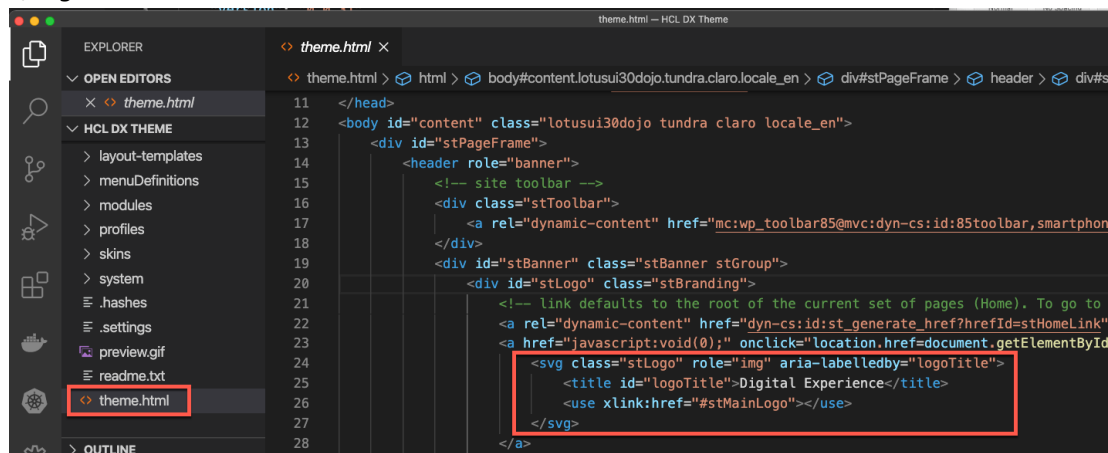


11. First copy the **dx-logo.jpg** from the **lab-resources/Theme Development Resources** folder into the **images** folder on your local drive as shown. You can use your Windows Explorer or Finder for that. Then close the **Welcome** page.



12. You will need to update the logo entry to point to the image you just added. Open the **theme.html** file and notice that the logo is currently managed with this code.

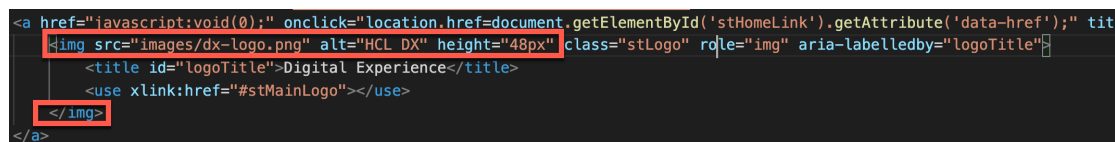
```
<svg class="stLogo" role="img" aria-labelledby="logoTitle">
  <title id="logoTitle">Digital Experience</title>
  <use xlink:href="#stMainLogo"></use>
</svg>
```



13. Replace it with the below line of code to make it point to the logo you just added and save your **theme.html** file. Make these changes and save it (**CTRL + S**).

```

  <title id="logoTitle">Digital Experience</title>
  <use xlink:href="#stMainLogo"></use>
</img>
```



14. Now test it on your **Promotion** page. You need to deploy the theme using the DXClient. This tool may be configured to work in a development pipeline.

Note that if you are directly working on your server folder using WebDAV, there is no need to deploy. Using WebDAV, you also copy your changes back to the WebDAV folder of your server.

To use the DXClient, ensure you have installed it. Then test it with the help option

dxclient deploy-theme -h

```

Hilhorst-MacBook-Pro:dxclient hilhorst2$ dxclient deploy-theme -h
Usage: dxclient deploy-theme [options]

- deploys the theme to the remote server

Options:
  -dxProtocol, --dxProtocol <value>          Protocol of the DX server (default: "https")
  -hostname, --hostname <value>              Host name of the DX server (default:
                                              "dx.sbx0118.play.hclsofy.com")
  -dxPort, --dxPort <value>                  Port number of the DX server, for any Kubernetes Environment
                                              default port is 443 (default: "443")
  -xmlConfigPath, --xmlConfigPath <value>    Path to DX configuration endpoint (default: "/wps/config")
  -dxUsername, --dxUsername <value>          Username of the DX server (default: "wpsadmin")
  -dxPassword, --dxPassword <value>          Password of the DX server (default: "wpsadmin")
  -contenthandlerPath, --contenthandlerPath <value> Alternate path for the portal context root or the content
                                              handler servlet (default: "/wps/mycontenthandler")
  -dxSoapPort, --dxSoapPort <value>          Soap Port number of the DX server (default: "10033")
  -dxProfileName, --dxProfileName <value>     Profile name of the DX server (default: "wp_profile")
  -dxProfilePath, --dxProfilePath <value>     Profile path of the DX server (default:
                                              "/opt/HCL/wp_profile")
  -dxConnectHostname, --dxConnectHostname <value> Host name of the config wizard home (route change only in case
                                              of Open Shift Kubernetes Environment). For any other case,
                                              this parameter should be same as hostname (default:
                                              "dx.sbx0118.play.hclsofy.com")
  -dxConnectUsername, --dxConnectUsername <value> Username for the cw_profile (default: "wpsadmin")
  -dxConnectPassword, --dxConnectPassword <value> Password for the cw_profile (default: "wpsadmin")
  -dxConnectPort, --dxConnectPort <value>      Port number of the cw_profile, for any Kubernetes Environment
                                              default port is 443 (default: "443")
  -xmlFile, --xmlFile <value>                Input xml file name with full path
  -applicationFile, --applicationFile <value> Application file name with full path
  -applicationName, --applicationName <value> Application name
  -themeName, --themeName <value>            Theme Collection name
  -themePath, --themePath <value>            Theme Path with zip or folder name
  -h, --help                                  display help for command

Hilhorst-MacBook-Pro:dxclient hilhorst2$

```

15. If you have set up the connection parameters in the config.json, you only need to set the specific themeName and themePath parameters. Then run in your terminal or command window:

dxclient deploy-theme -themeName <your theme's name> -themePath <your theme's folder>

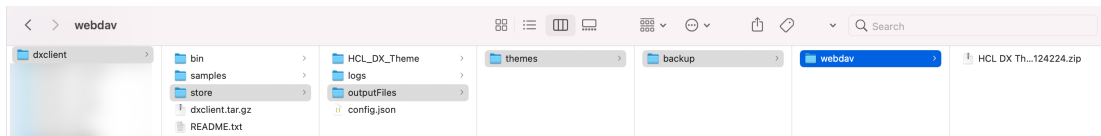
E.g. dxclient deploy-theme -themeName "HCL DX Theme" -themePath /Users/herberthilhorst/Data/Themes/HCL-DX_Theme

```

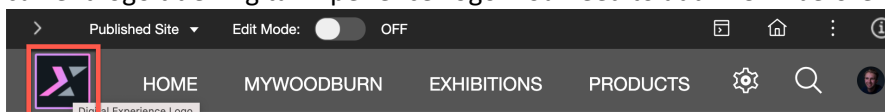
Hilhorst-MacBook-Pro:dxclient hilhorst2$ dxclient deploy-theme -themeName "HCL DX Theme" -themePath /Users/herberthilhorst/Data/Themes/HCL-DX_Theme
2021-12-13 12:42:22 : Start to deploy theme in WebDav.
(node:1) Warning: Setting the NODE_TLS_REJECT_UNAUTHORIZED environment variable to '0' makes TLS connections and HT
TPS requests insecure by disabling certificate verification.
(Use 'node --trace-warnings ...' to show where the warning was created)
2021-12-13 12:42:23 : The theme HCL DX Theme is available under WebDAV themes collection.
2021-12-13 12:42:26 : WebDAV theme back up has been taken and placed in : store/outputFiles/themes/backup/webdav/HCL
DX Theme-20211213124224.zip.
2021-12-13 12:42:34 : Files uploaded successfully to HCL DX Theme under WebDAV themes collection.
2021-12-13 12:42:34 : Deploy theme execution successful.
2021-12-13 12:42:34 :
Theme WebDAV deployment successful.
Hilhorst-MacBook-Pro:dxclient hilhorst2$

```

16. Notice it updates the logs/logger.log and creates a backup of your theme directory under store and as a zip with the date and time of deployment under outputFiles/themes/backup/webdav in the format <theme name>-<date><time>.zip. For example: HCL DX Theme-20211213124224.zip. You may find more details in https://help.hcl-software.com/digital-experience/9.5/latest/extend_dx/development_tools/dxclient/dxclient_artifact_types/themes/.



17. Then verify your changes. Open your **Promotion** page and view the updated logo. See the current logo title: Digital Experience Logo. You need to add 'HCL ' before it now.

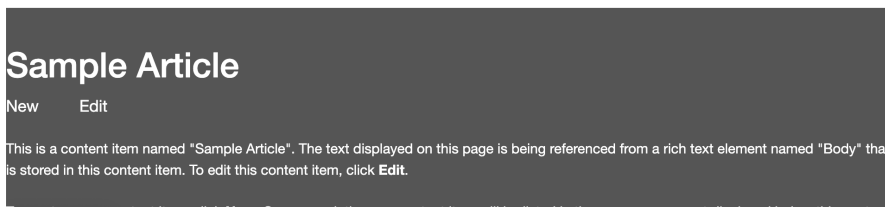


Lorem ipsum dolor sit amet.

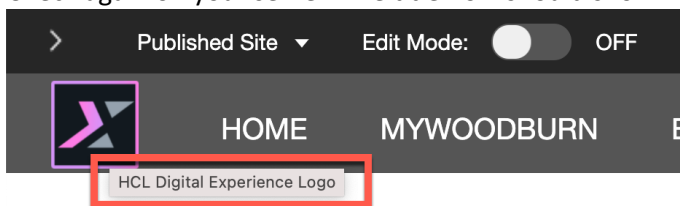
Consectetur adipiscing elit. Duis sagittis tempus massa, eget tincidunt eros varius sed. Ut placerat pellentesque varius.

Cras nibh massa, blandit rutrum luctus bibendum, rutrum vitae risus. Duis porta risus et felis tristique at pharetra elit malesuada. Integer ultricies fringilla odio, sed consequat ligula tristique eu.

Nulla lacinia posuere tortor. Proin accumsan diam et lectus bibendum vel rutrum eros dapibus. Donec et leo tortor. Praesent fermentum, ligula sit amet ultricies semper, leo enim faucibus metus, non ornare magna mauris non magna. Sed feugiat eleifend leo, sed pretium libero egestas ut.



18. Change the logo title to **HCL Digital Experience Logo** (add 'HCL ' before), by updating line 23 at the end, as shown, and then deploy it again with the **dxclient**, like you did in step 15. Check again on your server. The title now should show HCL Digital Experience Logo:



Lorem ipsum dolor sit amet.

You have successfully learned how to download an existing theme, how to access it using WebDAV and use DXClient to deploy it to your DX server.

Conclusion

Using this lab tutorial, you created a new theme on the DX server, based on a Bootstrap based Simple theme template. You have created a new Promotion test page that you configured to run with your new theme and that allows you to easily see any updates. Then you used the Theme Editor to look at several aspects of them, like the CSS and layout templates, and make an update to the footer to use a Web Content item. Then you learned how to work locally using your preferred code editor and use DXClient to pull and push your theme changes, as well as using the dedicated HCL DX Extensions for Visual Studio Code. And you learned how to download, access your theme using WebDAV and deploy a theme to your server using DXClient.

Resources

Refer to the following resources to learn more:

HCL Digital Experience Home - <https://hclsw.co/dx>

HCL Digital Experience on HCL Solutions Factory (SoFy) - <https://hclsofy.com/>

HCL Software - <https://hclsw.co/software>

HCL Product Support - <https://hclsw.co/product-support>

HCL DX Product Documentation - <https://hclsw.co/dx-product-documentation>

HCL DX Support Q&A Forum - <https://hclsw.co/dx-support-forum>

HCL DX Video Playlist on YouTube - <https://hclsw.co/dx-video-playlist>

HCL DX Product Ideas - <https://hclsw.co/dx-ideas>

HCL DX Product Demos - <https://hclsw.co/dx-product-demo>

HCL DX Did You Know? Videos - <https://hclsw.co/dx-dyk-videos>

HCL DX GitHub - <https://hclsw.co/dx-github>

HCL DX Extensions for Visual Studio Code - <https://hclsw.co/dx-extension-vsc>

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