

# HDX-ADM-200

## Web Application Bridge Lab

HCLSoftware U

Creating a new generation of experts

Edition September 2024

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**Company:**  
**HCLSoftware**

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## Introduction

In this lab, you will discover how to use Web Application Bridge for HCL Digital Experience to easily integrate external web applications into DX. The Web Application Bridge (or WAB) is a DX feature that uses reverse proxy technology to integrate web applications natively in your DX sites. This allows you to use DX as the single point entry to all your applications easily.

In this DX administrator lab, you play the role of Harry, an administrator for the fictitious Woodburn Studio company.



**Harry Pappus, Administrator, based in Chicago (USA)**

As a DX Administrator, you will experience how you may use the Web Application Bridge to integrate an external web application, the DX Help Center, easily into DX



## Prerequisites

1. Completion of [HDX-INTRO](#) and [HDX-BU-100](#) courses, as well as the previous lessons under [HDX-ADM-100](#) course, including the labs
2. Have a running DX instance on CF219 or newer. The lab is using the DX Solution Modules in HCL SoFy (<https://hclsofy.com/catalog/dx-solution-modules>).
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 it by your own ones.

You will be using the following user IDs and passwords:

Purpose	User	Password
SoFy Login	Your official email id	Your password
SoFy Solution Console Login	sol-admin	<from SoFy solution>
DX Login	hpappus (or wpsadmin)	HCL-Dem0 (or wpsadmin)
Integrated Solution Console Login	wpsadmin	wpsadmin

## Lab Overview

In this lab, you will discover how to use Web Application Bridge for HCL Digital Experience to integrate the external web application HCL Digital Experience Help Center, <https://opensource.hcltechsw.com/digital-experience/latest/>, into a DX page.

In this lab, there are several parts. These are shortly introduced now.

### Part 1: Configure the Web Application Bridge with DX Help Center

First, you will configure the Web Application Bridge with the HCL Digital Experience Help Center. You will create a content provider profile with a default policy.

**Virtual Web Application Manager**  
Integrate web-based content from different providers, such as Microsoft SharePoint, into your portal site. The applications are rendered through the Web Dock Portlet using an iframe.

Content provider profiles store information that is needed to connect to the host. Policies store more information about what can and cannot be accessed from the host site. You can have multiple policies for each profile.  
[Learn More...](#)

---

**Content Provider Profiles**

Web Dock Applications

- **Content Provider Profiles**

✔ Success: Policy is created for profile ✕

Create Content Provider Profile

Sort by: [Title](#) ↕ | ▾

---

1 - 1 of 1 Previous | Next

**HCL DX Help Center** | default | HCL DX Help Center Policy

<https://opensource.hcltechsw.com>  
 Created By: Harry Pappus | Created On: 7/4/2024, 5:32:28 PM | Modified On: 7/4/2024, 5:32:28 PM | ProxyType: None  
 HCL Digital Experience Help Center  
[Add Policy](#) | [Deactivate](#) | [Edit](#) | [Delete](#)

Show: [2](#) | [all](#) of the items Jump to page  of 1 Previous | Next

And your HCL DX Help Center Web Dock application.

**Web Dock Applications**

Web Dock Applications

- **Web Dock Applications**
- Content Provider Profiles

Create Web Dock Application

Sort by: [Title](#) ↕ | ▾

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1 - 1 of 1 Previous | Next

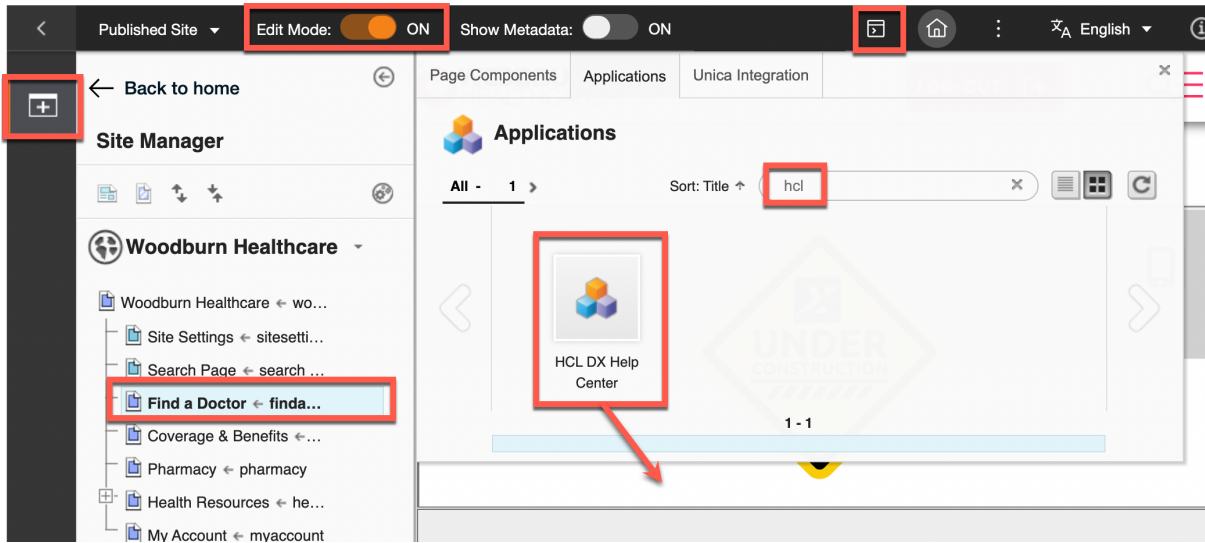
**HCL DX Help Center** | Display | Client-side IPC | Server-side IPC | Plugins

<https://opensource.hcltechsw.com/digital-experience/latest>  
 Created By: Harry Pappus | Created On: 7/4/2024, 5:47:36 PM | Modified On: 7/4/2024, 5:47:36 PM  
 HCL Digital Experience Help Center Web Dock Application  
[Edit](#) | [Delete](#)

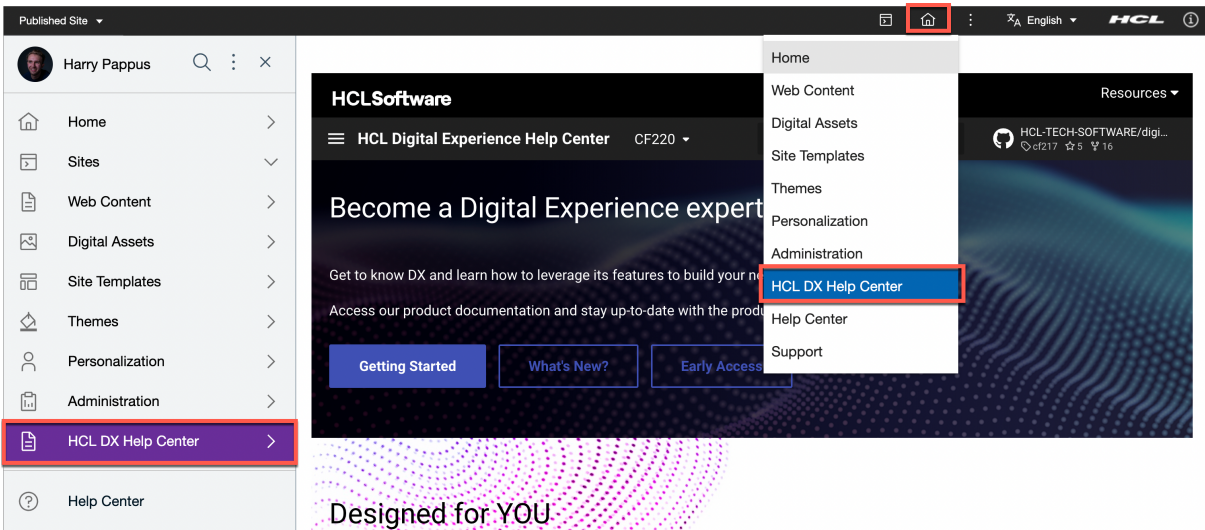
Show: [2](#) | [all](#) of the items Jump to page  of 1

## Part 2: Add the DX Help Center Web Dock Application Portlet to your Site

Then, you will add the HCL Digital Experience Help Center Web Dock Application Portlet to a DX page using the Site Manager

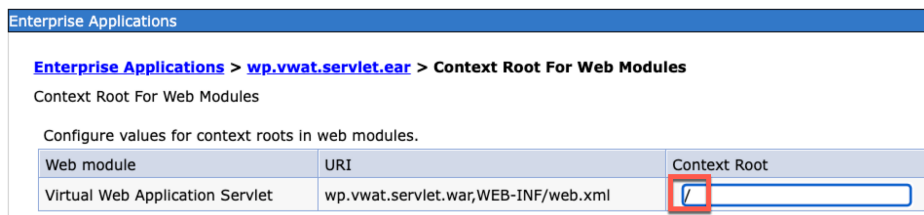


and using Manage Pages under the Practitioner Studio, and test it.



## Optional Part 3: Update the Web Application Bridge Servlet Context Root

Optionally, you may learn how to enable the Web Application Bridge to work as a proxy with a portal context root, the context root of the wp.vwat.servlet.ear application needs to be updated to /.



### Optional Part 4: Import DX Help Center SSL Certificate

To integrate a protected site, using https, into DX, you need to import its SSL certificate.

[SSL certificate and key management](#) > [Key stores and certificates](#) > [NodeDefaultTrustStore](#) > [Signer certificates](#)

Manages signer certificates in key stores.

Preferences

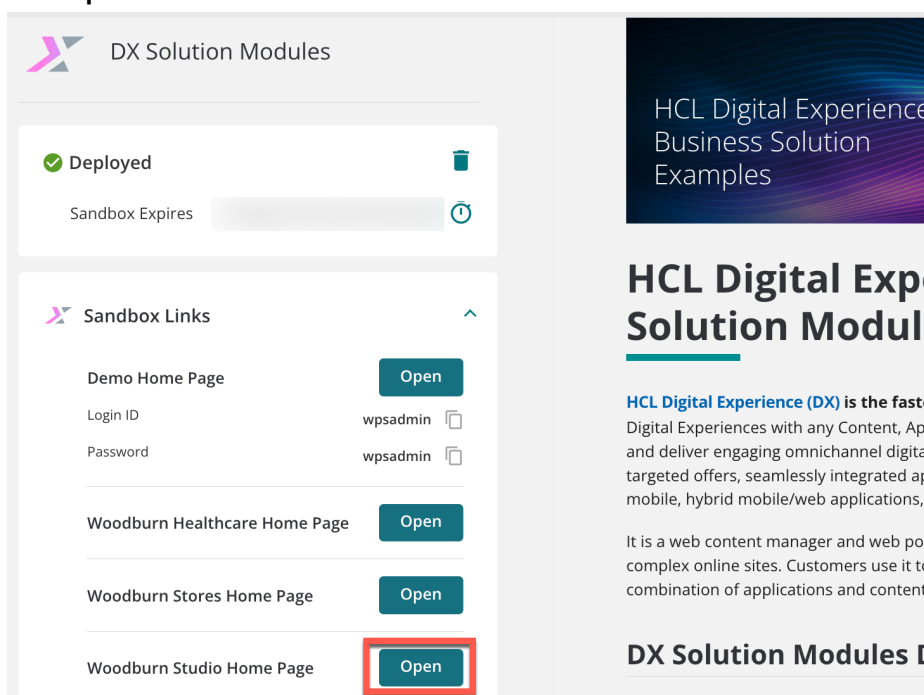
Select	Alias	Issued to	Fingerprint (SHA Digest)	Expiration
<input type="checkbox"/>	<a href="#">cvz</a>			
<input type="checkbox"/>	<a href="#">hd</a>	CN=ISRG Root X1, O=Internet Security Research Group, C=US	93:3C:6D:DE:E9:5C:9C:41:A4:0F:9F:50:49:3D:82:BE:03:AD:87:BF	Valid from Jan 20, 2021 to Sep 30, 2024.
<input type="checkbox"/>	<a href="#">maps.googleapis.com</a>			
<input type="checkbox"/>	<a href="#">root</a>			
<input type="checkbox"/>	<a href="#">root_1</a>			
<input type="checkbox"/>	<a href="#">root_2</a>			


Total 6

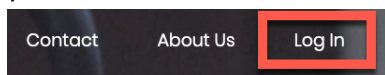
## Part 1: Configure the Web Application Bridge with DX Help Center

First, you will configure the Web Application Bridge with the HCL Digital Experience Help Center. You will create a content provider profile with a default policy. You need to have enabled your Web Application Bridge, as explained in optional part 3, and if your site is protected, using https, you should ensure you have imported the SSL certificate, as explained in optional part 4. In DX Solution Modules, this has already been done for you.

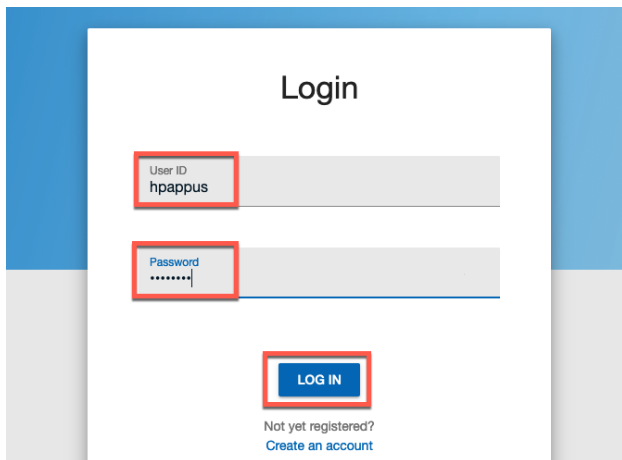
1. First connect to your server, e.g. to the home page of Woodburn Studio first. On the server where the DX Solution Modules has been installed, next to **Woodburn Studio Home Page**, click **Open**.



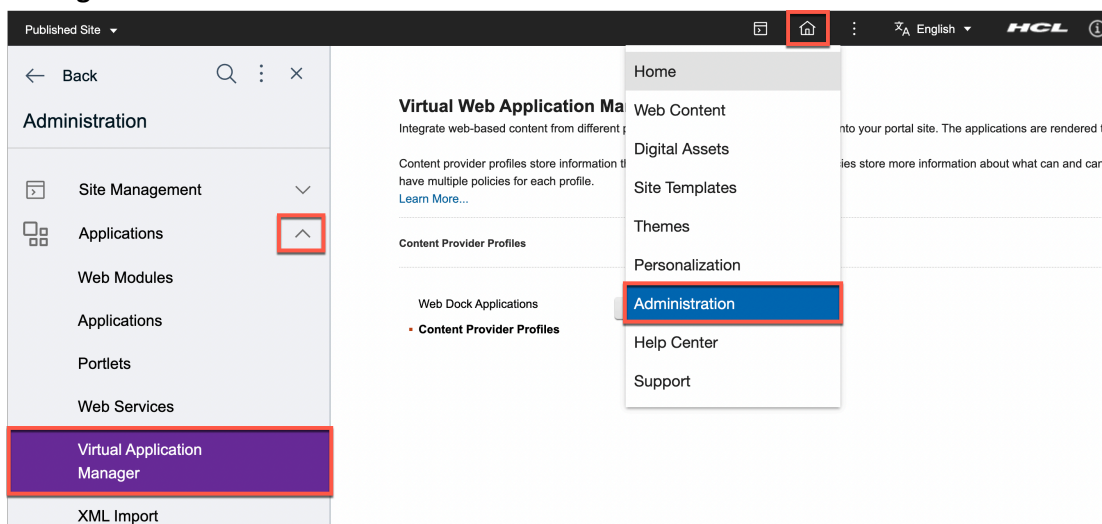
2. Now login as an administrator, Harry. Click on **Log In**. You may use **CRTL +** and **CRTL -** to zoom in and out. You may need to zoom out to see the navigation on the top. Otherwise, you'll find it under  on the top right.



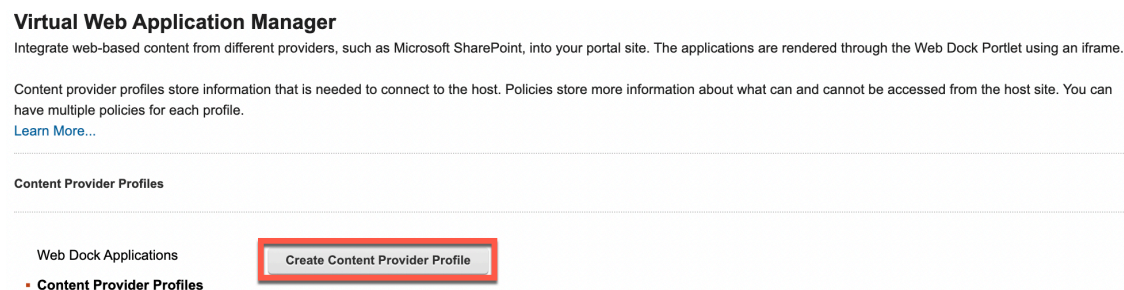
- Use the credentials of Harry (User ID: **hpappus**, Password: **HCL-Dem0** – if you do not have these, you may use the default administrator account with User ID: **wpsadmin**, Password: **wpsadmin**).



- Then go to the Web Application Bridge configuration. This is called the Virtual Application Manager. Open the **applications menu** and click **Administration – Virtual Application Manager**.



- And create the content provider profile for the DX Help Center. Click **Create Content Provider Profile**.



- And configure it for the HCL Digital Experience Help Center. Give it a **unique profile** title, like **HCL DX Help Center** and optionally set the localization, set the **host name** to **https://opensource.hcltechsw.com**, provide a **description**, like **HCL Digital Experience Help Center**, keep the option to create a default policy, keep None with Profile Proxy and click **Save**.

\*Profile Host Profile Proxy

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Enter information about the host that is required to connect to the content provider. [Learn More...](#)

\* Unique profile title:

[Localization](#)

\* Host name or IP address:  
 Example: http://www.test.com

Description:

Create default policy

\* Required

---

- Then configure a simple policy. Click **Add Policy**.

Web Dock Applications

- Content Provider Profiles

Success: Content provider profile is created

Sort by: [Title](#) ↑

1 - 1 of 1 1 Previous | Next

<p><b>HCL DX Help Center</b>   default</p> <p><b>https://opensource.hcltechsw.com</b></p> <p>Created By: Harry Pappus   Created On: 7/4/2024, 5:32:28 PM   Modified On: 7/4/2024, 5:32:28 PM   ProxyType: None</p> <p>HCL Digital Experience Help Center</p> <p><input type="button" value="Add Policy"/> <input type="button" value="Deactivate"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/></p>
---

Show: 2 | all of the items Jump to page 1 of 1 Previous | Next



- A policy controls what site visitors can access. You can allow or block content based on URL patterns. Check out all options you may configure for this policy, like **Connection**, **Request**, **Response** and **Single Sign-On**. You may use the **Learn More...** to learn more on these option. Then give it a **unique policy title**, like **HCL DX Help Center Policy**, a description, like **Policy to integrate the HCL Digital Experience Help Center** and click **Save**.

\*General **Connection** Request Response Single Sign-On

A policy controls what site visitors can access. You can allow or block content based on URL pattern [. Learn More...](#)

\* Unique policy title:

URL pattern:  
 URL pattern can be a java regular expression.  
 Add multiple URL patterns as comma-separated list.  
 Example: /[a-zA-Z]\*, /test1

Allow all, except:  
 [Add](#)

Block all, except:

Description:

\* Required

**Save** Cancel

- You see it is now configured with your new policy. Then configure the Web Dock Application for this web application. Click **Web Dock Applications**.

**Virtual Web Application Manager**

Integrate web-based content from different providers, such as Microsoft SharePoint, into your portal site. The applications are rendered through the Web Dock Portlet using an iframe.

Content provider profiles store information that is needed to connect to the host. Policies store more information about what can and cannot be accessed from the host site. You can have multiple policies for each profile.  
[Learn More...](#)

Content Provider Profiles

**Web Dock Applications**

- Content Provider Profiles

Success: Policy is created for profile

Create Content Provider Profile

Sort by: Title

1 - 1 of 1 1 Previous Next

<b>HCL DX Help Center</b>	default	HCL DX Help Center Policy
https://opensource.hcltechsw.com Created By: Harry Pappus   Created On: 7/4/2024, 5:32:28 PM   Modified On: 7/4/2024, 5:32:28 PM   ProxyType: None HCL Digital Experience Help Center <a href="#">Add Policy</a>   <a href="#">Deactivate</a>   <a href="#">Edit</a>   <a href="#">Delete</a>		

Show: 2 all of the items Jump to page 1 of 1 Previous Next



10. And create your web dock application. Click **Create Web Dock Application**.

**Virtual Web Application Manager**

Integrate web-based content from different providers, such as Microsoft SharePoint, into your portal site. The applications are rendered through the Web Dock Portlet using an iframe.

Web dock applications render content from the provider on a web page. Content authors add web dock applications to pages from the site toolbar. You can configure how the content renders on the page. Content authors can also modify the display configuration after they add the application to the page.

[Learn More...](#)

Web Dock Applications

Web Dock Applications  
Content Provider Profiles

Create Web Dock Application

11. Enter the details of your HCL DX Help Center web application. As a reminder, the full URL of your DX Help Center is: <https://opensource.hcltechsw.com/digital-experience/latest/>. Use **HCL DX Help Center** for the **unique web dock application title**, select the **HCL DX Help Center content provider profile** you just created, add **/digital-experience/latest** as the **Resource path**, and give it a **description**, like **HCL Digital Experience Help Center Web Dock Application** and click **Save**.

Web Dock Applications  
Content Provider Profiles

Basic

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**Web Dock Application**  
Provide a meaningful title for content authors to select in the site toolbar. Then, configure the content resource to display in the web dock application. [Learn More...](#)

\* Unique web dock application title:

[Localization](#)

\* Content provider profile:

\* Resource path:  
 Example: /us/en/home.aspx

Content provider resource:  
<https://opensource.hcltechsw.com/digital-experience/latest>

Description:

\* Required

---

12. Your new Web Dock Application is now created and ready to be used in your sites.

Web Dock Applications

Web Dock Applications

Content Provider Profiles

Create Web Dock Application

Sort by: Title ↑

1 - 1 of 1

<a href="#">HCL DX Help Center</a>	Display	Client-side IPC	Server-side IPC	Plugins
<a href="https://opensource.hcltechsw.com/digital-experience/latest">https://opensource.hcltechsw.com/digital-experience/latest</a> Created By: Harry Pappus   Created On:7/4/2024, 5:47:36 PM   Modified On:7/4/2024, 5:47:36 PM HCL Digital Experience Help Center Web Dock Application <a href="#">Edit</a>   <a href="#">Delete</a>				

Show: 2 | all of the items

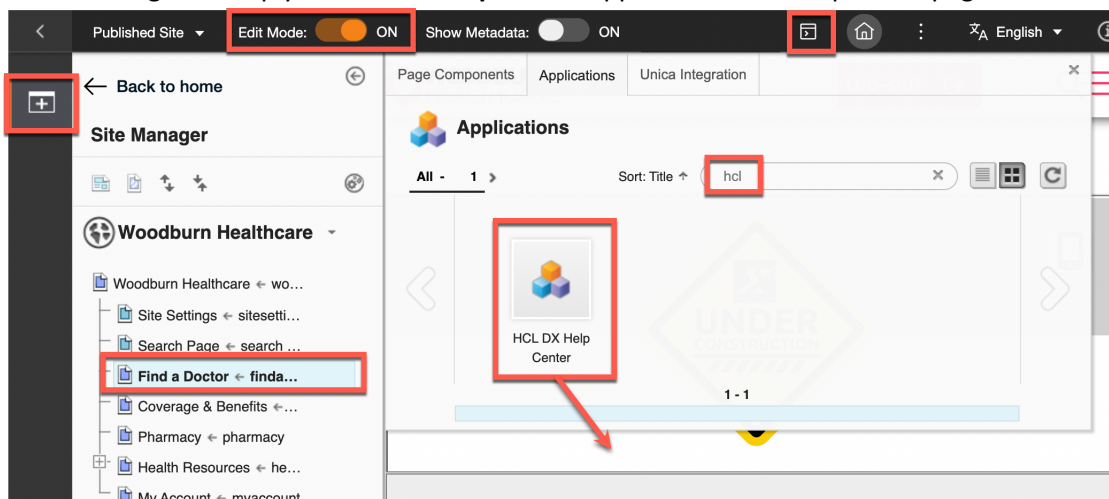
Jump to page  of 1

Congratulations! You successfully configured the Web Application Bridge with your DX Help Center web application.

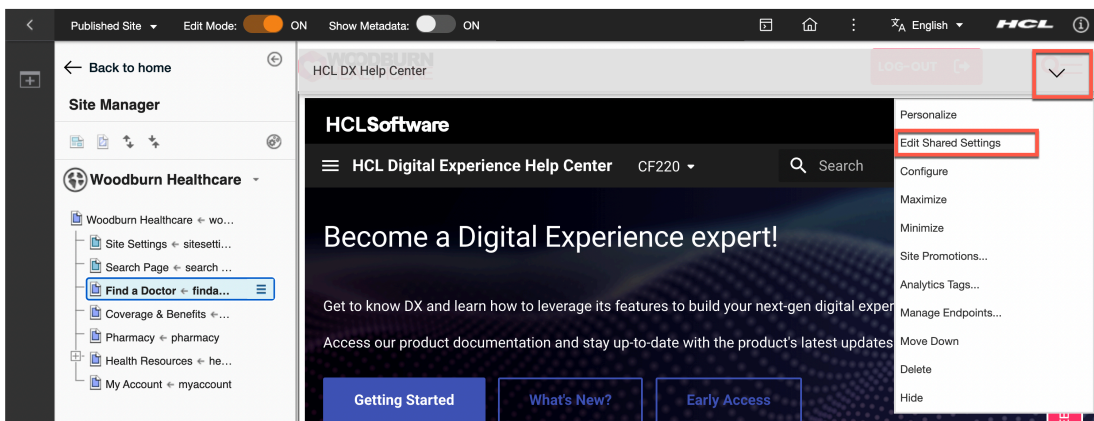
## Part 2: Add the DX Help Center Web Dock Application Portlet to your Site

In this part, you will add the HCL Digital Experience Help Center Web Dock Application Portlet to a DX page using the Site Manager and Manage Pages portlet and test it.

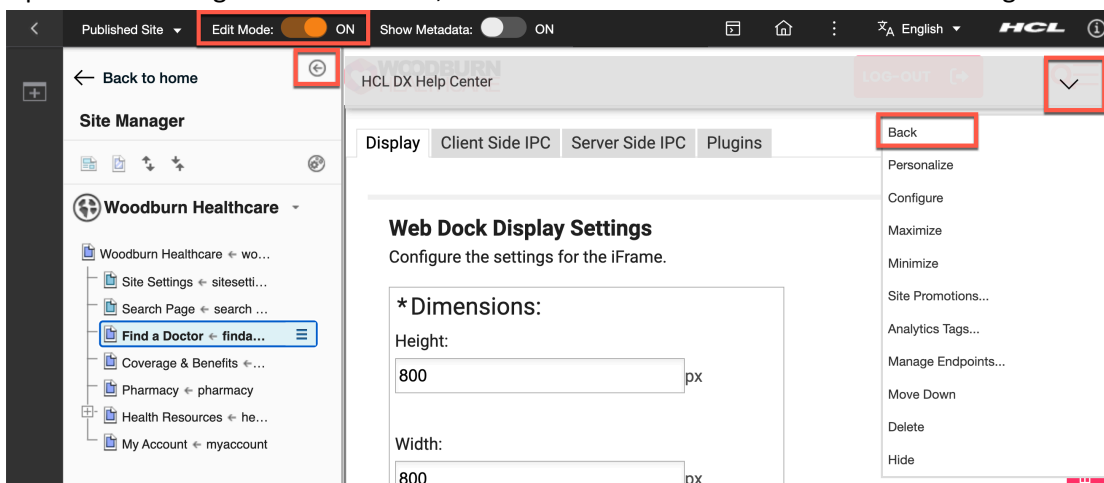
1. First add it to your Woodburn Healthcare Find a Doctor page using the Site Manager. Open the site menu, click **Woodburn Healthcare**, enable the **Edit Mode**, select the **Find a Doctor** page, click **Add page components and applications**, click the **Applications** tab, search for **HCL** and drag and drop your **HCL DX Help Center** application to the top of the page.



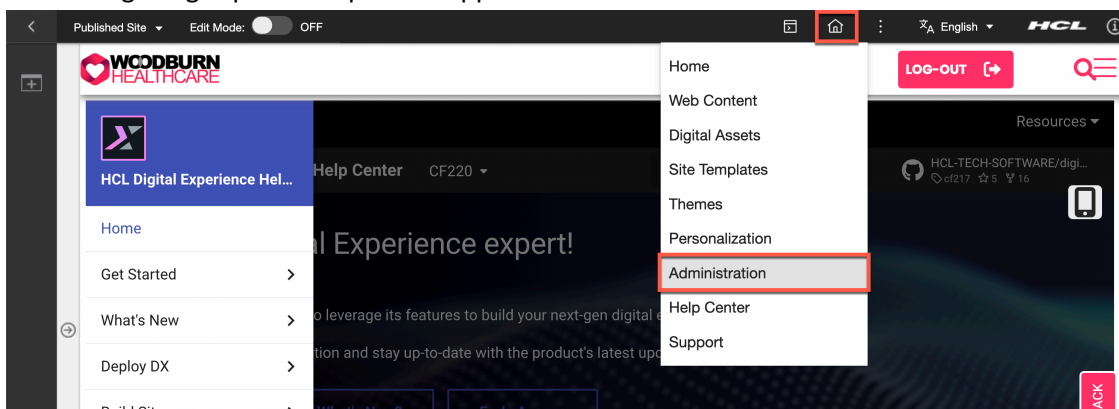
2. And it nicely shows in your page. You may test it. Notice the different options under the portlet menu. Click **Edit Shared Settings**,



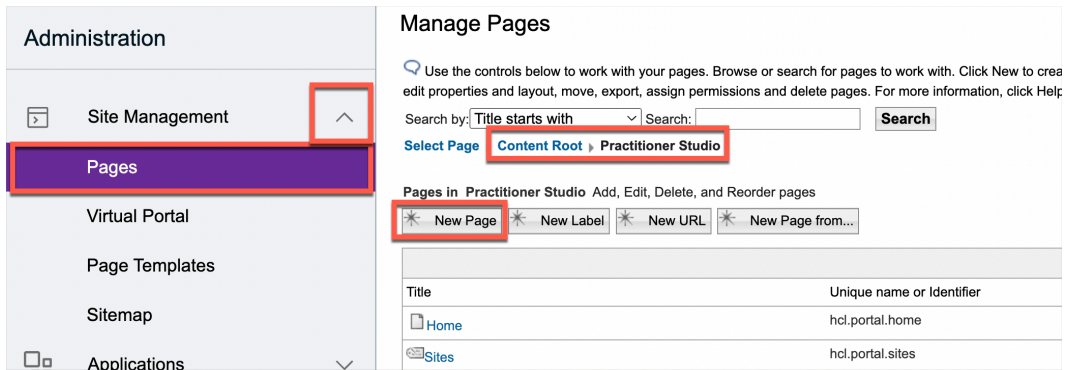
- This allows you to update the Web Dock settings again. Leave the settings and edit mode. Open the menu again and click **Back**, disable the edit mode and close the Site Manager.



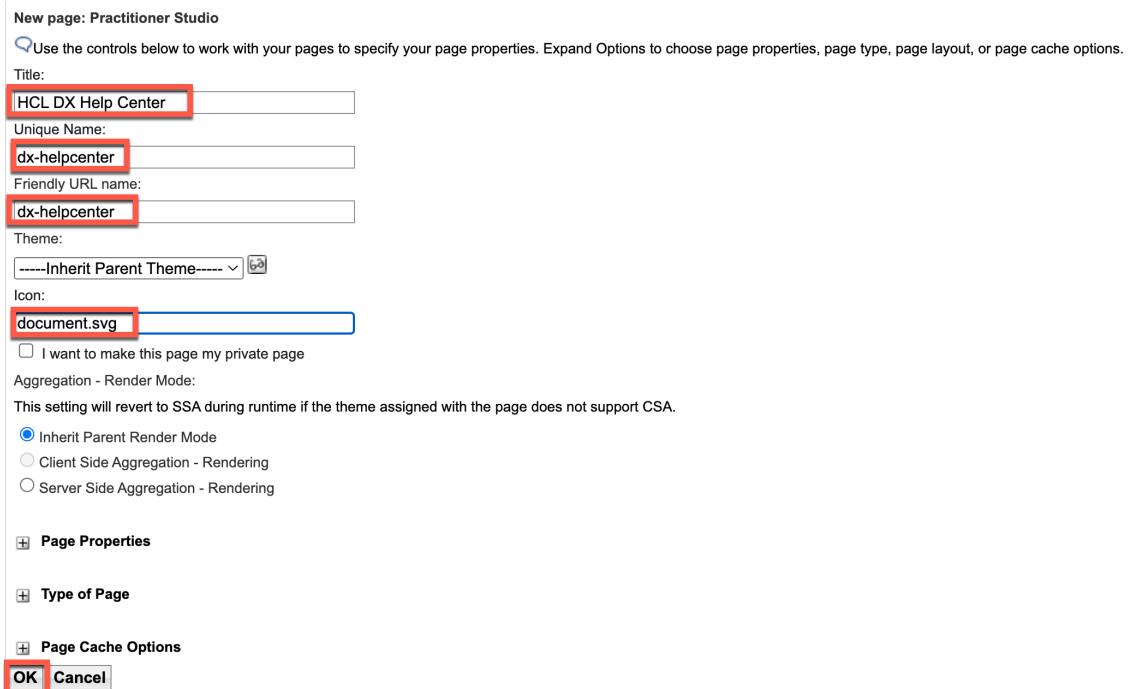
- You may further test it, like doing a search or navigating. Then add the same application to the Practitioner Studio. Adding pages under the Practitioner Studio can only be done using the Manage Pages portlet. Open the application menu and click **Administration**.



- Open **Site Management**, click **Pages**, under Manage Pages, navigate to the **Practitioner Studio** label and click **New Page**.



- Enter **HCL DX Help Center** for the title, **dx-helpcenter** as the **Unique Name**, **dx-helpcenter** for the **Friendly URL name**, enter **document.svg** for the **Icon** (which controls what icon to show in the navigation) and click **OK**.



- You may move your page up. Then add your HCL DX Help Center Web Dock Application to your new page. Click on the pencil icon to **edit page layout**.

**Manage Pages**

Use the controls below to work with your pages. Browse or search for pages to work with. Click New to create new pages, labels and urls. Activate and deactivate pages, re-order, edit properties and layout, move, export, assign permissions and delete pages. For more information, click Help.

Search by: Title starts with Search:  **Search**

[Select Page](#) > [Content Root](#) > [Practitioner Studio](#)

Pages in Practitioner Studio Add, Edit, Delete, and Reorder pages

Title	Unique name or Identifier	Status	
Home	hcl.portal.home	Active	
Sites	hcl.portal.sites	Active	
Web Content	hcl.portal.webcontent	Active	
Digital Assets	hcl.portal.mediaLibrary	Active	
Site Templates	ibm.portal.sitebuilder	Active	
Themes	hcl.portal.themes	Active	
Personalization	hcl.portal.Personalization	Active	
Administration	hcl.portal.administration	Active	
Search Center	ibm.portal.Search Center	Active	
HCL DX Help Center	dx-helpcenter	Active	

- Then click **Add portlets**.

Content Appearance Locks Wires

---

**Edit Layout**

Edit Layout allows you to add, remove and arrange portlets. Modifications occur as you make them. This page is rendered by a layout template, which specifies how the containers will be positioned on the page. The containers displayed below are a flat list of the containers used by the template, so the visual representation may not reflect how or where the content is rendered on the page.

Page title: HCL DX Help Center [Show Portlet Rule Mappings](#)

+ Add portlets

- Your Web Dock Application is available under the name you have set. Search by title starts with for the word **hcl**. Click **Search**, check the box next to your **HCL DX Help Center Application** and click **OK**.

**Edit Layout**

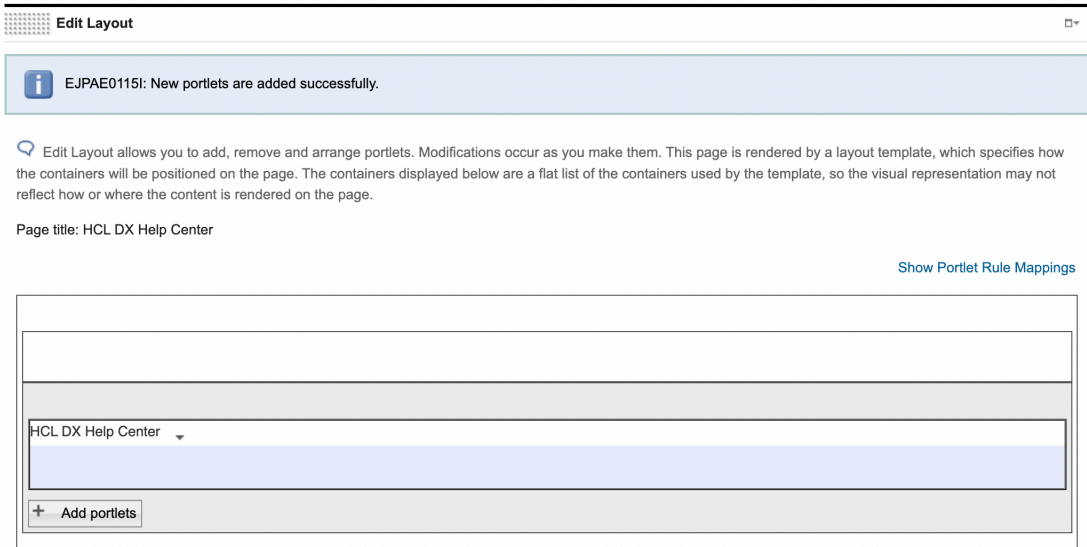
Search by: Title starts with Search:  **Search**

<input type="checkbox"/>	Portlet Title	Description	Unique name	Remote portlet
<input checked="" type="checkbox"/>	HCL DX Help Center	HCL Digital Experience Help Center Web Dock Application		

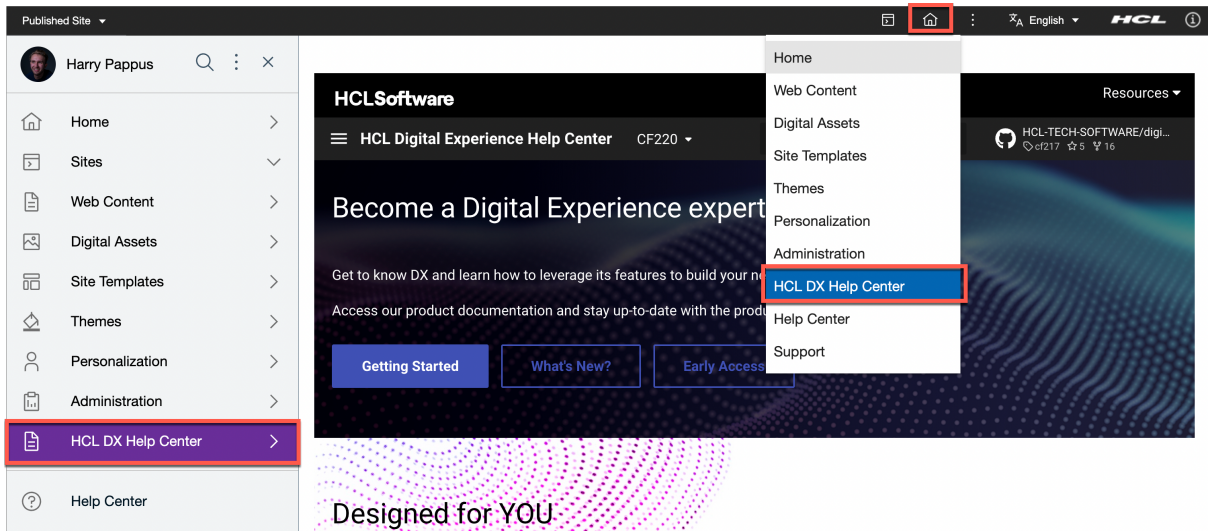
Page 1 of 1



10. And click **Done**.



11. Now check out your new page. Open the **applications menu** and click **HCL DX Help Center**. The HCL Digital Experience Help Center is displayed directly on the page.

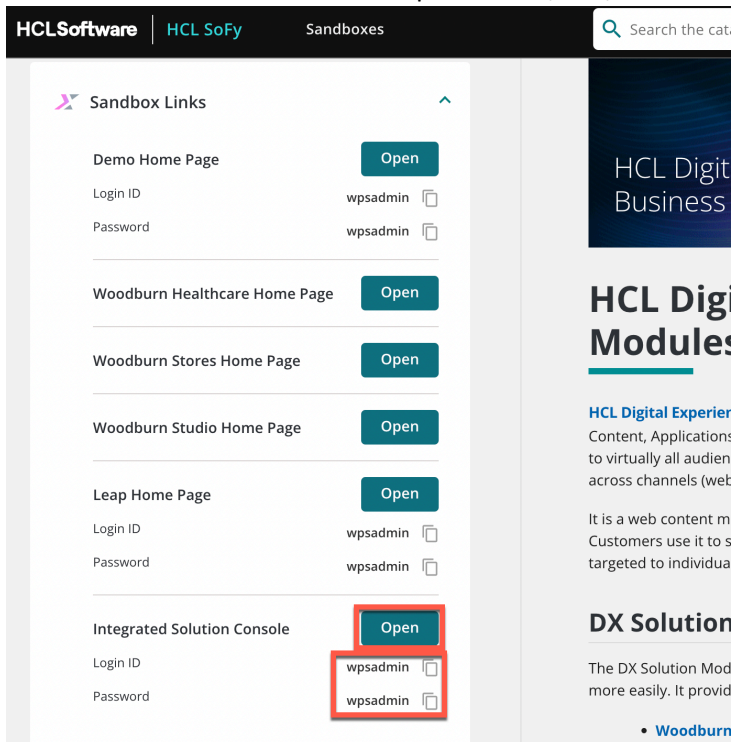


Congratulations, you have successfully added the DX Help Center Web Dock application to the Woodburn Healthcare page using the Site Manager and the Practitioner Studio using the Manage Pages.

## Optional Part 3: Update the Web Application Bridge Servlet Context Root

To enable the Web Application Bridge to work as a proxy with a portal context root, the context root of the `wp.vwat.servlet.ear` application needs to be updated to `/`.

1. To change the context root, you must access the Integrated Solution Console. Log into the Integrated Solution Console. If you use HCL SoFy, from the Sandbox Links of your **DX Solution Modules**, click **Open** next to the Integrated Solution Console. Note the default admin login User ID and Password you will need to log in. For other deployments, open a new browser tab or window and open `<host>/ibm/console`.

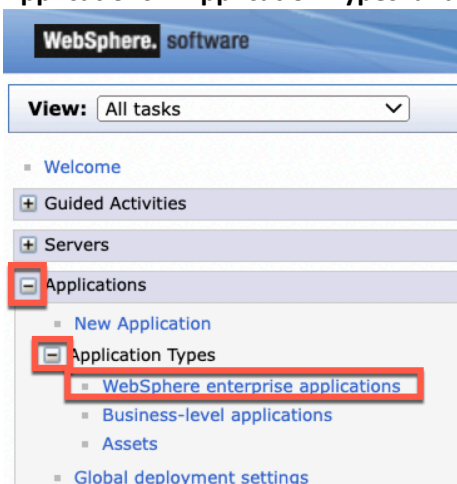


2. Then enter your admin credentials from the Solution Console and click **Log in**.

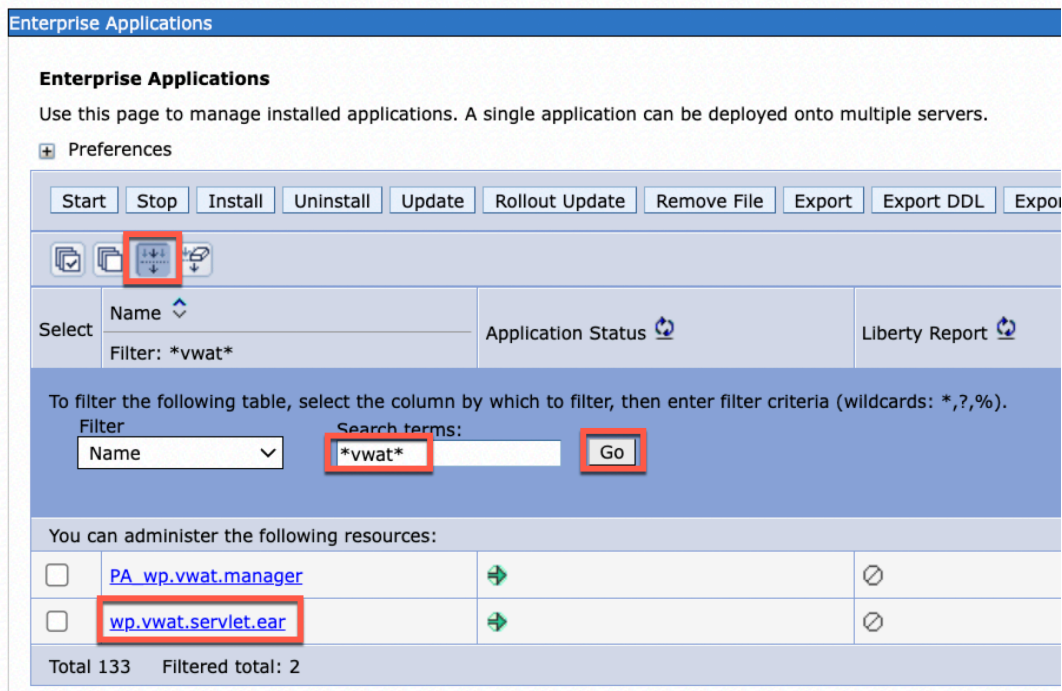




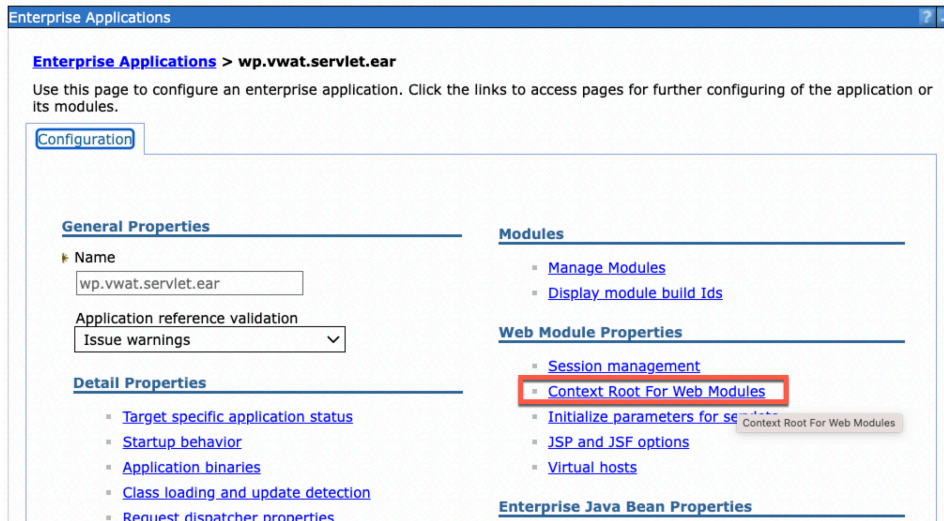
- Then navigate to the wp.vwat.servlet.ear WebSphere enterprise application. Open **Applications - Application Types** and click **WebSphere enterprise applications**.



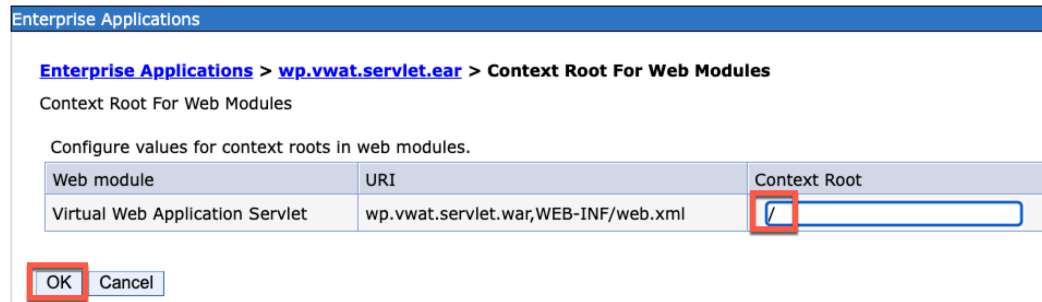
- Click the filter button, and filter by **Name**, and for the search terms enter **\*vwat\***. Click enter or **Go**. Then click the link for **wp.vwat.servlet.ear**.



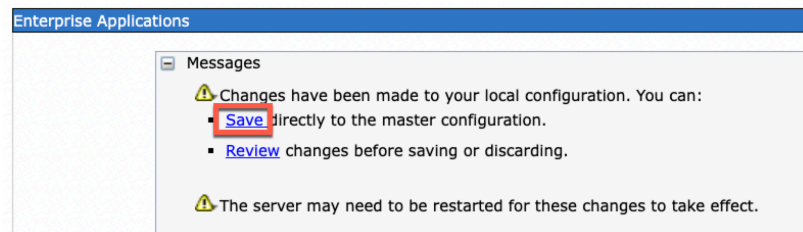
- Under **Web Module Properties**, click **Context Root for Web Modules**.



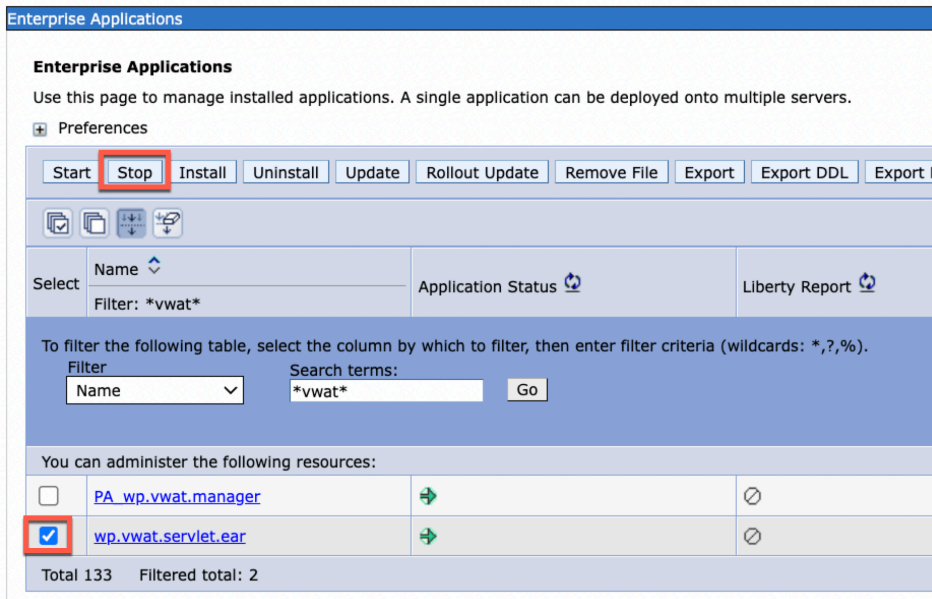
- For the **Context Root**, replace the value with / and click **OK**.



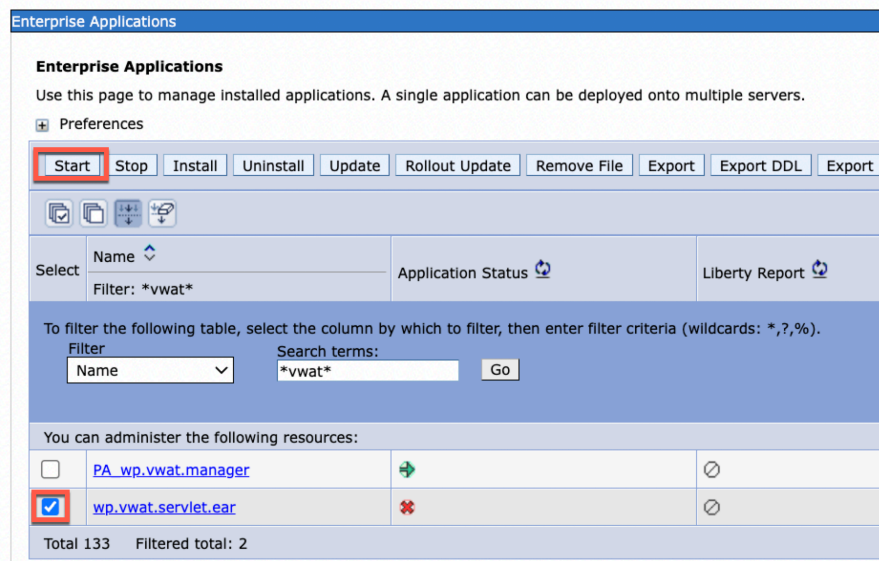
- Save** the changes.



- Then restart your application. Filter to the **\*vwat\*** again if necessary, click the checkbox next to **wp.vwat.servlet.ear** and click **Stop**.



- Once the application has stopped, start it again. Repeat the process to select the application and click **Start**.

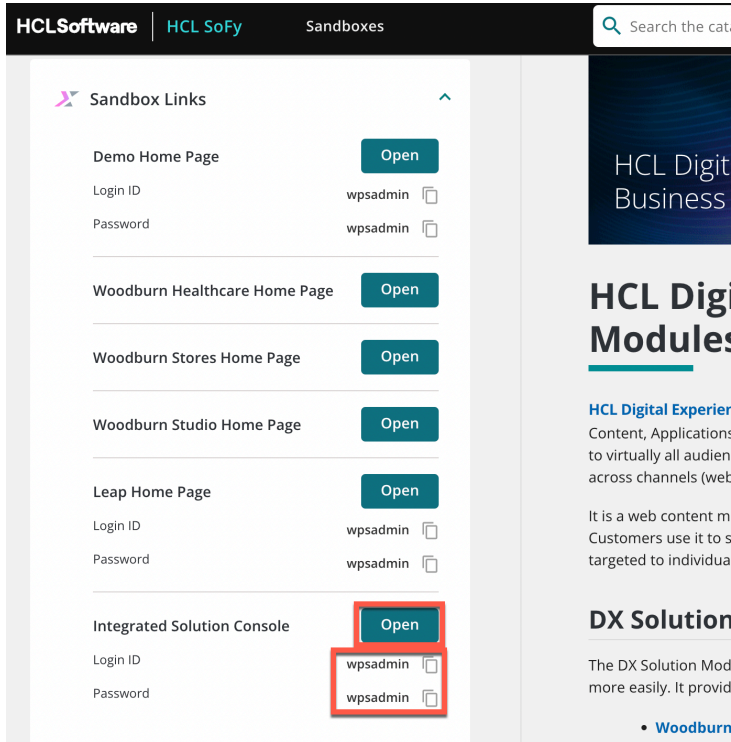


Congratulations, you have successfully enabled the Web Application Bridge by changing the context root of the application.

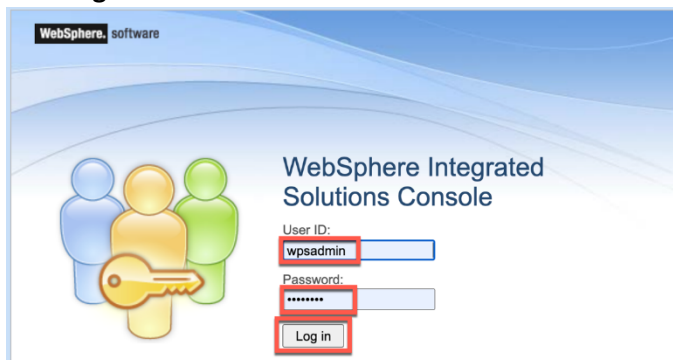
## Optional Part 4: Import DX Help Center SSL Certificate

To integrate a protected site, using https, into DX, you need to import its SSL certificate.

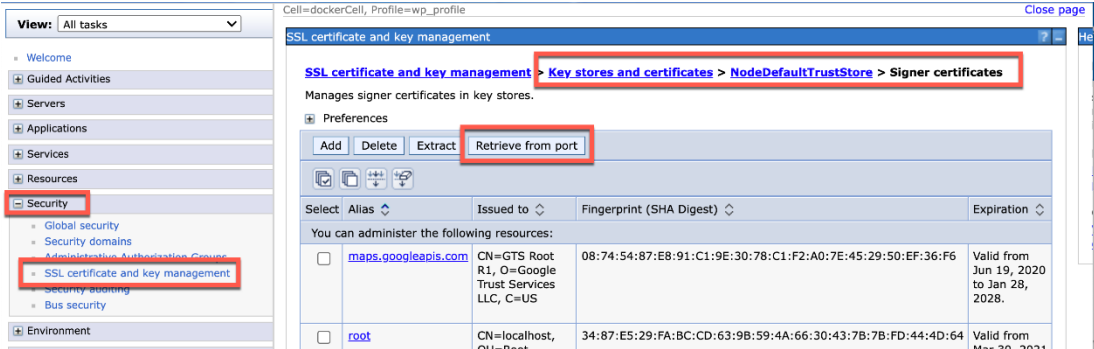
1. You import it in the Integrated Solution Console. Log into this Integrated Solution Console. If you use HCL SoFy, from the Sandbox Links of your **DX Solution Modules**, click **Open** next to the Integrated Solution Console. Note the default admin login User ID and Password you will need to log in. For other deployments, open a new browser tab or window and open `<host>/ibm/console`.



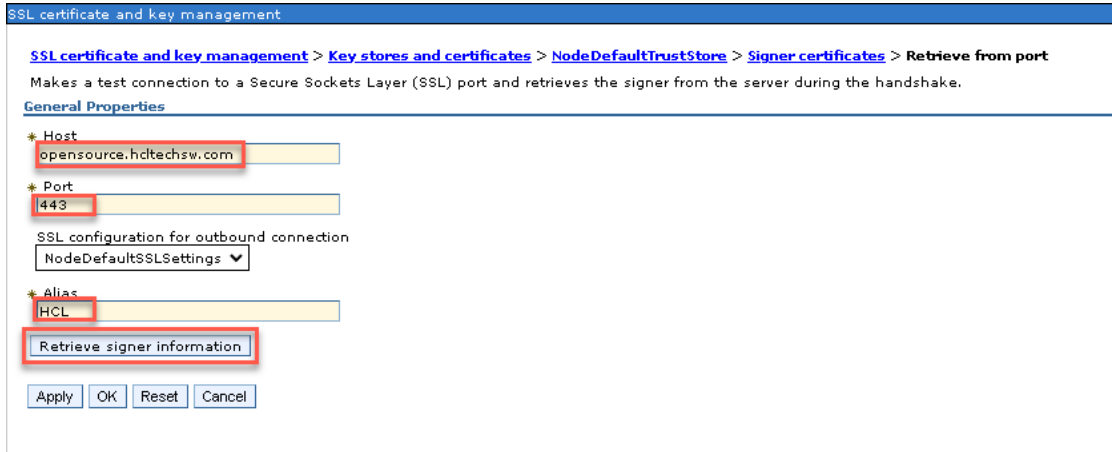
1. Then enter your admin credentials from the Solution Console: **wpsadmin/wpsadmin** and click **Log in**.



- Expand **Security** and click **SSL certificate and key management**, under Related Items **Key stores and certificates**, **NodeDefaultTrustStore**, under Additional Properties **Signer certificates** and **Retrieve from port**.



- As Host, enter the host of HCL Digital Experience Help Center, **opensource.hcltechsw.com**, enter **443** (for https) in the **Port** field, and an Alias name to distinguish this certification, e.g. **HCL**. Then click **Retrieve signer information**.



- Verify that the certificate information is for a certificate that you can trust and click **Apply**.

SSL certificate and key management

[SSL certificate and key management](#) > [Key stores and certificates](#) > [NodeDefaultTrustStore](#) > [Signer certificates](#) > [Retrieve from port](#)

Makes a test connection to a Secure Sockets Layer (SSL) port and retrieves the signer from the server during the handshake.

**General Properties**

\* Host

\* Port

SSL configuration for outbound connection

\* Alias

**Retrieved signer information**

Serial number

Issued to

Issued by

Fingerprint (SHA digest)

Validity period

- Then click **Save** to save it directly to the master configuration.

SSL certificate and key management

Messages

- Changes have been made to your local configuration. You can:
  - Save directly to the master configuration.**
  - Review changes before saving or discarding.
- The server may need to be restarted for these changes to take effect.

- You should see it added to your signer certificates.

[SSL certificate and key management](#) > [Key stores and certificates](#) > [NodeDefaultTrustStore](#) > [Signer certificates](#)

Manages signer certificates in key stores.

Preferences

Select	Alias	Issued to	Fingerprint (SHA Digest)	Expiration
<input type="checkbox"/>	svs			
<input type="checkbox"/>	<b>hcl</b>	CN=ISRG Root X1, O=Internet Security Research Group, C=US	93:3C:6D:DE:E9:5C:9C:41:A4:0F:9F:50:49:3D:82:BE:03:AD:87:BF	Valid from Jan 20, 2021 to Sep 30, 2024.
<input type="checkbox"/>	maps.googleapis.com			
<input type="checkbox"/>	root			
<input type="checkbox"/>	root_1			
<input type="checkbox"/>	root_2			

Total 6

Congratulations, you have added the SSL signer certificate for the HCL Digital Experience Help Center to your DX server.

## Conclusion

Using this tutorial, you learned how the Web Application Bridge allows you to easily and securely configure the integration of a web application, in this case the DX Help Center, and then add this to DX site.

## 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 Web Developer Toolkit - <https://github.com/HCL-TECH-SOFTWARE/WebDevToolkitForDx>



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