

HCL Design Room LIVE! Installation

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Chapter 1. Installing HCL Design Room LIVE!

HCL Design Room LIVE! supports installation with and without Internet connectivity (offline). HCL Design Room LIVE! provides installation scripts which can be used for installation and deployment of the web server. These are Node JS scripts and work on both Windows and Linux. The following sections cover the different procedures for each of the scenarios.

To update an existing version of the application, go directly to Chapter 2, "Updating HCL Design Room LIVE!," on page 21.

For information about the licenses agreement, see <https://www.hcltech.com/products-and-platforms/support>.

HCL Design Room LIVE! system requirements

Your environment must meet or have these prerequisites, operating systems, and other software versions for installing and running HCL Design Room LIVE!

Prerequisites

- Mongo database version 4.0.1
- Node JS version 8.11.3
- PM2 version 3.2.2

Note: Microsoft Visual C++ Redistributable Package is available by default, but you might have to reinstall it, if you find any errors related to this package while installing HCL Design Room LIVE!

Operating systems

The following operating systems are supported by the HCL Design Room LIVE! Server:

- Red Hat Enterprise Linux (RHEL) Server x86-64 version 6.8.x, 7.x, or later
- Windows Server 2016 (all editions) 64-bit
- Windows Server 2012 Standard Edition 64-bit
- Windows Server 2012 R2 Standard Edition 64-bit
- Windows Server 2012 Datacenter Edition 64-bit
- Windows Server 2012 R2 Datacenter Edition 64-bit
- Windows Server 2008 R2 Enterprise Edition 64-bit
- Windows Server 2008 R2 Standard Edition 64-bit
- Windows 10 64-bit
- Windows 7 64-bit

Browser support

The HCL Design Room LIVE! Web application works best with the recent versions of three web browsers. Use the following versions of these web browsers:

- Chrome version 67 or later
- Firefox version 57 or later

- Safari

Screen resolution

The display of HCL Design Room LIVE! on your monitor depends on the monitor, screen resolution, and browser zoom settings. The recommended screen resolution for a sharp quality display is 1920 x 1080 pixels. If your screen resolution is not in accordance with the required specification, then during login, you are prompted to check your resolution. If your screen resolution is low, then you can adjust the zoom level of your browser by using the Ctrl and + keys or Ctrl and - keys for optimal visual experience.

HCL Design Room LIVE! release notes

These release notes provide information about HCL Design Room LIVE! Version 9.7. The release notes include information such as the supported documents, links to the resources, and current limitations.

Prerequisites

HCL Products and Platforms licenses and downloads are managed by the HCL license portal. Ensure that you have the URL to the license server and the administrator credentials to access the server. After you complete the processes and instructions that you received from the portal to activate your entitlement, you can download the software. Then, you are ready to install and use HCL Design Room LIVE!

Important: The license server can be accessed only with the private key that corresponds to the latest uploaded public key. Private keys that correspond to older public keys become obsolete.

Note: If licensing is not configured by running the `license-dr.js` script, then HCL Design Room LIVE! will run on trial license mode for 60 days by default. Trial license will expire after 60 days, and users are warned about the same from two-weeks before the trial license expiration date and are reminded to activate the license by running the `license-dr.js` script.

Installation instructions are also available as a PDF file that comes with the product package. See the `HDRL_9.7.2019.xx_InstallationGuide.pdf` document, where `xx` indicates the sprint number. The download locations are listed in the Resources section.

Release version and release date

HCL Design Room LIVE! Version 9.7 sprint 2019.03 was released on January 21, 2019.

What's new in this release?

New and enhanced features are added to the product every release. Some of the key feature additions or enhancements are captured in the blog page. Go through the blogs to know release-wise new features. See, <https://www.devops-community.com/blogs>.

System requirements

A document with the system requirements information is available in the Sales Central and FlexNet Operations websites. The system requirements information is also part of the product online help and is also available as a PDF file in the product download package. See HDRL_9.7.2019.03_SystemRequirements.pdf.

Supporting documents

Documents are available to you in several locations. The documents are bundled along with the product, which can be downloaded as required. You can also find the online help that is embedded in the product. Furthermore, all the documents are also available on the FlexNet Operations and Sales Central websites. Links to these websites are available in the Resources section.

- HDRL_9.7.2019.xx_Setup.zip
- HDRL_9.7.2019.xx_InstallationGuide.pdf
- HDRL_9.7.2019.xx_ReleaseNotes.pdf
- HDRL_9.7.2019.xx_SystemRequirements.pdf
- HDRL_9.7.2019.xx_UserGuide.pdf, where *xx* refers to the sprint number and must be replaced with the sprint number that you are looking for. For example, HDRL_9.7.2019.03_Setup.zip

Known issues

- **Custom shape:** Links between the embedded shapes are not visible in the custom shapes group in the palette explorer, but, when you drag the embedded custom shape onto a whiteboard, the links appear correctly in the whiteboard and are also visible in the search results view.
- **Rich Text note:**
 - The display of the Rich Text note shape might not be as expected on Chrome browsers and on monitors with screen resolutions other than the recommended 1920 x 1080 pixels.
 - The Edit option of the RichText shape does not work as expected in the Safari browser. The problem occurs due to a known issue on the Safari browser end and is expected to be resolved when a fix is provided by Safari in the future.
- **Browser support:** HCL Design Room LIVE! is not compatible with versions earlier than Firefox 57.

Note: If you are using the Edge browser, you might find some features not working as expected in HCL Design Room LIVE!

- **Integration with Design Room ONE:** While integrating with Design Room ONE model elements, you can copy the URLs of one or more elements and paste them in the whiteboard in HCL Design Room LIVE! Note that the element attributes such as color, size, and links are not copied along with the element.

Resources

- HCL FlexNet portal: <https://hclsoftware.flexnetoperations.com/flexnet/operationsportal/logon.do>.
- Cloud license server URL: https://hclsoftware.compliance.flexnetoperations.com/api/1.0/instances/<license_server_id>, where <license_server_id> is your unique license server ID.

- DevOps Community website: <https://www.devops-community.com/designroomlive.html>.
- Sales Central portal: <https://salescentral.myhcl.com/Products-Platforms.aspx#parentHorizontalTab2>

About the installation scripts

Use the **node** command for running the HCL Design Room LIVE! installation and deployment scripts.

List of installation scripts

The following table summarizes the scripts that are used, what the scripts do, and what they assume from the environment:

preinstall-dr.js	Downloads the Mongo database and the PM2 process management application from the internet. The license agreements of these applications prevent us from bundling them with HCL Design Room LIVE!. This script must be run on a computer with internet access.
install-dr.js	Installs the Mongo database and the PM2 process management application. Run this script on the computer where you want to install the HCL Design Room LIVE! web server. No internet access is required.
license-dr.js	Generates the OpenSSL-based Public-Private keys and uploads the Public key to the license server. In response, the license server returns the Public key that is used later by HCL Design Room LIVE! to decrypt the license server responses for license requests. Note: If licensing is not configured by running the license-dr.js script, then HCL Design Room LIVE! will run on trial license mode for 60 days by default. Trial license will expire after 60 days, and users are warned about the same from two-weeks before the trial license expiration date and are reminded to activate the license by running the license-dr.js script.
deploy-dr.js	Starts the Mongo database and starts the HCL Design Room LIVE! Web server. Run this script on the same computer where the install-dr.js script was run.

Note: On Linux, the Mongo database is not downloaded and installed automatically by the scripts. For this reason, the best way to install Mongo on Linux is to use the package management system that is provided by each Linux distribution. See Mongo documentation for more information.

Installing on Windows with Internet

When you have Internet access, installing HCL Design Room LIVE! on Windows is a quick procedure.

Procedure

1. Extract the file HDRL_<version>_setup.zip to an empty folder <live-install-folder>. For example, the name of the ZIP file might be HDRL_v9.7.2018.40_setup.zip.

Note: The built-in "Extract All..." utility in Windows has a limitation on the length of the path names of the extracted files. You can reduce the risk of running into this limitation by extracting the compressed file into a folder where the full path name is short. If this doesn't help, use a better extraction utility, such as 7-zip.

2. Install Node JS. You must have the administrative access on the machine to perform the installation.
 - a. Double-click <live-install-folder>\server-sw\win32_x86_x64\node-v8.11.3-x64.msi.
 - b. Accept the default installation options. The Windows installer automatically updates the PATH variable. Before you proceed, test that the node command is available from the command prompt by typing the following command:

```
node --version
```

The version of Node JS should be printed.

Note: If you do not have administrative access to your machine, then you may get errors when running the installation and deployment scripts. To get the administrative rights, right-click Command Prompt program in the **Start** menu and select Run as administrator.

3. Open a new command prompt in the administrative mode and go to <live-install-folder>\DR_Install folder. Run the following command:
node preinstall-dr.js

The **preinstall-dr.js** script downloads the Mongo database and the PM2 process management application from the Internet. The downloaded applications are placed in the following path: <live-install-folder>\DR_Install\downloaded.

The next script to run is install-dr.js which installs the Mongo database and the PM2 process management application. The installation is controlled by the settings in the file <live-install-folder>\DR_Install\dr-config.json. Review these settings and update them if needed before running the script. Settings marked with the *// user option comment* are those that you may want to change before installing.

4. Perform the installation by running the following command:
node install-dr.js

The installation of the HCL Design Room LIVE! web server is now complete, and it is ready to be deployed. The deployment settings are found in <live-install-folder>\DR_Install\dr-config.json and you can customize the settings as described earlier.

5. Stop the **MongoDB service** in Windows Services, and change its **Startup Type** to Manual. This step is important for the deploy script to create the data folder in the path specified in the dr-config.json file.
6. Configure license server.

Note: If licensing is not configured by running the `license-dr.js` script, then HCL Design Room LIVE! will run on trial license mode for 60 days by default. Trial license will expire after 60 days, and users are warned about the same from two-weeks before the trial license expiration date and are reminded to activate the license by running the `license-dr.js` script.

a. **Setting up the license server:**

- **Cloud license server:** Ensure you setup cloud based license server instance with the HCL Design Room LIVE! features mapped to it. Refer to the entitlement documents for more details for license server setup instructions. After the server is set up, ensure that you have the following details ready:
 - Cloud license server instance URL. For example, `https://hclsoftware.compliance.flexnetoperations.com/api/1.0/instances/<server_id>`, where *server* is your license server ID.
 - Admin user credentials of the cloud license server instance.
- **Local license server:** For installing the local license server, refer to the `readme.pdf` file that is available in the license server package in the HCL license portal. After the local server is installed and set up, test your license server status by running the following command:

```
flexnetlsadmin.bat -server https://YOURHOSTNAME:PORT -authorize admin  
HCLDefault1@ -licenses -verbose
```

Note: The `flexnetlsadmin.bat` file is available in the following installation path: `<Extracted folder>/flexnetls-x64_windows-2018.02.0/enterprise`

A list of licenses that are available in your local server is displayed. In case, the server lists zero licenses, verify the following and restart the server:

- The local license server is registered in the FlexNet Operations site.
- Ensure that you added the *hostid* (To get the *hostid*, see the commands in the *Registering your License Server with the FNO and mapping licenses* section in `README.pdf` file that is available in the Local License server package) in `flexnetls.settings` under `Active Hostid`.

To log in to HCL Design Room LIVE!, you need the local server host name and the server instance ID. To find the local license server instance ID, type the URL as follows: `https://<local server hostname>:<Port>/version` in a web browser. A list of `serverInstanceID` instances are displayed. After you get the `ServerInstanceID`, your Local license server URL for HCL Design Room LIVE! will be in the following format: `https://<local license server hostname>:<port>/api/1.0/instances/<serverInstanceID>`

Note: The default user name for the Local License Server is *admin* and the password is *HCLDefault1@*.

b. **Setting up the license server access from HCL Design Room LIVE!** Run the license server access configuration script

```
node license-dr.js
```

This script generates the OpenSSL based Public-Private keys and uploads the Public key to the license server. In response, the license server returns the Public key which is then used by HCL Design Room LIVE! to decrypt the license server responses for license requests.

The `user_config.js` in HCL Design Room LIVE! installed location will have the following licensing related configuration values: The following values are used by the `license-dr.js` file while generating and uploading the respective keys:

licensePrivateKeyPath

Private key file relative path from the HCL Design Room LIVE! installed location, for example, `"lib_server/config/serverprivatekey.pem"`

licensePublicKeyPath:

Public key file relative path from the HCL Design Room LIVE! installed location, for example, `"lib_server/config/serverpublickey.pem"`

licenseServerReturnedPublicKeyPath

License server returned Public key file relative path from the HCL Design Room LIVE! installed location, for example, `"lib_server/config/serverreturnedpublickey.pem"`

HCL Design Room LIVE! at runtime will use the following additional licensing related values:

licenseServerURL

Valid license server URL.

Note: Updated automatically when license server access configuration is completed successfully.

licenseBorrowIntervalInMinutes

Maximum borrow interval period for checked out license. Default value is 60 minutes.

7. Deploy the server by running the following command:

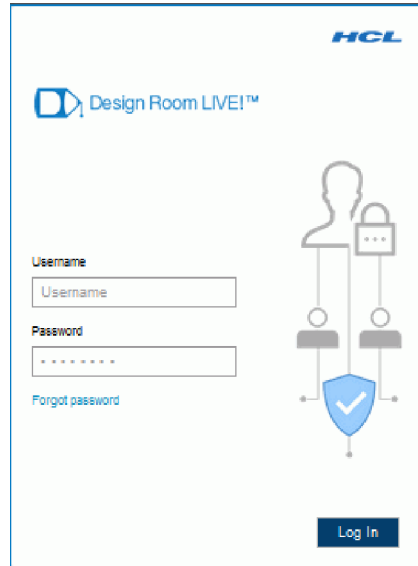
```
node deploy-dr.js
```

This script starts up the Mongo database (unless it is already running). It then starts the HCL Design Room LIVE! web server by using the PM2 process management application. The settings for how to deploy the server are stored in the PM2 configuration file `<live-install-folder>\DR_Install\pm2.config.js`. You can edit this file as needed.

The deployment script finishes by printing the URL of the HCL Design Room LIVE! Web server. Test whether the installation and deployment was successful by opening the URL in a web browser. For example, the default settings in `pm2.config.js` yields the following URL:

```
https://localhost/index.html
```

If the web server uses a self-signed certificate (by default it does), you need to ignore the browser security warning. After that, you should see the HCL Design Room LIVE! application:



Installing on Windows without Internet

Installing on Windows without Internet involves a few manual steps in the procedure.

Procedure

1. Download the HDRL_<version>_setup.zip file in a system that has Internet access.
2. Extract the file HDRL_<version>_setup.zip to an empty folder <live-install-folder>. For example, the name of the ZIP file might be HDRL_9.7.2018.40_setup.zip.

Note: The built-in "Extract All..." utility in Windows has a limitation on the length of the path names of the extracted files. You can reduce the risk of running into this limitation by extracting the compressed file into a folder where the full path name is short. If this doesn't help, use a better extraction utility, such as 7-zip.

3. Install Node JS. You must have the administrative access on the machine to perform the installation.
 - a. Double-click <live-install-folder>\server-sw\win32_x86_x64\node-v8.11.3-x64.msi.
 - b. Accept the default installation options. The Windows installer automatically updates the PATH variable. Before you proceed, test that the node command is available from the command prompt by typing the following command:

```
node --version
```

The version of Node JS should be printed.

Note: If you do not have administrative access to your machine, then you may get errors when running the installation and deployment scripts. To get the administrative rights, right-click Command Prompt program in the **Start** menu and select Run as administrator.

4. Open a new command prompt in the administrative mode and go to <live-install-folder>\DR_Install folder. Run the following command:
node preinstall-dr.js

The **preinstall-dr.js** script downloads the Mongo database and the PM2 process management application from the Internet. The downloaded applications are placed in the following path: <live-install-folder>\DR_Install\downloaded.

5. Go to the machine that does not have access to internet, where you want to install the HCL Design Room LIVE! web server, and copy the <live-install-folder> to the installation machine. Continue to run the remaining steps on that machine. As a prerequisite, you must have installed Node JS on that machine (see step 3).

The next script to run is **install-dr.js** which installs the Mongo database and the PM2 process management application. The installation is controlled by the settings in the file <live-install-folder>\DR_Install\dr-config.json. Review these settings and update them if needed before running the script. Settings marked with the *// user option comment* are those that you may want to change before installing.

6. Perform the installation by running the following command:
node install-dr.js

The installation of the HCL Design Room LIVE! web server is now complete, and it is ready to be deployed. The deployment settings are found in <live-install-folder>\DR_Install\dr-config.json and you can customize the settings as described earlier.

7. Stop the **MongoDB service** in Windows Services, and change its **Startup Type** to Manual. This step is important for the deploy script to create the data folder in the path specified in the dr-config.json file.
8. Configure license server.

Note: If licensing is not configured by running the **license-dr.js** script, then HCL Design Room LIVE! will run on trial license mode for 60 days by default. Trial license will expire after 60 days, and users are warned about the same from two-weeks before the trial license expiration date and are reminded to activate the license by running the **license-dr.js** script.

a. **Setting up the license server:**

- **Local license server:** For installing the local license server, refer to the readme.pdf file that is available in the license server package in the HCL license portal. After the local server is installed and set up, test your license server status by running the following command:

```
flexnetlsadmin.bat -server https://YOURHOSTNAME:PORT -authorize admin  
HCLDefault1@ -licenses -verbose
```

Note: The flexnetlsadmin.bat file is available in the following installation path: <Extracted folder>/flexnetls-x64_windows-2018.02.0/enterprise

A list of licenses that are available in your local server is displayed. In case, the server lists zero licenses, verify the following and restart the server:

- The local license server is registered in the FlexNet Operations site.
- Ensure that you added the *hostid* (To get the *hostid*, see the commands in the *Registering your License Server with the FNO and mapping licenses*

section in README.pdf file that is available in the Local License server package) in flexnetls.settings under Active Hostid.

To log in to HCL Design Room LIVE!, you need the local server host name and the server instance ID. To find the local license server instance ID, type the URL as follows: `https://<local server hostname>:<Port>/version` in a web browser. A list of serverInstanceID instances are displayed. After you get the ServerInstanceID, your Local license server URL for HCL Design Room LIVE! will be in the following format: `https://<local license server hostname>:<port>/api/1.0/instances/<serverInstanceID>`

Note: The default user name for the Local License Server is *admin* and the password is *HCLDefault1@*.

- b. Setting up the license server access from HCL Design Room LIVE! Run the license server access configuration script

```
node license-dr.js
```

This script generates the OpenSSL based Public-Private keys and uploads the Public key to the license server. In response, the license server returns the Public key which is then used by HCL Design Room LIVE! to decrypt the license server responses for license requests.

The user_config.js in HCL Design Room LIVE! installed location will have the following licensing related configuration values: The following values are used by the license-dr.js file while generating and uploading the respective keys:

licensePrivateKeyPath

Private key file relative path from the HCL Design Room LIVE! installed location, for example, "lib_server/config/serverprivatekey.pem"

licensePublicKeyPath:

Public key file relative path from the HCL Design Room LIVE! installed location, for example, "lib_server/config/serverpublickey.pem"

licenseServerReturnedPublicKeyPath

License server returned Public key file relative path from the HCL Design Room LIVE! installed location, for example, "lib_server/config/serverreturnedpublickey.pem"

HCL Design Room LIVE! at runtime will use the following additional licensing related values:

licenseServerURL

Valid license server URL.

Note: Updated automatically when license server access configuration is completed successfully.

licenseBorrowIntervalInMinutes

Maximum borrow interval period for checked out license. Default value is 60 minutes.

9. Deploy the server by running the following command:

```
node deploy-dr.js
```

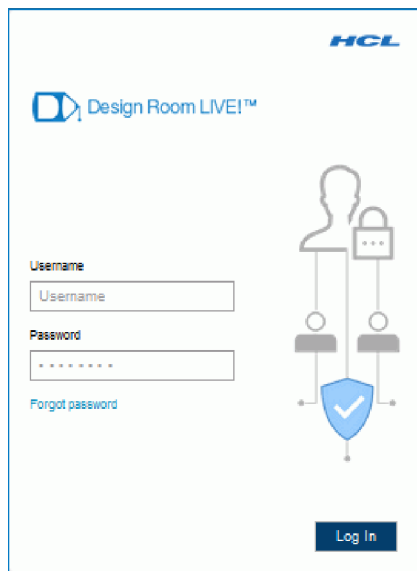
This script starts up the Mongo database (unless it is already running). It then starts the HCL Design Room LIVE! web server by using the PM2 process

management application. The settings for how to deploy the server are stored in the PM2 configuration file `<live-install-folder>\DR_Install\pm2.config.js`. You can edit this file as needed.

The deployment script finishes by printing the URL of the HCL Design Room LIVE! web server. Test whether the installation and deployment was successful by opening the URL in a web browser. For example, the default settings in `pm2.config.js` yields the following URL:

```
https://localhost/index.html
```

If the web server uses a self-signed certificate (by default it does), you need to ignore the browser security warning. After that, you should see the HCL Design Room LIVE! application:



Installing on Linux with Internet

Use the following steps to install HCL Design Room LIVE! on a Linux machine that has the Internet access.

Procedure

1. Extract the file `HDRL_<version>_setup.zip` to an empty folder `<live-install-folder>`. For example, the name of the ZIP file might be `HDRL_v9.7.2018.40_setup.zip`.
2. Download Mongo DB and install in the system. See the Mongo documentation for more information.
3. Install Node JS. You must have the administrative access on the machine to perform the installation.
 - a. Run the following command in a shell:

```
tar -Jxf <dr-install-folder>/server-sw/linux_x86_x64/  
node-v8.11.3-linux-x64.tar.xz
```

Note: You must manually update the `PATH` variable so that it contains the `bin` folder of the Node JS installation.

Before you proceed, ensure that the `node` command is available from the command line:

```
node --version
```

The version of Node JS should be printed.

Note: If you do not have root access to your machine, then you may get errors when you run the installation and deployment scripts.

4. Go to `<live-install-folder>/DR_Install` folder and run the following command:

```
sudo node preinstall-dr.js
```

The `preinstall-dr.js` script downloads the PM2 process management application from the Internet. The downloaded applications are placed in the following path: `<live-install-folder>/DR_Install/downloaded`.

The next script to run is `install-dr.js` which installs the PM2 process management application. The installation is controlled by the settings in the file `<live-install-folder>/DR_Install/dr-config.json`. Review these settings and update them if needed before running the script. Settings marked with the `// user option` comment are those that you might want to change before installing. You must pay attention to the setting in the `mongo-linux-install-folder` and ensure that it is set to the path where `bin/mongod` is located.

Review and update the installation settings by directly editing the `dr-config.json` file as needed.

5. Perform the installation by running the following command:

```
sudo node install-dr.js
```

The installation of the HCL Design Room LIVE! web server is now complete, and it is ready to be deployed. Once again, the deployment settings are found in `<live-install-folder>/DR_Install/dr-config.json` and you can customize the settings as needed.

6. Configure license server.

Note: If licensing is not configured by running the `license-dr.js` script, then HCL Design Room LIVE! will run on trial license mode for 60 days by default. Trial license will expire after 60 days, and users are warned about the same from two-weeks before the trial license expiration date and are reminded to activate the license by running the `license-dr.js` script.

a. **Setting up the license server:**

- **Cloud license server:** Ensure you setup cloud based license server instance with the HCL Design Room LIVE! features mapped to it. Refer to the entitlement documents for more details for license server setup instructions. After the server is set up, ensure that you have the following details ready:
 - Cloud license server instance URL. For example, `https://hclsoftware.compliance.flexnetoperations.com/api/1.0/instances/<server_id>`, where `server` is your license server ID.
 - Admin user credentials of the cloud license server instance.
- **Local license server:** For installing the local license server, refer to the `readme.pdf` file that is available in the license server package in the HCL license portal. After the local server is installed and set up, test your license server status by running the following command:

```
flexnetlsadmin.bat -server https://YOURHOSTNAME:PORT -authorize admin  
HCLDefault1@ -licenses -verbose
```

Note: The flexnetlsadmin.bat file is available in the following installation path: <Extracted folder>/flexnetls-x64_windows-2018.02.0/enterprise

A list of licenses that are available in your local server is displayed. In case, the server lists zero licenses, verify the following and restart the server:

- The local license server is registered in the FlexNet Operations site.
- Ensure that you added the *hostid* (To get the *hostid*, see the commands in the *Registering your License Server with the FNO and mapping licenses* section in README.pdf file that is available in the Local License server package) in flexnetls.settings under Active Hostid.

To log in to HCL Design Room LIVE!, you need the local server host name and the server instance ID. To find the local license server instance ID, type the URL as follows: https://<local server hostname>:<Port>/version in a web browser. A list of serverInstanceID instances are displayed. After you get the ServerInstanceID, your Local license server URL for HCL Design Room LIVE! will be in the following format: https://<local license server hostname>:<port>/api/1.0/instances/<serverInstanceID>

Note: The default user name for the Local License Server is *admin* and the password is *HCLDefault1@*.

- Setting up the license server access from HCL Design Room LIVE! Run the license server access configuration script

```
node license-dr.js
```

This script generates the OpenSSL based Public-Private keys and uploads the Public key to the license server. In response, the license server returns the Public key which is then used by HCL Design Room LIVE! to decrypt the license server responses for license requests.

The user_config.js in HCL Design Room LIVE! installed location will have the following licensing related configuration values: The following values are used by the license-dr.js file while generating and uploading the respective keys:

licensePrivateKeyPath

Private key file relative path from the HCL Design Room LIVE! installed location, for example, "lib_server/config/serverprivatekey.pem"

licensePublicKeyPath:

Public key file relative path from the HCL Design Room LIVE! installed location, for example, "lib_server/config/serverpublickey.pem"

licenseServerReturnedPublicKeyPath

License server returned Public key file relative path from the HCL Design Room LIVE! installed location, for example, "lib_server/config/serverreturnedpublickey.pem"

HCL Design Room LIVE! at runtime will use the following additional licensing related values:

licenseServerURL

Valid license server URL.

Note: Updated automatically when license server access configuration is completed successfully.

licenseBorrowIntervalInMinutes

Maximum borrow interval period for checked out license. Default value is 60 minutes.

7. Deploy the server by running the following command:

```
sudo node deploy-dr.js
```

The deployment script starts up the Mongo database (unless it is already running). It then starts the HCL Design Room LIVE! web server by using the PM2 process management application. The settings for how to deploy the server are stored in the PM2 configuration file <live-install-folder>/DR_Install/pm2.config.js. You can edit this file as needed.

The deployment script finishes by printing the URL of the HCL Design Room LIVE! web server. Test whether the installation and deployment was successful by opening the URL in a web browser. For example, the default settings in the pm2.config.js file yield the following URL:

```
https://localhost/index.html
```

If the web server uses a self-signed certificate (by default it does), you need to ignore the browser security warning. After that, you should see the HCL Design Room LIVE! application:



Installing on Linux without Internet

Use the following steps to install HCL Design Room LIVE! on a Linux machine that does not have Internet access.

Procedure

1. Download the HDRL_<version>_setup.zip file in a system that has Internet access.
2. Extract the file HDRL_<version>_setup.zip to an empty folder <live-install-folder>. For example, the name of the ZIP file might be HDRL_v9.7.2018.40_setup.zip.

3. Install Node JS. You must have the administrative access on the machine to perform the installation.

- a. Run the following command in a shell:

```
tar -Jxf <dr-install-folder>/server-sw/linux_x86_x64/  
node-v8.11.3-linux-x64.tar.xz
```

Note: You must manually update the PATH variable so that it contains the bin folder of the Node JS installation.

Before you proceed, ensure that the node command is available from the command line:

```
node --version
```

The version of Node JS should be printed.

Note: If you do not have root access to your machine, then you may get errors when you run the installation and deployment scripts.

4. Go to <live-install-folder>/DR_Install folder and run the following command:

```
sudo node preinstall-dr.js
```

The preinstall-dr.js script downloads the PM2 process management application from the Internet. The downloaded applications are placed in the following path: <live-install-folder>/DR_Install/downloaded.

5. Go to the machine that has no Internet access, where you want to install the HCL Design Room LIVE! web server, and copy the <live-install-folder> to the installation machine. Continue to run the remaining steps on that machine. As a prerequisite, you must have installed Node JS on that machine (see step 3).
6. Download Mongo DB and install in the system. See the Mongo documentation for more information.

The next script to run is install-dr.js which installs the PM2 process management application. The installation is controlled by the settings in the file <live-install-folder>/DR_Install/dr-config.json. Review these settings and update them if needed before running the script. Settings marked with the // *user option* comment are those that you might want to change before installing. You must pay attention to the setting in the mongo-linux-install-folder and ensure that it is set to the path where bin/mongod is located.

Review and update the installation settings by directly editing the dr-config.json file as needed.

7. Perform the installation by running the following command:

```
sudo node install-dr.js
```

The installation of the HCL Design Room LIVE! web server is now complete, and it is ready to be deployed. Once again, the deployment settings are found in <live-install-folder>/DR_Install/dr-config.json and you can customize the settings as needed.

8. Configure license server.

Note: If licensing is not configured by running the **license-dr.js** script, then HCL Design Room LIVE! will run on trial license mode for 60 days by default. Trial license will expire after 60 days, and users are warned about the same from two-weeks before the trial license expiration date and are reminded to activate the license by running the **license-dr.js** script.

a. **Setting up the license server:**

- **Local license server:** For installing the local license server, refer to the `readme.pdf` file that is available in the license server package in the HCL license portal. After the local server is installed and set up, test your license server status by running the following command:

```
flexnetlsadmin.bat -server https://YOURHOSTNAME:PORT -authorize admin  
HCLDefault1@ -licenses -verbose
```

Note: The `flexnetlsadmin.bat` file is available in the following installation path: `<Extracted folder>/flexnetls-x64_windows-2018.02.0/enterprise`

A list of licenses that are available in your local server is displayed. In case, the server lists zero licenses, verify the following and restart the server:

- The local license server is registered in the FlexNet Operations site.
- Ensure that you added the *hostid* (To get the *hostid*, see the commands in the *Registering your License Server with the FNO and mapping licenses* section in `README.pdf` file that is available in the Local License server package) in `flexnetls.settings` under `Active Hostid`.

To log in to HCL Design Room LIVE!, you need the local server host name and the server instance ID. To find the local license server instance ID, type the URL as follows: `https://<local server hostname>:<Port>/version` in a web browser. A list of `serverInstanceID` instances are displayed. After you get the `ServerInstanceID`, your Local license server URL for HCL Design Room LIVE! will be in the following format: `https://<local license server hostname>:<port>/api/1.0/instances/<serverInstanceID>`

Note: The default user name for the Local License Server is *admin* and the password is *HCLDefault1@*.

b. **Setting up the license server access from HCL Design Room LIVE!** Run the license server access configuration script

```
node license-dr.js
```

This script generates the OpenSSL based Public-Private keys and uploads the Public key to the license server. In response, the license server returns the Public key which is then used by HCL Design Room LIVE! to decrypt the license server responses for license requests.

The `user_config.js` in HCL Design Room LIVE! installed location will have the following licensing related configuration values: The following values are used by the `license-dr.js` file while generating and uploading the respective keys:

licensePrivateKeyPath

Private key file relative path from the HCL Design Room LIVE! installed location, for example, `"lib_server/config/serverprivatekey.pem"`

licensePublicKeyPath:

Public key file relative path from the Design Room Live! installed location, for example, `"lib_server/config/serverpublickey.pem"`

licenseServerReturnedPublicKeyPath

License server returned Public key file relative path from the Design Room Live! installed location, for example, `"lib_server/config/serverreturnedpublickey.pem"`

Design Room LIVE! at runtime will use the following additional licensing related values:

licenseServerURL

Valid license server URL.

Note: Updated automatically when license server access configuration is completed successfully.

licenseBorrowIntervalInMinutes

Maximum borrow interval period for checked out license. Default value is 60 minutes.

9. Deploy the server by running the following command:

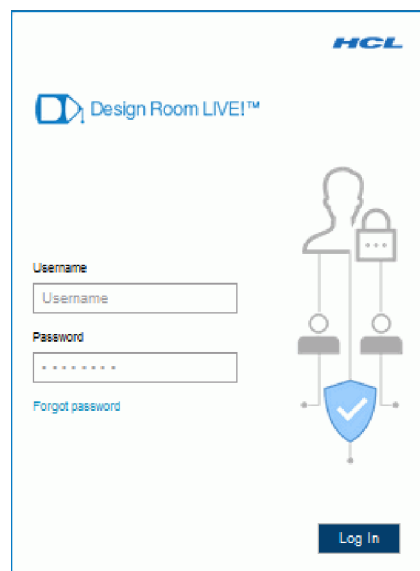
```
sudo node deploy-dr.js
```

The deployment script starts up the Mongo database (unless it is already running). It then starts the HCL Design Room LIVE! web server by using the PM2 process management application. The settings for how to deploy the server are stored in the PM2 configuration file <live-install-folder>/DR_Install/pm2.config.js. You can edit this file as needed.

The deployment script finishes by printing the URL of the HCL Design Room LIVE! web server. Test whether the installation and deployment was successful by opening the URL in a web browser. For example, the default settings in the pm2.config.js file yield the following URL:

```
https://localhost/index.html
```

If the web server uses a self-signed certificate (by default it does), you need to ignore the browser security warning. After that, you should see the HCL Design Room LIVE! application:



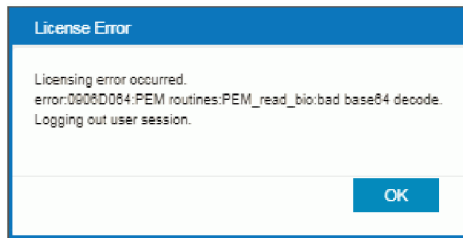
Troubleshooting licensing errors

This section briefs the licensing access related errors that can occur for users at HCL Design Room LIVE! runtime and the tips to rectify the problem.

Important: License server can only be accessed with the Private key that is corresponding to the latest Public key uploaded. Private keys corresponding to older Public keys becomes obsolete.

Some errors related to licensing and the solutions to fix them are listed as follows:

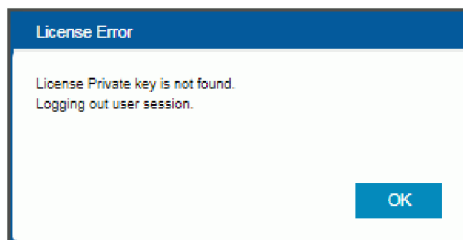
Private key file is corrupted.



Solution:

- Stop HCL Design Room LIVE!
- Ensure Private key file is correct.
- Redo License server access configuration setup, if required.

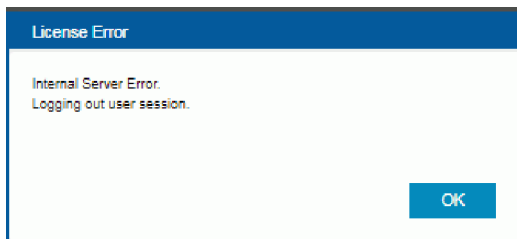
Private key file is missing.



Solution:

- Stop HCL Design Room LIVE!
- Ensure Private key file is correct.
- Redo License server access configuration setup, if required.

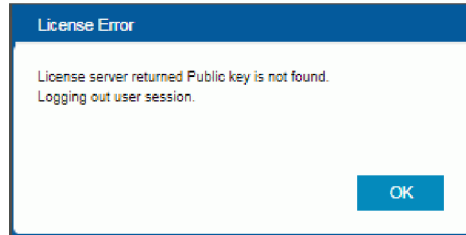
Private key file is obsolete.



Solution:

- Stop HCL Design Room LIVE!
- Ensure that the latest Private key file is used.
- Redo License server access configuration setup, if required.

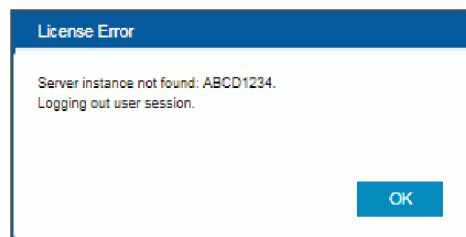
Public key that is returned by the license server is missing.



Solution:

- Stop HCL Design Room LIVE!
- Ensure that the Public key that is returned by the license server is correct.
- Redo License server access configuration setup, if required.

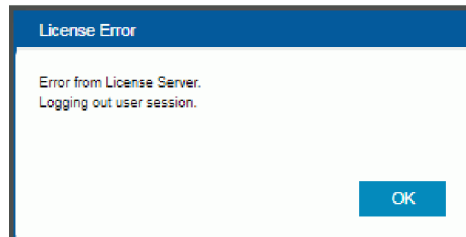
License server instance does not exist.



Solution:

- Stop HCL Design Room LIVE!
- Ensure that the specific license server instance is accessible.
- Redo License server access configuration setup, if required.

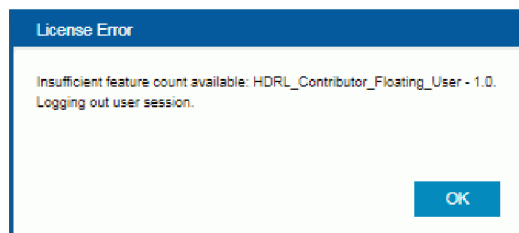
License server URL is not accessible.



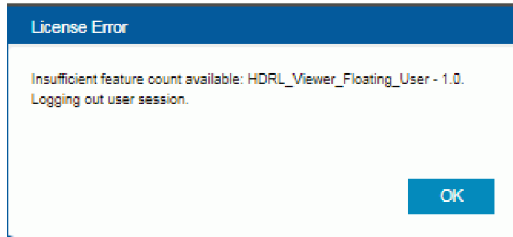
Solution:

- Stop HCL Design Room LIVE!
- Ensure that the specific license server URL is accessible.
- Redo License server access configuration setup, if required.

License is not available.



OR



Solution:

- Contributor license (HDRL_Contributor_Floating_User – 1.0) is required for users with contribution permissions.
- Viewer license (HDRL_Viewer_Floating_User – 1.0) is required for users with viewer only permissions.
- Ensure that the required license is available. You can do one of the following:
 - Increase the number of licenses available in License server
 - Wait until required license is released by another user.

Chapter 2. Updating HCL Design Room LIVE!

To update an existing HCL Design Room LIVE! installation to the latest version, perform the following steps:

Procedure

Note: When you plan to install in a new location or overwriting an existing version, ensure that you take a copy of the `<live-install-folder>\DR_Install\dr-config.json` file, `lib_server\config` folder that contains the license keys and the certificates, and `<live-install-folder>\user_config.js` file, so that you can reuse the configuration in the new installation.

1. Extract the file `HDRL_9.7.xxxx.xx_setup.zip` to an empty folder `<live-install-folder>`. For example, the name of the ZIP file might be `HDRL_9.7.2018.30_setup.zip`.

Note:

- The built-in "Extract All..." utility in Windows has a limitation on the length of the path names of the extracted files. You can reduce the risk of running into this limitation by extracting the compressed file into a folder where the full path name is short. If this doesn't help, use a better extraction utility, such as 7-zip.
 - Make sure to extract the files into an empty folder. Do not overwrite an existing HCL Design Room LIVE! installation, especially when the application is running.
 - Since this is an update to an existing HCL Design Room LIVE! installation, Node JS from the previous installation must be available. If not, perform step 2 in the Installation on Windows with internet access to install Node JS.
2. If you want to delete the old installation folder, you need to perform this step to ensure that there is no process running, which can prevent the folder from being deleted.

- a. Open an administrative command shell and run the following command:

```
pm2 kill
```

Note: Sometimes, running the `pm2 kill` command stops the Mongo database.

- b. If you find Mongo server still running after the previous step, then enter the Mongo shell by running the following command: `<mongo-install>\bin\mongo`, where `<mongo-install>` is specified either by `mongo-win-install-folder` or `mongo-linux-install-folder` in the file `<live-install-folder>\DR_Install\dr-config.json`.
- c. Run the following commands in the Mongo shell for stopping the Mongo database:

```
use admin
db.shutdownServer()
```
- d. Ensure that the version of Node JS is the same in the new version of the application that you are updating to. Go to a command prompt and run the following command:

```
node --version
```

Compare the output of this command with the version of Node JS that is in the new installation. On Windows, the Node JS installer is located in <live-install-folder>\server-sw\win32_x86_x64\, and on Linux, it is located in <dr-install-folder>/server-sw/linux_x86_x64/. If the version is not the same, you should uninstall Node JS (using the normal procedure for uninstalling installed programs) and then install the new Node JS version.

- e. Copy the following files from the old installation or from the backup location to the new installation folder:
 - dr-config.json file from the old installation (<live-install-folder>\DR_Install\) to the new installation (<live-install-folder-new>\DR_Install\)
 - config folder from (<live-install-folder>\lib_server\) to (<live-install-folder-new>\lib_server\)
 - user_config.js file from (<live-install-folder>) to (<live-install-folder-new>)

- f. Open an administrative command shell and navigate to cd <live-install-folder>\DR_Install\, and run the following command:
node deploy-dr.js

- g. You can delete the old install folder (<live-install-folder>) at this point.

The deployment script first stops the currently running HCL Design Room LIVE! web server. However, it does not stop the PM2 daemon process or the Mongo database. That is the reason you need to perform step 2 if you want to avoid lingering processes that prevent the old installation folder from being deleted.

The deployment script then starts the new version of the server. The version of Node JS, Mongo, and PM2 remains the same.

Chapter 3. Uninstalling HCL Design Room LIVE!

There is no script for uninstalling the HCL Design Room LIVE! web server, so you need to perform the following steps manually (from an administrative command prompt):

Procedure

Run the following commands from the command prompt:

1. `pm2 delete DesignRoomLive`
Stops the HCL Design Room LIVE! web server and deletes it from PM2 list of managed processes.
2. `pm2 kill`
Stops the PM2 daemon process.
3. `npm uninstall -g pm2`
Uninstalls PM2. If it is still available in the PATH after this command, you must manually remove the PM2 files. Use `where pm2` (Windows) or `which pm2` (Linux) to find out where it is located.
4. Enter the Mongo shell by running `<mongo-install>\bin\mongo`, where `<mongo-install>` is specified either by `mongo-win-install-folder` or `mongo-linux-install-folder` in the file `<live-install-folder>\DR_Install\dr-config.json` folder.

Run the following commands in the Mongo shell for stopping the Mongo database:

```
use admin
db.shutdownServer()
```

5. On Windows, you can uninstall Mongo using the following command:
`msiexec /uninstall <live-install-folder>\DR_Install\downloaded\mongo-win.msi`

On Linux, the commands for uninstalling Mongo depend on your Linux distribution; see the Mongo documentation.

6. Now you can remove the HCL Design Room LIVE! server by deleting the `<live-install-folder>` folder.

Chapter 4. Advanced configurations

User can customize the following configurations by editing the `dr-config.json` file that is available in the `<live-install-folder>\DR_Install` folder.

- Mongo installation folder can be updated as follows: `mongo_win_install_folder` OR `mongo_linux_install_folder` as needed based on the operating system.
- Mongo data folder can be updated as follows: `mongo_win_data_folder` OR `mongo_linux_data_folder` as needed based on the operating system.

Log files

You can view the log messages of the HCL Design Room LIVE! web server and the Mongo database in their respective log files.

- By default, the output printed by the HCL Design Room LIVE! web server is directed to the file `<live-install-folder>\DR_Install\live-out.log` and the error messages are printed to the file `<live-install-folder>\DR_Install\live-err.log`. You can use different log files by editing the properties `out_file` and `error_file` in `<live-install-folder>\DR_Install\pm2.config.js`.
- Log messages are also produced by the Mongo database. By default, these messages are printed to `<live-install-folder>\DR_Install\mongod.log`. You can use a different log file by editing the property `mongo-log-file` in `<live-install-folder>\DR_Install\dr-config.json`.

SSL Certification

The HCL Design Room LIVE! web server uses HTTPS, and you need to decide which SSL certificate it should use. You can choose one of the following two options.

Certificate configuration

- Use your own SSL certificate. This is the recommended approach for a HCL Design Room LIVE! installation that is intended for a production environment. The connection to the server will be secure and users will not get any warnings from the browser.

In some instances, you might have to extract the `.crt` and `.key` files from the `.pfx` file, so that the certificate and the decrypted key files are available separately in a plain text format. For more information, see “Extracting the certificate and keys from a `.pfx` file” on page 26.

- Use a self-signed SSL certificate. You can use this approach if you don’t yet have your own SSL certificate to use. However, in this case users will get warnings from the web browser about the use of a self-signed certificate as the server will not be considered secure.

The HCL Design Room LIVE! installation contains a self-signed certificate in `<live-install-folder>\lib_server\config`. Replace this certificate `drlive.crt` and `drlive.key` files with your own self-signed certificate and key. The web server will use that certificate by default.

Port configuration

By default, HCL Design Room LIVE! uses the port 443. To change the default port, update the SSL port parameter `sslPort:<portnumber>` in the `<live-install-folder>\user_config.js` file.

Extracting the certificate and keys from a .pfx file

The .pfx file, which is in a PKCS#12 format, contains the SSL certificate (public keys) and the corresponding private keys. Sometimes, you might have to import the certificate and private keys separately in an unencrypted plain text format to use it on another system. This topic provides instructions on how to convert the .pfx file to .crt and .key files.

Extract .crt and .key files from .pfx file

PREREQUISITE: Ensure OpenSSL is installed in the server that contains the SSL certificate.

1. Start OpenSSL from the `OpenSSL\bin` folder.
2. Open the command prompt and go to the folder that contains your .pfx file.
3. Run the following command to extract the private key:

```
openssl pkcs12 -in [yourfile.pfx] -nocerts -out [drlive.key]
```

You will be prompted to type the import password. Type the password that you used to protect your keypair when you created the .pfx file. You will be prompted again to provide a new password to protect the .key file that you are creating. Store the password to your key file in a secure place to avoid misuse.

4. Run the following command to extract the certificate:

```
openssl pkcs12 -in [yourfile.pfx] -clcerts -nokeys -out [drlive.crt]
```
5. Run the following command to decrypt the private key:

```
openssl rsa -in [drlive.key] -out [drlive-decrypted.key]
```

Type the password that you created to protect the private key file in the previous step.

The .crt file and the decrypted and encrypted .key files are available in the path, where you started OpenSSL.

Convert .pfx file to .pem format

There might be instances where you might have to convert the .pfx file to .pem format. Run the following command to convert to PEM format.

```
openssl rsa -in [keyfile-encrypted.key] -outform PEM -out [keyfile-encrypted-pem.key]
```

Note: Ensure that the name of the certificate file is `drlive.crt` and the private key file is named `drlive.key`. The renamed `drlive.crt` and `drlive.key` files must be placed in the `<live-install-folder>\lib_server\config` folder.