



# HP Integration Bridge

Software Version: 1.02

## Installation Guide for Windows

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## HP Integration Bridge overview

The HP Integration Bridge is a software component installed on the customer system to mediate between Agile Manager and on-premise applications located behind firewalls, such as HP ALM, enabling two-way communication between the two.

When you install the Integration Bridge, you install both an Integration Bridge application, and a Windows service that manages the application. The service makes sure that the Integration Bridge is automatically started when your system starts.

### Integration Bridge system requirements

Verify that your system has the following minimum system requirements to install the Integration Bridge:

<b>Operating system</b>	One of the following: <ul style="list-style-type: none"><li>• Windows Server 2008 R2 SP1 64-bit</li><li>• Windows Server 2012 R2 SP1 64-bit</li></ul>
<b>Memory</b>	8 GB
<b>Free disk space</b>	80 GB

**Note:**

- The Integration Bridge must be installed to a path named only with ASCII characters.
- The installation includes the Integration Bridge application, and the corresponding Windows service.

## Integration Bridge tasks

To start using NextGen Synchronizer, download and install the Integration Bridge, and then define credentials for connecting to ALM.

For details, see:

- ["Download and install the bridge" on page 7](#)
- ["Manage connection setup" on page 14](#)

Continue by creating synchronization links in Agile Manager. For details, see the Agile Manager Help Center (**Help > Help on This Page**).

See the following maintenance topics as needed.

- ["Integration Bridge security" on page 11](#)
- ["Start and stop the Integration Bridge" on page 27](#)
- ["Uninstall/Remove the Integration Bridge" on page 29](#)
- ["Upgrade the Integration Bridge" on page 30](#)
- ["Integration Bridge FAQs and troubleshooting" on page 32](#)

## Download and install the bridge

Download the Integration Bridge from Agile Manager and install it on a computer that can access both Agile Manager and ALM. The bridge communicates with both applications, enabling data synchronization between the two.


You can install multiple bridges. This is only necessary if you need to synchronize Agile Manager with ALM projects that reside on different networks, or if you define a large number of synchronization links and you want to distribute the load between multiple bridges.



**Note:** Install the bridge as a Windows administrator user. You can run the bridge as a non-administrator user with the relevant permissions.

For more detail, see ["Security recommendations" on page 12](#).

### Download the bridge from Agile Manager

Click **Configuration**  on the top right of the page, and select **Integrations** from the navigation menu on the left.

Tab: Integrations > Synchronizer. This tab is visible to **Integration Administrators** only.



**Tip:** If you have just assigned yourself to the Integration Administrator role, you do not need to log out and log in again. Simply refresh your browser window to access the **Integrations** configuration area.

During the Integration Bridge installation, you will need to enter credentials for the Agile Manager user assigned to the **Integration Bridge** role. The Integration Bridge uses these credentials to access Agile Manager.

Assign a user to the Integration Bridge role on the **Site > Users** configuration page.

On the **Integrations > Synchronizer** configuration page, do one of the following:

Installation	Instruction
If this is the first time you are installing the bridge	In the checklist, click the link in the second step to download the bridge, according to your operating system.
If you are installing an additional bridge or performing an upgrade	Select <b>More Actions &gt; Download Integration Bridge &gt; For Windows</b>

## Install the Integration Bridge

1. On the computer where you want to install the bridge, extract the downloaded zip file (**hp-integration-bridge-windows.zip**). You must extract this zip file to a path named only with English characters.

The zip file contains the following:

- The installation executable file.
  - A configuration file (**server-connection.conf**) containing the URL that the bridge will use to connect to Agile Manager.
  - The HP Integration Bridge Installation Guide, in which you can find installation instructions and more.
2. Run the **hp-integration-bridge.exe** file to begin the installation. When the wizard opens, click **OK** to get started.
  3. Follow the instructions in the installation process to complete the installation.


When provided, accept the default values, which are configured to connect to your workspace.

### Note:

- The Integration Bridge must be installed to a path named only with ASCII characters, and must not contain consecutive spaces.
- If you select the **Modify an Existing Instance** option, the bridge you select is uninstalled. After uninstalling, run the installation again to install a new instance.



- In the **Setup connection** step for configuring the connection to Agile Manager:

Settings	Description
<b>Bridge name</b>	Define a name for the bridge.
<b>URL</b>	<p>The URL of your Agile Manager site.</p> <p><b>Format:</b> http(s)://&lt;hostname or IP address&gt;:&lt;port number&gt;/agm</p> <p>This URL will be used in email notifications, such as to Integration Administrators and when creating URL attachments in ALM.</p> <div>  <p><b>Tip:</b> We recommend ensuring that this URL is accessible to email recipients and from the ALM client.</p> </div> <p>By default, this URL is provided for you, from the downloaded <b>server-connection.conf</b> file.</p> <p>It is stored in the <b>&lt;HP Integration Bridge installation folder&gt;\product\conf</b> folder.</p>
<b>Site ID</b> (Read only)	<p>The site ID of the Agile Manager site.</p> <p>You can find the site ID in your Agile Manager's URL, in the tenant ID attribute. For example: <b>TENANTID=123456789</b>.</p> <p>This is also stored in the <b>server-connection.conf</b> file.</p>
<b>Login name and Password fields</b>	<p>Enter credentials for the user assigned to the <b>Integration Bridge</b> role.</p> <p>If you need to modify these credentials later on, see <a href="#">"Set Agile Manager credentials" on page 23</a>.</p>
<b>Proxy server</b>	<p>If you will be using a proxy server to access Agile Manager, select <b>Use proxy server</b>.</p> <p>Enter details for the proxy server and the user who will be logging into the proxy server:</p> <ul style="list-style-type: none"> <li>◦ <b>Host.</b> A valid address for the proxy server.</li> <li>◦ <b>Port.</b> A valid port number (integer, between 1-65535)</li> </ul> <p>For details about modifying the proxy credentials later, see <a href="#">"Configure a proxy for Agile Manager connections" on page 24</a>.</p>



**Tip:**

You can click **Test Connection** to verify that the bridge can connect to Agile Manager.

After you enter this information, the connection to Agile Manager is tested. If the test fails, you can reenter the connection settings or continue the bridge installation and modify the credentials later.

- In the **Setup service** step for configuring the HP Integration Bridge service, accept the default service name and port number, or modify as needed.
4. When the installation is finished, the **Installation complete** message is displayed. Press **ENTER** to quit the installer.
  5. The Endpoint Credentials Manager application opens automatically. Define credentials for connecting to ALM, as described in ["Manage connection setup" on page 14](#).

**Note:** You must configure ALM credentials before you configure your links.

If the credentials manager does not open automatically, you can open it manually or configure the credentials using the CLI. For details, see ["Manage connection setup" on page 14](#).

In Agile Manager, the new bridge is identified within a few moments. If you do not see your new bridge, refresh the page. From there, click **Create synchronization links** to start creating your links.

#### See also

["Upgrade the Integration Bridge" on page 30](#)

# Integration Bridge security

The Integration Bridge does not expose any internal information. Additionally, HP application JAR files are signed by HP, helping to validate the code's origin.

This topic includes:

- ["Communication via SSL" below](#)
- ["Connections using a certificate that is not signed by a well-known Certificate Authority" below](#)
- ["Password encryption" on the next page](#)
- ["Security recommendations" on the next page](#)

## Communication via SSL

Communication between the Integration Bridge and Agile Manager is secured by SSL.

The bridge logs in to Agile Manager using the user credentials provided during installation, or later as described in ["Set Agile Manager credentials" on page 23](#).

### Connections using a certificate that is not signed by a well-known Certificate Authority

If you connect to a secured ALM server using a certificate that is not signed by a well-known Certificate Authority, you must establish trust for the certificate.

To establish this trust, import the issuer's certificate to the JRE's truststore in the following directory:

**<Integration Bridge installation directory>\product\util\3rd-party\jre1.7.0\_51\jre\lib\security\**

Do the following:

1. With Agile Manager or ALM open in your browser window, export the certificate from the browser, and save it to a file named **server.cer**.
2. On the Integration Bridge machine, place the **server.cer** file in the **<Integration Bridge installation>\product\util\3rd-party\jre1.7.0\_51\jre\bin** directory.
3. Use the keytool command from the **<Integration Bridge installation>\product\util\3rd-party\jre1.7.0\_51\jre\bin** directory to import the **server.cer** file to the **<Integration Bridge installation>\product\util\3rd-party\jre1.7.0\_51\jre\lib\security\cacerts** directory.

**For example:**

```
keytool.exe -import -v -trustcacerts -alias <alias>  
-file server.cer -storepass <password> -keystore <Integration Bridge  
installation>\product\util\3rd-party\jre1.7.0_51\jre\lib\security\cacerts
```

**Note:** You may need to repeat this command for the rest of the certificate chain, using a

different alias each time.

4. Restart the Integration Bridge.


## Password encryption

Passwords for connecting to endpoints are encrypted and saved on the customer's machine, preventing credentials from being transferred to another machine.

The encryption method uses keys that are randomly generated during installation. The bridge uses AES 128 as the main encryption method.

## Security recommendations

Security recommendations	
<b>Download sources</b>	Do not download the Integration Bridge installation file or updates from unknown sources.
<b>Integration Bridge machine</b>	Install the Integration Bridge on a dedicated, hardened machine.
<b>Integration Bridge network</b>	<p>Deploy the Integration Bridge in an isolated network, with a firewall between the bridge and the target on-premise application.</p> <ul style="list-style-type: none"><li>• Port 443 must be open for communication with Agile Manager.</li><li>• Additional ports may be required to be opened for internal communications with other on premise applications.</li></ul>

Security recommendations	
<b>Integration Bridge permissions</b>	<p>By default, the Integration Bridge service runs using the Windows Local System service user.</p> <p>To increase system security, assign a simple user to run the Integration Bridge.</p> <ul style="list-style-type: none"> <li>• Install the Integration Bridge in a folder <b>other than</b> the <b>Program Files</b> folder. This will enable you to grant the simple user permissions on the Integration Bridge installation folder.</li> <li>• Grant the user full permissions (Read/Write/Execute) on the installation folder.</li> <li>• Grant the user permissions to manage the Integration Bridge Windows service.</li> <li>• Open the Windows Service Manager, modify the HP Integration Bridge service to run using the simple user's account and then restart the service.</li> </ul> <div>  <p><b>Tip:</b> You can protect the Integration Bridge installation folder by granting permissions to that folder only to administrators, the Local System service user, and the dedicated user you created.</p> </div>
<b>Integration Bridge user</b>	The Agile Manager user with the Integration Bridge role should not have any other additional roles.
<b>On-premise application users</b>	When defining permissions for users of on-premise applications that communicate with Agile Manager, such as ALM users, limit permissions to specifically required operations only.

## Manage connection setup

Credentials are used to provide secure, two-way communication between the Integration Bridge and Agile Manager or ALM.

### Endpoint Credentials Manager

The Endpoint Credentials Manager application opens automatically after installing the Integration Bridge. This application is used to manage ALM credentials.

**Note:**

You must set ALM credentials before synchronizing entities between Agile Manager and ALM, and modify them later on if these credentials change.



If the Endpoint Credentials Manager application does not open automatically, or if you need to modify credentials again later, open the application manually. The Endpoint Credentials Manager is installed together with the Integration Bridge.

This section includes the following:

### Set ALM credentials (Endpoint Credentials Manager)



Perform this procedure as a user with permissions to run the Integration Bridge.

If you are working on a Linux machine that does not support GUI, set the ALM credentials using the Command Line Interface (CLI).

1. On the Integration Bridge machine, open the Endpoint Credentials Manager application as described above.
2. Click  **New** to create a set of credentials.
3. Enter the credentials on the right, and then click  **Save** .

Field	Description
<b>Display name</b>	The name used to identify this particular credentials record when configuring a link in Agile Manager.
<b>User</b>	The name of the user connecting to ALM.
<b>Password</b>	The password used to connect to ALM.
<b>Confirm password</b>	Enter the password a second time to confirm it.

Credentials are encrypted and stored on your system in the **credentialsStore.xml** and **bridgeCredentialStore.xml** files, located in the **<Bridge\_installation\_directory>\product\conf** folder.

- To update a credential record, select it and make your changes on the right. Then click  **Save**.
- To delete a credential record, select it, and click  **Delete**.

### Connecting to ALM using SiteMinder single sign-on (SSO)

If the Integration Bridge needs to connect to ALM using SiteMinder single sign-on (SSO):

- Configure SiteMinder to support basic authentication.
- You may need to change the CSSChecking parameter in the SiteMinder settings to allow the characters **>**, **<**, and **'** in URLs. Otherwise, SiteMinder may reject communication messages sent by NextGen Synchronizer and synchronizations may fail.

## Set ALM credentials (CLI)

Use the **credentials\_mng\_console** command line tool to set the credentials used to connect to ALM.

You must set ALM credentials before synchronizing entities between Agile Manager and ALM, and later on if these credentials change.



**Note:** Alternatively, set ALM credentials using the Endpoint Credentials Manager. For details, see ["Manage connection setup" on the previous page](#).

To open the **credentials\_mng\_console** command line tool:

1. Open the **<Bridge\_installation\_directory>\product\util\opb** directory.
2. Run the **credentials\_mng\_console.bat** file.

The **credentials\_mng\_console** tool supports the following commands:

"list"	"listEndpointTypes"	"listCredentialIds"
"listEndpointTypeParams"	"create"	"update"
"delete"	"help"	

list

Lists available credential records for connecting to ALM from the Integration Bridge.

Usage

```
credentials_mng_console.bat list -endpoint <ENDPOINT TYPE>
```

Parameters

-endpoint <ENDPOINT TYPE>	Endpoint type name, such as an ALM version (optional).  This type name must be a value available in the "listEndpointTypes" command.
---------------------------	--

Sample Results

```
=====
Endpoint type : sample-endpoint-type-11.5
ID : 9460b7
Name : sample credentials record
User : sample username
Password : *****
Parameters :
Key | Value
-----
sample.secret.property | *****
sample.url.property | 123
```



## listEndpointTypes

Lists available ALM endpoint types accessible to the Integration Bridge, such as ALM versions. You can filter the endpoints by type name.

### Usage

```
credentials_mng_console.bat listEndpointTypes -endpoint <ENDPOINT TYPE>
```

### Parameters

-endpoint <ENDPOINT TYPE>	Endpoint type name (optional)
---------------------------	-------------------------------

### Sample Results

```
Endpoint types :  
1. alm
```

## listCredentialIds

Lists all ALM credential record IDs and the ALM endpoint type related to each credential ID.

### Usage

```
credentials_mng_console.bat listCredentialIds -endpoint <ENDPOINT TYPE>
```

### Parameters

-endpoint <ENDPOINT TYPE>	Endpoint type name, such as the ALM version (optional).  This type name must be a value available in the "listEndpointTypes" command.
---------------------------	---

### Sample Results

```
Endpoint type : alm-11.5  
Name | ID :  
1. sample credentials record name | 11e7  
=====
```

```
Endpoint type : sample-endpoint-type-11.5  
Name | ID :  
1. sample credentials record name | 21e0
```

```
2. sample credentials record #2 name | 7e0
Endpoint type : alm-11.5
Name | ID :
1. sample credentials record name | 11e7
=====
Endpoint type : sample-endpoint-type-11.5
Name | ID :
1. sample credentials record name | 21e0
2. sample credentials record #2 name | 7e0
```

**listEndpointTypeParams**

Lists the specific parameters required for saving credentials for each ALM endpoint type.

**Usage**

```
credentials_mng_console.bat listEndpointTypeParams -endpoint <ENDPOINT TYPE>
```

**Parameters**

-endpoint <ENDPOINT TYPE>	Endpoint type name, such as an ALM version (optional).  This type name must be a value available in the "listEndpointTypes" command.
---------------------------	--

**Sample Results**

```
=====
Endpoint type   : sample-endpoint-type-11.5
Output format:
Parameter:
Label:
Description:
Mandatory:
-----
Endpoint type specific parameters:
Parameter: sample.url.property
```

Label: Server URL  
Description: URL address for sample server  
Mandatory: true  
Parameter: sample.secret.property  
Label: Secret key  
Description: Secret key for sample server  
Mandatory: false

## create

Creates a credentials record for accessing ALM from the Integration Bridge.

### Usage

```
credentials_mng_console.bat create -file <path to data file> -user <USER> -  
pass <PASSWORD> -endpoint <ENDPOINT TYPE> -name <CREDENTIALS RECORD NAME> -  
param <KEY> <VALUE> -param <KEY> <VALUE>
```

### Usage example - generic

```
credentials_mng_console.bat create -user <USER> -pass <PASSWORD> -endpoint  
sample-endpoint-type-11.5 -name <CREDENTIALS NAME> -param sample.url.property  
<PARAMETER_VALUE> -param sample.url.property <PARAMETER_VALUE>
```

### Usage example - ALM specific

```
credentials_mng_console.bat create -user <USER> -pass <PASSWORD> -endpoint  
alm-11.5 -name <CREDENTIALS NAME>
```

### Parameters

-file <FILE>	Read parameters from the <a href="#">property</a> file (optional). Parameters will be overwritten if they are specified in the console.
-user <USER>	User name
-pass <PASSWORD>	Password
-endpoint <ENDPOINT TYPE>	Endpoint type name, such as an ALM version. This type name must be a value available in the <a href="#">"listEndpointTypes"</a> command.

<b>-name &lt;CREDENTIALS NAME&gt;</b>	Credentials record name
<b>-param &lt;KEY&gt; &lt;VALUE&gt;</b>	Custom parameters (optional)
<b>-replace</b>	Replace all existing parameters with input parameters (optional)

The property file is a text file that describes the credential's properties. The file format is:

```
endpoint=<ENDPOINT TYPE>
name=<NAME>
user=<USER>
pass=<PASSWORD>
customParam1=value1
customParam2=value2
```

### Sample Results

```
endpoint=<ENDPOINT TYPE>
name=<NAME>
customParam1=value1
customParam2=value2
```

## update

Updates an existing credentials record for accessing ALM from the Integration Bridge.

### Usage

```
credentials_mng_console.bat update -user <USER> -pass <PASSWORD> -
credentialsId <CREDENTIALS ID> -endpoint <ENDPOINT TYPE> -param <KEY> <VALUE>
-param <KEY> <VALUE> -replace
```

### Usage example

```
credentials_mng_console.bat update -user <USER> -pass <PASSWORD> -
credentialsId <CREDENTIALS ID> -endpoint alm-11.5 -replace
```

### Parameters

-file <FILE>	Reads parameters from the <a href="#">property</a> file (optional). Parameters will be overwritten if they are specified in the console.
-user <USER>	New user name
-pass <PASSWORD>	New password
-credentialsId <CREDENTIALS ID>	The credentials record ID you want to update
-endpoint <ENDPOINT TYPE>	New endpoint name, such as an ALM version. This type name must be a value available in the <a href="#">"listEndpointTypes"</a> command.
-param <KEY> <VALUE>	Custom parameters (optional)
-replace	Replace all existing parameters with input parameters (optional)

### delete

Deletes an ALM credential record.

**Note:** You cannot delete a single parameter from a credential record. You can only delete an entire credential record.

### Usage

```
credentials_mng_console.bat delete -endpoint <ENDPOINT TYPE> -credentialsId  
<CREDENTIALS ID>
```

### Parameters

-endpoint <ENDPOINT TYPE>	Endpoint type name, such as the ALM version. This type name must be a value available in the <a href="#">"listEndpointTypes"</a> command.
-credentialId <CREDENTIALS ID>	The credentials record ID

## help

Provides help for the current command when configuring ALM credentials for the Integration Bridge.

### Usage

```
credentials_mng_console.bat help
```

## Configure a proxy for ALM connections

By default, the connection between the Integration Bridge and ALM is not authenticated by proxy. To configure a proxy, do the following:

### Note:

Perform this procedure as a user with permissions to run the Integration Bridge.

1. In the **<Integration Bridge installation directory>\product\domain\alm\conf** folder, open the **proxy.properties** file.
2. To use a proxy, change the **setProxy** value to **true**.  
If this value is **false**, proxy settings are ignored and no proxy is used.
3. Set the proxy host and port values:
  - a. Change the **proxyHost** value to the proxy IP address or server name.
  - b. Change the **proxyPort** value to the relevant port for the proxy.When **proxyHost** has a value, **proxyPort** is mandatory.

### Example

```
setProxy=true  
proxyHost=123.45.6.7  
proxyPort=1234  
proxyUser=  
proxyPass=
```

4. If the proxy requires authentication:
  - a. Change the **proxyUser** value to the proxy user name.
  - b. Change the **proxyPass** value to the proxy password.When **proxyUser** has a value, **proxyPass** is mandatory.

### Example

```
setProxy=true  
proxyHost=123.45.6.7  
proxyPort=1234  
proxyUser=MyUserName  
proxyPass=MyPassword
```

5. Save the **proxy.properties** file.
6. Restart the Integration Bridge. For details, see ["Start and stop the Integration Bridge" on page 27](#).



**Tip:** If authentication fails, verify that the contents of the **proxy.properties** file are syntactically correct and contain valid values.

## Set Agile Manager credentials

Use the **bridgeAuthentication** command line tool to set the credentials used to connect to Agile Manager.

As an administrator, or as a user with permissions to run the Integration Bridge:

1. Open the **<Bridge\_installation\_directory>\product\util\opb** directory.
2. Run the **bridgeAuthentication.bat** file.



**Note:** Set Agile Manager credentials only if the credentials change from when you first installed the Integration Bridge.


The **bridgeAuthentication** tool supports the following commands:

["setAuth" on the next page](#)

["help" on the next page](#)

setAuth

Sets credentials for connecting to Agile Manager from the Integration Bridge.

**Note:** The user logging in to Agile Manager must be assigned to the Agile Manager **Integration Bridge** role.  
  
For security purposes, the **Integration Bridge** user should not have any additional roles.

Usage

```
bridgeAuthentication.bat setAuth -user <USER> -pass <PASSWORD>
```

Parameters

-user <USER NAME>	The name of the user connecting to Agile Manager.
-pass <PASSWORD>	The password of the user connecting to Agile Manager.
-emptyPass	Sets an empty password.

help

Provides help for the current command when configuring Agile Manager credentials for the Integration Bridge.

Usage

```
bridgeAuthentication.bat help
```

# Configure a proxy for Agile Manager connections

Use the **proxyConfiguration** command line tool to set credentials for accessing Agile Manager through a proxy server.

1. Open the **<Bridge\_installation\_directory>\product\util\opb** directory.
2. Run the **proxyConfiguration.bat** file.



**Note:**

- Set proxy server credentials only if the credentials change from when you first installed the Integration Bridge.
- After making any changes, restart the Integration Bridge. For details, see ["Start and stop the Integration Bridge" on page 27](#).

The **proxyConfiguration** tool supports the following commands:

"setAddress"

```
"removeProxyConfiguration "
```

"setAuth"

"removeAuth"

"help" on the next page

## setAddress

Sets a host and port for accessing Agile Manager through a proxy server.

## Usage

```
proxyConfiguration.bat setAddress -host <PROXY HOST> -port <PROXY PORT>
```

## Parameters

<b>-host</b> <PROXY HOST>	The address of the proxy server host.
<b>-port</b> <PROXY PORT>	The port number of the proxy server.

## removeProxyConfiguration

Configures the Integration Bridge to access Agile Manager without a proxy server.

## Usage

```
proxyConfiguration.bat removeProxyConfiguration
```

## setAuth

Saves credentials for connecting to a proxy server, when accessing Agile Manager through a proxy server.

## Usage

```
proxyConfiguration.bat setAuth -user <USER> -pass <PASSWORD>
```

### Parameters

-user <USER NAME>	The name of the user connecting to the proxy server.
-pass <PASSWORD>	The password of the user connecting the proxy server.

### removeAuth

Deletes a set of credentials previously used to connect to Agile Manager through a proxy server.

### Usage

```
proxyConfiguration.bat removeAuth
```

### help

Provides help for the current command when configuring access to Agile Manager through a proxy server.

### Usage

```
proxyConfiguration.bat help
```

## NextGen Synchronizer proxy support

NextGen Synchronizer supports the following types of proxy authentication:

Between the Integration Bridge and...		Agile Manager	ALM
Forward	No authentication	√	√
	Basic authentication	√	√
Reverse	No authentication	√	√
	Basic authentication	x	x



**Note:** NTLM authentication is not supported for any types of proxy.

# Start and stop the Integration Bridge

If the Integration Bridge Windows service is installed, the Integration Bridge is automatically started when your system starts.

This topic describes how to manage the bridge activation manually.

Perform this procedure as a user with permissions to run the Integration Bridge.

**Note:**

- The Integration Bridge service is installed as part of the Integration Bridge installation.

```
<Bridge_installation_directory>/product/bin/HPIntegrationBridge.sh  
install
```
- The bridge must be running for Agile Manager to communicate with on-premise applications such as ALM.
- If you have upgraded your ALM projects, you'll need to restart the bridge manually after upgrade to continue synchronizing data between ALM and Agile Manager.

Start the bridge	Search or browse for, and select the <b>StartHPIntegration Bridge</b> application.
Stop the bridge	Search or browse for, and select the <b>StopHPIntegration Bridge</b> application.
Manage the bridge using Windows Services	<ol style="list-style-type: none"><li>1. Run the <b>services.msc</b> command.</li><li>2. Select the <b>HPIntegration Bridge</b> service.</li><li>3. Stop or start the service as required. This starts and stops the bridge application as well.</li></ol>

## Manage the bridge from the command line

Use the **HPIntegrationBridge** command line tool:

1. Open the **<Bridge\_installation\_directory>\product\bin** directory.
2. Run the **HPIntegrationBridge.bat** file.


Use the following commands:


Task	Command
<b>Start the bridge</b>	HPIntegrationBridge.bat start
<b>Stop the bridge</b>	HPIntegrationBridge.bat stop
<b>Restart the bridge</b>	HPIntegrationBridge.bat restart
<b>Install the Integration Bridge service</b>	HPIntegrationBridge.bat install
<b>Remove the Integration Bridge service</b>	HPIntegrationBridge.bat remove

## Uninstall/Remove the Integration Bridge

Uninstall a bridge if you no longer need it, or before upgrading.

Remove a bridge from the Link Configuration navigation tree if you no longer need it, or are no longer using it.

1. In the Agile Manager **Integrations** >  **Link Configuration** page, expand the navigation tree on the left.  
Verify that the bridge has no links configured. If there are any existing links, remove them.  
Select the link in the tree and then select **More Actions** > **Remove**.
2. Close all tools, folders, and files related to the Integration Bridge, such as the Endpoint Credentials Manager.
3. Do the following:

Task	Description
<b>Uninstall the bridge</b>	<p>As a Windows administrator user, uninstall the Integration Bridge using the <b>Start</b> menu option or the Windows Control Panel.</p> <p>During the uninstall process, select <b>Remove credentials</b> if you also want to remove any associated credentials. By default, credentials are kept, and you can use them in a subsequent installation or upgrade.</p>
<b>Remove the bridge from the Agile Manager user interface</b> (optional)	<p>In Agile Manager, select the bridge name and either select <b>Remove Bridge</b> from the context menu, or select <b>More Actions</b> &gt; <b>Remove</b>.</p> <div> <b>Caution:</b> Only remove the bridge from the user interface if you have no intention of recovering it.</div> <p>You cannot recover a bridge removed from the NextGen Synchronizer, even if you have not yet uninstalled it.</p>

When you uninstall the Integration Bridge, properties customized in the **server-connection.conf** file are deleted.

The information in the **server-connection.conf** file is backed up in the **server-connection.bak** file. If you need to use this information later, such as to upgrade the bridge, rename the backup file and copy it to a folder for a new installation.

For more details, see ["Upgrade the Integration Bridge" on the next page](#).

# Upgrade the Integration Bridge

Upgrade the Integration Bridge using one of the following methods:

- "Upgrade an existing bridge on the same server as the previous bridge" below
- "Upgrade the Integration Bridge, and install it in new location" on the next page

Both upgrade methods retain the configured endpoint credentials.



**Note:** If your Integration Bridge uses HTTPS to communicate with Agile Manager or ALM, you need to reinstall the certificate after upgrading the bridge. For details, see ["Connections using a certificate that is not signed by a well-known Certificate Authority" on page 11](#).

## Upgrade an existing bridge on the same server as the previous bridge

This procedure registers the upgraded bridge as an existing bridge.


1. Uninstall the Integration Bridge, as described in ["Uninstall/Remove the Integration Bridge" on the previous page](#). During the uninstall process, do *not* select **Remove credentials**.
2. Download the new version of the Integration Bridge from the **Integrations** > **Link Configuration** page.  
Select **More Actions** > **Download Integration Bridge** > **For Windows**
3. Extract the downloaded zip file (**hp-integration-bridge-windows.zip**) to a new folder.
4. Copy values from the previous installation to the new installation. Do the following:
  - a. In the installation directory of the previous version, access the **\product\conf\server-connection.bak** file.
  - b. In a parallel window, browse to the **server-connection.conf** file downloaded with the new version of the Integration Bridge, and open it for editing.
  - c. Copy the **agent.guid** property and its value from the previous installation file, and append it to the new file. Save the new file.
5. Run the newly downloaded **hp-integration-bridge.exe** to begin the installation.

During the installation, on the **Select installation** folder screen, select the installation folder that was used for the previous version.

For more details, see ["Download and install the bridge" on page 7](#).

## Upgrade the Integration Bridge, and install it in new location

This procedure installs the upgraded Integration Bridge in a new directory on the same server as the previous version, or on an entirely new machine.

1. Uninstall the Integration Bridge, as described in ["Uninstall/Remove the Integration Bridge" on page 29](#). During the uninstall process, do *not* select **Remove credentials**.
2. Download the new version of the Integration Bridge from the **Integrations** >  **Link Configuration** page.  
Select **More Actions** > **Download Integration Bridge** > **For Windows**
3. Extract the downloaded zip file (**hp-integration-bridge-windows.zip**) to a new folder.
4. Copy files and values from the previous installation to the new installation. Do the following:
  - a. In the directory where you want to install the new version, create the following folder structure:**product\conf**
  - b. Copy the following files from the installation directory of the previous version to the **conf** directory you created in the previous step.
    - **credentialsStore.xml**
    - **key.bin**
  - c. In the installation directory of the previous version, access the **\product\conf\server-connection.bak** file.
  - d. In a parallel window, browse to the **server-connection.conf** file downloaded with the new version of the Integration Bridge, and open it for editing.
  - e. Copy the **agent.guid** property and its value from the previous installation file, and append it to the new file. Save the new file.
5. Run the **hp-integration-bridge.exe** to begin the installation.

During the installation, in the **Select installation** step, select the directory where you want to install the new version.


For more details, see ["Download and install the bridge" on page 7](#).

# Integration Bridge FAQs and troubleshooting

This topic covers the following scenarios:

- "Bridge is not identified after installation" below
- "Bridge name is displayed in red in Agile Manager" below
- "Integration Bridge remains Offline even after stopping and starting the bridge" on the next page
- "Bridge connection status displayed as Unknown in Agile Manager" on the next page
- "Bridge cannot log in to Agile Manager or ALM" on the next page
- "A '403' or 'Authorization Exception' error occurs" on the next page
- "How do I modify the URL that the Integration Bridge uses to connect to Agile Manager?" on the next page

## Bridge is not identified after installation

If the bridge does not appear on the **Integrations > Synchronizer** or  **Link Configuration** page in Agile Manager after installation is complete, click **Refresh**, or refresh the browser page.

- If the bridge still does not appear, make sure the bridge is running. For details, see "[Start and stop the Integration Bridge](#)" on page 27.

The Integration Bridge Windows service attempts to start the bridge several times. If it is not successful, the application shuts down and the service stops.

- If the bridge does not start, make sure the value of the **Drmi.server.port** in the **<installation folder>\product\log\controller\wrapper.log** file is set to an available port.
- If the defined port is in use by another application when the Integration Bridge Windows service attempts to start the bridge, the following errors are printed to log files:

In the <b>wrapper</b> log file	java.rmi.server.ExportException: Port already in use: <port>
In the <b>controller</b> log file	java.rmi.NotBoundException: ControllerAPI

## Bridge name is displayed in red in Agile Manager

The Integration Bridge is down. In Agile Manager, click the bridge name to view the last time the bridge accessed the server.



## Integration Bridge remains Offline even after stopping and starting the bridge

If the connection status of your bridge is displayed as **Offline** in Agile Manager, try restarting the bridge. For details, see ["Start and stop the Integration Bridge" on page 27](#).

If the bridge remains offline, the Integration Bridge user's Agile Manager password may have expired.

Update the credentials that the bridge uses to connect to Agile Manager. For details, see ["Manage connection setup" on page 14](#).

## Bridge connection status displayed as Unknown in Agile Manager

Check the following log files in the Integration Bridge log folder (**<Bridge\_installation\_directory>\product\log\controller**):

- **controller.log**
- **wrapper.log**

Additionally, check the **<Endpoint type name>.log** file located in the **<Bridge\_installation\_directory>\product\log\<Endpoint type name>** directory.

## Bridge cannot log in to Agile Manager or ALM

The credentials defined for the endpoint may be incorrect. For details about verifying or modifying credentials, see ["Manage connection setup" on page 14](#).

## A '403' or 'Authorization Exception' error occurs

The user accessing Agile Manager from the Integration Bridge is not defined with the **Integration Bridge** role.

Modify this user's role in the Agile Manager configuration area (**Site > Users**).

**Note:** For security purposes, the **Integration Bridge** user should not have any additional roles.

## How do I modify the URL that the Integration Bridge uses to connect to Agile Manager?

The URL that the Integration Bridge uses to connect to Agile Manager is downloaded from Agile Manager with the Integration Bridge. In most cases, you should not need to modify this URL.

If the URL for your Agile Manager changed, do the following:

1. Navigate to the **<HP Integration Bridge installation folder>\product\conf** folder.
2. Open the **server-connection.conf** file for editing.
3. Update the **agm.base.url** property with the new URL.

Format: `http(s):<server hostname or IP address>:<port number>/agm`



**Tip:** If you can login to the Agile Manager that you want the Integration Bridge to use, login and then use the URL from your address bar. Take the URL from the beginning up to **/agm**. Ignore the rest.

4. Restart the bridge.

## Send Us Feedback



Let us know how we can improve your experience with the Installation Guide for Windows.

Send your email to: [SW-doc@hp.com](mailto:SW-doc@hp.com)

