# Blueprint 6.0

## Manual Upgrade Guide

# blueprint

# Blueprint Manual Upgrade Guide

## Overview

This *Blueprint Manual Upgrade Guide* is applicable if you have already installed Blueprint and you want to manually upgrade to a newer version. If you want to install Blueprint for the first time, please refer to the *Blueprint Installation Guide*. If you want to automatically upgrade Blueprint instead (recommended), see the *Blueprint Upgrade Guide*.

## Important Notices

### Upgrade duration

The upgrade can take up to 60 minutes for large databases.

### Backing up your data

It is strongly recommended that you back up your Blueprint data prior to starting the upgrade.

### Installing services

Job services can be manually installed if functionality for job execution and/or HP Quality Center legacy support is needed. For more information on installing job services, see Installing services.

> **Tip:** Job services are already installed and configured if **Job Services** is listed as an option in the *Instance Administration Console* within Blueprint. HP Quality Center is already installed if the 32-bit Blueprint service is listed in the *Services* window on your system (*Administrative Tools*).

## System Requirements

Please refer to the *Blueprint Installation Guide* for detailed information about Blueprint System Requirements.

## Upgrade Steps

- Step 1: Back up your data
- Step 2: Deploy the setup files to the web application server
- Step 3: Upgrade the Blueprint database and web site
- Step 4: Configure the Blueprint client

# Step 1: Back up your data

> **Warning**: It is strongly recommended that you back up your database and web site before starting the upgrade.

To back up your data before performing an upgrade:

1. Stop the Blueprint application pool and Blueprint web site.

   > **Note**: Your Blueprint application pool and Blueprint web site may have different names, depending on what you chose during installation.

2. Stop any installed components, including:

   - Job services
   - The HP Quality Center application pool and web site

   > **Note:** This step only applies if any job services or the HP QC web site have been installed.

3. Backup the following data:

   - Blueprint database
   - Blueprint website, including:
       - the `web.config` file
       - any custom dictionary files (`dictionary.dct`)
       - logging configurations (`Logging.config` file)
   - **JobExecutorService** folder. This includes the `BluePrintSys.RC.JobExecutor.exe.config` for each job service that has been installed.


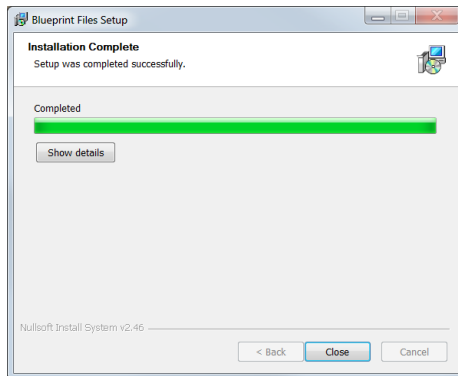# Step 2: Deploy the setup files to the web application server

Run `BlueprintFiles.exe` in the same folder where Blueprint is installed.

`BlueprintFiles.exe` extracts all of the application files and configuration utilities that are required for the Blueprint installation. After you open `BlueprintFiles.exe`, the following Files Setup Wizard appears:
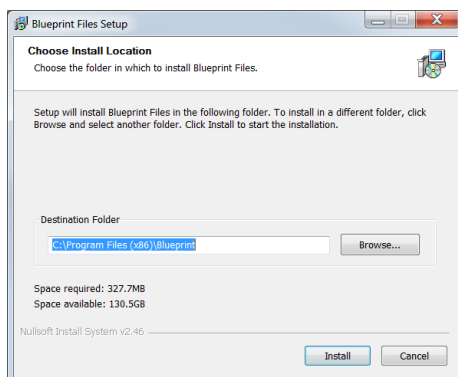


Click **Install** to continue.

When the installation has completed, the following dialog appears:



Click **Close**.

You have successfully deployed the setup files to the web application server.

## Step 3: Upgrade the Blueprint database and web site

1. Run the following command:

   > **Important**: The command must be run with Administrator privileges.

   ```
   blueprintdbcmd.exe /object DB /command UPGRADE /catalog Blueprint
   /datasource DATABASESERVER\INSTANCE01 /integratedsec FALSE /userid
   dbadmin /password "pAssw0rd"
   ```

2. Integrate any custom edits from the **web.config** backup into the new **web.config** file by merging the two files.

   Some parameters may include the connection string, ALM configuration path(s) and/or timeouts.

   For more information on editing **web.config** parameters, see the *IT Administration Guide*.

3. Integrate any custom edits from the **Logging.config** backup into the new **Logging.config** file by merging the two files.

4. Integrate any custom edits from the **BluePrintSys.RC.JobExecutor.exe.config** backup into the new **BluePrintSys.RC.JobExecutor.exe.config** file for any installed job service.

5. Copy and paste any custom **dictionary.dct** files into new dictionary folder.

6. Stop and then restart all installed job services.

7. Restart the HP Quality Center application pool and web site.

8. Restart the Blueprint application pool and Blueprint web site.

   > **Note**: Your Blueprint application pool and Blueprint web site may have different names, depending on what you chose during installation.

# Step 4: Configure the Blueprint client

## Configuring elevated trust in-browser

Blueprint must be configured to run with elevated trust in-browser before you can use some advanced features, such as:

- screen capture capabilities
- pasting images into diagrams
- Visio integration, such as importing and exporting diagrams
- rich text table integration with other applications

Elevated trust in-browser can be configured manually on each client machine, or the configurations can be pushed to Windows computers in a centralized manner.

**Using group policy to push the elevated trust-in browser configurations to Windows computers in a centralized manner**

The recommended way to configure Blueprint to run with elevated trust in-browser is to use Group Policy. Group Policy allows IT Administrators to push configurations to Windows computers in a centralized manner.

For overview information about Group Policy, refer to Microsoft's Group Policy documentation at: http://technet.microsoft.com/en-us/windowsserver/bb310732.aspx.

### To configure Blueprint to use elevated trust in-browser, your Group Policy configuration must do the following:

1. Set one of the following registry values:

    - On 32-bit computers:
      Set the **HKEY_LOCAL_MACHINE\Software\Microsoft\Silverlight\AllowElevatedTrustAppsInBrowser** registry value to **0x00000001**.
    - On 64-bit computers:
      Set the **HKEY_LOCAL_MACHINE\Software\Wow6432Node\Microsoft\Silverlight\AllowElevatedTrustAppsInBrowser** registry value to **0x00000001**.

    To learn more about setting a registry value through Group Policy, please refer to the Microsoft documentation that explains how to configure a registry item at: http://technet.microsoft.com/en-us/library/cc753092.aspx.

2. Download the elevated trust in-browser package from the Blueprint Customer Portal.

3. Add the **publicBlueprintCertificate2017.cer** certificate to the Trusted Publishers Store.

    To learn more about adding a certificate through Group Policy, please refer to the Microsoft documentation that explains how to deploy certificates by using group policy (http://technet.microsoft.com/en-us/library/cc770315(v=ws.10).aspx).

**Manually configuring a computer to run with elevated trust in-browser**

**To configure Blueprint to run with elevated trust in-browser, perform the following steps on each client:**

1. Download the elevated trust in-browser configuration files.
2. Unzip the package and note the directory where the files are located.
3. Run `cmd.exe` as Administrator.

   1. Click the Windows **Start** menu and type **cmd.exe** into the search bar.
   2. Right-click the **cmd.exe** program that appears under the Programs heading and then select **Run as administrator**:
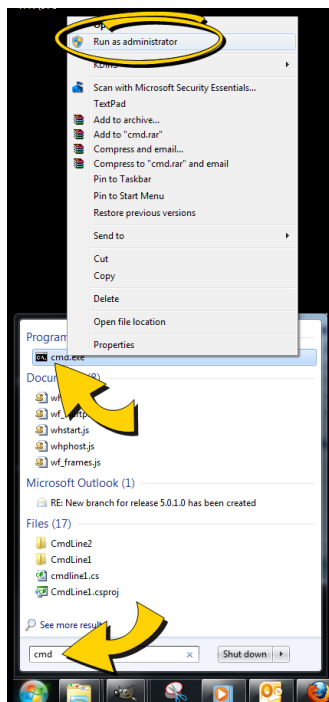
   

   3. When the confirmation dialog appears, click **Yes**.

      The `cmd.exe` application launches with Administrator privileges:

4. Use the `cd` command to navigate to the folder where you unzipped the files.

   For example:

   ```
   cd c:\temp\elevated_trust
   ```

5. Enter the following commands to allow elevated trust to run on your local machine:

   - For 64-bit operating systems:

     ```
     regedit.exe /s AllowElevatedTrustAppsInBrowser64.reg
     ```
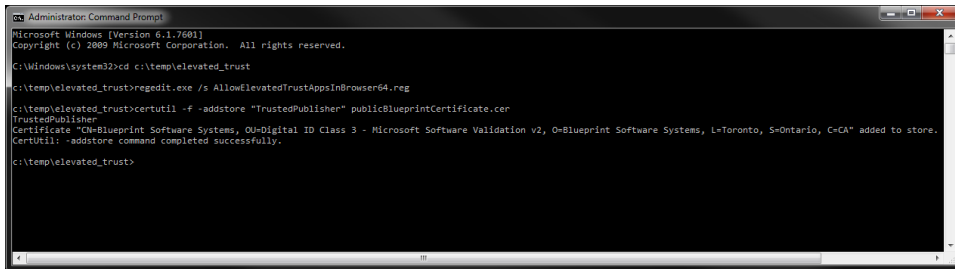
■ For 32-bit operating systems:

```
regedit.exe /s AllowElevatedTrustAppsInBrowser.reg
```

6. Run the following `certutil` command to apply the Blueprint public certificate:

```
certutil.exe -f -addstore "TrustedPublisher"
publicBlueprintCertificate2017.cer
```

Here is an example of the commands run on a 64-bit operating system:



7. Restart your web browser for the changes to take effect.

# Appendix

## Installing services

The following services are available to install if needed:

- **Job services (recommended)**

  This functionality is necessary to perform the following jobs in Blueprint: document generation, exporting artifacts to ALM systems and test generation.

- **Legacy support for HP Quality Center versions 12 and earlier (optional)**

  If you require support for HP Quality Center version 12 or earlier, setup of this component is necessary.

  > **Note:** HP Quality Center support is only available for COM library. It is not available for the REST API.

**To install services:**

- Continue to the single-server section to host job services and the Blueprint database on the same server.
- Continue to the distributed-server section to host job services and the Blueprint database on separate servers.

## Setting up services (single-server setup)

You can install one or both of the following:

- 64-bit job services
- HP Quality Center legacy support

### Deploying 64-bit job services (single-server)

1. Copy the following folder: `C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService\bin`.
2. Paste the copied folder into the following directory: `C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService`.
3. Rename the pasted folder **64bitservice**.
4. Delete the following two files from the pasted folder: **BluePrintSys.RC.JobExecutor32.exe** and **BluePrintSys.RC.JobExecutor32.exe.config**.
5. Open the following configuration file in a text editor: **BluePrintSys.RC.JobExecutor.exe.config**
6. Make sure that the value in the `<add key="Service.Jobs">` tag is as follows:

```
<add key="Service.Jobs" value="
DocGen,TfsExport,HpAlmRestExport,TfsChangeSummary,HpAlmRestChangeSumma
ry,TfsExportTests,HpAlmRestExportTests" />
```

7. Make sure the `<add key="Service.Name">` tag specifies the 64-bit job service as follows:

```
<add key="Service.Name" value="Blueprint Job Service (64 bit)" />
```

8. Replace the following `connectionString` value with the Blueprint database connection string:

```
<connectionStrings>
<add name="InstanceContainer"
connectionString="metadata=res://*/Models.Instance.csdl|res://*/Models
.Instance.ssdl|res://*/Models.Instance.msl;provider=System.Data.SqlCli
ent;provider connection string=&quot;Data Source=.\MSSQLSERVER;Initial
Catalog=Blueprint;Integrated
Security=True;Pooling=False;MultipleActiveResultSets=True&quot;"
providerName="System.Data.EntityClient" />
</connectionStrings>
```

> **Note:** `Data Source` must specify the SQL instance name and the Blueprint instance name. If your SQL instance has a name that is different from **MSSQLSERVER** and/or your Blueprint instance is not named **Blueprint**, you need to change the value(s).

9. Repeat all of the above steps to deploy a second 64-bit job service, performing the following revisions:

   - Name the second copied and pasted folder as follows: **64bitservice2**
   - Specify the `Service.Name` value as follows: `Blueprint Job Service 2 (64 bit)`.

   a. Install both 64-bit job services by running the following command with your user name and password:

   ```
   BluePrintSys.RC.JobExecutor.exe -c Install -a [USER] -u
   [USERNAME] -p [PASSWORD]
   ```

   > **Note:** To install the service using the default Windows account, run the following command instead:
   >
   > ```
   > BluePrintSys.RC.JobExecutor.exe -c Install -a
   > LocalService
   > ```

   b. Start the 64-bit job services with the following command:

   ```
   BluePrintSys.RC.JobExecutor64.exe -c Start
   ```

You have successfully deployed the 64-bit job services.

# Setting up HP Quality Center legacy support (single-server)

Installing HP Quality Center legacy support involves completing the following steps:

- Step One: Setting up the HP Quality Center legacy support connector
- Step Two: Deploying 32-bit job services for HP QC legacy support

**Step One: Setting up the HP Quality Center legacy support connector**

1. Set up the HP QC application pool by running the following command:

```
blueprintqcwebcmd.exe  /object AppPool /command ADD /apppoolname
HPQCLegacyConnector
```

2. Set up the HP QC web site by running the following command (where the number after /port is QcLiteWeb's port number):

```
blueprintqcwebcmd.exe  /object Site /command ADD /wsname
HPQCLegacyConnector /dir "C:\Program Files (x86)\Blueprint Software
Systems\Blueprint\QcLiteWeb" /port [8081] /apppoolname
HPQCLegacyConnector
```

3. Start the HP QC application pool by running the following command:

```
blueprintqcwebcmd.exe  /object AppPool /command START /apppoolname
HPQCLegacyConnector
```

4. Start the HP QC web site by running the following command:

```
blueprintqcwebcmd.exe  /object SITE /command START /wsname
HPQCLegacyConnector
```

5. Set the HP QC key for Blueprint with the following command (where the number after /port is QcLiteWeb's port number):

```
blueprintqcwebcmd.exe /object Config /command SET /dir "C:\Program
Files (x86)\Blueprint Software Systems\Blueprint\Web" /port [8081]
```

You have successfully set up the HP QC legacy support connector.

**Step Two: Deploying 32-bit job services for HP QC legacy support**

1. Copy the following folder: **C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService\bin**.
2. Paste the copied folder into the following directory: **C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService**.

3. Rename the pasted folder **32bitservice** for quick reference.

4. Delete the following two files from the pasted folder: **BluePrintSys.RC.JobExecutor.exe** and **BluePrintSys.RC.JobExecutor.exe.config**.

5. Open the following configuration file in a text editor: **BluePrintSys.RC.JobExecutor32.exe.config**

6. Make sure that the value within `<add key="Service.Jobs">` is as follows:

```
<add key="Service.Jobs" value="QcExport,QcChangeSummary,QcExportTests"
/>
```

7. Make sure the `<add key="Service.Name">` tag includes the Blueprint HP QC legacy job service as follows:

```
<add key="Service.Name" value="Blueprint HP QC Legacy Job Service (32
bit)" />
```

8. Replace the following `connectionString` value with the Blueprint database connection string:

```
<connectionStrings>
<add name="InstanceContainer"
connectionString="metadata=res://*/Models.Instance.csdl|res://*/Models
.Instance.ssdl|res://*/Models.Instance.msl;provider=System.Data.SqlCli
ent;provider connection string=&quot;Data Source=.\MSSQLSERVER;Initial
Catalog=Blueprint;Integrated
Security=True;Pooling=False;MultipleActiveResultSets=True&quot;"
providerName="System.Data. EntityClient" />
</connectionStrings>
```

> **Note:** `Data Source` must specify the SQL instance name and the Blueprint instance name. If your SQL instance has a name that is different from **MSSQLSERVER** and/or your Blueprint instance is not named **Blueprint**, you need to change the value(s).

   a. Install the 32-bit service by running the following command with your user name and password:

```
BluePrintSys.RC.JobExecutor32.exe –c Install –a [USER] –u
[USERNAME] –p [PASSWORD]
```

> **Note:** To install the service using the default Windows account, run the following command instead:
>
> ```
> BluePrintSys.RC.JobExecutor32.exe –c Install –a
> LocalService
> ```

   b. Next, start the 32-bit job executor Windows service with the following command:

```
BluePrintSys.RC.JobExecutor32.exe –c Start
```

You have successfully installed legacy support for HP Quality Center.

# Setting up services (distributed-server setup)

To set up services on a separate machine (distributed setup), complete the following steps:

1. Deploy services
2. Test the connection to the database
3. Finalize the job services setup

## Step One: Deploying services

You have the option of setting up the following services:

- 64-bit job services
- HP Quality Center legacy support

**Deploying the 64-bit services (distributed-server)**

> **Note:** In certain cases, the job services folder and files mentioned in the instructions below are located in the `C:\Program Files` directory instead of the `C:\Program Files (x86)` directory.

1. Copy the following folder: `C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService\bin`.
2. Paste the copied folder into the following directory: `C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService`.
3. Rename the pasted folder **64bitservice**.
4. Delete the following two files from the pasted folder: **BluePrintSys.RC.JobExecutor32.exe** and **BluePrintSys.RC.JobExecutor32.exe.config**.
5. Open the following configuration file in a text editor: **BluePrintSys.RC.JobExecutor.exe.config**
6. Make sure that the value in the `<add key="Service.Jobs">` tag is as follows:

```
<add key="Service.Jobs" value="
DocGen,TfsExport,HpAlmRestExport,TfsChangeSummary,HpAlmRestChangeSumma
ry,TfsExportTests,HpAlmRestExportTests" />
```

7. Make sure the `<add key="Service.Name">` tag specifies the 64-bit job service as follows:

```
<add key="Service.Name" value="Blueprint Job Service (64 bit)" />
```

8. Replace the following `connectionString` value with the Blueprint database connection string:

```
<connectionStrings>
<add name="InstanceContainer"
connectionString="metadata=res://*/Models.Instance.csdl|res://*/Models
.Instance.ssdl|res://*/Models.Instance.msl;provider=System.Data.SqlCli
ent;provider connection string=&quot;Data Source=.\MSSQLSERVER;Initial
```

```
Catalog=Blueprint;Integrated
Security=True;Pooling=False;MultipleActiveResultSets=True&quot;"
providerName="System.Data.EntityClient" />
</connectionStrings>
```

> **Note:** `Data Source` must specify the SQL instance name and the Blueprint instance name. If your SQL instance has a name that is different from **MSSQLSERVER** and/or your Blueprint instance is not named **Blueprint**, you need to change the value(s).

9. Repeat all of the above steps to deploy a second 64-bit job service, performing the following revisions:

   - Name the second copied and pasted folder as follows: **64bitservice2**
   - Specify the `Service.Name` value as follows: `Blueprint Job Service 2 (64 bit)`.

## Setting up HP Quality Center legacy support (distributed-server)

Setting up legacy support for HP Quality Center involves the following steps:

- Step One: Setting up the HP Quality Center legacy support connector
- Step Two: Deploying 32-bit job services

STEP ONE: SETTING UP THE HP QUALITY CENTER LEGACY SUPPORT CONNECTOR

1. Set up the HP QC application pool by running the following command:

```
blueprintqcwebcmd.exe  /object AppPool /command ADD /apppoolname
HPQCLegacyConnector
```

2. Set up the HP QC web site by running the following command (where the number after `/port` is `QcLiteWeb`'s port number):

```
blueprintqcwebcmd.exe  /object Site /command ADD /wsname
HPQCLegacyConnector /dir "C:\Program Files (x86)\Blueprint Software
Systems\Blueprint\QcLiteWeb" /port [8081] /apppoolname
HPQCLegacyConnector
```

3. Start the HP QC application pool by running the following command:

```
blueprintqcwebcmd.exe  /object AppPool /command START /apppoolname
HPQCLegacyConnector
```

4. Start the HP QC web site by running the following command:

```
blueprintqcwebcmd.exe  /object SITE /command START /wsname
HPQCLegacyConnector
```

5. Set the HP QC key for Blueprint with the following command (where the number after `/port` is `QcLiteWeb`'s port number):

```
blueprintqcwebcmd.exe /object Config /command SET /dir "C:\Program
Files (x86)\Blueprint Software Systems\Blueprint\Web" /port [8081]
```

You have successfully set up the HP QC legacy support connector.

STEP TWO: DEPLOYING 32-BIT JOB SERVICES

> **Note:** In certain cases, the job services folder and files mentioned in the instructions below are located in the **C:\Program Files** directory instead of the **C:\Program Files (x86)** directory.

Complete the following instructions, pasting the copied files onto your target machine:

1. Copy the following folder: **C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService\bin**.
2. Paste the copied folder into the following directory: **C:\Program Files (x86)\Blueprint Software Systems\Blueprint\JobExecutorService**.
3. Rename the pasted folder **32bitservice** for quick reference.
4. Delete the following two files from the pasted folder: **BluePrintSys.RC.JobExecutor.exe** and **BluePrintSys.RC.JobExecutor.exe.config**.
5. Open the following configuration file in a text editor: **BluePrintSys.RC.JobExecutor32.exe.config**
6. Make sure that the value within `<add key="Service.Jobs">` is as follows:

   ```
   <add key="Service.Jobs" value="QcExport,QcChangeSummary,QcExportTests"
   />
   ```

7. Make sure the `<add key="Service.Name">` tag includes the Blueprint HP QC legacy job service as follows:

   ```
   <add key="Service.Name" value="Blueprint HP QC Legacy Job Service (32
   bit)" />
   ```

8. Replace the following `connectionString` value with the Blueprint database connection string:

   ```
   <connectionStrings>
   <add name="InstanceContainer"
   connectionString="metadata=res://*/Models.Instance.csdl|res://*/Models
   .Instance.ssdl|res://*/Models.Instance.msl;provider=System.Data.SqlCli
   ent;provider connection string=&quot;Data Source=.\MSSQLSERVER;Initial
   Catalog=Blueprint;Integrated
   Security=True;Pooling=False;MultipleActiveResultSets=True&quot;"
   providerName="System.Data. EntityClient" />
   </connectionStrings>
   ```

> **Note:** `Data Source` must specify the SQL instance name and the Blueprint instance name. If your SQL instance has a name that is different from **MSSQLSERVER** and/or your Blueprint instance is not named **Blueprint**, you need to change the value(s).

## Step Two: Testing the connection to the database

> **Note:** This step must be performed for each job service you intend to set up.

This testing procedure must validate the configuration of the following values:

- The `Service.Name` value is unique and no other job service has this name on the current machine
- The `connectionString` value is valid and the job service can connect to Blueprint database.

If the test is not successful, you must specify the correct value(s) in the job service configuration file and re-attempt the test.

### To test the job services connection to the Blueprint database:

- Run the following command (where `[JobServiceExecutableFile]` is the name of the job service executable file):

```
[JobServiceExecutableFile] -c test
```

> **Note:** The 32-bit job services file name is typically **BluePrintSys.RC.JobExecutor32.exe** and the 64-bit job services file name is typically **BluePrintSys.RC.JobExecutor.exe**.

## Step Three: Finalizing the job services setup

> **Note:** This step must be performed for each job service you intend to set up.

This is the final step in setting up job services on a separate machine from the Blueprint database.

### To finalize the setup:

1. Install the job service by running the following command (where `[JobServiceExecutableFile]` is the name of the job service executable file):

```
[JobServiceExecutableFile] -c install
```

2. Start the job service by running the following command (where `[JobServiceExecutableFile]` is the name of the job service executable file):

```
[JobServiceExecutableFile] -c start
```

You have deployed job services.

### To verify whether job services have been successfully installed and configured:

1. Log on to Blueprint.

2. Open the *Instance Administration Console* from the **Menu** Menu.

   The *Instance Administration Console* appears.

3. Click **Job Services**.

   The *Job Services* screen appears.

Any job services that have been successfully installed and configured appear in the *Job Services* list. Information about the configured service name and supported jobs also is available in the list.