

blueprint[®]

BLUEPRINT INSTALLATION GUIDE

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Overview

This guide walks you through the Blueprint installation process. The same process can be followed whether you are installing for the first time or are upgrading an existing Blueprint deployment.

System Requirements

Please visit our documentation site to view detailed system requirements: <https://blueprint.helpdocs.io/article/xy1gfud4qb-system-requirements>.

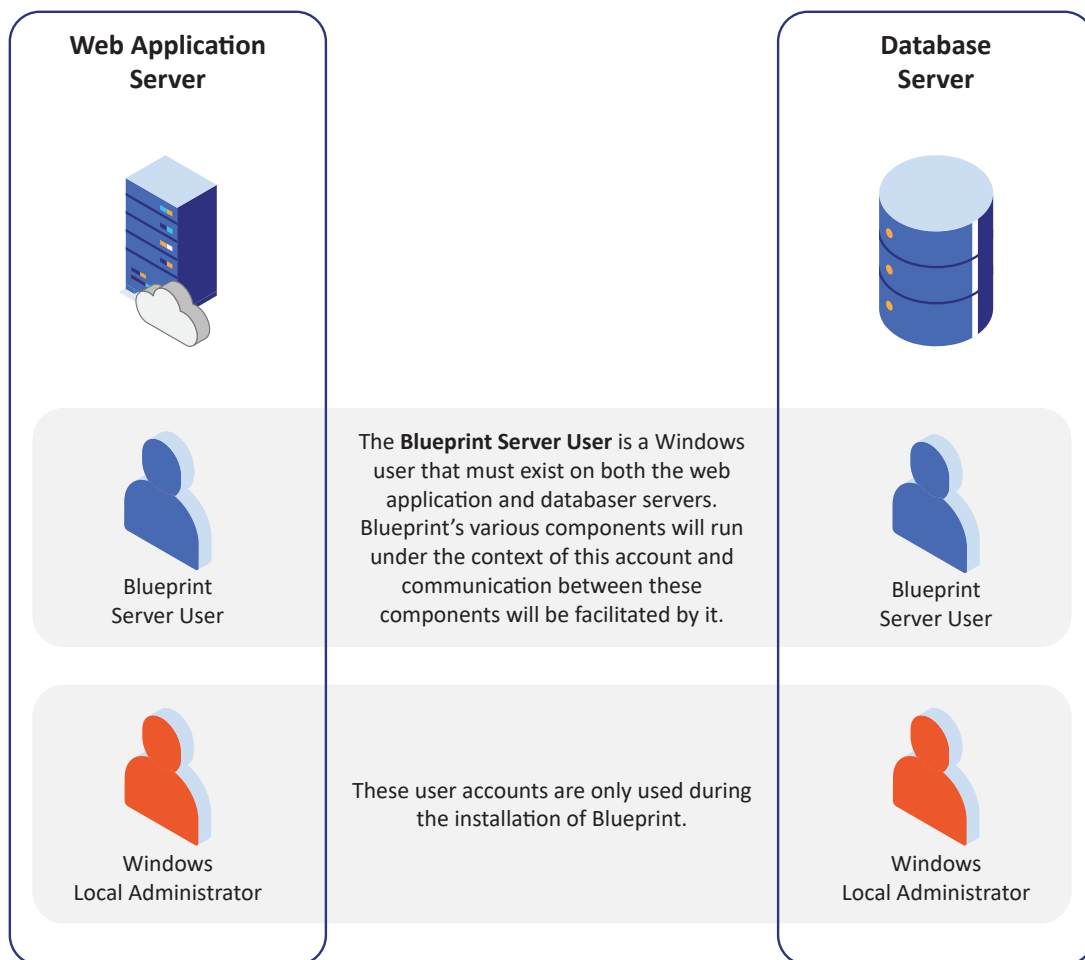
Before You Begin

Activation Keys

Before you begin, ensure that you have your activation key. If you don't have one, please submit a case to Blueprint Support using the Blueprint Community at <https://community.blueprintsys.com>.

User Account Requirements

The following diagram illustrates the user account requirements for Blueprint installation and ongoing operation:



Blueprint Server User

This user represents a service account that is used to run Blueprint's different components and facilitate communication between them for the application's regular operations. This user is used. The following requirements must be met for this user:

- The user account must be either a domain user (e.g. ACMECORP\Blueprint) or a local server account (e.g. ApplicationPoolIdentity).
- The user account must exist on both the web application and database servers.
- The user account can have standard user privileges and does not need to be an administrator, but will automatically be granted read and write permissions to Blueprint's application and logging directories.

Windows Local Administrator

This user represents a Windows account that has local administrator privileges on the web application server. This user account is used to install the Blueprint application and configure the system. It can be either a local or domain account and is only needed during software installation.

Database System Administrator

This user represents an account within Microsoft SQL Server that has "sysadmin" permissions. This user must have administrative privileges so that it can create the necessary resources in SQL Server. This may be either a Windows or SQL user account and its credentials will need to be supplied to the Blueprint installer during the installation process. Similarly to the Windows Local Administrator account, this is also only needed during software installation.

Choosing a Message Broker Service

By default, application messaging is managed by SQL Server's Service Broker feature and requires no further configuration. For larger Blueprint deployments, it is recommended that RabbitMQ is used instead. During the installation process, the Blueprint Configuration Wizard displays the option to provide information about your RabbitMQ server.

If you plan on using RabbitMQ in place of Service Broker, ensure that it is installed and running before proceeding with the Blueprint installation.

Information about downloading and installing RabbitMQ can be found on their website: <https://www.rabbitmq.com/download.html>.

Upgrading Blueprint From a Previous Version?

If you are upgrading Blueprint from a previous version, follow these steps to ensure that you have backed up necessary data and determined your upgrade path.

Backing Up Data From a Previous Deployment

It is strongly recommended that you back up your Blueprint data prior to starting the upgrade. To do so, please follow these instructions.

1. Stop the Blueprint application pools and sites in IIS.
2. Stop any installed Blueprint services:
 - Job Services
 - Image Render Service
 - Windows Service

3. Back up the following data:

- Blueprint databases
- Blueprint site data and configurations:
 - Web.config files:
 - <InstallationPath>\Web\Web.config
 - <InstallationPath>\Web\svc\AdminStore\Web.config
 - <InstallationPath>\Web\svc\ArtifactStore\Web.config
 - <InstallationPath>\Web\svc\FileStore\Web.config
 - <InstallationPath>\Web\svc\SearchService\Web.config
 - <InstallationPath>\Web_Auxiliary\svc\AccessControl\Web.config
 - <InstallationPath>\Web_Auxiliary\svc\ConfigControl\Web.config
 - Logging configuration: <InstallationPath>\Web\Configuration\Logging.conf
 - Custom logos (if applicable): <InstallationPath>\Images
 - Custom dictionary files (if applicable): <InstallationPath>\Dictionary
- The JobExecutorService folder, including the following files for each installed service:
 - <InstallationPath>\<JobServicePath>\BlueprintSys.RC.JobExecutor.exe.config
 - <InstallationPath>\<JobServicePath>\Configuration\Logging.config
- The BlueprintServices folder, including the following files:
 - <InstallationPath>\BlueprintServices\BlueprintSys.RC.ImageService\BlueprintSys.RC.ImageService.exe.config
 - <InstallationPath>\BlueprintServices\BlueprintSys.RC.Services\BlueprintSys.RC.Services.exe.config

Post-Upgrade Steps

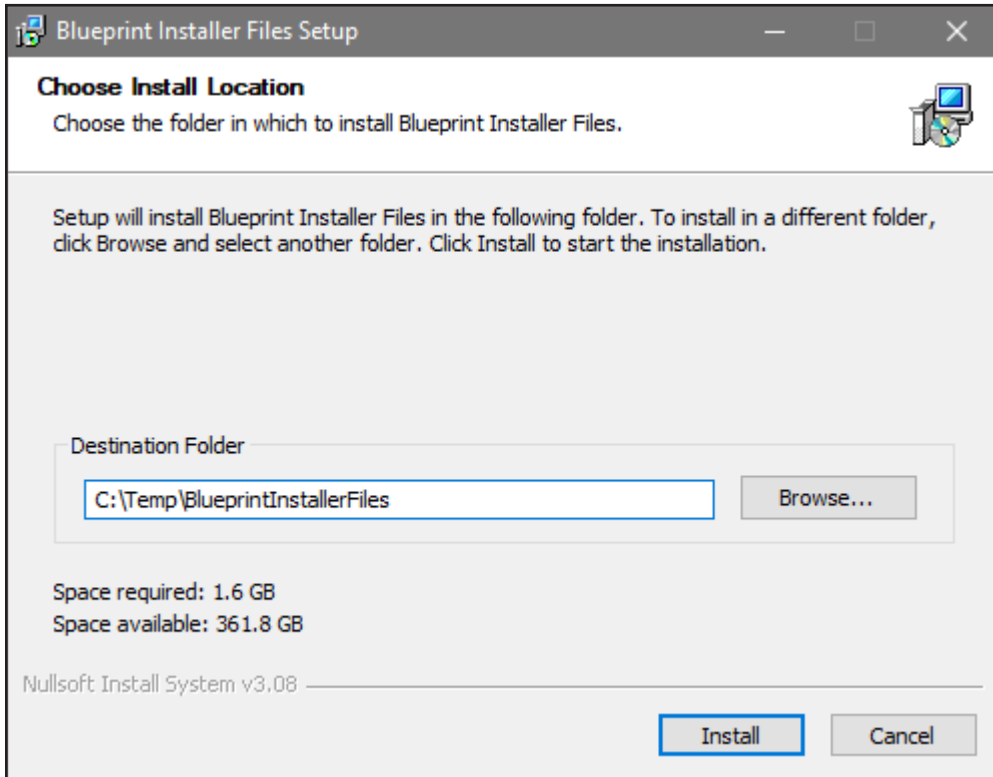
To ensure that graphical assets in some features are updated correctly, it is recommended that your end users clear their browser cache prior to logging in.

Installing Blueprint

Extract the Installation Files

In this step, you will be extracting the files necessary to install Blueprint.

1. Run the `BlueprintInstallerFiles` executable.

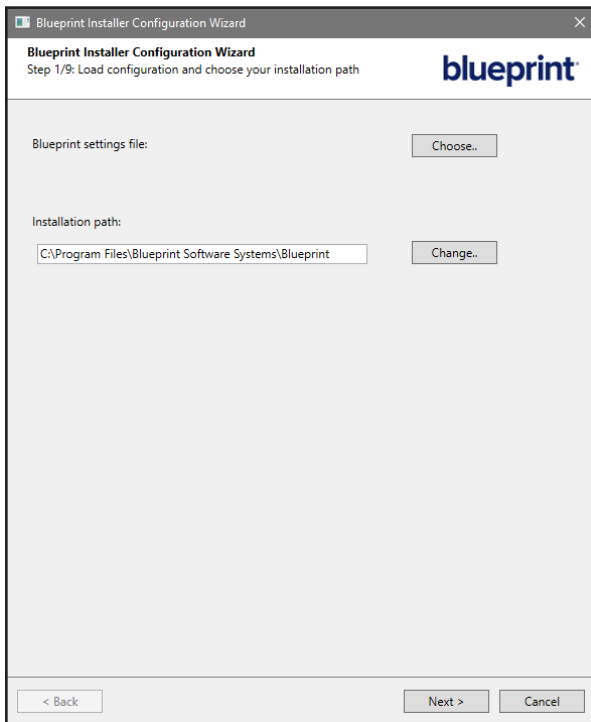


2. Enter your desired destination folder. Note that this path should be different than the final Blueprint installation directory.
3. Click **Install** to extract the files.
4. Click **Close** once the process is complete.

Create the Blueprint Settings File

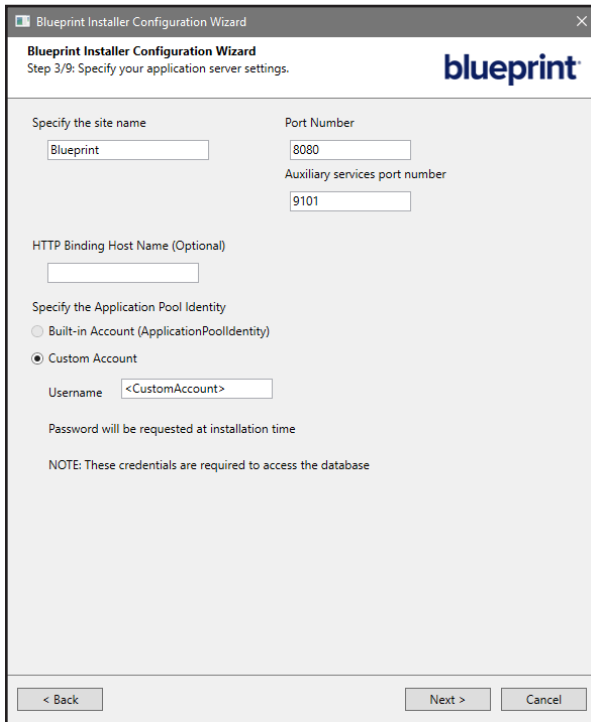
In this step, you will be using the configuration wizard to create a configuration file containing your desired installation settings. If you have an existing configuration file, you will be able to import it in Step 3.

1. In File Explorer, navigate to the directory where you extracted the Blueprint installation files to.
2. Run the `BlueprintSys.RC.Installer.Configuration.Wizard.exe` executable.
3. Enter your desired installation path and, if you have one already, import an existing configuration file to act as a starting point.



4. Click **Next**.
5. Select one of the following options:
 - **Distributed-server configuration:** This option allows you to host the Blueprint application and databases on separate servers. This is the standard and recommended configuration.
 - **Single-server configuration:** This option allows you to host the Blueprint application and databases on the same server. This configuration is not recommended for production environments.
6. Click **Next**.

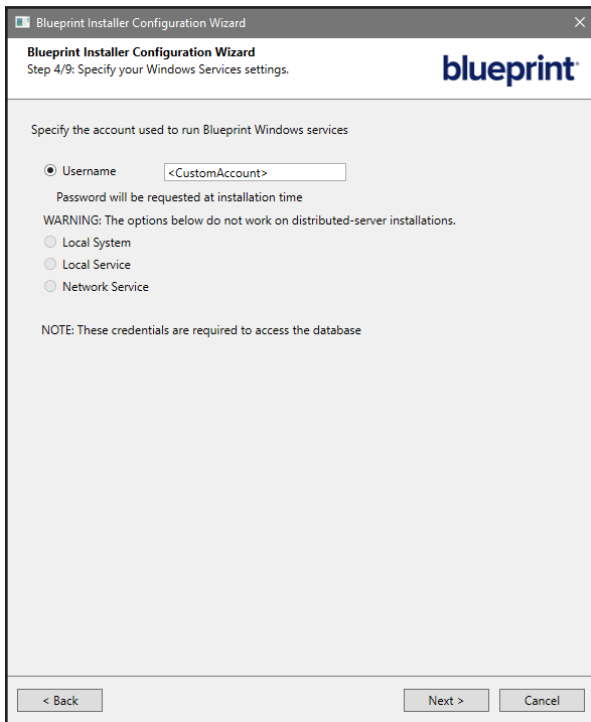
7. Specify your application server settings by filling in the following fields:



- **Specify the site name:** Define the name of the main Blueprint IIS site. The default is "Blueprint".
- **Port Number:** Define the port that the main site should be bound to. The default is 8080.
- **Auxiliary services port number:** Define the port number that the auxiliary site should be bound to. The default is 9101.
- **HTTP Binding Host Name (Optional):** Define the host name that you want to bind the Blueprint sites to. This will replace the default wildcard binding defined by IIS.
- Application Pool Identity Settings:
 - **Built-in Account (ApplicationPoolIdentity):** Selecting this option means that the Blueprint application pools in IIS will run with the ApplicationPoolIdentity identity. This option is only available for single-server deployment configurations.
 - **Custom Account:**
 - **Username:** Specify the username of the domain user account that you will be using to run the Blueprint application. Refer to the User Account Requirements section above for more information. You will be prompted for this account's password during installation.

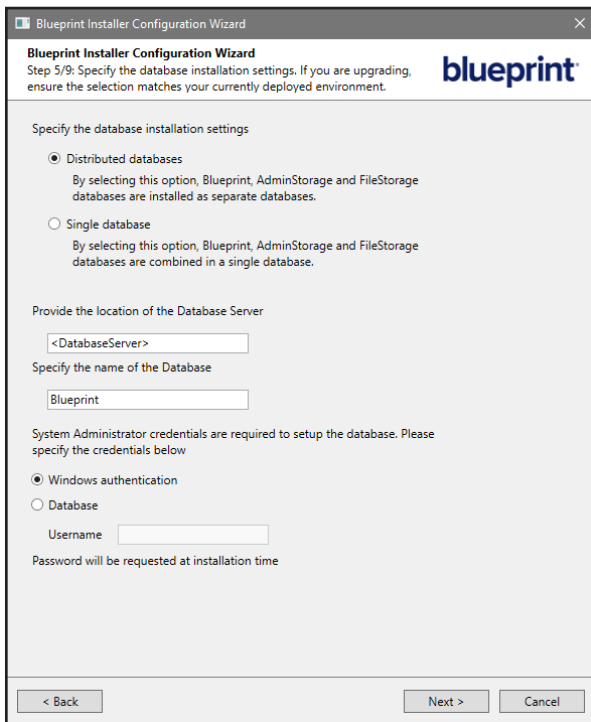
8. Click **Next**.

- Specify the username of the domain user account that you will be using to run the Blueprint Windows services. Refer to the User Account Requirements section above for more information. You will be prompted for this account's password during installation.



- Click **Next**.

11. Specify your database server settings by filling in the following fields:



- Distributed and Single Databases:

Important: This option is only available for new installations. Pre-existing database configurations cannot be changed. Distributed databases cannot be merged and single databases cannot be separated.

- **Distributed databases:** Selecting this options means that Blueprint will be deployed in its standard multi-database configuration. This option accommodates larger deployments as the databases can each be managed and stored individually. This is the recommended configuration.
- **Single database:** Selecting this option means that Blueprint will be deployed in a single-database configuration. This configuration is simpler to maintain, but is less scalable compared to the distributed database option.
- **Provide the location of the Database Server:** Specify the location of the SQL Server instance. This value must be provided in the following format: <Server_Name>\<Instance_Name>. For example, "ACMECORP\MSSQLSERVER".
- **Specify the name of the Databse:** Specify the name of the primary Blueprint database. The additional databases that are created will use this value as a prefix. The database must not already exist if this is meant to be a new installation.
- Provide system administrator credentials used to install Blueprint.

Important: This user must be a SQL Server System Administrator (SA). This will allow the installer to create the necessary databases and grant the appropriate permissions for the Blueprint application user specified earlier to be able to access them. The SA credentials are not stored in the system and they are only required during the installation process.

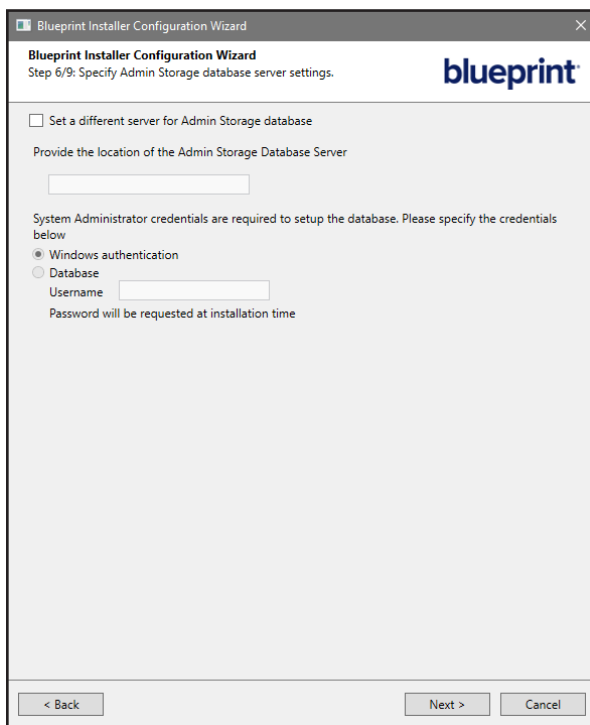
- **Windows Authentication:** Selecting this option will cause the installation scripts to attempt to connect to the database server using the user account that is running the script. Ensure that this user has SA privileges on the database server.

- **Database:** Selecting this option will allow the installation scripts to connect to the database server using a SQL Server account. You will be prompted for this account's password during installation.
 - **Username:** Specify the name of the SQL Server SA account that will be used to deploy Blueprint to the database server.

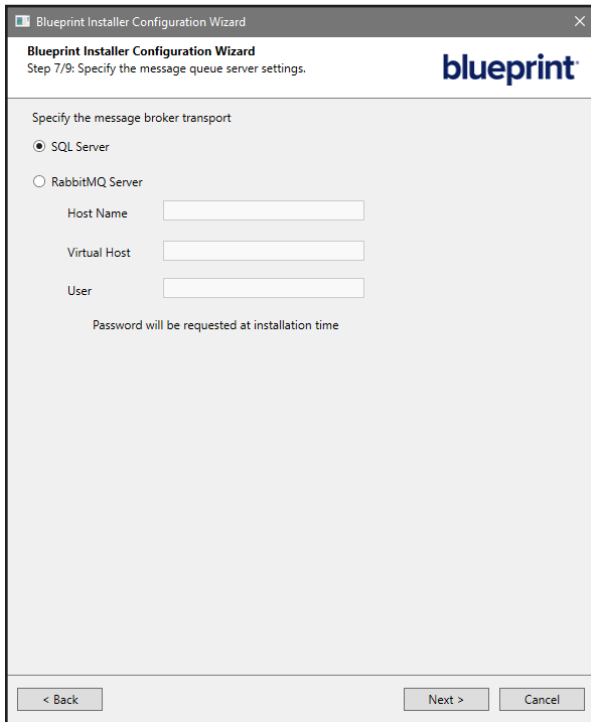
12. Click **Next**.

13. Optional: Specify an alternate database server to host the AdminStorage database. This option is only available for installations using both distributed-server and distributed-database configurations. By default, the AdminStorage database is deployed to the same server you specified in the previous step.

- To continue with the default deployment process, you may leave this checkbox unselected, click **Next**, and move to the next step.
- To specify an alternate server, select this checkbox, fill in the fields in accordance to the instructions provided in the previous step, click **Next**, and move to the next step.



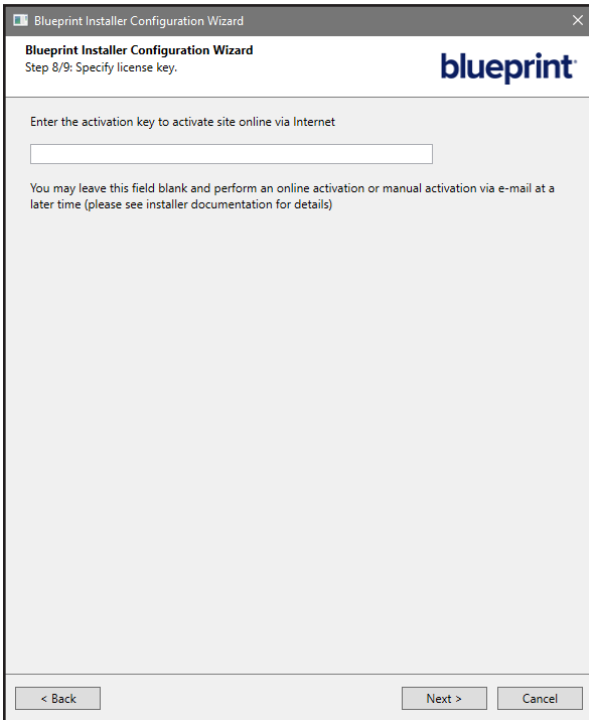
14. Specify your message broker settings by filling in the following fields:



- By default, application messaging is managed by the SQL Server Service Broker and requires no further configuration. If you have an existing RabbitMQ installation that you would like to use instead, provide the host name and virtual host of the installation, as well the username of an administrator account. You will be prompted for this account's password during installation.

15. Click **Next**.

- 16. If you wish to activate Blueprint during the installation process and have an activation key already, you may enter it now. Multiple keys can be entered as comma-separated values. Otherwise, you may perform an online activation, or a manual activation via e-mail, at a later time.



- 17. Click **Next**.

- 18. Click **Finish**.



19. The configuration file will be created in the same folder the Configuration Wizard executable. The file name format is as follows: `BlueprintInstallSettings-<VER>-<TIME>.xml`.
- `<VER>`: The version of Blueprint being deployed.
 - `<TIME>`: The date and time of when the file was created.

Install Blueprint

You are now ready to install Blueprint. Blueprint is installed using a series of Powershell scripts which leverage the installation files you extracted and the configuration file you created in the previous sections of this guide.

1. Launch a Windows Powershell terminal as an administrator.
2. Navigate to the folder where the extracted installation files and configuration file are located.

```
Set-Location -Path "<InstallationSourceDirectory>"
```

3. Run the following command to execute the installation script and use your configuration file. Replace the file name as needed.

```
.\Installation\Installer\Install-Blueprint.ps1 -BlueprintInstallSettingsPath .\BlueprintInstallSettings-<VER>-<TIME>.xml
```

Note: There are optional parameters that can be used when running the installation script. See "Installation Script Parameters" in the Configuration Reference section for more information.

4. During the first stage of the installation, the values in the configuration file will be validated. You may be prompted for various passwords belonging to the users you specified earlier, such as the service account that is going to run the Blueprint application.
5. If the validation stage completes successfully, installation will begin. If not, the installation process will end and relevant errors will be displayed on-screen.

Activate Blueprint

If you entered an activation key into the Blueprint Configuration Wizard while creating your configuration file and no errors were displayed during installation, your application should already be licensed and you can skip this section.

If activation was not completed during the installation process, either due to an error or the absence of an activation key, navigating to your new Blueprint site will produce the following error message: *The application cannot be run without a valid license. Please contact your Administrator.*

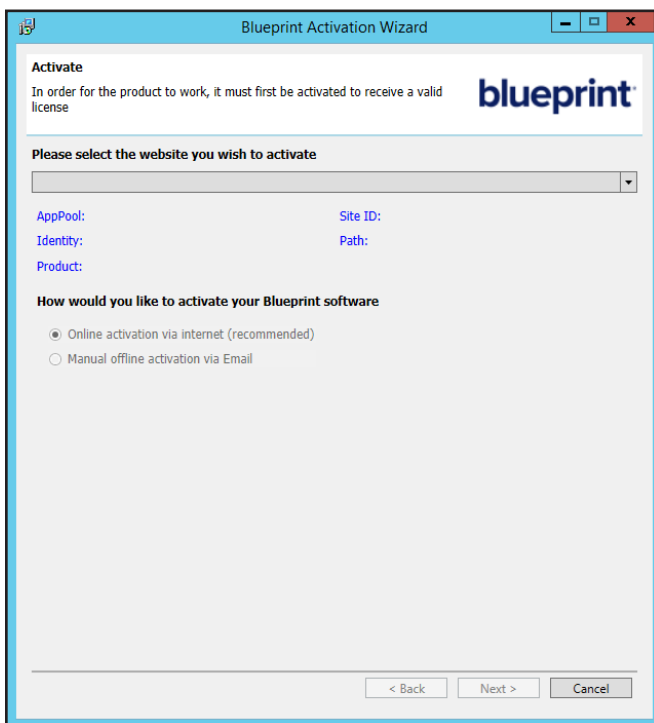
There are two methods to activate Blueprint:

1. Online Activation (Recommended)
 - Requires an internet connection on the Blueprint application server.
2. Manual Offline Activation (via E-mail)
 - Does not require an internet connection on the Blueprint application server.

Online Activation (Recommended)

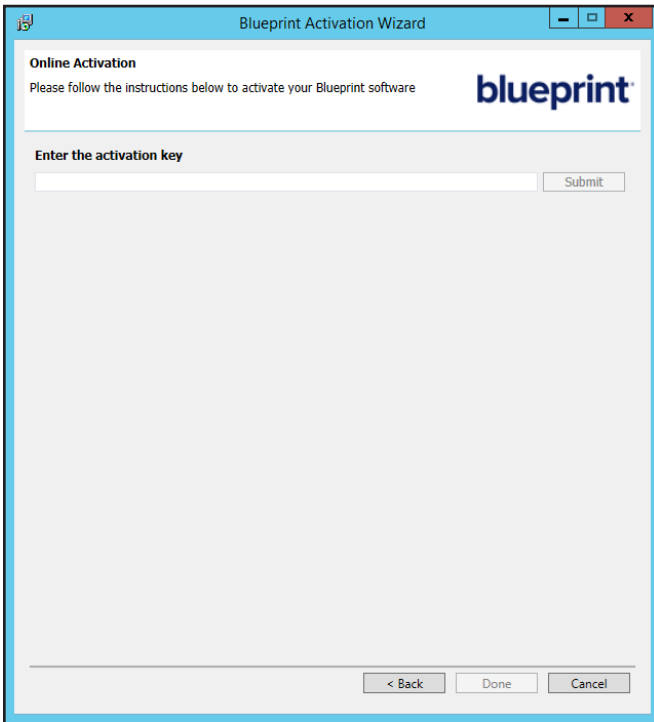
Complete the following steps on your Blueprint application server to activate your software:

1. Navigate to your Blueprint installation path.
 - The default path is `C:\Program Files\Blueprint Software Systems\Blueprint`.
2. Navigate to the `Setup` folder.
3. Launch `BlueprintActivationWizard.exe`.
4. Specify the site you want to activate and select **Online activation via internet**.



5. Click **Next**.

6. Enter your activation key into the space provided. If you have multiple keys, you may enter them as a comma-separated list.

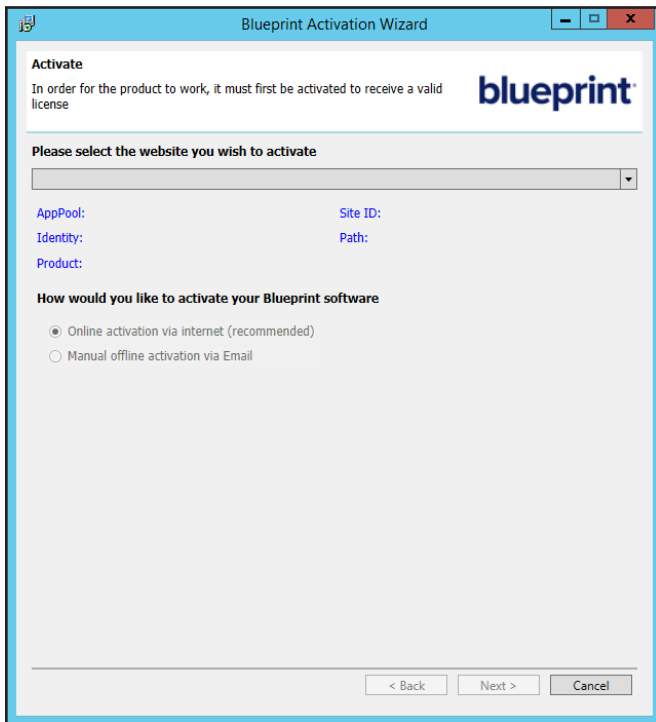


7. Click **Submit**.
8. Once a dialog box appears confirming activation, click **OK**.
9. Click **Done** to close the wizard.
10. Check if Blueprint has been activated by navigating to your new Blueprint site and verifying that you can see the login page.

Offline Activation (via E-mail)

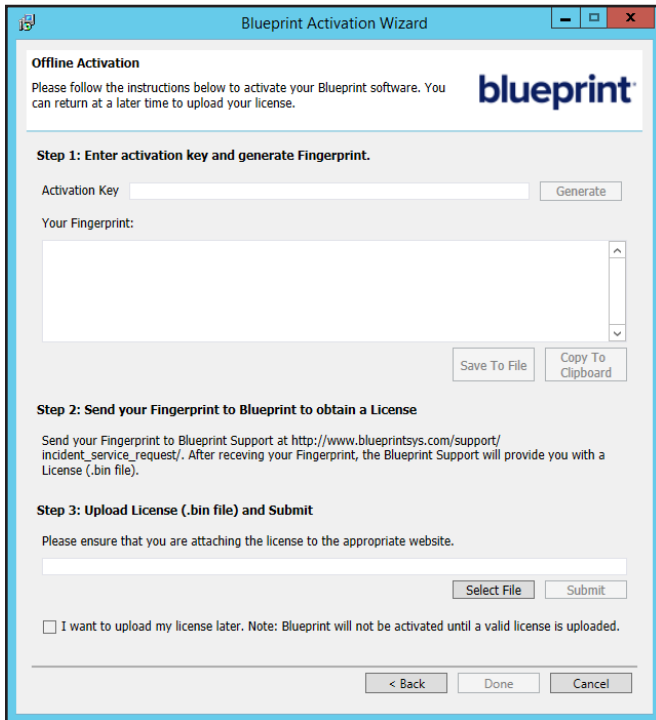
Complete the following steps on your Blueprint application server to activate your software:

1. Navigate to your Blueprint installation path.
 - The default path is `C:\Program Files\Blueprint Software Systems\Blueprint`.
2. Navigate to the `Setup` folder.
3. Launch `BlueprintActivationWizard.exe`.
4. Specify the site you want to activate and select **Manual offline activation via Email**.



5. Click **Next**.

6. Enter your activation key into the space provided.



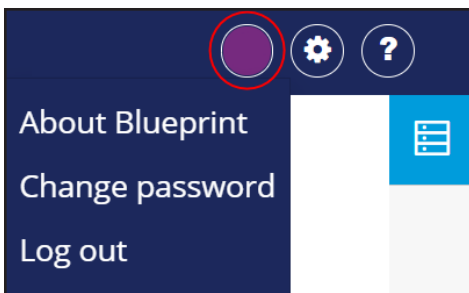
- 7. Click **Generate**.
- 8. Once a fingerprint has been generated, click **Save To File** or **Copy To Clipboard** and send the fingerprint to Blueprint Support in a support case through the Blueprint Community (<https://community.blueprintsys.com>).
- 9. Click **Done** and await your activated license key file. Blueprint Support will send this to you in a response to your case.
- 10. Once you have received the license key file, transfer the file to your Blueprint application server.
- 11. Repeat steps 1-5 to return to the offline activation section of the wizard.
- 12. Select **Select File** in the wizard's Step 3 section.
- 13. Locate and select the license key file.
- 14. Select **Submit** and click **OK** when you receive confirmation that your software has been activated.
- 15. Select **Done** to close the Blueprint Activation Wizard.
- 16. Check if Blueprint has been activated by navigating to your new Blueprint site and verifying that you can see the login page.

Blueprint Instance Setup

Admin User Setup

Complete the following steps to secure the default admin account:

1. Launch a supported browser and navigate to your Blueprint site.
2. Log in to Blueprint with the following default credentials:
 - **Username:** admin
 - **Password:** changeme
3. Change the default admin account password:
 - a. Open the user menu by selecting the user icon in the top-right corner of the screen. It is located to the left of the Admin Portal's gear icon.



- b. Select **Change Password**.
- c. Enter the current and new passwords and click **OK**.

A screenshot of the password change form. The form has a blue header with the 'blueprint' logo. Below the header, it says 'Please provide required password information.' There are three input fields: 'Password:', 'New Password:', and 'Confirm New Password:'. At the bottom of the form, there are two buttons: 'Cancel' and 'OK'.

Configuration Reference

Installation Script Parameters

The following parameters can be used with the Blueprint installation script (`Install-Blueprint.ps1`).

Installation Modification Parameters

Parameter	Description
-InstallDatabaseOnly*	Create/migrate the Blueprint databases. Skip all other components.
-InstallJobExecutorsOnly*	Install Blueprint Job Executor services. Skip all other components.
-InstallSiteOnly*	Install Blueprint sites. Skip all other components.
-InstallWindowsServicesOnly*	Install Blueprint Windows Services and Blueprint Image Render Services. Skip all other components.
-DontAskForDatabaseMigrationConfirmation	Perform database migration during installation without prompting for confirmation.
-SkipValidation	Skip the validation phase of the installation (not recommended).
-ValidateOnly	Perform the validation phase of the installation without making any changes to the system.

* Can be used in conjunction with one another.

Password Bypass Parameters

Parameter	Description
-AppPoolPassword '<Password>'	Supply password for the user identity running the IIS application pools.
-BlueprintDatabasePassword '<Password>'	Supply password for the SQL Server SA account used to install the Blueprint databases.
-AdminStorageDatabasePassword '<Password>'	Supply password for the SQL Server SA account used to install the AdminStorage database.
-BlueprintMessagingPassword '<Password>'	Supply password for the user identity connecting to the messaging service.
-WindowsServiceAccountPassword '<Password>'	Supply password for the user identity running Windows Services and Image Render Services.

Examples

- Validate the parameters in the configuration file (e.g. SQL Server connection strings, usernames, passwords, etc.) without modifying the system or installing any components.

```
.\Installation\Installer\Install-Blueprint.ps1 `
-BlueprintInstallSettingsPath .\BlueprintInstallSettings-<VER>-<TIME>.xml `
-ValidateOnly
```

- Install only Blueprint IIS sites and app pools (i.e. Skip deploying databases and services).

```
.\Installation\Installer\Install-Blueprint.ps1 `
-BlueprintInstallSettingsPath .\BlueprintInstallSettings-<VER>-<TIME>.xml `
-InstallSiteOnly
```

- Deploy only Blueprint databases, bypass prompts for database migration, and bypass all related password prompts.

```
.\Installation\Installer\Install-Blueprint.ps1 `
-BlueprintInstallSettingsPath .\BlueprintInstallSettings-<VER>-<TIME>.xml `
-InstallDatabaseOnly `
-DontAskForDatabaseMigrationConfirmation `
-BlueprintDatabasePassword 'Pa$$word1' `
-AdminStorageDatabasePassword 'Pa$$word2'
```