

# Sitecore Experience Platform Upgrade Guide

Sitecore Experience Platform 8.2 Update 4

*How to upgrade to Sitecore 8.2 Update 4*



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## 1.1 Prerequisites

If you are upgrading from Sitecore 8.1 rev. 151003 (Initial Release) or later, you can upgrade directly to Sitecore 8.2 rev. 170614 (Update-4). However, if your solution is based on an earlier version of Sitecore, you must first upgrade to Sitecore 8.1 rev. 151003 (Initial Release).

You can download all the prerequisite components from the Sitecore Developer Portal (<https://dev.sitecore.net>).

Prerequisites for upgrading from Sitecore 8.1 or later:

- [Sitecore 8.1 rev. 151003 \(Initial Release\) or later.](#)
- [Sitecore 8.2 rev. 170614 \(Update-4\) Update Package.](#)
- [Sitecore Update Installation Wizard 2.0.1 rev. 161216.zip](#)
- For Microsoft SQL Server, you must download the following database upgrade scripts:

When upgrading from Sitecore XP 8.1:

- `SXP82U1_BeforeInstall.sql`
- `CMS82_BeforeInstall.sql`

### Note

Upgrading a solution that uses Oracle databases is not supported in any version of Sitecore XP 8.1.

When upgrading from Sitecore XP 8.2 rev. 160729 (Initial Release):

- `SXP82U1_BeforeInstall.sql`

When upgrading from Sitecore XP 8.2 rev. 161115 (Update-1), Sitecore XP 8.2 rev. 161221 (Update-2).

- No scripts are required

To download the database upgrade script file(s), on the Sitecore Developer Portal, navigate to the [Sitecore Experience Platform 8.2 page](#), and in the **Upgrade options** section, click *Configuration files for upgrade*. The upgrade scripts are located in the `\Database Upgrade Script.zip` folder.

Upgrade scripts contain changes that are applied to Sitecore databases across all versions of Sitecore for compatibility purposes, and they also modify certain tables to support new functionalities or to increase performance. The changes are applied once, and only if the database requires it.

## 1.2 Upgrade Process

If you have an earlier version of Sitecore installed and you want to upgrade to Sitecore XP 8.2 rev. 170614 (Update-4), follow the instructions in each section of this chapter.

As part of the upgrade process, some solutions might require redesigning. If you need more help and guidance, refer to the administrator and developer documentation on the Sitecore Documentation site – <https://doc.sitecore.net>.

### 1.2.1 Content Testing

Before you upgrade your Sitecore installation, you must stop all content tests. This prevents the start date of the tests from being overwritten with the upgrade date.

### 1.2.2 Preconditions for Installing the Upgrade Package

To ensure that the upgrade process is not interrupted, if you are using the Sitecore Experience Database functionality (xDB), you must disable it. You must also disable all modules, including the Web Forms for Marketers and Email Experience Manager (EXM) modules.

To disable the Sitecore Experience Database (xDB):

1. In the `Sitecore.Xdb.config` file, set the `Xdb.Enabled` setting to *false*.
2. In the `Sitecore.Xdb.config` file, set the `Xdb.Tracking.Enabled` setting to *false*.

#### Important

After the upgrade is completed, ensure that you enable the Sitecore Experience Database (xDB) by setting the `Xdb.Enabled` and `Xdb.Tracking.Enabled` parameters to *true*.

To disable the Email Experience Manager module:

1. Disable all the configuration files in the following folders by adding `.disabled` to the file extension:
  - o `\Website\App_Config\Include\EmailExperience`
  - o `\Website\App_Config\Include\Z.EmailExperience`
  - o `\Website\App_Config\Include\ExperienceProfile\Sitecore.ExperienceProfile.Reporting.Sitecore.EmailExperience.ExperienceProfile.config`
2. In the `\Website\bin` folder of your website, disable all the files that begin with `Sitecore.EmailCampaign`, `Sitecore.EDS` or `Sitecore.ExM`.

To disable the Web Forms for Marketers module:

- Disable the following configuration file by adding `.disabled` to the file extension:
  - o `\Website\App_Config\Include\Sitecore.Forms.config`

#### Important

After the upgrade of Sitecore Experience Platform is completed, you must also upgrade the modules. To do this, see the Upgrade modules section.

### 1.2.3 Upgrade the Databases

To upgrade the databases on solutions running any version of Sitecore XP 8.1:

- Execute the `CMS82_BeforeInstall.sql` script for the Core, Master, and Web databases.
- If you are using the Sitecore Experience Database (xDB) functionality, you must execute the `SXP82U1_BeforeInstall.sql` script for the Reporting database.

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To upgrade the databases on solutions running Sitecore 8.2 rev. 160729 (Initial Release):

- If you are using the Sitecore Experience Database (xDB) functionality, you must execute the `SXP82U1_BeforeInstall.sql` script for the Reporting database.

## 1.2.4 Install the Upgrade Package

To install the upgrade package and update your website from Sitecore XP 8.1 Initial or later to Sitecore XP 8.2 rev. 170614 (Update-4), you must use the Update Installation Wizard.

### Important

If you are using Oracle, please contact Sitecore support.

Before you install the upgrade package:

- Back up your website.

To install the upgrade package:

1. Log in to the Sitecore Desktop, click the **Sitecore Start** button, **Development Tools, Installation Wizard**, and then install the Sitecore Update Installation Wizard 2.0.1 rev.161216.zip package.
2. Ensure that Internet Information Services (IIS) is configured to allow access to the `\sitecore\admin` folder.

### Note

This step may be necessary if you installed Sitecore XP using the `setup.exe` file.

The `setup.exe` file configures IIS to disallow access to the `\sitecore\admin` folder, and prevents you from using the Update Installation Wizard.

3. On the **Sitecore Launchpad**, click **Control Panel**, and in the **Administration** section, click **Install an update**.

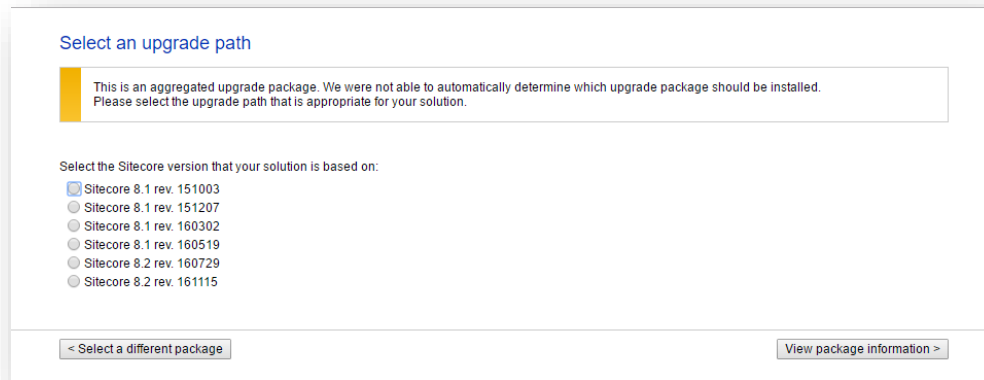
Alternatively, you can open the **Update Installation Wizard** by entering the following URL in your web browser:

```
http://<hostname>/sitecore/admin/UpdateInstallationWizard.aspx
```

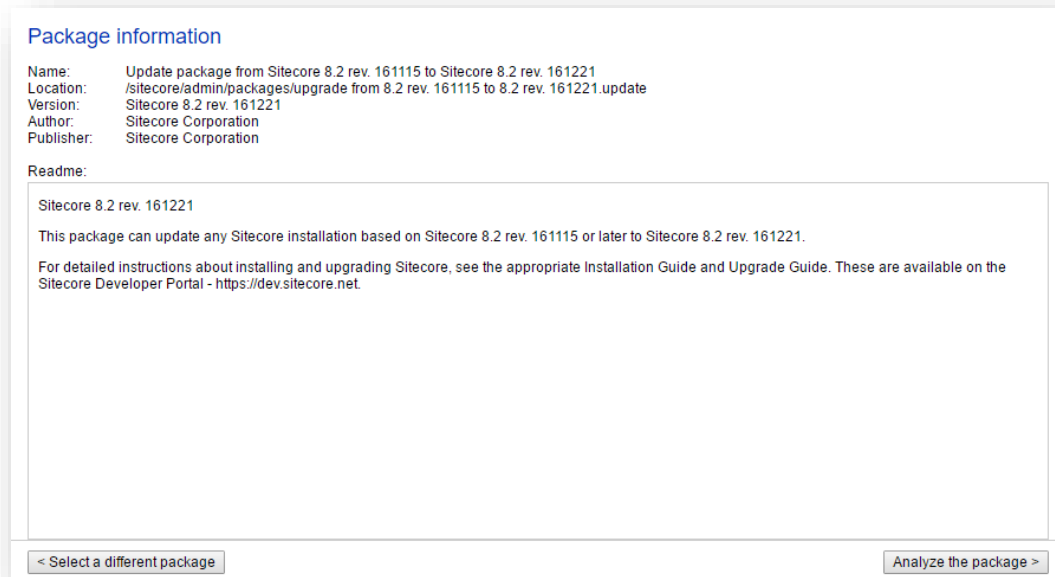
4. On the **Welcome to Sitecore update installation wizard** page, click **Select a package**.
5. On the **Select a package** page, click **Choose File** and navigate to the folder where you saved the `Sitecore 8.2 rev.170614.update` file. Select the file, and then click **Open**.
6. Click **Package information**.

### Note

If the **Update Installation Wizard** fails to detect your current Sitecore version, on the **Select an upgrade path** page, manually select the Sitecore version and revision number that your solution is based on, and then click **View package information**.



7. On the **Package information** page, review the information about the package, and then click **Analyze the package**.



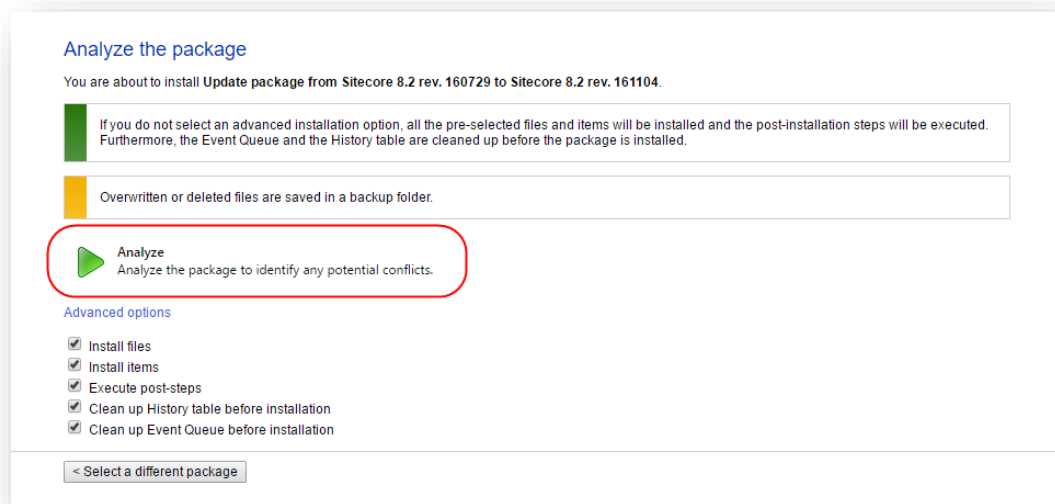
8. On the **Analyze the package** page, click **Advanced options**, review the installation options, and then click **Analyze**.

### Note

In the **Advanced options** section, it is recommended that you select the **Execute post-steps** check box, regardless of your other check box selections.

The post-steps are performed at the end of the upgrade process. These steps can be items or file operations that are executed by the Sitecore API, and can vary according to which Sitecore version you are upgrading from.

At this point, the installation wizard identifies any potential conflicts in the configuration files being upgraded, and lets you resolve them.



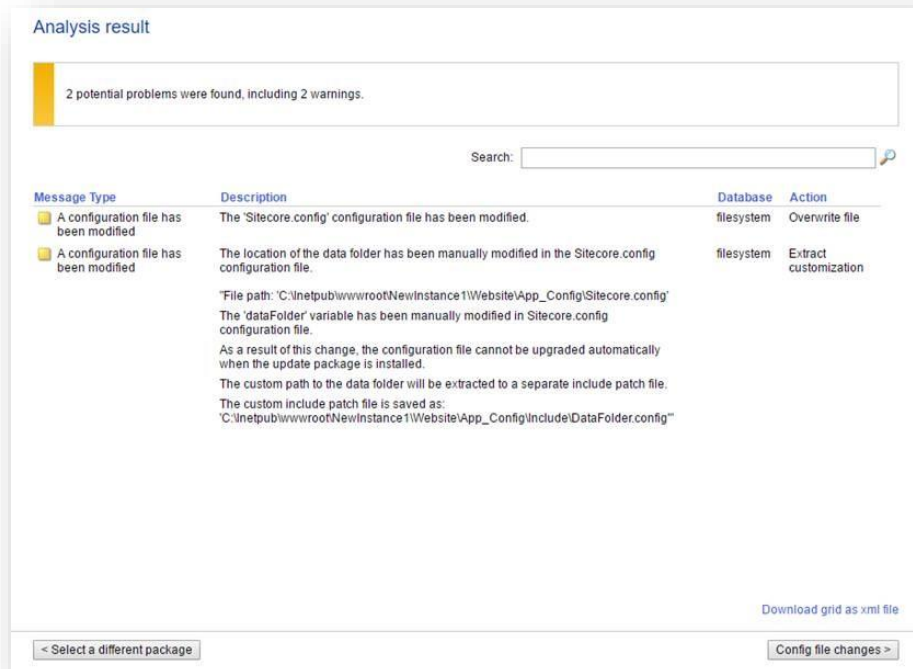
9. After the analysis process is complete, click **Analysis result**.

If the **Update Installation Wizard** does not find any conflicts, click **Install the package**, and skip to step 7 in the section Analyzing the Update Package and Resolving Configuration Conflicts.

## Analyzing the Update Package and Resolving Configuration Conflicts

To analyze the package and resolve the configuration conflicts:

1. On the **Analysis result** page, click **Config file changes**.

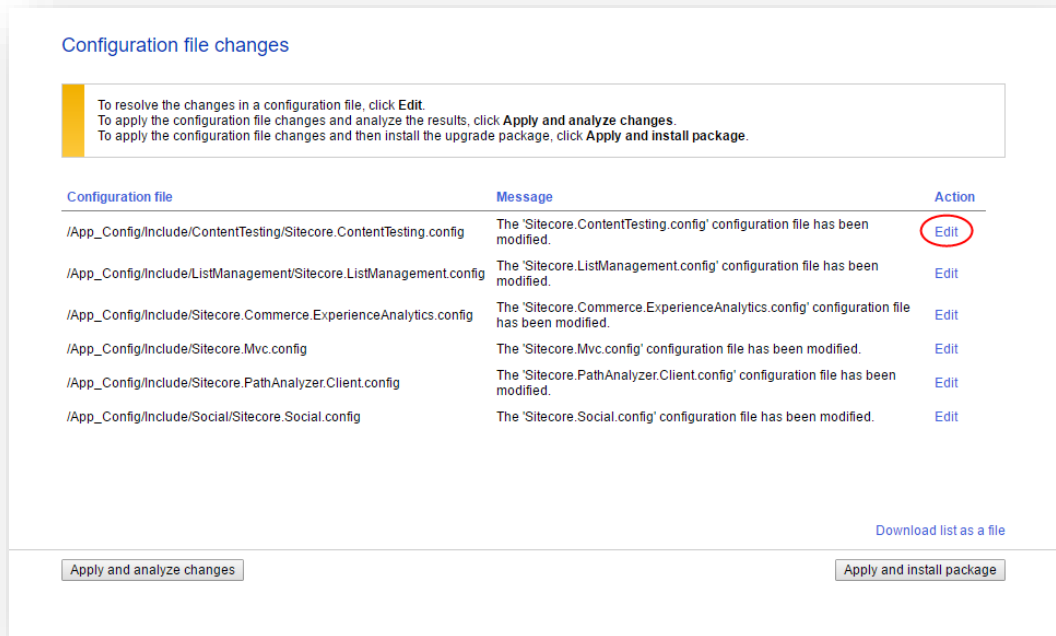


### Important

On the **Analysis result** page, in the **Message Type** column, if the **Update Installation Wizard** found *Configuration files that must be updated manually*, in the **Description** column, click the relevant description and read about the configuration changes.

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2. On the **Configuration file changes** page:
  - To automatically resolve all configuration conflicts and install the package, click **Apply and install package**. When you are finished, skip to step 7.
  - To manually resolve a conflict in a configuration file and modify the patch, in the **Action** column for each configuration file, click **Edit**.



3. On the **Resolve configuration file changes** page, review the differences between the original file and the customized file:
  - To manually resolve the conflicts, in the **Patch File** window, make the necessary changes, and then click **Resolve**.
  - To skip a conflict and manually resolve it later, click **Skip**. It is best practice to manually review your configuration patch files after the upgrade is complete.



## Note

When you skip the file, the **Update Installation Wizard** automatically detects any customization(s) in the Sitecore config files, creates the patch, and replaces the customized file with the new file.

Resolve configuration file changes  
/App\_Config/Include/Sitecore.Analytics.Tracking.config

**Differences between the original file and the customized file**

1	1	<?xml version="1.0" encoding="utf-8" ?>
2	2	<!--
3	3	
4	4	Purpose: This include file configures the tracking subsystem of the Sitecore Experience Database (xDB).
5	5	The tracking subsystem is responsible for tracking of online visitors. The system tracks personalization, campaigns, profile values, patterns, multivariate tests, etc.
6	6	
7	7	
8	8	If you want to disable this functionality and prevent online tracking of visitors, you can rename this con
9	9	so that it has a ".disabled" extension.
10	10	
11	11	-->
12	12	<configuration xmlns:patch="http://www.sitecore.net/xmlconfig/">
13	13	<sitecore>
14	14	<settings>
15	15	<!-- ANALYTICS AUTO DETECT BOTS
16	16	Enable auto detection of bots.
17	17	Default: true
18	18	-->
19	19	<setting name="Analytics.AutoDetectBots" value="true" />
20	20	<setting name="Analytics.AutoDetectBots" value="false" />
21	21	<!-- ANALYTICS CAMPAIGN QUERY STRING KEY
22	22	Specifies the key for triggering campaigns on the query string.
23	23	Default: so_camp
24	24	-->

Original file Customized file

**Patch File (/App\_Config/Include/Sitecore.Analytics.Tracking.patch.config.disabled)**

```
<?xml version="1.0" encoding="utf-8"?>
<configuration xmlns:p="http://www.sitecore.net/xmlconfig/"
xmlns:s="http://www.sitecore.net/xmlconfig/set/" p:p="1">
<sitecore>
<settings>
<setting name="Analytics.AutoDetectBots" s:value="false" />
<!--#text !#s== to be deleted=#!-->
<!-- ANALYTICS TRACKING COOKIE LIFETIME
Specifies the lifetime of the tracking cookie in hours.
Default: 87600 (10 years)
```

You can edit the patch file in this window

**Skip**  
Skip this configuration file and manually resolve it later.

**Resolve**  
Save the patch file, and replace the customized file with the original one.

4. After you resolve or skip all the configuration file conflicts, on the **Configuration file changes** page, click **Apply and analyze changes**.

At this point, the **Update Installation Wizard** restarts the analysis and ensures that all configuration file conflicts are either resolved or skipped.

The **Update Installation Wizard** then creates patch files with the customization, and disables the patches by adding the `.disabled` extension to the files.

## Note

In certain scenarios, the generated patch files can contain customizations that are critical for the Sitecore instance to run correctly. To avoid breaking changes, the **Update Installation Wizard** displays an error on the **Apply and analyze changes** page.

If this happens, you must enable the patch files by removing the `.disabled` extension, and then refresh the **Update Installation Wizard** page in your browser.

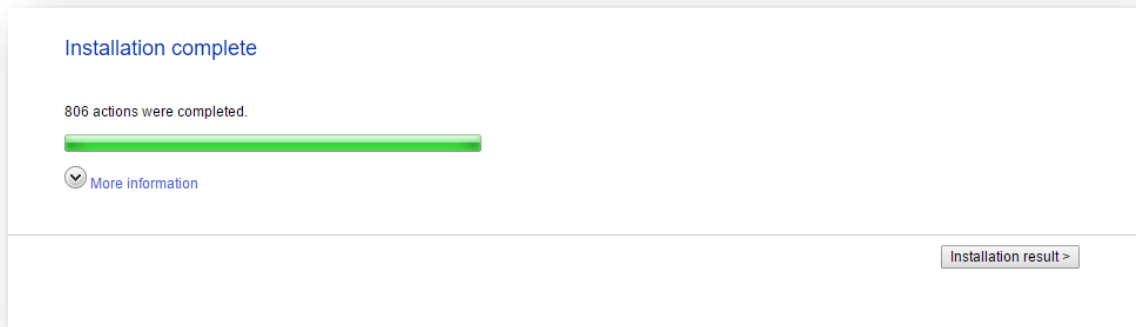
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- When the analysis is complete, click **Analysis result**.

## Note

If the analysis fails, you must restart the **Update Installation Wizard**. If this does not solve the problem, contact Sitecore support.

- If the **Update Installation Wizard** does not find any more conflicted configuration files, click **Install the package**. Any conflicts that were skipped or left unresolved during the configuration are now resolved automatically.
- On the **Installation complete** page, when the installation process is finished, click **Installation result**.

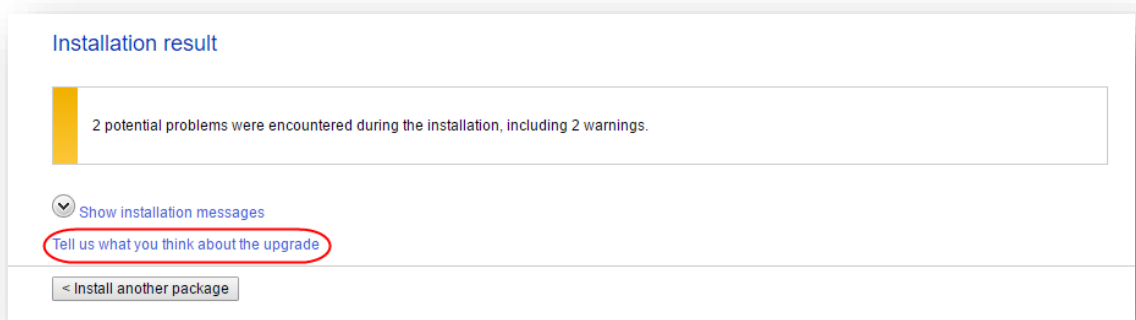


## Tip

When the installation is complete, you can give feedback to the Sitecore development team about your upgrade experience.

On the **Installation result** page, click **Tell us what you think about the upgrade**.

The feedback is anonymous and the feedback form does not collect instance or license-specific information.



## 1.2.5 Review Custom Changes in Configuration Files

When the installation is complete, you must enable the patch files with the customizations that were generated by the **Update Installation Wizard**.

For example, during analysis, if the `Sitecore.Mvc.config` file has been customized, the **Update Installation Wizard** creates a patch file with your customizations and creates a back up of the config file in a disabled state.

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The patch files are created and stored in the same folder where the original configuration files are located, and are saved in the following file format: `<filename>.patch.config.disabled`.

For better traceability and debugging, the wizard also saves the original file with your customizations in the following file format: `<filename>.custom.config.disabled`.

To enable the patch files with the customizations that were generated by the **Update Installation Wizard**:

- Remove the `.disabled` extension from the file name.

## Important

Sometimes the **Update Installation Wizard** cannot generate the configuration file patches, for example, when there are non-Sitecore sections in the `web.config` file.

When this happens, the **Update Installation Wizard** extracts the customizations from the config file, and merges the customizations with the corresponding file from the upgrade package.

The merged configuration file is then saved as `<filename>.merged.config.disabled` and the original file with custom changes is saved as `<filename>.custom.config.disabled`.

To replace the original file with the merged file for files that could not be patched:

1. Rename the original file `<filename>.config` file, to `<filename>.config.old`.
2. Rename the merged file `<filename>.merged.config.disabled` to `<filename>.config`.

## Note

It is best practice to create a *Custom* folder to store all the generated patches in the `\Website\App_Config\Include` path.

## 1.2.6 Update Solr Assemblies

If you are using the Solr search provider, you must upgrade the corresponding assemblies.

To update the Solr assemblies:

1. Re-generate the `schema.xml` file and reload Solr.
2. Enable all new Solr files located in the `\Website\App_config\Include` folder.

Starting with Sitecore XP 8.2, the default installation includes a default implementation of the Solr connector. This connector can be used without a third-party Inversion of Control (IOC) and it is automatically enabled after the upgrade is complete.

The third-party IOC is no longer available on the **Sitecore Downloads** page. However, if you want to continue using it, you can download it from the Sitecore [GitHub page](#).

## 1.3 Upgrade modules

After you have completed the upgrade of the Sitecore Experience Platform, you must upgrade any Sitecore modules that you have installed. To upgrade modules, refer to the corresponding module upgrade documentation located in the Sitecore Developer Portal (<https://dev.sitecore.net>).

### Note

If you have installed Email Experience Manager (EXM), the module upgrade guide can ask you to enable the module before you perform the upgrade.

To enable the module, you must undo the changes in the Preconditions for Installing the Upgrade Package section for EXM.

### 1.3.1 Upgrade the Web Forms for Marketers module

To upgrade the Web Forms for Marketers module, you must download the [Web Forms for Marketers 8.2 rev. 170518 \(Update-4\) Upgrade Package](#) from the Sitecore Developer Portal. To install the Web Forms for Marketers 8.2 Upgrade Package, use the **Update Installation Wizard**.

To install the upgrade package:

1. On the **Sitecore Launchpad**, click **Control Panel**, and in the **Administration** section, click **Install an update**.
  - Alternatively, to open the **Update Installation Wizard**, enter the following URL in your web browser.  
<http://<hostname>/sitecore/admin/UpdateInstallationWizard.aspx>
2. The wizard guides you through the update process and helps you:
  - Upload the upgrade package.
  - Analyze the package.
  - Install the package.

### Note

For more guidance on the steps required to upgrade the Web Forms for Marketers module, see the [Install the Upgrade Package](#), and [Review Custom Changes in Configuration Files](#) sections.

After you have completed the upgrade process of the Web Forms for Marketers module, you must continue with the [Post-Installation Steps](#) section.

### Upgrade multiple Web Forms for Marketers instances

For every Sitecore instance in your environment that you want to upgrade, you must repeat all the steps described in this section on the Content Management server (CM).

### Note

If you have Content Delivery servers (CD), use the [Web Forms for Marketers CD 8.2 rev. 170518 Upgrade Package](#) and modify the `Sitecore.Forms.config` file as described in the [Sitecore Web Forms for Marketers 8.2 Update-4 Installation Guide](#) available on the [Sitecore Developer Portal](#).

## 1.4 Post-Installation Steps

After installing the upgrade package, to complete the installation of Sitecore XP 8.2 rev. 170614 (Update-4), you must complete the following post-installation steps:

- Clear the browser cache.
- Publish the site.
- Rebuild the search indexes and the link database.
- Redeploy marketing definitions.

### 1.4.1 Clear the Browser Cache

After you change the configuration files, you must clear your browser cache.

#### Note

These steps can vary depending on the browser and version of the browser that you are using.

To clear your browser cache:

1. In Internet Explorer, click **Tools, Internet Options**.
2. In the **Internet Options** dialog box, in **Browsing History**, click **Delete**, and then delete all your **Temporary Internet Files**.

### 1.4.2 Publish the Site

You must publish the entire site (including system items, templates, and so on) to every publishing target.

To publish the entire site:

1. In the Sitecore Desktop, click the **Sitecore Start** button, and then click **Publish Site**.
2. In the **Publish Site** dialog box, select **Republish**.

### 1.4.3 Rebuild Search Indexes and the Link Database

After publishing your website, you must rebuild your search indexes and the Link database.

To rebuild all the `ContentSearch` indexes:

1. On the **Sitecore Launchpad**, click **Control Panel**, and in the **Indexing** section, click **Indexing manager**.
2. In the **Indexing Manager** dialog box, click **Select all**, and then click **Rebuild**.

To rebuild the Link database for the Master and Core databases:

1. On the **Sitecore Launchpad**, click **Control Panel**, and in the **Database** section, click **Rebuild Link Databases**.
2. Select the Master and Core databases and then click **Rebuild**.

### 1.4.4 Redeploy Marketing Definitions

To complete the upgrade process, you must redeploy marketing definitions.

#### Important

If you are using the Sitecore Experience Database (xDB) functionality, you must set the `Xdb.Enabled` and `Xdb.Tracking.Enabled` parameters to `true`.

If you do not do this, you cannot redeploy marketing definitions.

To redeploy marketing definitions:

1. On the **Sitecore Launchpad**, click **Control Panel, Analytics**, and then click **Deploy Marketing Definitions**.
2. In the **Deploy marketing definitions** dialog box, select all the definitions and taxonomies and click **Deploy**.

If you do not do this, the binary data stored in the **Data** column in the definition tables (*CampaignActivityDefinitions*, *GoalDefinitions*, and so on) might not be compatible with Sitecore XP 8.2 rev. 170614 (Update-4).

## 1.4.5 Rebuilding the Reporting Database

Due to changes in the reporting database schema and aggregation pipeline, and in order to have accurate data in it, you must rebuild the reporting database. Although performing this step is optional, it is considered best practice to rebuild the reporting database when you upgrade from any version of Sitecore.

### Note

This process is resource intensive and may take a long time to complete.

If you need more help and guidance to rebuild the reporting database, refer to the administrator and developer documentation on the Sitecore Documentation site – <https://doc.sitecore.net>.

## 1.4.6 Upgrade Multiple Instances

Repeat all the steps in the upgrade process for every Sitecore instance that you want to update.

### Note

If you want to skip installing files, items, executing post-steps or other options, in the Update Installation Wizard, in the **Advanced Options** section, ensure that you clear the relevant check boxes.