# SITECORE

# Sitecore Experience Commerce Upgrade Guide for Sitecore XC 10.0 to XC 10.1

Sitecore Experience Commerce 10.1

February 25, 2021

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# 1. Introduction

This guide describes how to upgrade a Sitecore Experience Commerce™ (XC) 10.0 deployment to Sitecore Experience Commerce (XC) 10.1.

These instructions apply to on-prem solutions.

> **WARNING**
> Prior to performing the Sitecore XC upgrade, you must ensure to review the release notes and the listed breaking changes.

## 1.1. Overview of the Sitecore XC upgrade process

The instructions in this document comprise the upgrade steps for Sitecore Experience Commerce (XC) and the Sitecore Experience Accelerator (SXA) Storefront .

Follow the upgrade workflow in this order:

- Review upgrade prerequisites
- Prepare for the solution upgrade
- Upgrade Sitecore Experience Platform (XP)
- Upgrade Commerce Engine, Connect Core and Commerce Engine Connect
- Upgrade Commerce Business Tools
- Upgrade the SXA Storefront

# 2. Prerequisites

> **IMPORTANT**
> Before you begin the upgrade process, you must backup your Commerce Engine.

These upgrade instructions assume you are upgrading from Sitecore XC 10.0 to Sitecore XC 10.1.

These instructions assume that your current Sitecore XC deployment (before the upgrade) uses the following software:

- Sitecore Experience Platform (XP) 10.0
- Sitecore Experience Accelerator (SXA) 10.0
- Sitecore Experience Commerce (XC) 10.0

## 2.1. Install new software prerequisites

Review the system requirements and install all required software before you begin the upgrade process.

## 2.2. Download and extract required Sitecore software packages

In preparation for the upgrade, download and extract the required Sitecore XC 10.1 software line-up:

- Sitecore Experience Platform (XP) 10.1 software and installation instructions
- Sitecore XC 10.1 release package
- Sitecore Experience Accelerator (SXA) 10.1

# 2.3. System requirements

This section describes the system requirements for a Sitecore XC 10.1 hosting environment.

The Sitecore Experience Commerce compatibility matrix is available in this Sitecore Knowledge Base article

- Hardware requirements
- Hosting environment requirements

> **NOTE**
> You need a Braintree sandbox account to enable web payment functionality through the Commerce Engine. Follow the instructions on the Braintree website to set up an account, and note the MerchantID, Public Key and Private Key information. You need to specify the values for those parameters in the Sitecore XC deployment script.

## 2.3.1. Hardware requirements

The minimum hardware configuration requirements for running a single Sitecore XC installation are:

- 4 core processor
- 16 GB of RAM

> **NOTE**
> These are recommended hardware requirements for running the software on a single computer. For more information about running Sitecore XC on different kinds of hardware, consult your Sitecore partner or technical sales representative.

## 2.3.2. Hosting environment requirements

The following table lists the software requirements for Sitecore XC 10.1 hosting environment.

> **IMPORTANT**
> Address all system requirements before you proceed with the Sitecore XC deployment or upgrade.

| | |
|---|---|
| *Operating system* | • Windows Server 2016 <br><br> • Windows Server 2019 <br><br> • Windows 10 Professional (64-bit) |
| *.NET Framework* | The latest available version of the ASP.NET Core Runtime 3.1. Hosting Bundle |

| | |
|---|---|
| *Database* | • Microsoft SQL Server 2019 |
| | • Microsoft SQL Server 2017 |
| | • Microsoft Azure SQL |
| | • Redis data store |
| |     • Redis (Linux): 4.0.9 (or later) |
| |     • Redis (Azure): 4.0.14 (or later) |
| |     • Redis (Windows): 3.0.504 (or later) |
| | **NOTE** <br> Sitecore recommends using Redis for Linux for production installations. The version for Windows should only be used for development or non-production single machine deployments. |
| *Web server* | • IIS 10.0 |
| | • Microsoft Web Deploy 3.6 |
| | • URL Rewriter |
| *Development* | • Visual Studio 2019 |
| | • The latest available version of .NET Core SDK 3.1 |
| | • MSBuild Microsoft Visual Studio Web targets (available from Nuget) |
| | **NOTE** <br> When you unpack the Web targets NuGet package, copy the `\tools \VSToolsPath\Web \Microsoft.Web.XmlTransform.dll` file into a folder and take note the path. |
| | • OData Connected Service (available from Visual Studio Marketplace) |
| | • Node.js (for BizTools customization) |
| *Deployment* | PowerShell 5.1 or later |
| *Search indexing* | Solr 8.4.0 |
| | SolrCloud |
| *Sitecore software* | • Sitecore Experience Platform 10.1 (available on dev.sitecore.net) |
| | • Sitecore Experience Accelerator (SXA) 10.1 (available on dev.sitecore.net) |
| | • Sitecore PowerShell Extensions 6.2 for Sitecore 10.1 (available with SXA downloads on dev.sitecore.net) |
| | • Sitecore Identity 5.0.0 |
| | **NOTE** <br> Sitecore PowerShell Extensions and Sitecore SXA are installed when you run the Sitecore Experience Commerce deployment script, as part of the XC installation process. <br><br> The Sitecore XC installation process requires the .ZIP packages for both Sitecore SXA and Sitecore Powershell Extensions. WDP packages are not supported. |

# 3. Preparing for the solution upgrade

Before you begin upgrade to Sitecore Experience Commerce 10.1, create a copy of your current Sitecore XC configuration for future use.

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# 4. Upgrade Sitecore XP

Proceed with the Sitecore XP 10.1 software upgrade by following instructions provided in the Sitecore Experience Platform Upgrade Guide, available on the Sitecore Experience Platform 10.1 download page.

# 5. Upgrade Commerce Engine, Connect Core, and Commerce Engine Connect

You must update the Commerce Engine binaries as well as policy configuration when you upgrade the Commerce Engine. You must also upgrade the Connect Core and Commerce Engine Connect files.

Perform the following procedures in the order listed:

- Update the Commerce Engine binaries
- Update policy set configuration
- Update environment configuration
- Update global policy configuration
- Update Commerce Engine configuration
- Disable antiforgery protection (temporary)
- Upgrade the database schema
- Update Commerce Solr schema
- Restart the Commerce Engine sites
- Bootstrap the Commerce Engine
- Flush the Redis cache
- Update Commerce Connect Core
- Update Commerce Connect Core additional packages
- Update Commerce Connect XConnect configuration
- Update Commerce Marketing Automation
- Update Commerce Engine Connect
- Synchronize Control Panel content items
- Rebuild Commerce indexes
- Update the data templates
- Re-enable the anti-forgery setting
- Republish and rebuild the search indexes (for Commerce Engine only upgrade)

# 5.1. Update the Commerce Engine binaries

On your existing Sitecore XC system:

1. Open Internet Information Services (IIS) Manager, and stop the following Commerce Engine sites:

    - *CommerceAuthoring*

    - *CommerceMinions*

    - *CommerceOps*

    - *CommerceShops*

2. In IIS Manager, stop the *CommerceMinions_SC* application pool.

3. In each Commerce Engine service folder, delete all existing sub-folders and files, <u>except</u> the *wwwroot* folder. Only keep the *wwwroot* folder and its content.
   For example, open the `c:\inetpub\wwwroot\CommerceAuthoring_Sc` folder, and delete the existing *runtimes* folder and all the `.dll` files.

    > **IMPORTANT**
    > Repeat this step for each of the following Commerce service folders
    >
    > - `c:\inetpub\wwwroot\CommerceAuthoring_Sc`
    >
    > - `c:\inetpub\wwwroot\CommerceShops_Sc`
    >
    > - `c:\inetpub\wwwroot\CommerceMinions_Sc`
    >
    > - `c:\inetpub\wwwroot\CommerceOps_Sc`

4. In each Commerce Engine service folder, replace the deleted *runtimes* folder and `.dll` files with the Sitecore XC 10.1 version of those folders and files.

    > **NOTE**
    > The Sitecore XC 10.1 files are available in the
    > `Sitecore.Commerce.Engine.*.zip` package or the version you compiled
    > from the `Sitecore.Commerce.Engine.SDK.*.zip` package.

# 5.2. Update policy set configuration

Sitecore XC 10.1 includes changes to Sitecore XC policy configuration, and you must update the policy set configuration files as part of the upgrade process.

You must complete these steps for each Commerce Engine service.

To update policy set configuration files:

1. Compare the Sitecore XC 10.1 version of the policy set files (located in the `c:\inetpub\wwwroot\<CommerceEnvironment>\wwwroot\data\Environments` folder) with the previous version of the policy set files used in your deployment, and merge the changes.

   > **NOTE**
   >
   > If you did not customize your Sitecore XC 10.0 policy set files, replace all policy set files in the `c:\inetpub\wwwroot\<CommerceEnvironment>\wwwroot\data\Environments` folder with the Sitecore XC 10.1 version of those files.

2. After you have updated your policy set files, search for any fields with a mention of the term "`Placeholder`" as the value, and replace with the appropriate value for your deployment.

   > **NOTE**
   >
   > It is recommended to perform a clean (vanilla) deployment of Sitecore XC, and use the values from that deployment as a reference point for the upgrade.

## Summary of changes to policy set files in Sitecore XC 10.1

The following table summarizes the changes to the policy set configuration files from Sitecore XC 10.0 to Sitecore XC 10.1, comparing against an existing deployed environment.

Policy set files are located in the `c:\inetpub\wwwroot\<CommerceEnvironment>\wwwroot\data\Environments` folder.

| Policy set file | Changes in Sitecore XC 10.1 |
|---|---|
| `Core.ControllerMethodRoles.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.AccessByRoles.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Caching.PolicySet-*.*.*.json` | Not changed in this release. |
| `Plugin.Catalog.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.CatalogIndexing.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Content.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.ContentHub.PolicySet-*.*.*.json.disabled` | Removed in this release. |
| `PlugIn.LocalizeEntities.PolicySet-*.*.*.json` | The "`Sitecore.Commerce.Core.LocalizeEntityComponentPolicy, Sitecore.Commerce.Co` "`ContentHubImagesComponent.ContentHubImage`" is removed in this release. |

| Policy set file | Changes in Sitecore XC 10.1 |
|---|---|
| `PlugIn.Minions.PolicySet-1.0.0.json-*.*.*.json` | The new `"Sitecore.Commerce.Plugin.Archive.ArchiveEntitiesMinion, Sitecore.Commerce.Plug` are added for `JournalEntry` and `Order` entities. |
| `PlugIn.Payments.Braintree.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Plugin.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Relationships.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Search.PolicySet-*.*.*.json` | Not changed in this release. |
| `Plugin.Search.Azure.PolicySet-*.*.*.json` | Removed in this release. |
| `PlugIn.Search.Solr.PolicySet-*.*.*.json` | Not changed in this release. |
| `Plugin.SQL.PolicySet-*.*.*.json` | The `"Sitecore.Commerce.Plugin.SQL.EntityStoreSqlPolicy"` policy is updated with a new `"A` property. |
| `PlugIn.SQL.Sharding.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Validation.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Versioning.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.ViewTemplateComposer.PolicySet-*.*.*.json` | Not changed in this release. |
| `PlugIn.Workflow.PolicySet-*.*.*.json` | Not changed in this release. |

# 5.3. Update environment configuration

Sitecore XC 10.1 includes changes to the default environment configuration files.

You must update environment configuration files for each Commerce Engine service in your deployment with the changes listed in the following table.

The following table summarizes changes to default configuration files for the *AdventureWorks* and *Habitat* sample environments from Sitecore XC 10.0 to Sitecore XC 10.1, comparing against an existing deployment.

The default path to the environment files is `c:\inetpub\wwwroot\<CommerceEnvironment>\wwwroot\data\Environments`.

| Environment file | Changes in Sitecore XC 10.1 |
|---|---|
| `PlugIn.AdventureWorks.CommerceAuthoring-*.*.*.json`<br><br>or<br><br>`Plugin.Habitat.CommerceAuthoring-*.*.*.json` | The "`Sitecore.Commerce.Plugin.Orders.GlobalCheckoutPolicy`" policy is updated with the following new properties:<br><br>• "`RetryOrderCreationOnConcurrencyFailure`": true<br>• "`MaxRetriesForOrderCreation`": 3<br><br>The "`Sitecore.Commerce.Plugin.Inventory.GlobalInventoryPolicy, Sitecore.Commerce.Plugin.Inventory`" policy is updated with the following new properties:<br><br>• "`RetryInventoryUpdatesOnCheckout`": true<br>• "`MaxRetriesForInventoryUpdatesOnCheckout`": 5<br><br>The "`Sitecore.Commerce.Core.EnvironmentInitializationPolicy, Sitecore.Commerce.Core`" is updated to remove the following values from the "`InitialArtifactSets`" collection:<br><br>• "`Catalog.DefaultSellableItems-1.0`"<br>• "`Catalog.DefaultRelationshipDefinitions-1.0`"<br>• "`GiftCards.DefaultGiftCard-1.0`"<br>• "`Environment.AdventureWorks.PolicySets-1.0`" or "`Environment.Habitat.DefaultRelationships-1.0`" |
| `PlugIn.AdventureWorks.CommerceMinions-*.*.*.json`<br><br>or<br><br>`PlugIn.Habitat.CommerceMinions-*.*.*.json` | Added "`Sitecore.Commerce.Plugin.Archive.ArchiveEntityPolicy, Sitecore.Commerce.Plugin.Archive`" policies for `JournalEntry` and `Orders` entities.<br><br>The "`Sitecore.Commerce.Plugin.Orders.GlobalCheckoutPolicy`" policy is updated with the following new properties:<br><br>• "`RetryOrderCreationOnConcurrencyFailure`": true<br>• "`MaxRetriesForOrderCreation`": 3<br><br>The "`Sitecore.Commerce.Plugin.Inventory.GlobalInventoryPolicy, Sitecore.Commerce.Plugin.Inventory`" policy is updated with the following new properties:<br><br>• "`RetryInventoryUpdatesOnCheckout`": true<br>• "`MaxRetriesForInventoryUpdatesOnCheckout`": 5 |

| Environment file | Changes in Sitecore XC 10.1 |
| --- | --- |
| `PlugIn.AdventureWorks.CommerceShops-*.*.*.json`<br><br>or<br><br>`PlugIn.Habitat.CommerceShops-*.*.*.json` | The `"Sitecore.Commerce.Plugin.Orders.GlobalCheckoutPolicy"` policy is updated with the following new properties:<br><br>• `"RetryOrderCreationOnConcurrencyFailure": true"`<br><br>• `"MaxRetriesForOrderCreation": 3"`<br><br>The `"Sitecore.Commerce.Plugin.Inventory.GlobalInventoryPolicy, Sitecore.Commerce.Plugin.Inventory"` policy is updated with the following new properties:<br><br>• `"RetryInventoryUpdatesOnCheckout": true`<br><br>• `"MaxRetriesForInventoryUpdatesOnCheckout": 5`<br><br>The `"Sitecore.Commerce.Core.EnvironmentInitializationPolicy, Sitecore.Commerce.Core"` is updated to remove the following values from the "`InitialArtifactSets`" collection:<br><br>• `"Catalog.DefaultSellableItems-1.0"`<br><br>• `"Catalog.DefaultRelationshipDefinitions-1.0"`<br><br>• `"GiftCards.DefaultGiftCard-1.0"`<br><br>• `"Environment.AdventureWorks.PolicySets-1.0"` or `"Environment.Habitat.DefaultRelationships-1.0"`<br><br>• `"Environment.AdventureWorks.RelationshipTypes-1.0"` or `"Environment.Habitat.RelationshipTypes-1.0"` |

## 5.4. Update global policy configuration

Sitecore Experience Commerce (XC) 10.1 includes changes to Sitecore XC global policy configuration. You must update the global environment configuration file (`Global.json`) to include the policy changes as described in this topic.

You must complete these steps for each Commerce Engine service.

To update global policy configuration:

1.  In your deployment, navigate to the `wwwroot\bootstrap\` folder for the Commerce Engine service (for example, `c:\inetpub\wwwroot\CommerceAuthoring\wwwroot\bootstrap`).

2.  Compare the `Global.json` file in your deployment with the same file included with the Sitecore XC 10.1 `Sitecore.CommerceEngine.SDK.*.zip`.

3.  Update the existing `Sitecore.Commerce.Plugin.SQL.EntityStoreSqlPolicy` policy as follows:

    *   Update the "`Version`" property to "`10.1.0`".

## 5.5. Update Commerce Engine configuration

Sitecore XC 10.1 includes changes to Sitecore XC Commerce Engine configuration file. You must update the `config.json` file as part of the upgrade process.

To update the Commerce Engine configuration file:

1.  Open the `c:\inetpub\wwwroot\<CE-service>\wwwroot` folder, and open the `config.json` file.

2.  Compare the `config.json` file in your deployment with the same file included with the Sitecore XC 10.1 `Sitecore.Commerce.Engine.SDK.*.zip` package.

3.  Update the "`Redis`" section to include the new properties:

```
"IntervalBetweenConnectionAttemptsInSections": 60,
"RedisConnectionPoolSize": 1,
"RedisCompressionEnabled":true,
```

4.  Save your changes.

## 5.6. Disable antiforgery protection (temporary)

You must disable antiforgery setting for the Business Tools in the Authoring service configuration file.

> **NOTE**
>
> When you place a call to the Commerce Engine API from outside the Commerce Business Tools (for example, using Postman), you must disable the antiforgery protection setting in the `wwwroot\config.json` file.

To disable the antiforgery protection:

1.  Navigate to the `\inetpub\wwwroot\CommerceAuthoring_Sc\wwwroot\` folder and open the `config.json` file.

2.  Locate the the anti-forgery setting and change the value to false:

    ```
    "AntiForgeryEnabled": false,
    ```

# 5.7. Upgrade the database schema

This release of Sitecore Experience Commerce contains changes to SQL database schema and stored procedures.

> **NOTE**
> The upgrade scripts use default global and shared environment database names. Before you run the scripts, you must modify them to match the names of databases in your deployment.

To upgrade Sitecore XC SQL database schema with the changes contained in this release:

1. Open the SQL Server Management application.

2. Navigate to the unzipped upgrade package and locate the database schema update script.

3. Run the following script and execute against both the *SitecoreCommerce_Global* and *SitecoreCommerce_SharedEnvironments* databases:

   - `SitecoreCommerce10.1.0_SchemaUpgrade.sql`

4. If you plan on using the Entity Archiving feature introduced in this release, you must set up the `ArchiveDataBase`.
   Open the `Sitecore.Commerce10.1.0_CreateArchiveDatabase.ps1` script file, and modify the following parameters to match your environment:

   - `$severname` – the connection to your SQL server.

   - `$archiveDatabaseName` – the name of the database for archiving.

   - `$dacpacPath` – the path to the `Sitecore.Commerce.Engine.SharedArchive.DB.dacpac` file.

   > **NOTE**
   > In the `Sitecore.Commerce.Engine.SDK.*` package, the `Sitecore.Commerce.Engine.SharedArchive.DB.dacpac` file might be called `Sitecore.Commerce.Engine.DB.dacpac`.

5. Modify the following authentication settings in the script to match the appropriate authentication credentials:

   - On line 26, update the `/TargetUser:"<Username>" /TargetPassword:"<Password>"` settings.

   - On line 48, update the values for the `-UserName "<Username>"` and `-Password "<Password>"` settings.

6. Save your changes to the script file.

7. Run the script.

**NOTE**

After the script is completed, you see the new
`SitecoreCommerce_ArchiveSharedEnvironments` database. The schema of
the new archive database matches the schema of existing commerce
databases.

## 5.8. Update Commerce Solr schema

Sitecore XC 10.1.0 uses Solr version 8.4.0. No upgrade is required for Sitecore XC 10.1.

> **NOTE**
> If your Sitecore XP 10.1 deployment uses a new instance of Solr, you should migrate
> your Sitecore XC solr indexes to the new solr instance.

## 5.9. Restart the Commerce Engine sites

To restart the Commerce Engine sites:

- Open Internet Information Services (IIS) Manager and restart the Commerce Engine sites, for example:
    - *CommerceAuthoring*
    - *CommerceMinions*
    - *CommerceOps*
    - *CommerceShops*

# 5.10. Bootstrap the Commerce Engine

You must bootstrap the Commerce Engine to propagate the changes you made to the environment configuration files into the global database.

The Sitecore XC SDK includes code samples for DevOps operations, so that you can access the Sitecore XC API directly. The following instructions assume that you are using Postman to exercise the Sitecore XC API and that you have imported the Adventure Works and Habitat environments into Postman.

To run the bootstrap operation:

1. Launch the Postman application.

2. In the **Collections** pane in Postman, navigate to the *Authentication* folder.

3. Open the `Sitecore` folder and execute the `GetToken` request.
   When Postman displays an access token in the **Body** pane, authentication is successful.

4. In the **Collections** pane, navigate to the *SitecoreCommerce_DevOps* folder.

5. Open the *1 Environment Bootstrap* folder, and execute the `Bootstrap Sitecore Commerce` request.

6. Launch Internet Information Services (IIS) Manager and perform an IIS reset.

# 5.11. Flush the Redis cache

After you have completed all of the steps required to upgrade the Commerce Engine, you must flush the Redis cache as described in the Redis documentation to remove any content that may have been added to the cache during the upgrade process.

# 5.12. Update Commerce Connect Core

You use the Sitecore Installer to update the Commerce Connect Core.

To update Commerce Connect Core:

1. Launch the Sitecore Installer and install the Sitecore Commerce Connect Core 16.0.\*.zip package.

2. When you are prompted to overwrite existing files, click **Yes to all**. When prompted to overwrite items, select **Merge** and **Clear**, and click **Apply to all**.

## 5.13. Update Commerce Connect Core additional packages

You use the Sitecore Installer to the update the following additional Connect Core packages: Sitecore Commerce ExperienceAnalytics Core and Sitecore Commerce ExperienceProfile Core.

To update Commerce Connect Core additional packages:

- Use the Sitecore Installer to install the following packages (if you are prompted to overwrite existing files, click **Yes to all**. If prompted to overwrite items,  select **Merge** and **Clear**, and click **Apply to all**):
    - `Sitecore Commerce ExperienceProfile Core 16.0.*.zip` package
    - `Sitecore Commerce ExperienceAnalytics Core 16.0.*.zip` package

## 5.14. Update Commerce Connect XConnect configuration

To update the Commerce Connect XConnect configuration:

1. Navigate to the `\inetpub\wwwroot\<siteName>\XConnectFiles\Models` folder and make a copy of the `Sitecore.Commerce.Connect.XConnect.Models.json` file.

2. Paste the copied file to the following locations (overwriting the existing file):

   - `\inetpub\wwwroot\<siteName>.xconnect\App_data\jobs\continuous\IndexWorker\App_data\Models`

   - `\inetpub\wwwroot\<siteName>.xconnect\App_data\Models`

3. Navigate to the `\inetpub\wwwroot\<siteName>\XConnectFiles\Configs` folder, and make a copy of the `sc.XConnect.Collection.Model.Commerce.Plugins.xml` file.

4. Paste the copied file to the following location: `\inetpub\wwwroot\<sitename>_xconnect\App_Data\Config\Sitecore\Collection\`

5. Navigate to the `\inetpub\wwwroot\<siteName>\XConnectFiles\Configs` folder, and make a copy of the `Segmentation.Commerce.Predicates.xml` file.

6. Paste the copied file to the following locations: `\inetpub\wwwroot\<sitename>_xconnect\App_Data\jobs\continuous\AutomationEngine\App_Data\Config\sitecore\Segmentation\`

7. Navigate to the `\inetpub\wwwroot\<siteName>\bin` folder, and make a copy of the `Sitecore.Commerce.Connect.Collection.Model.dll` file.

8. Paste the copied file to the following location: `\inetpub\wwwroot\<sitename>_xconnect\bin`

# 5.15. Update Commerce Marketing Automation

You use the Sitecore Installer to update the Sitecore Commerce Marketing Automation Core package delivered as part of Commerce Connect Core.

To update Commerce Marketing Automation Core packages

1.  Stop the Marketing Automation Engine service.

2.  Use the Sitecore Installer to install the following packages (if you are prompted to overwrite existing files, click **Yes to all**. If prompted to overwrite items,  select **Merge** and **Clear**, and click **Apply to all**):

    -   `Sitecore Commerce Marketing Automation Core 16.0.*.zip` package

3.  Unzip the `Sitecore Commerce Marketing Automation for AutomationEngine 16.0.*.zip` package, and place the contents in the xConnect installation folder (for example, `c:\inetpub\wwwroot\<sitename>_xconnect`).

4.  Start the Marketing Automation Engine service.

5.  Open Internet Information Service (IIS) Manager and perform an IIS reset.

## 5.15.1. Redeploy marketing definitions
After you update the Commerce Connect Core additional packages, you must deploy marketing definitions in Sitecore Control Panel.

To redeploy marketing definitions:

1.  Log in to Sitecore and open the Sitecore Control Panel.

2.  In the **ANALYTICS** section, click **Deploy marketing definitions**. The **Deploy marketing definitions** dialog opens.

3.  Click **Deploy**.

> **NOTE**
> The deployment operation can take several minutes to complete.

# 5.16. Update Commerce Engine Connect

You must install the Commerce Engine Connect Update module to update Commerce Engine Connect, and merge the changes to the CE Connect configuration file.

To update the Commerce Engine Connect module and change the configuration:

1. Launch the Sitecore Installer and install the Sitecore Commerce Engine Connect 7.0.*.zip package.

2. When you are prompted to overwrite existing files, click **Yes to all**. When prompted to overwrite items, select **Merge** and **Clear**, and click **Apply to all**.

3. On the Sitecore service instance, navigate to the `\inetpub\wwwroot\<siteName>\App_Config\Include\Y.Commerce.Engine.Connect.config` folder, and update the `web.config` file with any required configuration changes and to ensure the correct URL is being used for connectivity from Sitecore to the Commerce Engine, including:

   - Ensure the following properties are set with the URL values for your deployment: `<shopsServiceUrl>`, `<commerceOpsServiceUrl>`, and `<commerceMinionsServiceUrl>`.

   - Ensure that the `<sitecoreIdentityServerUrl>` property is set to the URL of your Sitecore Identity Server.

   - Ensure that the `<commerceEngineConnectClientId>` property is set to the value `CommerceEngineConnect`.

   - Ensure that in the `<commerceCachingConfiguration>` section the `<configuration>` for the Redis host is correct.

4. Navigate to the `c:\inetpub\wwwroot\<siteName>\App_Config\Include\Y.Commerce.Engine` folder and rename the following (disabled) files to enable them:

   - `Sitecore.Commerce.Engine.DataProvider.config`

   - `Sitecore.Commerce.Engine.Connectors.Index.Common.config`

   - `Sitecore.Commerce.Engine.Connectors.Index.Solr.*.config`

5. To prepare for merging changes to the `web.config` file, take note of the following formation:

   - On your Sitecore service instance, the path to the Commerce Engine config file on your Sitecore instance, for example: `\inetpub\wwwroot\<sitename>\web.config` file.

   - On your Sitecore service instance, the path to the `\inetpub\wwwroot\<sitename>\MergeFiles\Sitecore.Commerce.Engine.Connectors.Merge.config` file.

   - The path to the location where you installed the MSBuild Microsoft Visual Studio Web Targets package (as part of the prerequisites).

6. In PowerShell create a script based on the following sample, and replace the values for `$WebConfig`, `$InputFile`, `$MergeTo` with the paths to the `web.config`, `merge.config` and `xmltransform` files you noted in step 5.

```
$WebConfig = "<pathto>\web.config"
$InputFIle = "<pathto>\MergeFiles\Sitecore.Commerce.Engine.Connectors.Merge.Config"
$MergeTool = "<pathto>\Microsoft.Web.XmlTransform.dll"
```

```
Add-Type -LiteralPath $MergeTool
$xmldoc = New-Object Microsoft.Web.XmlTransform.XmlTransformableDocument;
$xmldoc.PreserveWhitespace = $true $xmldoc.Load($WebConfig);
$transf = New-Object Microsoft.Web.XmlTransform.XmlTransformation($InputFile);
if ($transf.Apply($xmldoc) -eq $false)
{
    throw "Transformation failed."
}
$xmldoc.Save($WebConfig);
```

7.  Run the Powershell script.

8.  Verify that the changes to the `web.config` files are applied.

# 5.17. Synchronize Control Panel content items

As part of the upgrade process, you must synchronize content items in the Control Panel to the Commerce Engine.

If you previously synchronized Sitecore Control Panel content items to the Commerce Engine, you must re-synchronize the content.

If this is the first time Sitecore Control Panel content items are synchronized to the Commerce Engine, use this procedure instead.

## Re-synchronize Control Panel content items

To re-synchronized Control Panel content item paths:

1. Launch the Postman application.

2. Navigate to the *ContentAPISamples* folder in the **Collections** pane.

3. Open the *DoActions* folder and execute the `Sync Content Path` sample for each environment that has a different data store (that is, uses a distinct dataset and configuration, identified by a different `ArtifactStoreId`).
   You can use the `Check Long Running Command Status` sample to ensure that the synchronization operation completes, as the operation may take several minutes.

   > **NOTE**
   >
   > You may need to obtain the `EntityView` value to use as input for the Sync Content Path sample if you receive an error related the entity version. See the Synchronize content items topic for more information.

4. Launch Internet Information Service (IIS) Manager and perform an IIS restart.

## Synchronize Control Panel content items for the first time

If you have not synchronized Control Panel content items before, perform the following steps:

1. Launch the Postman application.

2. Navigate to the *SitecoreCommerce_DevOps* folder in the **Collections** pane.

3. Open the *3 Environment Initialize* folder, and run the `Ensure\Sync default content paths` sample request for each environment that has a different data store (that is, for each environment that use a different `ArtifactStoreId`).

   > **NOTE**
   >
   > The operation might take several minutes to complete. You can run the `Check Long Running Command Status` sample in Postman to ensure that the synchronization operation completes.

4. Launch Internet Information Service (IIS) Manager and perform an IIS restart.

## 5.18. Rebuild Commerce indexes

To rebuild the Sitecore XC indexes:

> **NOTE**
> Before you rebuild the Sitecore indexes, make sure that previous indexes were deleted.

1. Launch the Postman application

2. In the **Collections** pane, navigate to the *SitecoreCommerce_DevOps* folder.

3. Expand the *Minions* folder and execute the following requests:

   > **NOTE**
   > When you execute the indexing minion requests, make sure that they point to the URL of the Commerce Engine instance that is running the Minions service.

   - `Run FullIndex Minion - Orders`
   - `Run FullIndex Minion - Customers`
   - `Run FullIndex Minion - PriceCards`
   - `Run FullIndex Minion - Promotions`
   - `Run FullIndex Minion - Catalog Items`

## 5.19. Update the data templates

To update the data templates:

1. Log in to Sitecore Launchpad (https://<host>/sitecore) and click **Content Editor**.

2. Click the **Commerce** tab.

3. Click **Delete Data Templates**.

4. Click **Update Data Templates**.

## 5.20. Re-enable the anti-forgery setting

Re-enable the anti-forgery setting for the Business Tools in the Authoring service configuration file.

To enable the anti-forgery setting:

1.  Navigate to the `\inetpub\wwwroot\CommerceAuthoring_Sc9\wwwroot\` folder and open the `config.json` file.

2.  Locate the the anti-forgery setting and change the value to true:

    ```
    "AntiForgeryEnabled": true,
    ```

# 5.21. Republish and rebuild the search indexes (for Commerce Engine only upgrade)

> **NOTE**
> If you are performing an upgrade of the SXA Storefront, you do not need to perform this procedure now. (You will republish and rebuild the Sitecore search indexes as part of the SXA Storefront upgrade process.) You can proceed with the Business Tools upgrade.

If you are only upgrading the Commerce Engine only, without performing a storefront upgrade, republish and rebuild the Sitecore search indexes before you proceed with the Business Tools upgrade.

To republish the site and re-index the core, master and web indexes:

1. Log in to Sitecore Launchpad (https://<host>/sitecore) and click on **Content Editor**.

2. Click the **Publish** tab.

3. Click **Publish** and select **Publish site** from the drop-down menu.

4. In the **Publish Site** window, select **Republish – publish everything** and click **Publish**.

5. Return to the Sitecore Launchpad and click on **Control Panel**.

6. Click on **Indexing manager**.

7. Select the following indexes from the Local Indexes list and click **Rebuild**:

   - `sitecore_core_index`

   - `sitecore_master_index`

   - `sitecore_web_index`

# 6. Upgrade Commerce Business Tools

To upgrade the Commerce Business Tools:

1. Open IIS Manager, and stop the SitecoreBizFx site.

2. Navigate to the `inetpub\wwwroot\SitecoreBizFx\assets` folder.

3. Note any customizations made to the `config.json` file.

4. Delete the contents of the `inetpub\wwwroot\SitecoreBizFx` folder.

5. Copy all of the files from the Sitecore XC 10.1 `Sitecore.BizFx.*.zip` package (or from your compiled version of the Sitecore BizFX SDK) into the `inetpub\wwwroot\SitecoreBizFx` folder.

6. Update the `config.json` file (in the `\assets` folder) with any required customizations.

7. In Internet Information Services (IIS) Manager, restart the SitecoreBizFx site.

# 7. Upgrade the SXA Storefront

This section provides instructions for upgrading the Sitecore Experience Accelerator (SXA) Storefront, and to update the related configuration.

Sitecore Experience Accelerator 10.1 is a prerequisite for the SXA Storefront. If you did not install Sitecore Experience Accelerator (SXA) version 10.1 as part of the Sitecore Platform upgrade, download and install the software.

These instructions assume that you have completed the Sitecore XC upgrade.

## 7.1. SXA Storefront upgrade tasks

The following list details the tasks that you must perform to upgrade the SXA Storefront:

- Install the Storefront packages
- Update the SXA Storefront configuration
- Update the storefront domain configuration
- Republish and rebuild the Sitecore search indexes
- Verify the current version number

> **NOTE**
>
> Override templates for existing tenants are not present after an upgrade to the latest version of Sitecore XC. You must configure the override catalog templates manually.
>
> For information about creating a catalog template or enabling direct navigation for custom catalogs or upgraded solutions, see Configure direct navigation on existing sites.

## 7.2. Install the Storefront packages

To install the SXA Storefront packages:

1. Copy the following Sitecore XC 10.1 Storefront packages that you previously downloaded to the `\inetpub\wwwroot\<siteName>\App_Data\packages` folder:

   - Sitecore Commerce Experience Accelerator

   - Sitecore Commerce Experience Accelerator Storefront

   - Sitecore Commerce Experience Accelerator Storefront Themes

   - Sitecore Commerce Experience Accelerator Habitat Catalog

2. Log in to the Sitecore Launchpad and click on **Control Panel**.

3. Under **Administration**, click **Install a package**.

4. Click **Choose package** and select the package to install, for example `Sitecore Commerce Experience Accelerator`.

   > **NOTE**
   > Install the packages in the order listed in step 1.

5. Verify the package information, click **Next**, then click **Install**.

6. If you are prompted to overwrite an existing file, click **Yes to all**.

7. If the system displays a warning message that **Item being installed already exists in database**, select the **Overwrite** option and click **Apply to all**.

   > **NOTE**
   > This prompt may occur more than once.

8. After the installation successfully completes, select the **Restart the Sitecore client** box checkbox, and click **Close** .

9. Repeat steps 3 to 8 for each Storefront package.

10. Open Internet Information Services Manager and perform an IIS reset.

## 7.3. Update the SXA Storefront configuration

After you installed the SXA Storefront package, you must apply the configuration of your existing SXA Storefront site to the new Storefront site deployed as part of the upgrade process.

To update the SXA Storefront configuration:

1. To prepare for merging your configuration changes to the SXA Storefront `web.config` file, take note of the following formation:

- The path to your existing SXA Storefront `web.config` file, for example `\inetpub`
    `\wwwroot\<sitename>\web.config`

  - The path to the `\inetpub\wwwroot\<sitename>\MergeFiles`
    `\Merge.SXA.Storefront.config` file.

  - The path to the location where you installed the MSBuild Microsoft Visual Studio Web
    Targets package (as part of the prerequisites).

2. In PowerShell create a script based on the following sample, and replace the values for
   `$WebConfig`, `$InputFile`, `$MergeTo` with the paths to the
   `web.config`, `merge.config` and `xmltransform` files you noted in step 5.

```
$WebConfig = "<pathto>\web.config"
$InputFIle = "<pathto>\MergeFiles\Merge.SXA.Storefront.config.Config"
$MergeTool = "<pathto>\Microsoft.Web.XmlTransform.dll"
Add-Type -LiteralPath $MergeTool
$xmldoc = New-Object Microsoft.Web.XmlTransform.XmlTransformableDocument;
$xmldoc.PreserveWhitespace = $true $xmldoc.Load($WebConfig);
$transf = New-Object Microsoft.Web.XmlTransform.XmlTransformation($InputFile);
if ($transf.Apply($xmldoc) -eq $false)
{
    throw "Transformation failed."
}
$xmldoc.Save($WebConfig);
```

3. Run the Powershell script.
4. Verify that the changes to the `web.config` files are applied.

## 7.4. Update the storefront domain configuration

If there is an existing storefront site in your current Sitecore XC deployment, update the configuration
in the new `domain.config` file with your own storefront domain configuration.

- Open the new `\inetpub\wwwroot\<sitename>\app_config\security\domains.config`
  file, and update the configuration to reflect the domain name of your storefront site.

## 7.5. Republish and rebuild the Sitecore search indexes

To republish and rebuild the search indexes:

1.  Log in to Sitecore Launchpad and click **Content Editor**.

2.  Click the **Publish** tab.

3.  Click **Publish** and select **Publish site** from the drop-down menu.

4.  In the **Publish Site** window, select **Republish – publish everything** and click **Publish**.

5.  Return to the Sitecore Launchpad and click **Control Panel**.

6.  Click **Indexing manager**.

7.  Select the following indexes from the Local Indexes list and click **Rebuild**:

    - `sitecore_core_index`

    - `sitecore_master_index`

    - `sitecore_web_index`

8.  In IIS Manager, start the upgraded Storefront site and verify that the upgrade completed successfully.

## 7.6. Verify the current version number

1.  Log in to Sitecore Launchpad and click **Content Editor.**

2.  In the left pane, navigate to */sitecore/system/Settings/Foundation/Commerce Experience Accelerator/Upgrade/Current*.

3.  Verify that the value in the **Version** field is *6000*.