

Sitecore Experience Commerce Installation Guide for On-Premise Solutions

Sitecore Experience Commerce 9.2

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1. Getting started

This guide describes how to install Sitecore Experience Commerce™ (XC) solution in a single-server configuration (local environment).

NOTE

This document assumes that you have already installed the Sitecore Experience Platform software (using the XP Single Instance (XPO) configuration), as described in the *Sitecore Experience Platform Installation Guide*, available from dev.sitecore.net.

This chapter contains the following sections:

- [Sitecore Experience Commerce solution](#)
- [System requirements](#)
- [Packages for on-premises installation](#)

1.1. Sitecore Experience Commerce solution

Sitecore Experience Commerce (XC) is an e-commerce solution, built on the Sitecore Experience Platform (Sitecore XP).

The Sitecore XC solution provides a core framework for rapidly delivering commerce functionality through the following components:

- **Commerce Engine**
An extensible commerce core framework, hosting commerce services such as Cart, Order, Pricing, Promotions, Catalogs, and Inventory. The Commerce Engine includes a pluggable framework for extending the engine to modify or add to existing functionality.
- **Commerce Business Tools**
A set of rich business tools for merchandisers and customer service representatives. The business tools are built on the Angular framework, and can also be extended using the same pluggable framework.
- **Sitecore Experience Accelerator (SXA) Storefront**
A sample storefront website that is integrated with the Commerce Engine. You can use the SXA Storefront as a starting point to building a customized storefront.

For more information about Sitecore XP, refer to the [Sitecore Documentation site](#).

For assistance, or to report any discrepancies between this document and the product, please contact [Sitecore Support](#).

With Sitecore 9.0 and later, the on-premises installation of the platform occurs in the context of the Sitecore Installation Framework (SIF). The framework deploys Web Deploy Packages (WDP) by passing parameters to configuration files through a Microsoft® PowerShell module.

1.2. System requirements

This section describes the system requirements for a Sitecore XC 9.2 hosting environment.

- [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.

1.2.1. Hardware requirements

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

- 4 core processor
- 16 GB of RAM

NOTE

The 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.

1.2.2. Hosting environment requirements

The following table lists the software requirements for Sitecore XC 9.2 hosting environment.

| | |
|-------------------------|---|
| <i>Operating system</i> | Windows Server 2016 |
| | Windows Server 2019 |
| | Windows 10 Professional (64-bit) |
| <i>.NET Framework</i> | .NET Framework 4.7.1 Developer Pack (including available updates) |
| | ASP.NET MVC 5.2 or later |
| | ASP.NET Core 2.1 |
| | .NET Core Windows Server Hosting 2.1.3 or later versions of 2.1 |
| | OData 7.2.0 |
| <i>Database</i> | Microsoft SQL Server 2016 SP2 |
| | Microsoft SQL Server 2017 |
| | Microsoft Azure SQL |
| | Redis data store |

NOTE

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.

| | |
|---|--|
| <i>Web server</i> | IIS 10.0 FC: (XPO 9.2) Microsoft Web Deploy 3.6 URL Rewriter |
| <i>Development</i> | Visual Studio 2017 + latest updates Visual Studio 2017 Tooling .NET Core 2.1.7 Windows Hosting module MSBuild Microsoft Visual Studio Web targets (available from Nuget) Git client |
| <i>Deployment</i> | PowerShell 5.1 or later |
| <i>Runtime</i> | .Net Core Runtime 2.1. Node.js OData Connected Service (available from Visual Studio Marketplace) |
| <i>Search indexing</i> | Solr 7.5 |
| <i>Sitecore software</i> | Sitecore Experience Platform 9.2 (available on dev.sitecore.net) Sitecore Experience Accelerator (SXA) 1.9.0 (available on dev.sitecore.net) Sitecore PowerShell Extensions 5.0 for Sitecore 9.2 (available with SXA downloads on dev.sitecore.net) |
| NOTE Sitecore SXA and Sitecore PowerShell Extensions are installed when you run the Sitecore Experience Commerce deployment script, as part of the XC installation process. | |
| <i>Web browsers</i> | Microsoft Edge Internet Explorer 11 Mozilla Firefox Google Chrome Apple Safari |

1.3. Packages for on-premises installation

The Sitecore XC release package does not include any Sitecore XP software. You must install all [Sitecore XP pre-requisite software](#) first.

The following table lists the software packages provided with the Sitecore XC release package for an on-premises installation.

The SIF.Sitecore.Commerce package contains Sitecore Installation Framework scripts and Web Deployment Packages (WDP). Each package has a unique version number.

| Package | Description |
|---|---|
| SIF.Sitecore.Commerce | Contains Commerce-specific extensions to the Sitecore Installation Framework (SIF), including the master deployment script for Commerce packages, Commerce configuration, and Solr schema. |
| Sitecore.Commerce.Engine.OnPrem.Azure | Contains the binary (pre-compiled code) for the Commerce Engine, a lightweight, micro-service based framework for the development of commerce solutions. For deployment using Azure search. |
| Sitecore.Commerce.Engine.OnPrem.Solr | Contains the binary (pre-compiled code) for the Commerce Engine, a lightweight, micro-service based framework for the development of commerce solutions. For deployment using Solr search. |
| Sitecore.Commerce.Engine.SDK | Contains the development kit (source code) for compiling the Commerce Engine. Compiling the SDK programmatically fetches Commerce Engine plugins from Sitecore's public NuGet feed. This NuGet feed hosts plugins that are released and supported with the Sitecore XC release. Available as ZIP package. |
| Sitecore.BizFX.OnPrem | Contains an integrated suite of Sitecore XC Business Tools (pre-compiled code), built on the Angular application platform version 4. |
| Sitecore.Biz.FX.SDK | Contains the development kit (source code) for compiling the Sitecore XC business tools. Available as ZIP package. |
| Commerce Connect | |
| Sitecore Commerce Connect Core OnPrem | Contains a middleware integration layer between the Sitecore XC back-end and the Storefront front-end, and the Sitecore Experience Platform. It also contains the Commerce marketing automation campaign templates. |
| Sitecore Commerce Engine Connect OnPrem | Contains a thin integration layer for integrating the Commerce Engine with Sitecore Commerce Connect Core. Available as ZIP package. |
| Sitecore Commerce ExperienceAnalytics Core OnPrem | Contains Commerce Experience Analytics installer and core files required for integration with Commerce. |
| Sitecore Commerce ExperienceProfile Core OnPrem | Contains Commerce Experience Profile installer and core files required to integrate Experience Profile with Commerce. |

| Package | Description |
|---|--|
| Sitecore Commerce Marketing Automation Core OnPrem | Contains Commerce Marketing Automation installation and core files as well as the default Commerce Marketing Automation templates. |
| Sitecore Commerce Marketing Automation for AutomationEngine | Contains Commerce Marketing automation files required to setup the Marketing Automation Engine service. Available as ZIP package. |
| SXA Storefront | |
| Sitecore Commerce Experience Accelerator | Contains Commerce-specific extensions to the Sitecore Experience Accelerator (SXA) templated UX layouts (for example, UI renderings used to display a catalog on the Storefront) as well as the Commerce email campaign templates. |
| Sitecore Commerce Experience Accelerator Storefront | Contains the sample and starter storefront as an integrated part of the Sitecore XC solution, built using SXA UX layouts. |
| Sitecore Commerce Experience Accelerator Storefront Themes | Contains the themes used for the SXA Storefront site. |
| Sitecore Commerce Experience Accelerator Habitat Catalog | Contains the Habitat sample catalog for the Storefront site. |
| Sitecore.Commerce.Habitat.Images.OnPrem | Contains images for the Habitat sample catalog. |
| Adventure Works Images.OnPrem | Contains images for the Adventure Works sample catalog. |

2. Preparing for a Sitecore XC installation

This chapter outlines the tasks you must complete before installing the Sitecore XC solution on a single machine in a non-production environment.

This chapter contains the following sections:

- [Verify your Sitecore XP setup](#)
- [Download the Sitecore XC release package](#)
- [Create a secret client certificate](#)

2.1. Verify your Sitecore XP setup

The instructions in this document assume that you have already installed the Sitecore XP software on your system, as described in the *Sitecore Experience Platform Installation Guide*.

These instructions also assume that you have .NET Core SDK 2.1.7 installed in your development environment and have the following installed in your deployment environment:

- .NET Core Windows Server Hosting 2.1.7
- Solr 7.5 deployment (with HTTPs enabled)
- Sitecore Experience Platform 9.2 (XP Single deployment)

2.1.1. Search provider setup

Solr is the recommended search provider for a single-server installation. However, Sitecore also supports Azure Search as a search provider.

If you are using Solr as a search provider, make sure that Solr is running properly before you install the Sitecore XC solution by rebuilding the search indexes and the link databases in the Sitecore client (**Control Panel > Indexing Manager**). See the *Sitecore Experience Platform Installation Guide* for detailed instructions.

In addition, make a note of the values you used for the Solr installation (`$SolrUrl`, `$SolrRoot`, `$SolrService`) during the Sitecore XP installation. You must specify these values in the Sitecore XC deployment script.

If you are using Azure Search as a search provider, you must create an Azure Search Service and make a note of the values for the service name, the service admin key, and the service query key. You must specify these values in the Sitecore XC deployment script.

2.1.2. SQL server setup

The Sitecore Installation Framework (SIF) installs the required databases during Sitecore XP deployment, but you must set up the correct user roles for authentication. Ensure that you add a recognized user (for example, `collectionuser`) to the xDB shared databases (as described in the *Sitecore Experience Platform Installation Guide*).

Sitecore XP uses SQL authentication during installation (for example, `$SqlAdminUser = "sa"`). Sitecore XC uses Windows Authentication during installation, which means that the user identity running the Sitecore XC deployment script is typically the current Windows logon user. This user account must have proper database permissions (for example, `sysadmin` at the SQL instance level) during the installation.

In addition, make a note of the value you used for the SQL installation (`$SqlServer`) during the Sitecore XP installation. You must specify this value in the Sitecore XC deployment script.

2.2. Download the Sitecore XC release package and prerequisites

You can download the Sitecore XC release package from the [Sitecore Experience Commerce Download](#) page.

To download the Sitecore XC 9.2 release package and prerequisites:

1. Download and install [Redis](#).

NOTE

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.

2. Open a browser and go to the [Sitecore Experience Commerce Download](#) page.
3. Download the Sitecore Experience Commerce release package (`Packages for On-Premises 2019.08-x.x.xxx`).
4. Extract the contents of the zip file to the location from which you are deploying Sitecore XC (for example, `c:\deploy`).
The extraction process results in multiple .zip files.
5. Extract the content of the `SIF.Sitecore.Commerce.zip` file.
6. Download the following software to a folder in your local deployment folder:
 - Sitecore PowerShell Extensions 5.0 for Sitecore 9.2 (available from the [Sitecore Experience Accelerator Download](#) page)
 - Sitecore Experience Accelerator 1.9 (available from the [Sitecore Experience Accelerator Download](#) page)
 - MSBuild Microsoft Visual Studio Web targets (available from [Nuget](#))

NOTE

When you unpack the Web targets NuGet package, copy the `\tools\VSToolsPath\Web\Microsoft.Web.XmlTransform.dll` file into a folder and note the path.

3. Installing Sitecore XC

The Sitecore XC release package includes PowerShell scripts for installing Sitecore XC. The `Deploy-Sitecore-Commerce.ps1` script (located in the *SIF Sitecore Commerce* folder) installs all of the Sitecore XC modules and the SXA Storefront site.

This chapter contains the following sections:

- [Customize the deployment script](#)
- [IIS setup](#)
- [Run the deployment script](#)

3.1. Customize the deployment script

The Sitecore XC deployment script executes a single command to deploy Sitecore XC, and includes a number of parameters that you must change. Sitecore recommends that you modify the existing deployment script and save it with a new name (to preserve a record of the factory default script).

After you specify values and paths to reflect your own deployment environment you can run the script to install the solution. If there are any parameters for which no value is specified, the script prompts you to enter a value during installation.

To customize the deployment script:

1. Navigate to the `SIF Sitecore Commerce` folder that you unzipped earlier (for example, `c:\deploy\SIF.Sitecore.Commerce.x.x.xxx\`).
2. Open the `Deploy-Sitecore-Commerce.ps1` script file in a text editor.
3. Save a copy of the file with a new name (for example, `MyDeploy-Sitecore-Commerce.ps1`).
4. Specify values for the following parameters, according to your own environment. In particular, you should make sure that the path values correspond to the locations where you unzipped or copied files needed for the installation.

NOTE

By default, Sitecore XC parameters values are aligned with the Sitecore Experience Platform (XP0) default parameters values. If your Sitecore XP deployment uses custom value, make sure to customize the Sitecore XC deployment script accordingly.

| Parameter | Description |
|---|--|
| <code>SiteNamePrefix</code> | Prefix used as a variable for SOLR, the website and the database instances. The default value matches the Sitecore XP default (for example "xp0"). |
| <code>skipInstallDefaultStorefront</code> | Specifies whether or not to by pass the installation of the default SXA Storefront. By default, the XC installation script also deploys the SXA Storefront. |
| <code>SqlUser</code> | Variable used for <code>SqlAdminUser</code> (A SQL user with sysadmin privileges). |
| <code>SqlPass</code> | Variable used for <code>SqlAdminPassword</code> . |
| <code>IdentityServerSiteName</code> | Variable used to compose the value of the <code>SitecoreIdentityServerUrl</code> . (This parameter is used as value for other parameters, for example, <code>SitecoreIdentityServerApplicationName</code> , <code>SitecoreIdentityServerUrl</code>) |
| <code>Path</code> | The path to the <code>Master_SingleServer.json</code> file provided in the <code>SIF.Sitecore.Commerce</code> package. |
| <code>SiteName</code> | Name of your Sitecore site (for example, "xp0") |
| <code>SiteHostHeaderName</code> | Host header for your Sitecore site. |
| <code>InstallDir</code> | Location of the Sitecore site |
| <code>XConnectInstallDir</code> | Location of the xConnect site. |

| Parameter | Description |
|------------------------------|--|
| CommerceInstallRoot | The path to the <code>inetpub</code> folder where Commerce is installed. |
| CommerceServicesDbServer | Location of the database server where you want to deploy the Commerce databases. |
| CommerceServicesDbName | Name of the database for the Commerce Services shared database. |
| CommerceServicesGlobalDbName | Name of the database for the Commerce Services global database. |
| SitecoreDbServer | Location of the database server hosting the Sitecore databases (same value used for <code>\$\$SqlServer</code> during Sitecore XP installation). |
| SitecoreCoreDbName | Name of the Sitecore core database. |
| SqlDbPrefix | Parameter variable (string) used as part of the name of the Sitecore core database and master database. |
| SqlAdminUser | A SQL user with <code>sysadmin</code> privilege. |
| SqlAdminPassword | The password for the SQL user with <code>sysadmin</code> privilege (<code>SqlAdminUser</code>) |
| SitecoreDomain | The name of the Sitecore domain. |
| SitecoreUsername | Name of the Sitecore user account. |
| SitecoreUserPassword | Password for the Sitecore XP user account, as define in your Sitecore XP deployment. |
| CommerceSearchProvider | The type of Search provider you are using for your deployment (Solr or Azure). |
| SolrUrl | URL for the Solr service (same value used for the Sitecore XP installation), if the Search provider is Solr. |
| SolrRoot | Path to Solr installation (same value used for the Sitecore XP installation), if the Search provider is Solr. |
| SolrService | Name of the Solr service (same value used for the Sitecore XP installation), if the Search provider is Solr. |
| SolrSchemas | Path to the Commerce Solr schemas (provided as part of the <code>SIF.Sitecore.Commerce</code> package), if the Search provider is Solr. |
| CommerceServicesPostfix | Postfix appended to Commerce services folders names and site names. The postfix allows you to host more than one Commerce installment on one server. |
| CommerceServicesHostPostfix | Postfix used as the root domain name (two-levels) to append as the hostname for Commerce services . |

By default, all Commerce services are configured as sub-domains of the domain identified by the postfix.

NOTE

Postfix validation enforces the following rules:

- The first level (`TopDomainName`) must be 2-7 characters in length and can contain alphabetical characters (a-z, A-Z) only. Numeric and special characters are not valid.
- The second level (`DomainName`) can contain alpha-numeric characters (a-z, A-Z, and 0-9) and can include one hyphen (-) character. Special characters (wildcard (*)), for example, are not valid.

| Parameter | Description |
|---|--|
| SearchIndexPrefix | Prefix for the Search index. Using the SiteName value for the prefix is recommended. |
| EnvironmentsPrefix | String used as a prefix in the EnvironmentName setting in the config.json file for each CE role. |
| Environments | The list of environments where to run EnsureSyncDefaultContentPaths and InitializeCommerceServices tasks. |
| EnvironmentsGuids | Commerce environments GUIDs used to clean existing REDIS cache during deployment. |
| <p>NOTE Default parameter values correspond to the default Commerce environment GUIDS.</p> | |
| MinionEnvironments | The environments running the minions service. (This is required for running the FullIndexMinion on CatalogItems list.) |
| AzureSearchServiceName | Name of the Azure Search service, if the Search provider is Azure. |
| AzureSearchAdminKey | The value of the admin API-key to access the Azure Search service, if the Search provider is Azure. |
| AzureSearchQueryKey | The value of the query API-key to access the Azure Search service, if the Search provider is Azure. |
| CommerceEngineWdpFullPath | Full path to the Commerce Engine service WDP package. |
| CommerceOpsServicesPort | Port for the Commerce Ops Service. Default value is 5015. |
| CommerceShopsServicesPort | Port for the Commerce Shops Service. Default value is 5005. |
| CommerceAuthoringServicesPort | Port for the Commerce Authoring Service. Default value is 5000. |
| CommerceMinionsServicesPort | Port for the Commerce Minions Service. Default value is 5010. |
| BizFxPackage | Full path to the Sitecore BizFx Server WDP package. |
| BizFxPort | Port for the Commerce Business Tools. Default value is 4200. |
| CommerceEngineCertificateName | The name of the certificate generated during the installation process and that is used for communication between CE Connect and Commerce Engine roles. |
| RedisConfiguration | URL of the Redis service. |
| RedisInstanceName | The name of the Redis instance. |
| RedisInstallationPath | Path to the Redis installation, for example, C:\Program Files\Redis. |
| SiteUtilitiesSrc | Path to the SiteUtilityPages folder (part of the SIF Sitecore Commerce package). |
| HabitatImagesWdpFullPath | Path to the Sitecore.Commerce.Habitat.Images.OnPrem.scwdp.zip file. |
| AdventureWorksImagesWdpFullPath | Path to the Adventure Works Images.OnPrem.scwdp.zip file |
| CommerceConnectWdpFullPath | Path to the Sitecore Commerce Connect Core <version>.scwdp.zip file. |
| CommerceXProfilesWdpFullPath | Path to the Sitecore Commerce ExperienceProfile Core <version>.scwdp.zip file. |
| CommerceXAnalyticsWdpFullPath | Path to the Sitecore Commerce ExperienceAnalytics Core <version>.scwdp.zip file. |

| Parameter | Description |
|---|--|
| CommerceMAWdpFullPath | Path to the Sitecore Commerce MarketingAutomation Core <version>.scwdp.zip file. |
| CommerceMAForAutomationEngineZIPFullPath | Path to the Sitecore Commerce Marketing Automation for AutomationEngine <version>.zip file. |
| CEConnectWdpFullPath | Path to the Sitecore Commerce Engine Connect OnPrem <version>.scwdp.zip file. |
| PowerShellExtensionsModuleZIPFullPath | Path to the location where you downloaded Sitecore PowerShell Extensions package. |
| SXAModuleZIPFullPath | Path to the location where you downloaded Sitecore Experience Accelerator package. |
| SXACommerceWdpFullPath | Path to the Sitecore Commerce Experience Accelerator <version>.scwdp.zipfile. |
| SXAStorefrontWdpFullPath | Path to the Sitecore Commerce Experience Accelerator Storefront <version>.scwdp.zip file. |
| SXAStorefrontThemeWdpFullPath | Path to the file Sitecore Commerce Experience Accelerator Storefront Themes <version>.scwdp.zip. |
| SXAStorefrontCatalogWdpFullPath | Path to the Sitecore Commerce Experience Accelerator Habitat Catalog <version>.scwdp.zip file. |
| MergeToolFullPath | Path to the location where you downloaded the Microsoft.Web.XmlTransform.dll file. |
| <div style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>NOTE This DLL file is included as part of the Nuget package you downloaded previously.</p> </div> | |
| UserDomain | Domain of the local account used for the various application pools created as part of the deployment |
| UserName | User name for a local account to be set up for the various application pools that are created as part of the deployment. |
| UserPassword | User password for authentication. |
| SitecoreIdentityServerApplicationName | Name of the Sitecore Identity server application. (Determined by the value of the IdentityServerSiteName variable. |
| SitecoreIdentityServerHostUrl | Url of the Sitecore Identity server. |
| BizFxSiteName | Name of the Sitecore XC Business Tools server. |
| BraintreeMerchantId | The Braintree Merchant Id |
| BraintreePublicKey | The Braintree Public Key |
| BraintreePrivateKey | The Braintree Private Key |
| BraintreeEnvironment | The Braintree Environment |

- If you want to install the Sitecore XC solution in a Commerce-Engine only deployment (that is, without installing the SXA Storefront), you can specify that the script omits the SXA modules in the Install-SitecoreConfiguration command, after the parameters block:

```
Install-SitecoreConfiguration @params -Skip Module-
PowerShellExtensions_InstallModule,Module-SXAframework_InstallModule,Publish-
Extensions_PublishToWeb,SXAStorefrontWdpsInstall_InstallCXAWDP,SXAStorefrontWdpsInstall_Inst
allSXAStorefrontWDP,SXAStorefrontWdpsInstall_InstallStorefrontThemesWDP,SXAStorefrontWdpsI
nstall_InstallStorefrontCatalogWDP,SXAStorefrontPostInstallationSteps_MergeWebConfig
```

6. After you have made your changes to the custom deployment script, save the file.

3.2. IIS setup

If the Sitecore XP IIS site name is different from its application pool name (by default, they are the same), you must change the values in the Sitecore XC deployment scripts for the `StopAppPool` and `StartAppPool` parameters in the `SXAStorefront.Preconfigure.json` file to reflect the correct application pool name.

3.3. Run the deployment script

To run your customized Sitecore XC deployment script:

1. In IIS Manager, restart the Sitecore Identity service.

IMPORTANT

After you have restarted the service, do not browse to the Sitecore Identity service. Run the deployment script (by performing the following steps) before accessing the Sitecore Identity service.

2. Launch PowerShell as an administrator, and navigate to: `C:\deploy\<path-to-SIF-folder>`.
3. Run the customized deployment script by executing the following command (using the file name you used for your deployment script), for example: `.\MyDeploy-Sitecore-Commerce.ps1`

NOTE

The installation script performs tasks that update the Sitecore databases. If you attempt to re-run the Sitecore XC deployment script after a Sitecore database was altered by a previous installation attempt, the script fails with an error message. To avoid this error, you can [modify the script to skip or remove the tasks previously completed](#) and run the script again. Otherwise, you must [uninstall](#) and re-install Sitecore Experience Platform and Sitecore Commerce XC.

4. After the deployment completes, manually remove the `SiteUtilityPages` folder from the Sitecore install directory (for example: `C:\inetpub\wwwroot\xp0.SC\SiteUtilityPages`).

WARNING

Leaving the `SiteUtilityPages` folder and its content permanently in the Sitecore install directory could expose your deployment to a security risk.

NOTE

The deployment process removes the `SiteUtilityPages` folder from its parent folder `SIF.Sitecore.Commerce.3.0.28`. To deploy an additional instance of Sitecore Commerce XC, you must unzip the `SIF.Sitecore.Commerce.3.0.28.zip` again.

Alternatively, you can deploy from the same unzipped SIF folder, but you must first copy the `SiteUtilityPages` folder and its contents back into the `SIF.Sitecore.Commerce.3.0.28` folder.

4. Post-installation steps

After you have successfully installed the Sitecore XC software, you must complete the following tasks to complete your deployment:

- [Update the Storefront theme \(optional\)](#)
- [Configure user accounts](#)

4.1. Update the Storefront theme (optional)

By default, the Sitecore XC deployment script installs the SXA Storefront site with the storefront-branded theme.

Optionally, you can assign a different theme (for example, a custom theme), as described in the [Create a new tenant and site](#) topic on the Sitecore Documentation site.

You must [re-publish](#) the Storefront site for your changes to take effect.

4.2. Configure user accounts

After you have deployed your Sitecore XC solution, you must create user accounts and assign the appropriate roles.

NOTE

Every Sitecore XC user who requires access to the Business Tools must have the *Commerce Business User* role assigned, at a minimum.

You [create users](#) and [assign roles](#) using the **User Manager** tool on the **Sitecore Launchpad**.

Refer to the [User roles and permissions](#) topic for information on the pre-defined roles and associated permissions for the Sitecore XC Business Tools.

5. Uninstall Sitecore XC

You can uninstall Sitecore XC when you want to start with a fresh deployment. You use the Sitecore Installation Framework (SIF) to uninstall the Sitecore XC on-premise topology.

WARNING

The uninstall script removes Commerce Engine roles and their respective databases. The script to uninstall Sitecore Experience Commerce (XC) does not remove Sitecore Experience Platform (XP). After you uninstalled Sitecore XC, your Sitecore XP deployment may become unstable. Sitecore recommends that you also uninstall the Sitecore Experience Platform (XP) after you uninstall Sitecore XC.

WARNING

When you uninstall Sitecore XC, your Sitecore Experience Platform (XP) deployment becomes nonfunctional. You must also uninstall Sitecore XP.

To uninstall Sitecore Experience Commerce, change the `Install-SitecoreConfiguration` cmdlet to `Uninstall-SitecoreConfiguration`. For example:

Change:

```
Install-SitecoreConfiguration @params -Verbose *>&1 | Tee-Object "$PSScriptRoot\XC-Install.log
```

to:

```
Uninstall-SitecoreConfiguration @params -Verbose *>&1 | Tee-Object "$PSScriptRoot\XC-Unstall.log
```

Run the script and the topology is removed.

For instructions on how to uninstall your Sitecore XP single topology deployment, refer to the Sitecore XP *Quick Installation Guide for Developer Workstation*, available on the [Sitecore Download site](#).

6. Troubleshooting

This section contains a list of issues that can arise during the initial deployment of Sitecore Experience Commerce, and proposes possible solutions.

- [Installation script fails to create a tenant and storefront site](#)
- [Default storefront site fails to load or loads without catalog navigation bar](#)
- [Install-SitecoreConfiguration: The service cannot accept control messages at this time](#)
- [Remove a module or task from the deployment script](#)
- [Sitecore.Commerce.Habitat.Images.OnPrem.scwdp.zip fails to deploy](#)

6.1. Installation script fails to create a tenant and storefront site

If the installation process fails to create a tenant and default storefront site, you can manually create a tenant and storefront site by following steps described in [this topic](#).

6.2. Default storefront site fails to load or loads without catalog navigation bar

If, after completing the deployment procedure, the default storefront site fails to load or loads without displaying the catalog navigation bar, you can perform the following procedures as possible solutions:

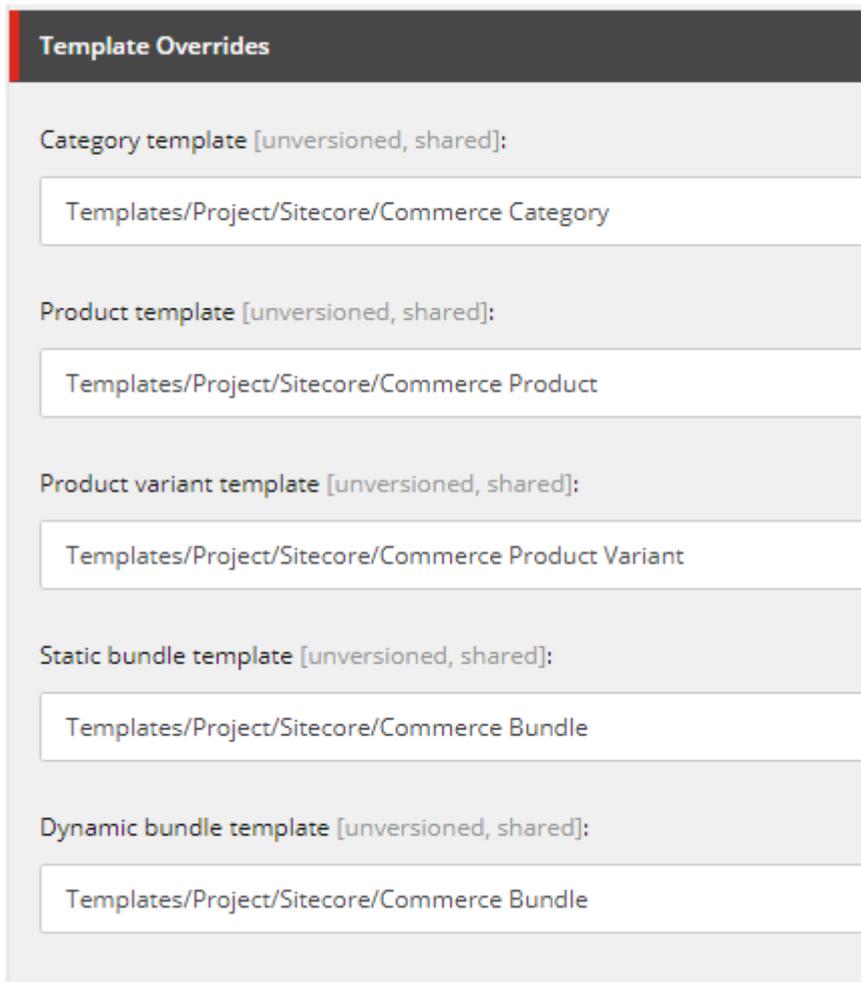
- [Verify the template overrides values](#)
- [Verify catalog configuration](#)
- [Verify the site grouping configuration](#)
- [Refresh the Commerce cache and data templates](#)
- [Republish the site](#)
- [Rebuild the Solr index](#)

6.2.1. Verify the template overrides values

If the template overrides values of the Habitat Master catalog do not match the default storefront values, the storefront site fails to load properly.

To verify the template overrides for the default storefront catalog:

1. In the Content Editor, navigate to `/sitecore/content/Sitecore/Storefront/Home/Catalogs/Habitat_Master`.
2. Go to the Template Overrides section, and verify that the value template override. The values for the Habitat_Master should be as follows:



| Template Overrides | |
|---|---|
| Category template [unversioned, shared]: | Templates/Project/Sitecore/Commerce Category |
| Product template [unversioned, shared]: | Templates/Project/Sitecore/Commerce Product |
| Product variant template [unversioned, shared]: | Templates/Project/Sitecore/Commerce Product Variant |
| Static bundle template [unversioned, shared]: | Templates/Project/Sitecore/Commerce Bundle |
| Dynamic bundle template [unversioned, shared]: | Templates/Project/Sitecore/Commerce Bundle |

6.2.2. Default storefront site fails to load or loads without catalog navigation bar

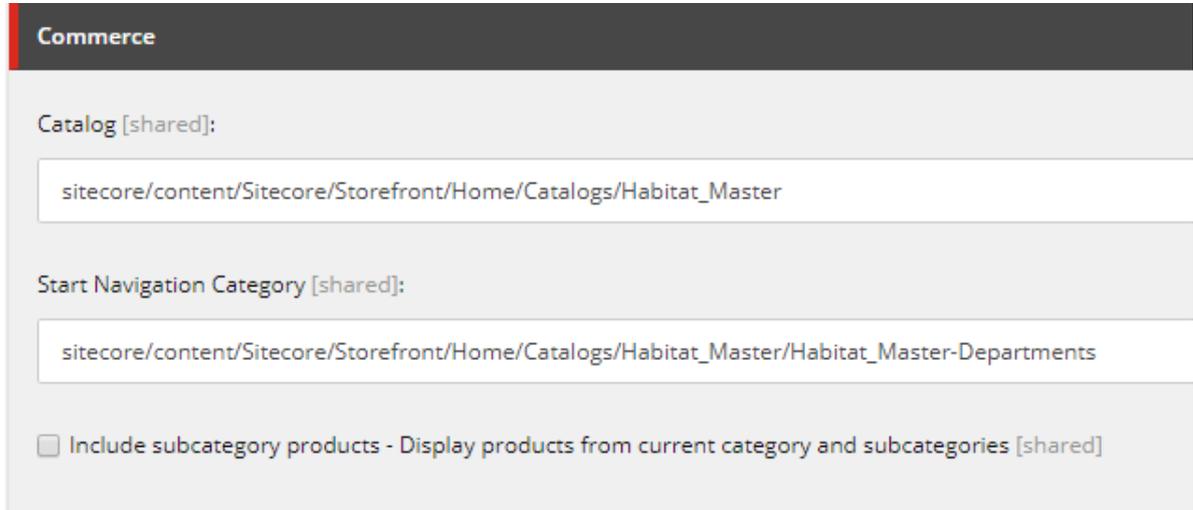
Verify the catalog configuration

If the default Habitat catalog configuration contains errors, the storefront site or catalog information may fail to load properly.

To verify the default storefront catalog configuration:

1. In the Content Editor, navigate to `/sitecore/content/Sitecore/Storefront/Settings/Commerce/Catalog Configuration`.

2. Go to the **Commerce** section, and verify that values for the **Catalog** and **Start Navigation Category** fields are set as follows:



The screenshot shows the Commerce configuration interface. At the top, there is a dark header with the word "Commerce" in white. Below the header, there are two main sections. The first section is labeled "Catalog [shared]:" and contains a text input field with the value "sitecore/content/Sitecore/Storefront/Home/Catalogs/Habitat_Master". The second section is labeled "Start Navigation Category [shared]:" and contains a text input field with the value "sitecore/content/Sitecore/Storefront/Home/Catalogs/Habitat_Master/Habitat_Master-Departments". Below these sections, there is a checkbox labeled "Include subcategory products - Display products from current category and subcategories [shared]" which is currently unchecked.

6.2.3. Verify the site grouping configuration

If the host name value specified in the storefront site grouping configuration does not match the default storefront hostname, the default storefront site cannot load.

To verify the site grouping configuration:

1. In the Content Editor, navigate to `/sitecore/content/Sitecore/Storefront/Settings/Site Grouping/Storefront`.
2. Go to the **Basic** section, and verify that the field **Host Name (use* as wild card and | to list more values)** is set to `sxa.storefront.com`.

6.2.4. Refresh the Commerce cache and data templates

A staled Commerce cache or obsolete data templates may prevent the default storefront from loading or displaying properly.

To refresh the Commerce cache:

1. In the Content Editor, click the **Commerce** tab.
2. On the ribbon, click **Refresh Commerce Cache**.

To refresh data templates:

1. In the Content Editor, click the **Commerce** tab.
2. On the ribbon, click **Delete Data Templates**.
3. On the ribbon, click **Update Data Templates**.

6.2.5. Rebuild the Solr index

After you publish the storefront, you must [rebuild the Solr XP index](#).

6.2.6. Re-publish the site

If you made any changes to the storefront configuration or settings, you must [republish](#) the default storefront site.

6.3. Install-SitecoreConfiguration: The service cannot accept control messages at this time

The Sitecore XC deployment script might fail, with an error message similar to the following:

```
Install-SitecoreConfiguration: The service cannot accept control messages at this time. (Exception from HRESULT: 0x80070425) At C:\Program Files\WindowsPowerShell\Modules\SitecoreInstallFramework\2.1.1\Public\Install-SitecoreConfiguration.ps1:641 char:25 + & $entry.Task.Command @paramSet | Out-Default + ~~~~~ + CategoryInfo : NotSpecified: (:) [
```

To resolve this issue:

1. In IIS manager, re-start the app pool and the application.
2. [Run the deployment script](#) again.

6.4. Remove a module or task from the deployment script

As a general rule, when a task in the `Deploy-Sitecore-Commerce.ps1` script fails during execution, you can remove preceding tasks that completed successfully from the script file before you attempt to run the deployment script again.

Before running the deployment script again, you can either [remove the reference to a specific module](#) (for example, if all tasks defined in that module's JSON file successfully executed), or you can [remove specific completed tasks in a module's JSON file](#).

6.4.1. Remove a reference to a module

To remove a reference to a module from the `Master_SingleServer.json` file:

1. In the folder where you deployed the `SIF.Sitecore.Commerce` package, open the `Configuration/Commerce/Master_SingleServer.json` file and, in the file, locate the "Includes" section. The following shows an example of the "Includes" section and some of the modules it contains:

```
},
  "Includes": {
    "IdentityServer": {
      "Source": ".\\Configuration\\Commerce\\IdentityServer\\IdentityServer.Config.json"
    },
    "Solr": {
      "Source": ".\\Configuration\\Commerce\\Solr\\Solr.Install.json"
    },
    "CommerceEngine": {
      "Source": ".\\Configuration\\Commerce\\CommerceEngine\\CommerceEngine.json"
    },
    "BizFx": {
      "Source": ".\\Configuration\\Commerce\\SitecoreBizFx\\SitecoreBizFx.Install.json"
    },
    "StoreFront-PreconfigureInstance": {
      "Source": ".\\Configuration\\Commerce\\SXASorefront\\
\\SXASorefront.Preconfigure.json"
    },
    "Module-DirDst-EnsurePath": {
      "Source": ".\\Configuration\\Commerce\\Common\\Common.EnsurePath.json"
    },
    "Module-PowershellExtensions": {
      "Source": ".\\Configuration\\SitecoreUtilities\\InstallModule.json"
    },
    "Module-SXAFramework": {
      "Source": ".\\Configuration\\SitecoreUtilities\\InstallModule.json"
    },
    "Publish-Extensions": {
      "Source": ".\\Configuration\\Commerce\\Common\\Common.PublishToWeb.json"
    },
    "Module-HabitatImages": {
      "Source": ".\\Configuration\\Commerce\\Common\\Common.InstallWdpModule.json"
    },
    ...
  }
}
```

2. Delete the reference to the module you want to remove from the deployment process, and save the changes.

For example, to exclude the module that deploys the `Sitecore.Commerce.Habitat.Images.OnPrem.scwdp.zip` package, delete the following block from the `Master_SingleServer.json` file: `"Module-HabitatImages": { "Source": ".\\Configuration\\Commerce\\Common\\Common.InstallWdpModule.json"`.

3. Run the `Deploy-Sitecore-Commerce.ps1` script again. The script deploys the remaining modules.

6.4.2. Remove a completed task from a module

To remove a task from module's JSON file:

1. In the folder where you deployed the `SIF.Sitecore.Commerce` package, open the `Configuration\Commerce\<MODULE><FILENAME.json>`, and locate the "Tasks" section. The following shows an example of the "tasks" section in the `Configuration/Commerce/CommerceEngine/CommerceEngine.Initialize.json` file.

```
},
  "Tasks": {
    "DisableCsrfValidation":
    "RestartWebAppPoolOps":
    "GetIdServerToken":
    "BootstrapCommerceServices": {
      "EnsureSyncDefaultContentPaths": {
        "Type": "EnsureSyncDefaultContentPaths",
        "Params": {
          "UrlEnsureSyncDefaultContentPaths":
"[variable('UrlEnsureSyncDefaultContentPaths')]",
          "UrlCheckCommandStatus": "[variable('UrlCheckCommandStatus')]",
          "Environments": "[parameter('Environments')]"
        }
      }
    }
  },
}
```

2. Remove completed tasks, and save your changes.
3. Run the `Deploy-Sitecore-Commerce.ps1` script again. The script performs the remaining deployment tasks.

6.4.3. Skip specific tasks

Sitecore Install Framework (SIF) allows you skip specific tasks by passing the `-Skip` parameter to the `Install-SitecoreConfiguration` function.

For example, you can use `Install-SitecoreConfiguration @params -Skip Module-PowershellExtensions_CheckPaths,Module-PowershellExtensions_InstallModule` to skip the following tasks during deployment: `Module-PowershellExtensions_CheckPaths` and `Module-PowershellExtensions_InstallModule`.

6.5. Sitecore.Commerce.Habitat.Images.OnPrem.scwdp.zip fails to deploy

In some cases, when you re-run the `Deploy-Sitecore-Commerce.ps1` script again after a previous failed deployment attempt, the task that deploys

`Sitecore.Commerce.Habitat.Images.OnPrem.scwdp.zip` fails with an error message similar to the following:

```
msdeploy.exe : Error: .Net SqlClient Data Provider: Msg 8672, Level 16, State 1, Line 2 The MERGE statement attempted to UPDATE or DELETE the same row more than once. This happens when a target row matches more than one source row. A MERGE statement cannot UPDATE/DELETE the same row of the target table multiple times. Refine the ON clause to ensure a target row matches at most one source row, or use the GROUP BY clause to group the source rows.
```

Before you run the deployment script again, you must remove the reference to the "Module-HabitatImages" from the `Includes` section of the `Master_SingleServer.json` file. See [this procedure](#) for guidance on how to remove previously completed tasks from the deployment script.

NOTE

If other deployment tasks failed with the same type of error, you should remove or skip them before you run the script again.