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Autodesk SCCM Administrator's Guide

This guide takes you through planning and step-by-step instructions to successfully deploy and manage Autodesk software using Microsoft® System Center Configuration Manager (SCCM). It is targeted toward CAD managers, BIM managers, and IT specialists who have a basic understanding of SCCM.

We've carefully tested these steps with Autodesk products. However, every company and network is unique; if you encounter a problem or have questions please contact Autodesk Support.
Prepare

This guide assumes that you’ve already set up an SCCM environment. For information about preparing your environment, please refer to the Microsoft guidelines: Prepare the Windows Environment for Configuration Manager

The following checklist will help ensure you are ready for deployment:

### People and process

- Define roles and responsibilities. Who will:
  - Create the deployment
  - Test the deployment
  - Roll out the deployment
  - Provide support during and after rollout

- Identify specific user needs for the software you’re deploying.

- Create an evaluation document based on user requirements.

- Communicate upgrade activity to your organization.
  
  If running updates might create a network bottleneck, consider scheduling updates during off hours to limit disruption.

### Systems and network

- Check system requirements and compatibility for each product:
  
  https://knowledge.autodesk.com/support/system-requirements

- Update your license server to support new product versions.
  
  - Contact your partner or CSM:
    
  
  - Upgrade licenses:
    

- Specify the license server on the client:
  

- Check if network and security settings (e.g. proxy/firewall) need to be adjusted:
  

- Create a network share for the deployment:
  

### Software

- Download the full software installation package from your Autodesk Account for each product you are installing.
1. Sign in to Autodesk Account: https://manage.autodesk.com

2. Locate your software on the Management tab.

   Your licensed products appear when you click Products & Services.

![Autodesk Account Management](image)

Products and services contained in an industry collection are grouped under the collection name, but are listed individually by product. You must individually download and install each product in a collection.

3. Select a product.

   Click the product name, and then click the Download button that corresponds to the version you want to download. Specify the following information:

   - **Versions**: Serial numbers and activations are version-specific.
   - **Platforms**: Select the operating system for the computer where software will be installed. For Windows systems, specify whether you have a 32-bit or 64-bit operating system. You can see which version you need by visiting Control Panel > System.
   - **Languages**: Some software products include support for multiple languages without additional downloads. If your installation file is language-specific, options will appear in the Language drop-down menu.

4. Choose a download method.

   Your choice of download options depends on your installation needs, internet speed, and operating system. If you are creating deployments, choose the Browser Download method. See: About Download Methods.
5. Follow on-screen instructions.

Depending on the download method and operating system, the process varies. You might be asked to install the Autodesk Download Manager and accept license agreements. If prompted, select Run.

- Download required addons, plugins, language packs, service packs from Autodesk Account [https://manage.autodesk.com](https://manage.autodesk.com).

For instructions, click **Product Updates** in the left navigation bar of the Management tab, and then click **Install Updates, Add-ons, and Enhancements** under Quick Links.

### Additional Resources
- [Autodesk Installation and Licensing Community Forum](https://manage.autodesk.com)
- [Autodesk Support](https://autodesk.com/support)
Select Your Deployment Method

This guide covers three deployment methods: Package, Hybrid, and Application. Here are a few things to consider when selecting the right deployment method for your organization.

<table>
<thead>
<tr>
<th>Package</th>
<th>Hybrid</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>The standard way to deploy an Autodesk product:</td>
<td>An optional way to deploy a product:</td>
<td>The advanced way to deploy a product:</td>
</tr>
<tr>
<td>• Easiest method</td>
<td>• Deployment using a Script installer</td>
<td>• Circumvents the product installer</td>
</tr>
<tr>
<td>• Uses command line in the SCCM package</td>
<td>• Installation detection needs to be manually added in SCCM</td>
<td>• Advanced setup in SCCM using dependency chains and detection methods</td>
</tr>
<tr>
<td>• Detects installed products automatically</td>
<td>• SCCM can show an application’s installation error codes</td>
<td>• SCCM can show error codes for specific components</td>
</tr>
<tr>
<td>• Can be deployed to devices only</td>
<td>• Applications can also be superseded automatically when source is updated</td>
<td>• Applications can also be superseded automatically when source is updated</td>
</tr>
<tr>
<td>• Device deployments to Software Center only</td>
<td>• Can be deployed to users and devices</td>
<td>• Can be deployed to users and devices</td>
</tr>
<tr>
<td></td>
<td>• Deployments to a user collection are visible in the Configuration Manager</td>
<td>• Deployments to a user collection is visible in the Configuration Manager</td>
</tr>
<tr>
<td></td>
<td>• Administrator approval request feature</td>
<td>• Administrator approval request feature</td>
</tr>
</tbody>
</table>
The following table indicates the maximum number of clients for each deployment scenario.

<table>
<thead>
<tr>
<th>Hierarchy design</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stand-alone Primary Site</td>
<td>100,000</td>
</tr>
<tr>
<td>Central Administration Site</td>
<td></td>
</tr>
<tr>
<td>with a site database created on a Datacenter or</td>
<td></td>
</tr>
<tr>
<td>Enterprise edition of SQL Server</td>
<td>400,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Role</th>
<th>Scalability and Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Administration Site</td>
<td>25 Primary Sites</td>
</tr>
<tr>
<td>Primary Site</td>
<td>250 Secondary Sites</td>
</tr>
<tr>
<td></td>
<td>10 Management Points</td>
</tr>
<tr>
<td></td>
<td>250 Distribution Points &amp; 2000 Pull-Distr. Points</td>
</tr>
<tr>
<td></td>
<td>Max 5,000 DP combined in Pri &amp; Sec sites.</td>
</tr>
<tr>
<td></td>
<td>Max 10,000 packages combined in Pri &amp; Sec sites.</td>
</tr>
<tr>
<td>Secondary Site</td>
<td>250 Distribution Points</td>
</tr>
<tr>
<td></td>
<td>1 Management Point</td>
</tr>
<tr>
<td>Management Point</td>
<td>25,000 Clients / MP recommended</td>
</tr>
<tr>
<td>Distribution Point</td>
<td>4000 Simultaneous Connections Clients</td>
</tr>
<tr>
<td></td>
<td>10,000 Max packages combined in Pri &amp; Sec sites.</td>
</tr>
<tr>
<td>Software Update Point</td>
<td>Multiple Software Updated Points (8 Max)</td>
</tr>
<tr>
<td></td>
<td>25,000 clients if installed on Site Server</td>
</tr>
<tr>
<td></td>
<td>100,000 clients if installed on Site System</td>
</tr>
<tr>
<td>App Catalog Website Point</td>
<td>Multiple instances.</td>
</tr>
<tr>
<td></td>
<td>400,000 clients (50,000 recommended / instance)</td>
</tr>
</tbody>
</table>

For more information about SCCM design and scale, go to:

https://docs.microsoft.com/en-us/sccm/core/plan-design/configs/size-and-scale-numbers

https://docs.microsoft.com/en-us/sccm/core/plan-design/configs/size-and-scale-numbers#bkmk_clientnumbers
Create a Deployment

This section assumes that you have completed the preparation steps. We also recommend that you familiarize yourself with best practices for creating a deployment. For information about specific products, please check Product Specific Information and Customization.

Basic Steps

1. Close all running applications on your computer.
2. Run setup.exe to start the installer.
3. Select a language for the deployment instructions, if prompted, and then click Create Deployment.
4. In the Administrative Image section of the Configure <name> page, enter a deployment configuration name and a UNC path (example: `\computernamesharenamedp_name`):

- **Deployment configuration name**: Enter a descriptive name for the deployment that identifies the user group, platform, or other attribute to differentiate this deployment from others.
- **Administrative image path**: Enter the path or browse to the shared network folder where you want to create and store your admin image. Users will install from this location so it must be a shared folder where users have read-write access.

Using a Universal Naming Convention (UNC) path is strongly recommended to ensure that the path will be the same for all users over the full lifecycle of the product. Also, if your admin image is nested inside a series of subfolders, you risk exceeding the path length limit set by the Windows operating system. Avoid this possibility by placing your admin image in a location at or near the top directory of the server, such as `\serverXX\Deployments`.

- **Target platform**: Select either 32-bit or 64-bit for the target operating system.
- **Include only products required by this deployment configuration**:
  - If selected, the deployment cannot be modified in the future to include additional products.
  - If unselected, the admin image will include all possible products, so the current deployment can be modified.

5. Select the desired installation settings:

- **Run installations in silent mode**: Runs the installation in the background, without prompting the user for any input. Note that silent mode can automatically restart the user's computer without warning after installation and progress bars might appear.
- **Create a log file in each workstation’s temp folder**: Lets users review and troubleshoot their own installations.
- **Create a network log file**: Creating a log file in a central location supports the network administrator in reviewing data for all installations. The default location is a Log folder in the same folder as the admin image. The network log file must be in a shared folder where users of the deployment have read-write access. Otherwise, log data for user installations cannot be written to the log file.
6. Click **Next**.
7. Review and accept the Autodesk software license agreement.
8. On the Product Information page, select your License Access type.

   - **Autodesk ID**: Use a license assigned to a user, who must sign in when they first access the product.
   - **Serial Number**: Enter your serial number and product key.
     
     **Important**: If you are a MultiFlex or Token Flex customer, enter the product key as 535<release year letter>1; for example, 2018 uses 535J1. The letter varies based on release year; the letter for 2018 is J, for 2019 it is K and so on.

   - **Network**: Enter information for your network license server model (single, distributed, or redundant) including the server(s) where the license manager is located. See [choosing a network license server model](#) for more information.

9. Click **Next**.
10. On the Create Deployment Configuration page, select the products to include in the deployment.
If you need to configure settings for a product, click the product name to open the configuration panel where you can review and change settings. The configuration settings you choose apply to every instance of the product installed from the deployment. After the deployment is created, these settings can only be changed by modifying the deployment.

Configuration settings vary widely by product. For more information, see the product installation instructions.

11. Click **Create** to create the deployment image.
After the deployment is created, the Deployment Configuration Complete page opens, showing the path to the new deployment and a link for registering products online.

Changing a Deployment’s Location

If, after creating a deployment, you need to change its location, you can manually move it instead of deleting and creating a new one. Note that some coded paths do not automatically change when you move a deployment.

Adding an Update to a Deployment

Complete the following steps to add updates by either modifying an existing deployment or adding downloaded updates to a new deployment.

You should use a full installer of your product. You can download it from Virtual Agent or from the Autodesk Account using the Browser Download method.

To add updates to a deployment:


2. Locate and download each update to include in the deployment. When downloading, be sure to select the Browser Download option to download the executable files. You can only add executables files to a deployment. By default, only .msi and .exe files are supported.

   For detailed instructions about accessing updates, go to: https://knowledge.autodesk.com/cus
tomer-service/download-install/install-software/update-software/enhancements#download

3. Start the product installation from the full installer; when the wizard starts, select Create a Deployment.
Or, if you already have a deployment, navigate to the Tools folder in the product deployment folder and run **Create & modify a deployment**.

![Create & modify a deployment](image)

From here you will follow the same process you would to add updates to a new deployment. When the list of products and components to include in the deployment appears, click the arrow next to **Manage additional software for this deployment** under **Include additional software**.

![Manage additional software](image)

Next, click **Add** and select each of the update executables you downloaded from Account. Add a name and, if you want to install an msi silently without notifications, add `/quiet` in the Command Line Parameters field. Refer to the product release notes for silent install switch information.

![Add and select updates](image)
4. Continue through the wizard steps until the deployment creation or modification is complete.
5. On the client machine, start the deployment installation.
6. Once installed, open the product and check the version under Help > About and then select the Product Information dialog box. You should see the updated product version indicating the updates have been successfully installed together with the product deployment.

Adding MSI, MSP, and EXE Installers
Adding MSI, MSP, and EXE installers to an existing deployment can also be challenging. The following sections provide tips for adding these installer types to a deployment.
Adding MSI to a Deployment:

To add an MSI installer, include the command INSTALLDIR="C:\Program Files\Autodesk\" in the Command Line Parameters for the MSI file you are adding.

Adding MSP to a Deployment:

To add an MSP installer:

2. Locate the .msp updates you want to add to the deployment and select Browser Download for the download method.
3. Start the product deployment wizard from the setup.exe of the product from which you are creating a deployment.
4. When the list of products and components to include in the deployment appears, click the arrow next to Manage additional software for this deployment under Include additional software.
5. Temporarily change the extension of the .msp updates you downloaded to .exe.
6. Click Add in the Manage Additional Software window and add the updates. Be sure to include a name. If you want to silently install the update, enter /q or /quiet in the Command Line Parameters field. .msp updates take standard msiexec switches.
Close the window when you’re finished.

7. **Click Create** to create the deployment.

8. After the deployment is created, go to the Deployment folder and open the `<deployment root>\Img\ADDONS` folder. Change the file extensions for each of the .exe files back to .msp.
9. Rename the .exe files in each of the update folders back to .msp.

Go to the \Img\{deployment name}.ini file and rename the updates listed in the ini file back to .msp.

In the following example, the three update .exe files are indicated by the red arrows:
After editing, the updates extensions are now .msp:
Now you can deploy to install the msp updates.
Extracting Files from an EXE Update

To extract files from an EXE update:

1. Open the command prompt.
2. Browse to the location of the update.
3. Run the command <update name>.exe /e <update name>. For example, Autodesk_Revit_2017_2_1.exe /e Autodesk_Revit_2017_2_1 will create a new folder called Autodesk_Revit_2_1.

The folder that is created includes an ExtractFiles folder containing the contents of the patch wrapper update.

For older EXE updates (pre-patch wrapper) the same command line should extract the file to the same location as the EXE update, but the file will have no extension. You can either add .msp to the end of the above command line or add the extension to the extracted files.

There are some EXE updates that will not extract into MSP/MSI files, so they must be deployed from the EXE file. The method for setting up and detecting an EXE installation in SCCM is described in the Application Mode section of this guide.

Notes About MSI, MSP, and EXE Installers:
The following are useful installer tips. Be sure to refer to release documentation for product-specific instructions.

• Some MSI installations might fail if the files and folders that were in the same folder where the MSI file was originally found are not present. Copy those files and folders to the same folder where the MSI resides - \img\ADDONS.

• Most installers have a silent command line option. Be sure to add this to the Command Line Parameters section for any installer you are adding.

• Some EXE installers can be converted to a MSP (example command line: C:\temp\c3dsp1.exe /e c:\temp\c3dsp1.msp). Refer to release documentation to determine if a product supports this option.

• To exclude Autodesk desktop app from the installer, deselect it on the install screen:
Resources:

- Installing service packs silently, including command line prompt examples for silent install and converting .exe files to .msp files:  
- Extracting an MSP file:  

Parameters Used by Autodesk Executable Updates

- EXE: File format created with the (ASP) Autodesk patch wrapper
  - ASP updates respond to these switches:
    - `<Update_name>.exe -help`
      - *Setup Help*:
        - `/install /repair /uninstall /extraction`
          - Installs, repairs, uninstalls or creates a complete local copy of the bundle in the directory. Install is the default.
        - `/passive /quiet`
          - Displays minimal user interface (UI) with no prompts or displays no UI and no prompts.
          - By default, UI and all prompts display.
        - `/norestart`
          - Suppresses any attempts to restart.
          - By default, UI will prompt before restart.
        - `/log log.txt`
          - Logs to a specific file and path.
          - By default, a log file is created in `%TEMP%`.
  - Some older updates in executable format were not created using the ASP and might listen to other parameters such as `/S` for silent installation. Refer to product release notes for more information.
- MSI and MSP – Autodesk updates in these formats respond to the msiexec parameters listed here:
  - [https://www.advancedinstaller.com/user-guide/msiexec.html](https://www.advancedinstaller.com/user-guide/msiexec.html)
Editing the INI File to Add Extensions and Updates

Using the Add Additional Software or the Add Updates function to add extensions and/or updates to the deployment can sometimes cause unexpected behaviour (such as installation confirmation windows not being completely silent for the user). If this occurs, try putting the extension/update installation instructions directly into the INI configuration file (.\IMG\<admin image name>.INI) by completing the following steps:

1. Open the Img folder:

2. Create a folder in which to copy the extracted extensions/updates. We recommend creating a subfolder for each extension/update if they contain multiple files, as shown in the following example:

3. Open the admin image INI configuration file using Notepad or an equivalent plain text editor.
4. Scroll to the bottom of the INI configuration file and add the following code to control the installation of the extension/update. The following example shows the code for an AutoCAD 2017.1.1 update. You'll want to change the highlighted sections to match what you are installing. You can copy and paste the code block and rename it for multiple extensions and/or updates, but make sure each has its own block.

```
[ACAD_2017_1_1]
PRODUCT_NAME=AutoCAD 2017.1.1 Update
EXE_PATH=Addons\AutoCAD_2017.1.1_Update_64bit.exe
EXE_PARAM=/quiet
LOG=%tmp%\AutoCAD 2017.1.1.log
DISK COST=21569536
IGNORE_FAILURE=YES
ROLLBACKABLE=NO
ACTION=INSTALL
PATCHES=
```

Here are some guidelines for entering the code:

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>[name]</td>
<td>Sets what the code block is called and is used later to invoke the installation of the extension/update. It is important to make sure each code block has a different name and that you know which is which.</td>
</tr>
<tr>
<td>PRODUCT_NAME</td>
<td>The name that will appear in the installer GUI when this code block is executed.</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EXE_PATH</td>
<td>Tells the installer where the executable is located and its name.</td>
</tr>
<tr>
<td>EXE_PARAM</td>
<td>Allows you to pass any command line parameters to the install as though you were running from a command line. Therefore, you can pass the standard MSI command switches to any MSI or MSP files, or the command line switches supported by EXE files.</td>
</tr>
<tr>
<td>LOG</td>
<td>Tells the installer where to create the installation log file and what to call it.</td>
</tr>
<tr>
<td>DISK_COST</td>
<td>Sets how much disk space the installer will check for to make sure that the update will have space to install.</td>
</tr>
</tbody>
</table>

Copy the `[name]` value (the red highlighted section in the example above) from your code block and paste it into the ADDON_SEQUENCE= line near the Global MSI Properties section near the top of the INI file:

```
ADDON_SEQUENCE=ACAD_2017_1_1;ACAD_LP_GERMAN
```

If you added multiple code blocks, separate the pasted names with a semicolon (;):

```
ADDON_SEQUENCE=ACAD_2017_1_1;ACAD_LP_GERMAN
```
The installer will install the addons in a left to right order; make sure to install components in the correct order (for example install Update 1 before the Update 1 Hotfix). It is also a good idea to finish patching the base product before installing extensions.

Additional Resources

- Including service packs (non-enterprise customers only):
  https://knowledge.autodesk.com/customer-service/network-license-administration/network-deployment/preparing-for-deployment/including-service-packs

- Silently installing add-ins in a deployment:
  **Note:** Although this article is specific to Revit, the steps apply regardless of the product you are deploying.

- Adding plugins, tools, and extra apps to deployments:

- Installing Add-Ins:

- Alternative distribution methods:
Package Mode Workflow

Before you begin: Complete the steps for creating an **AdminImage** using the Autodesk deployment wizard. See Create a Deployment.

Basic workflow: You'll import the entire Admin image folder created by the Autodesk deployment wizard as one package into SCCM and add a command line that points to the Setup.exe and the Setup.ini with the correct switches. The installation sequence is handled by the Setup.exe, which reads the Setup.ini.

This method deploys by device, not by user.

Creating a Package in SCCM

In the SCCM console:

1. Click **Software Library**, and then expand **Application Management**.
2. Expand **Packages**, and then right-click to create a new folder or navigate to an existing folder.
3. Right-click the selected folder and choose **Create Package** inside the selected folder to start the SCCM package creation wizard.

4. Enter the package information.
5. Select **This package contains source files** and then browse or manually enter the network location for the AdminImage folder created using the Autodesk deployment wizard. Click **OK**, and then click **Next**.

6. Select the **Standard program** type and enter the program information.

<table>
<thead>
<tr>
<th>Field information and instructions:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Command line</strong></td>
</tr>
</tbody>
</table>
The following example shows the AutoCAD 2018 script:

Run
Select **Hidden** to install the product silently without any user input.

Program can run
We recommend selecting **Whether or not a user is logged on** so that the product can install at any time on the device if a user is logged on to the client machine or not.

7. Click **Next** to enter Requirements:

Field information and instructions:

<table>
<thead>
<tr>
<th>Option</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run another program first</td>
<td>We recommend leaving this unchecked. If you do select it, you can specify what package to run before installing this package.</td>
</tr>
<tr>
<td>Platform requirements</td>
<td>Select <strong>The program can run on any platform</strong> or select the operating systems supported by the Autodesk product.</td>
</tr>
<tr>
<td>Estimated disk space</td>
<td>If you know the cache space the product requires, add it here; otherwise, select Unknown.</td>
</tr>
</tbody>
</table>

**Example:**
The following article applies these steps to an AutoCAD LT deployment:
Additional Resources

- SCCM 2007 package instructions:
Application Mode Workflow

Before you begin: Complete the steps for creating an AdminImage using the Autodesk deployment wizard. See Create a Deployment.

Basic workflow: The application method uses an MSI to create a package that:

- Can deploy products to users or devices in a network.
- Is accessible from a web browser in addition to the installed SCCM application.
- Provides customers full end-to-end customer lifecycle management, including installation, patching, versioning, uninstall, and reporting.

For this workflow, you must import each executable and each MSI as an individual application into SCCM with the correct switches and parameters. You also need to create a dependency chain for each imported application, in the correct order of installation with individual detection criteria, such as registry entries. The dependency tree is traversed at install time to install the right component in the right order.

Creating an Application in SCCM

The examples in this section show the application method for creating an AutoCAD 2018 deployment. It includes every component that comes with AutoCAD 2018. Your admin image might contain fewer components, in which case, you can skip steps that do not apply.

1. After creating the AdminImage, open the `<deploymentname>_SCCM.txt` file in the SMS_SCCM scripts folder.

   This file lists the installation order and the command lines to install each component in AdminImage. It also includes the folders where those files are located.
Looking at the file, you can determine that:

- .Net Framework Runtime 4.6 install files are located in `Img\3rdParty\dotNetFramework\46`.
- The installer is called `dotNetFx46_Full_x86_x64.exe`.
- The admin image will run the installer with the command switches `/q /norestart`.
- It is the first component that will attempt to be installed.

2. Copy each component to its own folder within a folder structure separate from the original admin image. This method prevents SCCM from copying unnecessary files when it creates the content for each application. Also, the components are not tied to a specific admin image, making it easier for you to reuse them.

In the following example, two folders (Autodesk Components and Autodesk Pre-Requisites) have been added to the Autodesk folder. The folder is located on network storage used to store base content prior to setting up the Applications within SCCM, which is on a different machine.

All the third party pre-requisites will go into the Autodesk Pre-Requisites folder and all the Autodesk components will go into the Autodesk Components folder. Your file structure may vary based on your organizational preferences.

The following shows the structure after third party pre-requisites are copied and sorted:
This is the result after copying Autodesk components:

SCCM automatically adds all the files and folders needed from the MSI-file.

3. Next, set up each component within SCCM as individual applications.

Select the folder in which you want to create the application, right-click, and then select **Create Application**.
4. At this stage, the steps vary based on whether you are creating an **EXE installer** or an **MSI installer**.

**EXE installer example**

Select **Manually specify the application information**.

On the next screen, fill in the general information for the component (.Net Framework in this example).
Add application catalog details:

Click **Add** in the Deployment Types window:
Select **Script Installer** from the drop-down list:

Enter general information for the deployment type:
Click Browse to locate and select the folder containing the component, and then enter the command line to install from the `<deploymentname>_SCCM.txt` file. Remember to correct the folder path to reflect the new location relative to the selected content folder. To add an uninstall command for Autodesk components here as well, you can find it in the `<deploymentname>_uninstall.txt` file located in the same folder as the `<deploymentname>_SCCM.txt` file.
Click **Add Clause** in the Detection Method window to create the method that SCCM will use to detect if this component is already installed. This detection method can be tricky, and varies by product. For Autodesk components, the GUID is listed in the `<deploymentname>_Uninstall.txt` file, but for third party pre-requisites, you need to find it by other methods. For MSI installs SCCM will pick up the detection method from the MSI file itself, but for EXE installer you must create one. The following Microsoft article shows how to detect the .Net Framework version:

https://docs.microsoft.com/en-us/dotnet/framework/migration-guide/how-to-determine-which-versions-are-installed#net_b

Many publishers will provide this information on the Internet, but you might need to manually find the GUID within the registry.

The above example uses the Version key rather than the Release so that the detection will accept any version of .Net Framework 4.6.

You can add additional detection methods, if needed. Methods can use either/or logic or require all to be present. Custom scripts can also be used for detection.

On the User Experience page, you can choose how you want the installation to behave, whether the installation should be visible to users or not, and other details.
On the requirements page you can set anything you want SCCM to check before attempting to install (it will always check if the component is already present). These checks can include available hard drive space, amount of RAM in the machine, operating system, and CPU. This example does not set any requirements.
On the Dependencies page you can specify what this component requires to be installed before it can be installed. In this instance, .Net Framework is the first component to install, so it will not have any dependencies.

The Summary page summarizes the setups. The Progress page will show SCCM creating the deployment type, and then the Completion page will show the success or failure of the creation. Note that SCCM is not checking that detection methods or other settings will work, merely that the entered information contains everything it needs to attempt the installation and detection.
When you close the window, you return to the Application wizard and the newly created deployment type appears.

Like the Deployment Type wizard, you will next see a Summary page, a Progress page, and the Completion page once SCCM has created the application.
The application should now appear in the Application folder in which it was created.

**MSI Installer Example**

For an MSI installer, select **Automatically detect information about this application from installation files**, and tell SCCM that it is an MSI file. This example shows the MS XML 6 Parser prerequisite.
When you click Next, SCCM will analyse the MSI file and import information on the installer, including detection methods names.

Next, fill in or correct general information about the Application. SCCM will have pulled in information from the MSI file, including the Install command and behaviour.
The Summary, Progress, and Completion pages appear as SCCM creates the application. The following example shows the application created successfully:

Click Close to return to the main SCCM window. The MSI Application appears in the folder you created.
Setting Up the Rest of the Components

The following are detection methods that can be used for pre-requisites:

<table>
<thead>
<tr>
<th>Component</th>
<th>GUID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft VC++ Redistributable 2008 SP1 32-bit</td>
<td>{1F1C2DFC-2D24-3E06-BCB8-725134ADF98}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2010 SP1 32-bit</td>
<td>{FOC3E5D1-ADE-321E-8167-68EFDE699}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2012 Update 4 32-bit</td>
<td>{33d1fd90-4274-19-9bc1-97e33d9c2d6}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2015 32-bit</td>
<td>{46216a8-6347-4894-a1b3-db3e3c981d}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2008 SP1 64-bit</td>
<td>{4B6C7001-C7D6-3710-913E-5BC23FCE91}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2010 SP1 64-bit</td>
<td>{1D8E6291-B0D5-35EC-8441-6616567A076}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2012 Update 4 64-bit</td>
<td>{37B8F9C7-3FB-3253-8781-2517C99D70}</td>
</tr>
<tr>
<td>Microsoft VC++ Redistributable 2015 64-bit</td>
<td>{F2039E5-D84E-3505-A7A8-73S5F01556}</td>
</tr>
<tr>
<td>Universal C Runtime</td>
<td>Undetectable</td>
</tr>
<tr>
<td>Microsoft DirectX</td>
<td>Windows Update controls latest version</td>
</tr>
<tr>
<td>Windows Media Format 9.5 Series Runtime</td>
<td>Undetectable</td>
</tr>
<tr>
<td>FARO LS 1.1.600.6 64-bit</td>
<td>{510A08AF-1649-4844-94E5-EAC43A02368}</td>
</tr>
</tbody>
</table>

Once all the pre-requisites are set up you should have something like this within your third party location.
In this example, 64-bit VC++ redistributables depend on the 32-bit version, but this is not required. To set up dependencies, open the Application by right-clicking its name, and then select Properties (or double-click the Application name).

![Deployment Types window](image)

When the Application window opens, click the **Deployment Types** tab, select the Deployment Type, and then click **Edit**.

![VC++ Redistributable 2008 SP1 (x64) Properties](image)

When the Deployment Type window opens, select the **Dependencies** tab, and then click **Add**.
Next give the dependency group a name that reflects the requirement, and then click Add.

Browse to the location of the required installation, select the application that needs to be installed (top right), select the installation (bottom right), and then click OK to set the dependency.
This will take you back to the Add Dependency window where the new dependency appears. You can add multiple dependencies here. You can also choose whether the dependency should trigger an installation of the required component or whether it should only alert when there is a missing dependency.
When you have added all the required dependencies click **OK** until you return to the main SCCM window. Repeat this for each component for which you want to set dependencies. Be careful not to create a loop with the dependency chains (although SCCM will sometimes notice and alert you).

Next, set up the Autodesk components within SCCM.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Deployment Types</th>
<th>Deployments</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Autodesk License Service (x64) - 5.1.4</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk Featured Apps 2016-2018</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk AutoCAD Performance Feedback Tool 1.2.8</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk Material Library 2018</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Remove Prior ReCap Installs</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk ReCap</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk Material Library Base Resolution Image Library 2018</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk App Manager 2016-2018</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>ACAD Private</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>ACA &amp; MEP 2018 Object Enhancer</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>A360 Desktop</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>AutoCAD 2018</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Autodesk Advanced Material Library Image Library 2018</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>AutoCAD 2018 Language Pack - English</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>AutoCAD 2018 - English</td>
<td>1</td>
<td>0</td>
<td>Active</td>
</tr>
</tbody>
</table>

The easiest method is to open the SMS_SCCM scripts folder in the original deployment, and then open the `<deployment name>_SCCM.txt` file.

```
PC  media$ (\10.41.16.170) (Y:)  AutoCAD2018ApplicationMode  SMS_SCCM scripts
```

<table>
<thead>
<tr>
<th>Name</th>
<th>Date modified</th>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutoCAD2018ApplicationMode_SCCM.txt</td>
<td>2/7/2018 4:47 AM</td>
<td>Text Document</td>
<td>19 KB</td>
</tr>
<tr>
<td>AutoCAD2018ApplicationMode_Uninstall.txt</td>
<td>2/7/2018 4:47 AM</td>
<td>Text Document</td>
<td>13 KB</td>
</tr>
<tr>
<td>Product_Uninstall_ReadMe.txt</td>
<td>8/2/2012 12:04 PM</td>
<td>Text Document</td>
<td>3 KB</td>
</tr>
<tr>
<td>SMS_SCCM_ReadMe.txt</td>
<td>1/25/2013 10:37 AM</td>
<td>Text Document</td>
<td>4 KB</td>
</tr>
</tbody>
</table>

The installation order that the admin image would use is within this file. So, the method is to scroll to the very bottom and work your way up to create the dependency chain. For example, the last component installed in the example shown is the A360 Desktop, and prior to that it is Autodesk AutoCAD Performance Feedback Tool 1.2.8. Therefore, you would make A360 Desktop dependent on the Performance Feedback Tool, and so on back up the installation order.

Once you get to the Autodesk Material Library 2018 you can either continue with a single dependency each time, or make the Material Library dependent on all the third party pre-requisites because they are independent of each other (remember that if you made the 64-bit VC++ dependent on the 32-bit version you only need to add the 64-bit VC++ of each release to the Material Library dependencies).

As the final component is A360 Desktop, or the Performance Feedback Tool, you may want to create an extra component that just creates a marker folder and call it AutoCAD 2018 Deployment or similar, so that when you go to deploy AutoCAD 2018 the component that the deployment will be named for will be named for the product.
Hybrid Mode Workflow

Before you begin: Complete the steps for creating an AdminImage using the Autodesk deployment wizard. See Create a Deployment.

Basic workflow: Hybrid mode is not an official SCCM term or workflow. It is a workaround developed by our customers to avoid the complexity of using the Application mode. It combines the simplicity of the Package mode with the functionality of the Application mode, which can deploy to users both in the software center on the client machine and from the application catalogue (web browser).

Instead of relying on individual executables and MSIs with their detection criteria, you can leverage one Setup.exe and Setup.ini with a command file containing the command line pointing to the Setup.exe and Setup.ini. You’ll import the command file and the entire Admin image as an application into SCCM, which leverages the Setup.exe and the Setup.ini for the product to install the right executables and MSIs in the right order.

The Hybrid mode is different from the Package mode because you import the command file and the Admin image as an application in SCCM (where the command file contains the command line) instead of importing the Admin image and then adding the command line in SCCM. The Hybrid Model is also different from the Package Model in that the detection in SCCM needs to be added manually.

Step 1: Create the Command File

Complete the following steps to create a command file that targets and runs the Setup.exe with the needed deployment parameters. As part of this process, you’ll also add the command file to the package folder root.

1. Navigate to the SMS_SCCM_Scripts folder inside your product package folder (<path_to_deployment>\SMS_SCCM SCRIPTS\).

2. Look for the file you created with the Autodesk deployment wizard. In this example, the file is called ACAD2018_SCCM.txt.

3. Open the file and look for the deployment parameter:

   The following command line will install all components of the deployment.
   This is the recommended method of advertising Autodesk deployments using SMS or SCCM
   Please refer to the SMS_SCCM ReadMe found in the same folder as this file
   .\Img\Setup.exe /W /q /l\Img\ACAD2018.ini /language en-us

   The last line includes the Setup.exe location with the switches and ini-location.
4. Open Notepad and paste the line into the file:

   ![Image of Notepad with the line pasted]

5. Save the file in the root of the AdminImage folder. When saving, give the file a meaningful name that you can easily identify later, and add the extension `.cmd`.

   The file in the following example is called `Acad_loader.cmd`:

   ![Image of file system with `Acad_loader.cmd` highlighted]

**Step 2: Create the SCCM Application**

1. Open the configuration manager and navigate to `Software Library\Overview\Application Management\Applications\<customer path to application folder>`.  

2. Either create a new folder or open an existing folder in which to create the application.

3. Click **Create Application** in the top left corner of the window. You can also right-click the background and select Create Application from the menu.

   In the following example the application is created in the AutoCAD folder:
4. Select **Manually specify the application information** in the wizard, and then click **Next**.
5. Enter **name**, **publisher**, and **version** information. We also recommend that you select **Date published** to help you keep track of the application.

6. Click **Next** to view the Application Catalog screen. We’re deploying to the software center (instead of the catalog), so the information in this screen does not apply. Click **Next**.
7. Click **Add** beneath the Deployment types window.
8. Select **Manually specify the deployment information**, and then click **Next**.

9. Select the application you created, add administrator comments as needed, and then click **Next**.
10. Enter the package and command line folder location and add the command file:
   - Click **Browse** next to the **Content location** field and navigate to the network folder containing the package and the command file (for example, Acad_loader.cmd).
   - Click **Browse** next to the **Installation Program** field and locate the command file you created earlier. Type `*.cmd` to see a list of all the files or type the file name.
11. Add the detection method so SCCM will know when the application is installed.

There are several detection methods, but we recommend using one or several MSI product codes. These codes are found for each component in the `<deployment name>_Uninstall.txt` file that is found inside the SMS_SCCM scripts folder created inside the deployment folder.
When adding detection in SCCM, select:

- Setting type: **Windows Installer**
- Product code: `{28B89EEF-1001-0000-3102-CF3F3A09B77D}`

You also need to add one MSI code from the `<deployment name>_Uninstall.txt` file.

This example uses the ACAD private MSI code:
If you want to add more MSI codes, select Add Clause again. It is recommended that you select MSI codes for detection from components in the list that are not used by other products that can be installed on the same machine, such as Material libraries.

When you have added at least one MSI Code to be used for the Hybrid application detection, click Next.

12. Select the following user experience options:
   - **Install for system if resource is device; otherwise install for user** in the Installation behavior drop-down. This installs the product with administrative rights.
   - **Whether or not a user is logged on** under Logon requirement to install the application without the user being logged in.
   - **Hidden** under Installation program visibility to install silently.

![User Experience settings](image)

Click Next.

13. Enter any requirements for the application to run in the Requirements screen. Typically, you do not need to enter anything here. Click Next.


15. Review the information in the Summary screen. Click Previous to change any details; otherwise, click Next to create the application.

16. Click Close when the application is created to return to the wizard. Click Next until the wizard finishes.
Testing

Complete the following steps to test your deployment:

1. Log in to a client machine as a typical user profile (or better yet, have a real user log in). You want to make sure that the account you log in with does not have admin rights.
2. Run the software.
3. Verify that:

   - The software starts up.
   - There aren't any licensing errors.
   - All major functions of the software critical to your business are working as expected.
   - Any customization, add-ons, and updates for your software were correctly applied.
Distribution and Deployment

This section covers distribution and deployment steps for 2012 SCCM. For detailed information go to: https://technet.microsoft.com/en-us/library/gg682178.aspx.

Distributing a Package

After you create a package in SCCM, navigate to the SCCM software library:

\Software Library\Overview\Application Management\Packages\

Your package should be in the subfolder where you created your package to be deployed.

If you click on a product while on the Summary tab, you’ll see the package properties at the bottom of the screen.

A large colored circle appears under Content Status:

- **Gray** means the package is not distributed.
- **Green** or **partly green** means the package is successfully distributed to all the distribution points or to some of them.
- **Red** or **partly red** means the package failed to deploy to all the distribution points or failed to distribute to some of them.
- **Yellow** or **partly yellow** means the package is in the process of deploying to one or more distribution points.
The Summary tab also includes the following package information:

- **Package ID**: This unique id appears in the log files so you can know what package is visible, downloaded or failed to install on the client.
- **Targeted**: Shows how many distribution points are targeted by the package.
- **Content Status link**: Takes you to the Monitoring section and shows in more detail what is going on with the package distribution.

Two more tabs, Programs and Deployments, appear at the bottom. They are covered later in this section.

Click on your package and either right-click and select **Distribute Content** or click on it in the top navigation bar to open the Distribute Content wizard.
Here you need to add the **distribution points** to use for the package distribution.

After you selected the distribution point(s), click Next until the wizard finishes. This will start to distribute the selected package to the selected distribution points.

**Recommendations:**

- Select the distribution point(s) nearest to the location of the user’s client machines.
- Distributing to one distribution point will be faster than distributing to many.
- Use the primary site server (PS) when debugging issues with the distribution of the package; this is the same machine that holds the source SCCM packages.
Deploying a Package

The package model only allows deploying content to devices; application and hybrid models will let you deploy products to users and devices.

Once you have selected your package in the software center and you start the SCCM deployment wizard, you need to select **Device Collection** from the drop-down menu.

Next, make sure you deploy to the correct device collection you created for the intended client machines.
After you select the device collection to deploy to, move through the wizard until you get to this selection point:

- **Available**: Select this option if you want the product to be available to the user to install from the configuration manager. This option will make the package available to the client machines in the device collection, but will not install on them unless the user on the client machine selects to do so.

- **Required**: Select if you want the product to be pushed and installed on all devices in the device collection.

If you select the Required option, these options appear:

- **Send wake-up packets**: This will try and start up the client machines if they are turned off (if this is set up on the client machines), and then install the package on them.

- **Allow clients on a metered Internet connection to download after the installation deadline, which might incur additional costs**: This will allow slow network clients to continue the installation even if the deadline has passed.

The following sections describe the **Available** and **Required** options in more detail.

### Available Option Details

The following steps through the Available option tree.

1. Scheduling options specify the time and date the package will become available to users to install on client machines, and if and when the package availability expires. These options are not required.
After making your selections, click Next.

2. Check only the following options on the User Experience screen:
   - Software installation
   - System restart
If you want the products to be deployed outside the maintenance window, any scheduling will not impact the deployments.

Click Next.

3. Select a deployment option on the Distribution Points screen:
   - Download content from distribution point and run locally
   - Run program from distribution point

The sections that follow describe each option in more detail.

**Download content from distribution point and run locally**

If you choose to download the content locally, make sure you select that option in the second drop-down menu as well.

Downloading the content and running locally requires that you have enough space in the client cache settings in the client configuration and that enough hard drive space is available for the content to be downloaded and extracted locally. To verify that the cache size is large, go to:

Control panel → Configuration Manager → Cache
The content files are downloaded to "C:\Windows\ccmcache\" by default, but can be changed. The log file to check for errors regarding to cache limitation is the CAS.log in the "C:\Windows\CCMLogs\" folder.
Run the program from the distribution point

If you select this option, make sure you select it in the second drop-down menu as well.

You do not need to set the cache size, but you do need enough free hard drive space.
Required Option Details

If you want to push the installation to the client machines you have to select the **Required** option in the deployment wizard.

This option will force you to create an assignment schedule. The quickest option is to select New and then choose to deploy as soon as possible.
The rerun behavior determines when the installer will rerun.

Select the option best suited for your testing:

- **Never rerun deployed program**: The program will never rerun on a specific client under any circumstances.
- **Always rerun program**: Tells the client to disregard previous execution status, such as removing a client and adding it back to a collection.
- **Rerun if failed previous attempt**: These statuses are explicitly determined by the return codes from executing the program.
- **Rerun if succeeded on previous attempt**: The program will be rerun only if it has previously run successfully on the client. This is useful when using recurring advertisements in which the program is routinely updated, and in which each update requires the previous update to have been successfully installed.

The following selections are the same as described in the Available deployment section:

- Download and run locally
- Run from distribution point
After selected the options you want, click Next which to go to the Summary page:

Verify the selected deployment settings or go back to make changes.

Click next to finish the deployment. The Completion page appears:

Your package has now been deployed to the selected device collection.
Deploying Application and Hybrid Modes

The Application and Hybrid modes let you deploy content to device collections and to user collections.

To deploy the application to a device collection, follow the steps for the Package mode deployment described earlier.

To deploy your application to a user collection:

1. Select the application you want to deploy from:
   \Software Library\Overview\Application Management\Applications\

2. Click Deploy in the top navigation bar to start the SCCM Deployment wizard.
3. Select User Collections from the dropdown menu.
4. Select the user collection you want to use.

The product will either install or become available users in the selected user collection log in to client machines.

5. Select a distribution point to which to distribute the application, unless you already distributed the application. Click Next.
6. Select whether you want the application to be available to users to install or automatically pushed and installed on the user’s machine.

The Available and Required options are described in detail in the Package deployment section.

If you select Available, you can require that users must obtain administrators approval before installing the product. A notification will appear in the Software Center Configuration Manager, where the administrator must approve the installation.

If you selected the Required option, and you select Pre-deploy software to the user primary device, the application will install on the client machine that is set as the user’s primary device.
7. Select when the application will be made available (Optional).

8. Specify what types of messages the user will see in the Configuration Manager on the client machine.
9. Select to notify the System Center Operations manager when a product is installed or fails.
10. Click Next to go to the Summary page. Review the page before committing the deployment.
11. Click Next to deploy.
Distributing a Single Update

These instructions apply to executable updates created with the Autodesk patch wrapper. This method also works for Autodesk .msp filetype updates but with a different command line.

Part 1. Create the Install Script as a Package

1. Download your update from the Autodesk accounts portal.
2. Create a new folder in the shared network location. This is where you will place the update file and the install script that will be the used for the update install package.
3. Navigate inside this folder and select create new text file.
4. Open the text file and enter the update name followed by the parameters you want to use. Examples:
   - .exe: `AutoCAD_2019.0.1_Update_64bit.exe /quiet`
   - .msp: `msiexec /p acad.msp /q` (using `acad.msp` as an example)

   The parameters selected here will install the update silently with no user interaction.

5. Select Save As, select all files, and enter a relevant name with the file name extension .cmd.
6. Create a package in SCCM.
7. Enter package information, and point to the network folder you created with the update install script inside. Click Next.

8. Enter the following information:
   a. Name of the install package.
   b. For Command line, navigate to the product uninstall folder you had created in Step 1 and select all files, then select the .cmd file you created.
c. Select whether or not you want the install script to run hidden.

d. Select if the install script will run whether or not the user is logged on.

e. Select the Run with administrative rights Run mode (recommended).

f. Click Next.

9. Next, you can choose to run another program first. Also indicate if the install will only run on certain platforms. Click Next.

10. Confirm the settings and then finish the wizard.

Now that you have finished creating the Package in SCCM, it can be distributed and deployed as any other package.

If you select the Required deployment option, the install script will automatically run and install the product update on all machines in the selected device collection. If you select Available, the update will become available in the configuration manager on all the client machines in the select device collection.
Troubleshooting

If you encounter issues or errors, refer to the following resources for guidance. If you need additional assistance, please contact Autodesk support: https://knowledge.autodesk.com/contact-support

General Troubleshooting

<table>
<thead>
<tr>
<th>Topic</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updates for some products aren’t showing up in the Autodesk desktop app</td>
<td>Use the management tools in Autodesk Account (<a href="http://www.autodesk.com/account">www.autodesk.com/account</a>) to manage distribution of updates for Autodesk products. If you are a Token Flex customer, you will only see publicly available updates. Updates included with your Token Flex subscription will need to be manually downloaded and included in deployments.</td>
</tr>
</tbody>
</table>

Common Errors

<table>
<thead>
<tr>
<th>Topic</th>
<th>Article</th>
</tr>
</thead>
</table>
Note: Rather than changing the entire admin image to unhide the GUI, you can just remove the /q from the command file command line. The log files will show the actual error, where the GUI will only show (at best) the failing module.

Install of Revit 2017 Add-ins fails with errors 1603 and 1606


Error 1402 or 1406 during installation

https://knowledge.autodesk.com/support/autocad/troubleshooting/caas/sfdcarticles/sfdcarticles/Error-1402-or-1406-During-Installation.html

0x87D01201(-2016407039) Cache error, go to control panel/configuration manager and select the cache tab.
1. Select Configure Settings
2. Select Delete Files
Now retry the installation on the client machine

0x87D00324(-2016410844) This SCCM error message signifies that the detection of the installed application is not correct. Go to the detection option in SCCM for the selected application and verify that the detection setting is correct.

Performance

<table>
<thead>
<tr>
<th>Topic</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCM deployment hanging when it is deployed from an image that does not contain the root folder adminimage</td>
<td><a href="https://knowledge.autodesk.com/support/product-design-suite/troubleshooting/caas/sfdcarticles/sfdcarticles/SCCM-deployment-hanging-when-it-is-deployed-from-an-image-that-does-not-contain-the-root-folder-adminimage.html">https://knowledge.autodesk.com/support/product-design-suite/troubleshooting/caas/sfdcarticles/sfdcarticles/SCCM-deployment-hanging-when-it-is-deployed-from-an-image-that-does-not-contain-the-root-folder-adminimage.html</a></td>
</tr>
</tbody>
</table>

Log Files

<table>
<thead>
<tr>
<th>Log File Location</th>
<th>Description</th>
</tr>
</thead>
</table>
| Package Deployment Found in: Windows\CCM\Logs | DataTransferService.log – Shows the transfer status of package 
Execmgr.log – Shows the installation status of the package, exit codes. |
<table>
<thead>
<tr>
<th>Log File Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid deployment</td>
<td>DataTransferService.log – Shows the transfer status of package</td>
</tr>
<tr>
<td>Found in: Windows\CCM\Logs</td>
<td>AppEnforce.log – Shows status of installation and detection.</td>
</tr>
<tr>
<td></td>
<td>CAS.log - Provides information about the process of downloading software updates to the local cache and cache errors,</td>
</tr>
</tbody>
</table>
Uninstalling Deployed Products

This section describes how to use SCCM to uninstall deployed products.

Before starting this procedure, the CAD Manager should delete the existing deployment in SCCM if it is set to Required to prevent the product from automatically reinstalling.

Package Mode Uninstall Process

The following steps apply to 2012 SCCM.

Part 1. Create the Uninstall Script

1. Navigate to the Product deployment folder of the Autodesk product that you want to uninstall from the device collection.

   ![Product deployment folder screenshot]

2. Open the `<deployment_name>_Uninstall.txt` text file and copy all the content.

   ![Open text file]

3. Exit the folder.
4. Create a new folder in the shared network location to use for the uninstall script that will be the used for the Uninstall package.
5. Name the folder appropriately and open the folder.
6. Inside the folder, right click and select to create a new text file.
7. Open the text file you just created and paste all the content that you had previously copied from the product `<deployment_name>_Uninstall.txt` text file.
8. Select Save As:
   a. Select Save as type: All Files (*.*)
   b. Name the file and add the file extension .cmd
   c. Make sure the encoding is: ANSI
9. Next, right-click the .cmd file and select edit.
10. Inside the file, manually delete any double colons, :: that are in front of the lines that starts with ::call in them, this will select that component of the product to be uninstalled.

11. Save the uninstall script file.

Part 2: Create the Uninstall Package in SCCM

Next, create the uninstall package in SCCM for the deployment.

1. Open SCCM 2012 and go to the Software Library.
2. Navigate to \Software Library\Overview\Application Management\<Your packages>.
3. Select Create package.
4. Enter the required information.

For the option, This package contains the source files, navigate to and select the product uninstall folder that you had created in the shared network location in Part 1.
5. Click **Next**.
6. Select **Standard program** and click **Next**.
7. Enter information for the standard program:
   a. Name of the uninstall package
   b. For **Command line**, navigate to the product uninstall folder you created in Step 1 and select all files, and then select the .cmd file you created.
   c. Select whether or not you want the uninstall script to run hidden.
d. For the option "Program can Run", select if the uninstall script will run whether or not the user is logged on.
e. Make sure the uninstall script runs with administrative rights (recommended).
f. Click Next.

8. Next, you can choose to run another program first. Also indicate if the uninstall will only run on certain platforms. Click Next.
9. Confirm the settings and then finish the wizard.

The package can now be distributed and deployed as any other package. Make sure you do not have the product to be uninstalled set as install required to the same devices, at the same time.

If you select the Required deployment option, the uninstall script will automatically run and uninstall the Autodesk products on all machines in the selected device collection.

Steps for 2007 SCCM

Go to the <deployment name>\SMS_SCCM scripts folder and create an uninstallation batch file with ANSI encoding, following the instructions in the Product_Uninstall_Readme.txt file. You will use the resulting batch file <deployment name>_Uninstall.bat in this procedure.

1. Open the SCCM console.
2. In the Configuration Manager Console window, expand Software Distribution.
3. Right-click Packages ➤ Distribute ➤ Software.
4. In the Distribute Software wizard, click Next.
5. In the Package dialog box, select Create a New Package and Program without a Definition File. Click Next.
6. In the Package Identification dialog box, enter the information for Name, Version, Publisher, Language and any comments. Click Next.
7. In the Source Files dialog box, make selections for where SCCM retrieves the batch file (<deployment name>_Uninstall.bat) and how it manages it. Select “Always Obtain Files from a Source Directory”. Click Next.
8. In the Source Directory dialog box, specify the location of the source directory. Click Next.
9. In the Distribution Points dialog box, select the distribution point(s). This is the location from which the software package will be deployed to the target computers. Click Next.
10. In the Program Identification dialog box, enter the name of your program. This is the name that displays in Add or Remove Programs in the Control Panel. In the Command Line field, enter \<deployment name>_Uninstall.bat . Click Next.
11. In the Program Properties dialog box, Program Can Run drop-down list, select how you want your program to run. Your choices are:
   • Only When a User is Logged On
   • Whether or Not a User is Logged On
   • Only When No User is Logged On
12. In the After Running drop-down list, select an action to take after the program has run. Your choices are:
   • No Action Required
   • Program Restarts Computer
   • ConfigMgr Restarts Computer
   • ConfigMgr Logs User Off
   Note: Some products require a system restart after running. Click Next.
13. In the Advertise Program dialog box, select Yes to advertise the program to users. Click Next.

14. In the Select a Program to Advertise dialog box, select the package you want to advertise. Click Next.

15. In the Select Program ➤ Advertisement Target dialog box, select the collection of people to whom you want to advertise, or create a new collection.

16. In the Select Program ➤ Advertisement Name dialog box, enter or change the name of your advertisement. Add any comments to further describe the advertisement. Click Next.

17. In the Select Program ➤ Advertisement Subcollection dialog box, select one of the following options:
   - Advertise this Program to an Existing Collection
   - Create a New Collection and Advertise this Program to It

18. Click Next.

19. In the Select Program ➤ Advertisement Schedule dialog box, if desired, set options to advertise your program at a specific date and time, or set an expiration date. Click Next.

20. In the Select Program ➤ Assign Program dialog box, select one of the following options:
   - If the installation process is mandatory, select Yes, Assign the Program.
   - If the installation process is optional, select No, Do Not Assign the Program.

   Click Next.

21. In the Summary dialog box, verify your advertisement information. Use the back buttons to make any changes. To finish, click Next.
Hybrid Mode Uninstall Process

Complete the following steps to create an uninstall application for a hybrid deployment.

Part 1: Create the Uninstall Script

1. Go to the deployment folder you previously created and open the SMS_SCCM Scripts folder.

2. Open the `<deployment_name>-Uninstall.txt` text file and copy all the content.

3. Go back one level to the root of the deployment folder.


5. Paste the copied content into the new text file.

6. Going through the text you just pasted, remove the `::` in front each component you want to uninstall.

   **Note:** Only uncomment the specific product components; do not uncomment things like Material Libraries, Licensing components or anything else shared between products. For example, remove AutoCAD MEP and leave AutoCAD Electrical functioning, the AutoCAD MEP uninstall.bat should only have AutoCAD MEP uncommented.

7. Select Save As type all files and make sure Encoding is set to ANSI. Save it to the root of your product deployment folder, giving it a relevant name; for example, `3dsmax_uninstall.cmd` or `.bat`:

Now you have an uninstall script that can be used to centrally uninstall deployed Autodesk products.

Part 2: Create the Uninstall Application in SCCM

1. Navigate to your product application in SCCM.
2. Select the **Deployments** tab at the bottom of the window.

3. Select delete from the top menu. This is necessary to deploy the application as uninstall when finished.
4. Click on the product application to select it, and then right-click and select **Properties**.

5. Click the **Deployment Types** tab.

6. Select the script and click **Edit**.
7. Click the **Programs** tab.

8. Locate the “Specify the command to uninstall this application section”. Click **Browse** next to the Uninstall program field.

9. Select **show all files**, and then select the command line script you created.

10. Click **OK** until the wizard finishes.
11. Next, right-click on the application and select **Deploy**.

12. Select the device or user collection you are going to target and click **OK**.
13. Select the distribution point you are using or want to use.

14. In the Deployment Settings window, select **Uninstall** in the Action drop-down window. Select any other options you want to include. “Send wake up packets” will uninstall products from devices that are sleeping.

15. Enter deployment schedule information on the Scheduling screen.

16. Select **Software Uninstall** in the User Experience screen along with any other options you prefer.

17. Finish going through the wizard, and then click the Deployments tab to verify that the application you created is listed with an Uninstall action.
SCCM Central Update Uninstall

Applies to executable updates created with the Autodesk patch wrapper.

Part 1. Create the Uninstall Script as a Package

1. Create a new folder in the shared network location to use for the update uninstall script. Name it something convenient; for example, update-name-uninstall.
2. Open the folder and select create new text file.
3. Open the text file and enter the update name followed by the parameters you want to use. For example,

   AutoCAD_2019.0.1_Update_64bit.exe /uninstall /quiet

   The parameters selected here will uninstall the update silently with no user interaction.

4. Select Save As, select all files, and name it something relevant with the file name extension .cmd

5. Create a package in SCCM.

6. Enter the package information and point to the network folder with the update uninstall script

   ![Create Package and Program Wizard](image)

   **Specify information about this package**

   Enter a name and other details for the new package. To take full advantage of new features that include the Application Catalog, use an application instead.

   **Name:** AutoCAD_2019.0.1-uninstall

   **Manufacturer:** Autodesk

   **Language:** en-us **Version:** 2019

   ![Folder Path](image)

7. Click Next and select standard package.

8. Click Next and enter the standard package information:
   a. Name the uninstall package.
   b. For the **Command Line** field, navigate to the product uninstall folder you had created in Step 1, select all files, and then select the .cmd file you created.
c. For the Run option select whether or not you want the uninstall script to run hidden.

d. For the Program Can Run option, select if the uninstall script will run whether or not the user is logged on.

e. Make sure the uninstall script runs with administrative rights (recommended).

f. Click Next.

9. Next, you can choose to run another program first. Also indicate if the uninstall will only run on certain platforms. Click Next.

10. Confirm the settings and then finish the wizard.

Now that you have finished creating the Package in SCCM, it can be distributed and deployed as any other Package. Make sure you do not have the product to be uninstalled set as install required to the same devices, at the same time.

If you select the Required deployment option, the uninstall script will automatically run and uninstall the product update on all machines in the selected device collection.
# Additional Resources

<table>
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<tr>
<th>Topic</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove Autodesk Software (Windows)</td>
<td><a href="https://knowledge.autodesk.com/customer-service/download-install/remove-products/remove-windows-products">https://knowledge.autodesk.com/customer-service/download-install/remove-products/remove-windows-products</a></td>
</tr>
<tr>
<td>Topic</td>
<td>Article</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>s/2017-How-to-Complete-a-Clean-Install-and-Uninstall-of-Revit-products.html</td>
</tr>
</tbody>
</table>
# Product Specific Information and Customization

The following resources address product-specific deployment, customization, and troubleshooting. For system requirements, go to: [https://knowledge.autodesk.com/support/system-requirements](https://knowledge.autodesk.com/support/system-requirements)

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<th>Product</th>
<th>Process</th>
<th>References</th>
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<td>Civil 3D</td>
<td>Civil tools missing from tool palette</td>
<td><a href="https://knowledge.autodesk.com/support/autocad-civil-3d/troubleshooting/caas/sfdarticles/sfdarticles/Civil-tools-missing-from-Tool-Palettes.html">https://knowledge.autodesk.com/support/autocad-civil-3d/troubleshooting/caas/sfdarticles/sfdarticles/Civil-tools-missing-from-Tool-Palettes.html</a></td>
</tr>
<tr>
<td></td>
<td>accessing country kits</td>
<td><a href="https://knowledge.autodesk.com/search-result/caas/downloads/content/civil-3d-country-kits.html">https://knowledge.autodesk.com/search-result/caas/downloads/content/civil-3d-country-kits.html</a></td>
</tr>
<tr>
<td>Product</td>
<td>Process</td>
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</table>
# Definitions

## Autodesk terminology:

<table>
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<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdminImage</td>
<td>The folder within the deployment location that contains the installer instructions and source files for the Autodesk product.</td>
</tr>
<tr>
<td>Application Manager/Admin Mode</td>
<td>An Autodesk application used in the deployment mode. (At the very last step in creating an Autodesk product deployment, there is a Launch button to launch this application.) This application knows what product you are deploying and will attempt to offer you the latest updates for that product. If you select these updates, they will be included for all your client installations. Note: If you are a Token Flex customer, you will only see publicly available updates. Updates included with your Token Flex subscription will need to be manually downloaded and included in deployments.</td>
</tr>
<tr>
<td>Autodesk desktop app</td>
<td>Autodesk desktop app is a desktop component that is installed with Microsoft Windows®-based Autodesk products (2017 and later). It delivers product updates, new releases, and security patches to subscribers.</td>
</tr>
<tr>
<td>Autodesk Deployment Wizard</td>
<td>The workflow within Autodesk product installers which allows the source files to be repackaged onto a network share. This tool allows customizations to be captured and deployed along with the product silently.</td>
</tr>
<tr>
<td>Deployment shortcut</td>
<td>Location in the root folder of the deployment location, this shortcut file contains command line parameters which can be used to install the deployment on a client machine. Combine running this shortcut manually with disabling silent mode in the Deployment Wizard as a powerful troubleshooting technique.</td>
</tr>
<tr>
<td>Hybrid mode</td>
<td>Using the setup.exe /W /q /l &lt;deployment name&gt;.ini command line to deploy everything as a single application.</td>
</tr>
<tr>
<td>Package mode</td>
<td>Using package deployment in SCCM.</td>
</tr>
<tr>
<td>Application mode</td>
<td>Creating each component as separate Applications within SCCM.</td>
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## SCCM Terminology

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<tr>
<th>Site System Role</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Application Catalog web service point</td>
<td>A site system role that provides software information to the Application Catalog website from the Software Library.</td>
</tr>
<tr>
<td>Application Catalog website point</td>
<td>A site system role that provides users with a list of available software from the Application Catalog.</td>
</tr>
<tr>
<td>Asset Intelligence synchronization point</td>
<td>A site system role that connects to Microsoft to download Asset Intelligence catalog information and upload uncategorized titles so that they can be considered for future inclusion in the catalog. This site system role can only be installed on the central administration site or a stand-alone primary site.</td>
</tr>
<tr>
<td>Certificate registration point</td>
<td>A site system role that communicates with a server that runs the Network Device Enrollment Service to manage device certificate requests that use the Simple Certificate Enrollment Protocol (SCEP).</td>
</tr>
<tr>
<td>Distribution point</td>
<td>A site system role that contains source files for clients to download, such as application content, software packages, software updates, operating system images, and boot images. You can control content distribution by using bandwidth, throttling, and scheduling options.</td>
</tr>
<tr>
<td>Fallback status point</td>
<td>A site system role that helps monitor client installations and identify clients that are unmanaged because they cannot communicate with their management point.</td>
</tr>
<tr>
<td>Management point</td>
<td>A site system role that provides policy and service location information to clients and receives configuration data from clients. You must install at least one management point at each primary and at each secondary site for clients to obtain computer and user polices.</td>
</tr>
<tr>
<td>Endpoint Protection point</td>
<td>A site system role that Configuration Manager uses to configure the default membership for Microsoft Active Protection Service.</td>
</tr>
<tr>
<td>Enrollment point</td>
<td>A site system role that uses PKI certificates for Configuration Manager to enroll mobile devices and Mac computers, and to provision Intel AMT-based computers</td>
</tr>
<tr>
<td>Enrollment proxy point</td>
<td>A site system role that manages Configuration Manager enrollment requests from mobile devices and Mac computers.</td>
</tr>
<tr>
<td>Out of band service point</td>
<td>A site system role that provisions and configures Intel AMT-based computers for out of band management.</td>
</tr>
<tr>
<td>Reporting services point</td>
<td>A site system role that integrates with SQL Server Reporting Services to create and manage reports for Configuration Manager.</td>
</tr>
<tr>
<td>Software update point</td>
<td>A site system role that integrates with Windows Server Update Services (WSUS) to provide software updates to Configuration Manager clients.</td>
</tr>
<tr>
<td>State migration point</td>
<td>A site system role that stores user state data when a computer is migrated to a new operating system.</td>
</tr>
<tr>
<td>Site System Role</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>System Health Validator point</td>
<td>A site system role that validates Configuration Manager Network Access Protection (NAP) policies. It must be installed on a NAP health policy server.</td>
</tr>
<tr>
<td>Microsoft Intune connector</td>
<td>A site system role that was introduced in Configuration Manager SP1 that uses Microsoft Intune to manage mobile devices in the Configuration Manager console.</td>
</tr>
</tbody>
</table>

**Microsoft System Center 2012 Configuration Manager Terminology**

For a glossary of Microsoft terminology, go to: