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Understanding Deployments

A deployment provides an efficient way to install one or more Autodesk products with a standard configuration on multiple computers. The files required for the installation process are stored on the network, in an administrative image, in a folder to which all users have shared access. To install the products, users navigate to the deployment folder and double-click an installer shortcut (.LNK file).

**NOTE** The installer referenced in this guide applies only to Windows operating systems. However, some of the concepts and procedures may be useful to administrators of Autodesk products on Linux or Mac OS X networks.

Some essential facts about deployments:

- Deployments can be created for network licenses or multi-seat stand-alone licenses.
- Multiple deployments with different configurations can exist in the same folder, sharing the same administrative image, which is a set of installation files.
- An existing deployment can form the basis for creating another deployment with a different configuration.
Deployments can be configured to generate a log file for each installation. Network administrators can use these log files for troubleshooting.

Planning a Deployment

Check Deployment Readiness

This checklist identifies preliminary tasks to complete, information to gather, and decisions to make before creating a network deployment.

TIP To review deployment settings, including details of product configuration, you can create a test deployment. After the learning process, you can delete the test deployment.

Deployment Checklist

- Review the system requirements by clicking the System Requirements link in the installer. Confirm that your network, servers, and client computers meet these system requirements.

- Understand the general process for installing the type of license you have purchased. For a network license deployment, know the license server name(s), and the type of license server model that was specified at the time of license purchase. For more information, see Determine the License Server Model (page 4).

- Install and activate any network administrator tools and utilities. For example, if you are using a network license, install the Network License Manager from the installer.

- Locate your product serial number and product key. These are located on the outside of the product packaging, or in an email message if you downloaded your product or upgrade from Autodesk.

- Identify a network location for deployments, and create a shared folder to contain deployments.
Deployment Checklist

☐ If your product has language options, decide which language to use for each deployment.

**NOTE** Languages can be included when you initially create a deployment, or when you create a new deployment configuration, but not when you modify a deployment.

Determine whether to create log files on individual computers, in the deployment folder, or both.

Determine whether to run installations in silent mode.

**NOTE** When products are installed in silent mode, the user’s system can automatically reboot without warning when the installation is complete.

Identify other applicable configuration settings such as defined search paths, locations of support files, and whether to automatically install service packs.

---

**Determine the Installation Type**

When you set up your deployment, you specify the installation type by target platform and license type.

**Target Platform**

Specify either a 32-bit or 64-bit platform, depending on the operating system of the computers that will use the deployment. For some Autodesk products, you can install a 32-bit version on a 64-bit operating system. For more information, consult product-specific documentation.

**License Type**

Specify one of the following license types in the installer, based on the type of license you purchased:

- **Network License** With this license type, you install the product to computers on a network, along with the files and registry entries that allow the product to communicate with the Network License Manager (NLM) on one or more
servers. You also define the NLM configuration. When an Autodesk product starts up on a client computer, it requests a license from NLM, then returns it when the product is stopped. Computers running the product based on a network installation do not require individual activation. For more information, see Choose a License Server Model (page 4).

A major advantage of a network license is that you can install the product on more systems than the number of licenses you have purchased (for example, purchase 25 licenses, but install on 40 computers). At any one time, the product runs on the maximum number of computers for which you have licenses, so you get true floating licenses.

**Stand-Alone License** This license type is for multi-seat stand-alone installations where a single serial number and product key are used to install products on multiple computers. With this license type you do not use NLM to manage product licensing. Instead, installation, registration, and activation occur on each computer. After the first activation using the multi-seat stand-alone serial number and product key, activation occurs automatically for all computers using this deployment, as long as they are connected to the Internet.

**Determine the License Server Model**

If you choose the Network License option, you need to know which license server model will be used to distribute the product licenses. This was specified as one of the following when the license was purchased:

- **Single license server model.** The Network License Manager (NLM) is installed on a single server, so license management and activity is restricted to this server. A single license file records the total number of licenses available on the server.

- **Distributed license server model.** Licenses are distributed across more than one server. A unique license file is required for each server. To create a distributed license server, you must run NLM on each server that is part of the distributed server pool.

- **Redundant license server model.** Three servers are available to authenticate each license. With this configuration, licenses continue to be monitored and issued as long as at least two servers are functional. The license file on all three servers is the same, and you must run NLM on each server.

Each of these license server models is described in detail in the Licensing Guide. It is recommended that you also read that guide before you deploy the product.
You can find the Licensing Guide by clicking the Installation Help link in the installer.

**Configure Individual Products**

When you create a deployment, you can accept the default settings for any product you choose to install, or you can configure these settings to create a custom deployment. Configuration details for each product are usually covered in a product-specific appendix to this guide. It is recommended that you review these appendices, and determine the right settings for each product in your deployment.

To configure product settings, on the Create Deployment page of the installer, ensure that the product is selected for installation, and then click the product in the scrolling list. The configuration panel opens.

**IMPORTANT** The configuration settings you choose apply to every instance of the product installed from the deployment. After the deployment is created, these settings can be changed only by modifying the deployment. For more information, see Modify a Deployment (page 10).

Most products allow you to choose an installation type, either Typical to select the most common options, or Custom to review options in more detail.

Some other common product settings are as follows:

- User preferences for product behavior
- Installation of support files, such as material libraries
- Access to online resources

Click Installation Help for further information specific to your product or suite.

**Include Service Packs**

Most products provide the option to include service packs in a deployment. You can download a service pack from autodesk.com, or use a service pack stored on a local hard drive or network location. In either case, the service pack will be applied only after the installation of the main product is completed.
If you select the Install Service Pack from autodesk.com button, the service pack will be automatically downloaded and you will not need to extract the MSP file.

You can add multiple service packs to a deployment only if the service packs are locally stored, not if you are downloading them from autodesk.com.

**NOTE** If the deployment process for the main product is canceled or fails, the service pack installation will automatically be canceled.

Two options are available for including service packs in deployments:

- **Append the Service Pack onto the Deployment.** When you append a service pack, the service pack is applied to the current deployment only. Multiple service packs may be appended to a deployment. The service pack file is included in the deployment and the service pack is applied after the product is deployed.

- **Merge the Service Pack into the Administrative Image MSI File.** With this option, the service pack is merged into the administrative image. Once merged, a service pack cannot be removed from the administrative image.

To extract a Microsoft Installer Patch (MSP) file from a service pack:

1. Download the service pack from the Support site for your product.
2. Review the service pack *Readme* file for information about patch usage.
3. Open a Windows command prompt and enter the patch file name followed by the /e switch and a target file name. Here is the general command format:

   `<local_drive:\`<patch_name>.exe /e
   `<local_drive:\<patch_name>.msp

   Here is an example:

   `ProductSP1.exe /e ./ProductSP1.msp`

   where *ProductSP1.exe* is the name of the downloaded patch and *ProductSP1.msp* is the name of the extracted file. Using ‘./’ in front of the extraction file name places the extracted file in the same folder as the original executable. The “e” command line switch extracts the MSP file from the executable.
To include a service pack with the deployment

To include a service pack with a deployment, an MSP file must be extracted from the downloaded service pack executable.

1. On the Include Service Packs page, click the Browse button.
2. In the Open dialog box, locate the service pack you want to include with the deployment.
3. Select the MSP file and click Open.
4. Specify whether you want to append the service pack to the deployment or merge the service pack into the administrative image.
5. Click Next.

Create a Network Share

After you have fully prepared for creating a deployment, you are ready to set up and distribute Autodesk products from a shared network location. A network share is an installation folder to which all users' computers have access. You create deployments in the network share, and point users to this location to install the program. Any subfolders inside a network shared folder are automatically shared.

If you select the option to create a network log file, then during installation, the user's computer writes an entry to the log file in the network share. Therefore, this option requires that users have read-write access to the network share.

You can create a deployment folder on a network share as part of the process of creating the deployment. If you plan to create several deployments of the same product or suite, configured for different user groups, then these deployments can share the same administrative image, and the shortcuts can reside in the same folder. However, if you plan to create deployments of different products or suites, it is recommended that you create separate product folders on the network share before starting to create deployments.

For more information on how to create a network share, see the documentation for your operating system.
Creating a Deployment

Create an Original Deployment

Use this procedure to create a new deployment from the installer. In the process, you can create a default deployment by accepting the default configuration of each installed product, or you can create a custom deployment by customizing the configuration settings of one or more products in the deployment.

To create an original deployment

1. Close all running applications on your computer.
2. Start the installer.
3. On the first page, if language choices are available, select a language for the deployment instructions, and then click Create Deployment.
4. On the Configure <name> page, Administrative Image section, specify the following data:

   a. Enter a descriptive name for the deployment that identifies the user group, platform, or other attribute to differentiate this deployment from others.
   b. Enter the path or browse to the shared network folder where you want to create and store your administrative image. Users install the program from this location.

   NOTE For information on how to create a network share, see Create a Network Share (page 7).

   c. Select either 32-bit or 64-bit for the target operating system.
   d. Choose whether to include only the products required by this configuration.
      - If selected, the deployment cannot be modified in future to include additional products.
      - If unselected, the administrative image will include all possible products, so the current deployment can be modified in any way.
In the **Installation Settings** section, select one or more of these options:

- **Silent mode** runs the installation in background, without prompting the user for any input.

  **NOTE** Silent mode can automatically restart the user’s computer without warning after installation.

- **Log file on each workstation** can enable users to review and troubleshoot their own installations.

- **Network log file** in a central location supports the network administrator in reviewing data for all installations.

  **NOTE** 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.

Review and accept the Autodesk software license agreement.

On the Product Information page, select your license type, and enter your serial number and product key. If this data is valid, green check marks appear.

If you are sure that the product information is correct, click Next.

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.

**IMPORTANT** The configuration settings you choose apply to every instance of the product installed from the deployment. After the deployment is created, these settings can be changed only by modifying the deployment.

Configuration settings vary widely by product. For more information, click Installation Help to see the product documentation.

Click Create to create the deployment.

After the deployment is created, the Deployment Configuration Complete page opens, presenting useful paths to the new deployment and a link for registering products online.

After you have finished using this screen, click Finish.
Modify a Deployment

Inside each deployment folder is a Tools folder that contains a shortcut (.LNK file) named Create & Modify a Deployment. You can use this shortcut to
- Create a new deployment configuration
- Create a new deployment configuration that uses an existing deployment as a template
- Modify the configuration of an existing deployment

The installer pages guide you through the process, similar to when creating an original deployment. If your original administrative image was set to include only products required by the deployment configuration, then your options for creating or modifying the deployment are limited. In particular, you cannot add products to the deployment that are not in the original administrative image. Conversely, if your original administrative image was not set to include only the required products, then it includes all product files. As a result, you can add products when you modify this deployment or when you create new deployment configurations.

To modify a deployment

1. Open the shared network folder that contains the deployment.
2. In the Tools folder, double-click the Create & Modify a Deployment shortcut.
   The installer opens at the Modify Deployment page.
3. Click through the deployment configuration pages, and select the required options.
4. Click Create Deployment.

Direct Users to the Administrative Image

After you have created the deployment, users can install the program using the shortcut (.LNK file) located in the deployment folder with the administrative image. The shortcut name matches the deployment name that you specified when creating the deployment. Notify users of the shortcut name and location. Instruct them to double-click the shortcut to start the installation. If the deployment uses silent mode, advise users to keep other applications closed during the installation, because their computers might restart automatically after products are installed.