

AutoCAD Raster Design 2010

Network Administrator's Guide

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Getting Started with Network Administration and Deployment

1

Network administration and deployment requires careful planning and execution. This section gives you information about how to prepare for deployment, set up a license server, and set up and distribute the program.

Network administration and deployment requires careful planning and execution. This section gives you information about how to set up and distribute the program.

If you are not familiar with network administration and deployment, you should familiarize yourself with the following topics before you attempt to deploy and administer the program over a network.

If you are not familiar with network administration and deployment, you should familiarize yourself with the entire process before you attempt to deploy and administer the program over a network.

- [Deployment Preparation](#) (page 1)
- [Setting Up Network Tools and Your License Server](#) (page 7)
- [Setting Up a Deployment](#) (page 13)
- [Distributing the Program](#) (page 10)

Deployment Preparation

To prepare for a deployment, you should take the time to review the following requirements and options.

System Requirements

This section contains the system requirements for the location of the administrative image that you create, the network license server, and the client workstation.

This section contains the system requirements for the location of the administrative image that you create and the client workstation.

Before you begin installing the program on a network, make sure that your servers and client workstations meet the minimum recommended hardware and software requirements for a deployment.

The program will automatically detect if the Windows operating system is the 32- or 64-bit version when installing AutoCAD Raster Design. The appropriate version of AutoCAD Raster Design will be installed. The 32-bit version of AutoCAD Raster Design cannot be installed on a 64-bit version of Windows vice-versa.

See the following tables for administrative image, license server, and client workstation system requirements.

See the following tables for administrative image and client workstation system requirements.

Hardware and Software Requirements - Administrative Image Location

Hard disk	2 GB or above (recommended)	The location where you create the administrative image must be a shared location so that users can access the administrative image.
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Hardware and Software Requirements - Network License Server

Operating system	Windows Vista® 32-bit SP1 Windows Vista 64-bit SP1 Windows® XP 32-bit SP3 Windows XP 64-bit SP2 Windows 2003 R2 Server Edition Windows 2000 Server Edition	The Network License Manager supports Ethernet network configurations only.
Computer/processor	Pentium® III or higher 450 MHz (minimum), Intel Mac	

Hardware and Software Requirements - Network License Server

Network interface card	Compatible with existing Ethernet network infrastructure	The Network License Manager supports multiple network interface cards, but at least one must be an Ethernet card.
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Communication protocol	TCP/IP	The Network License Manager uses TCP packet types.
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32-bit Hardware and Software Requirements

Operating systems	Windows® XP Home and Professional Edition SP2 or later Microsoft® Windows Vista® SP1 or later including: <ul style="list-style-type: none">■ Windows Vista Enterprise■ Windows Vista Business■ Windows Vista Ultimate	For more information on Windows Vista versions see http://www.microsoft.com/windowsvista/versions/
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Browser	Internet Explorer® 7.0 or later
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CPU type	<i>Windows XP</i> - Intel® Pentium® 4 or AMD Athlon™ Dual Core processor, 1.6 GHz or higher with SSE2 technology <i>Windows Vista</i> - Intel Pentium 4 or AMD Athlon Dual Core processor, 3.0 GHz or higher with SSE2 technology
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Memory	<i>Windows XP</i> - 2 GB RAM <i>Windows Vista</i> - 2 GB RAM
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Display resolution	1280 x 1024 32bit color (True Color) 128 MB or greater	For graphics cards that support Hardware Acceleration, DirectX 9.0c or later must be installed.
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Hard disk	<i>DVD</i> - Installation 1 GB <i>Downloaded File</i> - Installation approximately 500 MB	A 32-bit AutoCAD Raster Design cannot be installed on a 64-bit Windows operating system and vice-versa.
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32-bit Hardware and Software Requirements

Pointing device	MS-Mouse compliant
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3D Modeling Additional Requirements	<ul style="list-style-type: none">■ Intel Pentium 4 or AMD Athlon processor, 3.0 GHz or higher; or Intel or AMD Dual Core processor, 2.0 GHz or higher■ 2 GB RAM or greater■ 400 MB free hard disk space available not including installation■ 1280 x 1024 32-bit color video display adapter (True Color) 128 MB or greater, Direct3D® capable workstation class graphics card
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64-bit Hardware and Software Requirements

Operating systems	Windows® XP Professional x64 Edition SP2 or later Microsoft® Windows Vista® Enterprise SP1 or later	For more information on Windows Vista versions see http://www.microsoft.com/windowsvista/versions/
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Browser	Internet Explorer 7.0 or later
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CPU type	AMD Athlon 64 with SSE2 technology AMD Opteron™ with SSE2 technology Intel Xeon with Intel EM64T support and SSE2 technology Intel Pentium 4 with Intel EM64T support and SSE2 technology
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Memory	Windows XP - 4 GB RAM Windows Vista - 4 GB RAM
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Display resolution	1280 x 1024 32-bit color (True Color) 128 MB or greater	For graphics cards that support Hardware Acceleration, DirectX 9.0c or later must be installed.
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64-bit Hardware and Software Requirements

Hard disk	DVD - Installation 1 GB	A 64-bit AutoCAD Raster Design cannot be installed on a 32-bit Windows operating system and vice-versa.
	Downloaded File - Installation approximately 500 MB	

Pointing device	MS-Mouse compliant
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3D Modeling Additional Requirements	■ Intel Pentium 4 or AMD Athlon processor, 3.0 GHz or higher; or Intel or AMD Dual Core processor, 2.0 GHz or higher
	■ 2 GB RAM or greater
	■ 2 GB free hard disk space available not including installation
	■ 1280 x 1024 32-bit color video display adapter (True Color) 128 MB or greater, Direct3D® capable workstation class graphics card

Choose an Installation Type

When you set up your deployment, you need to choose the type of installation to deploy. In the AutoCAD Raster Design Deployment wizard, you specify one of the following installation types:

NOTE You must select the same type of installation as the host application when you are preparing to install AutoCAD Raster Design. If you install the host application as a stand-alone type, you must also select the stand-alone option for AutoCAD Raster Design.

Network License installation With this type of installation, you install the program to workstations with the files and registry entries that allow the program to communicate with the Network License Manager. You also define the configuration of the Network License Manager so that the licenses can be accessed. Workstations running the program based on a network installation do not require individual activation. Licensing of this program is managed by at least one license server.

The main advantage is that you can install AutoCAD Raster Design on more systems than the number of licenses you have purchased (for example, purchasing 25 licenses but installing on 40 workstations). At any one time, AutoCAD Raster Design runs on the maximum number of systems for which you have licenses. This means you get a true floating license.

Multi-Seat Stand-Alone installation (Stand-Alone option) Choose this type of installation for stand-alone installations where a single serial number and product key are used for multiple seats. Multi-seat stand-alone installations do not rely upon the Network License Manager to manage product licenses; however, you can still use the AutoCAD Raster Design Deployment wizard to create administrative images and deployments. Registration and activation is more automated for multi-seat stand-alone installations. After the first activation using the multi-seat stand-alone serial number and product key, activation occurs automatically for all workstations based on this deployment, as long as your systems are connected to the Internet.

Stand-Alone installation (Stand-Alone option) Choose this type of installation for stand-alone installations where a single serial number and product key are used for a single seat. Like a multi-seat stand-alone installation, you do not use the Network License Manager to manage product licensing, but installation, registration, and activation occurs on each workstation.

If you choose one of the Stand-Alone installation types, you can proceed to the section [Distributing the Program](#) (page 10).

Choose a License Server Model

If you chose the Network License option, you need to decide which license server model to use to distribute the product licenses.

TIP If you are deploying a stand-alone or multi-seat stand-alone installation type, you do not use a license server model. Proceed to [Distributing the Program](#) (page 10).

For the network installation, use one of the following license server models:

- **Single license server model.** The Network License Manager is installed on a single server, so license management and activity is restricted to this server. A single license file represents 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 the Network License Manager on each server that is part of the distributed server pool.

- **Redundant license server model.** You use three servers to authenticate a single license file. One server acts as the master, while the other two provide backup if the master server fails. With this configuration, licenses continue to be monitored and issued as long as at least two servers are still functional. The license file on all three servers is the same. You must install the Network License Manager on each server.

Each of these license server models is described in detail in the *Network Licensing Guide*. It is strongly recommended that you read that guide before you deploy the program. You can find the *Network Licensing Guide* by clicking the Read the Documentation selection, the Documentation link at the lower left corner of the Deployment wizard, or in the Help system.

Setting Up Network Tools and Your License Server

If you are planning to have users run the program using network licenses, you need to use the Network License Manager and the Network License Activation Utility. The Network License Manager helps you configure and manage license servers. The Network License Activation Utility helps you get licenses and register them over the Internet.

Installing the Network License Manager

The Network License Manager is used to configure and manage the license servers.

To install your Network License Manager

- 1 In the AutoCAD Raster Design Installation wizard, click Install Tools and Utilities.
- 2 On the Select the Products to Install page, select Autodesk Network License Manager and click Next.
- 3 Review the Autodesk software license agreement for your country or region. You must accept this agreement to proceed with the installation. Choose your country or region, click I Accept, and then click Next.

NOTE If you do not agree to the terms of the license and want to terminate the installation, click Cancel.

- 4 On the Review - Configure - Install page, review your product selection and the current settings. If you don't want to make any changes, click Install. If you want to change the install type or installation path, click Configure.
- 5 On the Select the Installation Location page, accept the default installation path (*C:\Program Files\Autodesk Network License Manager*) or Browse to specify a different path. If you enter a path that does not exist, a new folder is created using the name and location you provide. Click Next.

WARNING Do not install the Network License Manager on a remote drive. When you install the Network License Manager files, you must provide a path to a local drive. You must specify the drive letter; the universal naming convention (UNC) is not supported.

- 6 On the Configuration Complete page, click Configuration Complete to return to the confirmation page.
- 7 On the Review - Configure - Install page, click Install.
- 8 When the Installation Complete page displays, click Finish.

Activating a Network License Through Autodesk.com

If your product does not include the Network License Activation Utility, you can activate your license by going to <https://registeronce.autodesk.com> and following the on-screen instructions.

Configure Your License Server

You configure a license server so that you can manage AutoCAD Raster Design licenses you received when you ran the Network License Activation Utility. Configure the license server with the *lmtools.exe* utility.

To configure your license server

You should be logged in with Administrator rights when working with the LMTOOLS utility.

- 1 Do one of the following:
 - (Windows XP) Click Start menu ► All Programs ► Autodesk ► Network License Manager ► LMTOOLS.
 - (Windows Vista) Double-click the LMTOOLS icon on the desktop.
- 2 In the Lmtools program, on the Service/License File tab, make sure the Configure Using Services option is active.
- 3 Click the Config Services tab.
- 4 In the Service Name list, select the service name you want to use to manage licenses.

By default, the service name is *FLEXnet Service 1*. If FLEXnet® is managing other software on your computer in addition to Autodesk, you can change the service name to avoid confusion, for example, you can rename *FLEXnet Service 1* to *Autodesk Server1*.

NOTE If you have more than one software vendor using FLEXnet for license management, the Service Name list contains more than one option. Make sure that only one Autodesk service is listed.

- 5 In the Path to Lmgrd.exe File field, enter the path to the Network License Manager daemon (*lmgrd.exe*), or click Browse to locate the file.

By default, this daemon is installed in the *C:\Program Files\Autodesk Network License Manager* folder.
- 6 In the Path to the License File box, enter the path to your license file, or click Browse to locate the file.

This is the path to the license file obtained by the Network License Activation Utility or the location where you placed the license file if you obtained it offline.
- 7 In the Path to the Debug Log File box, enter a path to create a debug log, or click Browse to locate an existing log file.

It is recommended that you save to the *\Program Files\Autodesk Network License Manager* folder. The log file must have a *.log* file extension. For new log files, you must enter the *.log* extension manually.
- 8 To run *lmgrd.exe* as a service, select Use Services.
- 9 To automatically start *lmgrd.exe* when the system starts, select Start Server at Power Up.

- 10 Click Save Service to save the new configuration under the service name you selected in step 4. Click Yes when prompted if you would like to save the settings to the service.
- 11 Click the Start/Stop/Reread tab and do one of the following:
 - If a service has not yet been defined for Autodesk, click Start Server to start the license server.
 - If a service for Autodesk is already defined and running, click ReRead License File to refresh the Network License Manager with any changes made to the license file or Options file.

The license server starts running and is ready to respond to client requests.

- 12 Close *lmtools.exe*.

Distributing the Program

Once you have fully prepared for creating a deployment, you are ready to set up and distribute AutoCAD Raster Design by using the Deployment wizard and choosing a deployment method.

Create a Network Share

A network share is an installation folder that you make available to users' computers on a network. You point users to this location to install the program. Create a network share that will be used by the AutoCAD Raster Design Deployment wizard during the creation of a client deployment.

A shared folder is required for network license and multi-seat stand-alone methods of installation. Any subfolders that are placed inside a network shared folder are automatically shared.

NOTE You must have Full Control permissions set for your shared folder when you are creating your deployment images. Read permissions are necessary to access the network share and administrative permissions on the workstation where the program is deployed.

To create a network share folder

- 1 On the desktop of a network server, create a folder named *Deployments*.
- 2 Right-click the *Deployments* folder and click Share and Security (or Sharing).

- 3 In the <folder name> Properties dialog box, Sharing tab, select Share This Folder.
- 4 Specify a Share Name, such as *Deployments*, if necessary.
- 5 Click the Permissions button. In the Permissions dialog box make sure Full Control is active. Click OK.
In Vista, right-click the *Deployments* folder and then click Share. In the Properties dialog box select Sharing and then Advanced Sharing to share the folder. Click the Permissions button to make sure Full Control is active. Click OK.
These steps are important when creating your deployment images.
- 6 Click OK or Close to close the Properties dialog box.
- 7 For each product you plan to install, create a subfolder in the *Deployments* folder. Name each folder with the pertinent product name.

Minimize the Chances of Installation Failure

The AutoCAD Raster Design installation process may stop if some applications, such as Microsoft Outlook or virus checking programs, are running when you are creating a deployment. Close all running applications and temporarily disable virus checking utilities.

Distributing an AutoCAD Raster Design Product

You can choose from several methods of distributing an Autodesk program. Network sharing is the default method.

- **Network Share.** Users launch the program with the shortcut icon that you created with the Deployment wizard. The program is installed on users' local computers, and a product icon appears on their desktop.

NOTE Users must have Read permissions to access the network share and administrative permissions on the workstation where this program is installed.

- **Scripting.** See [Create Scripts That Install Programs](#) (page 37).
- **Group Policy Objects (GPOs).** See [Distribute a Deployment Through Group Policies](#) (page 46).

- **Microsoft SystemCenter Configuration Manager (SCCM).** See [Tasks for Deploying Autodesk Software with SCCM](#) (page 53).
- **Imaging Software.** See [Use a Master Image to Distribute Network Licensed Products to Multiple Systems](#) (page 60).

Setting Up a Deployment

2

The deployment process provides you with numerous options for creating, and customizing your deployments, so you should set aside ample time to complete the process in one sitting. To be successful it is recommended that you review the following checklist and information before you begin. The deployment process is initiated from the Deployment wizard. Once a deployment is created, users then access the deployment to install products to their computers.

Preliminary Tasks for a Network Deployment

The deployment checklist gives you a quick summary of the type of information you should be familiar with before begin. When you have completed these tasks, you are ready to create a deployment.

Deployment Checklist

- ☐ You have reviewed the system requirements. You must make sure that your network, servers, and client workstations meet the system requirements.
- ☐ You understand the type of license you've purchased. If you plan a network license deployment, you should also be familiar with the type of license server model you want to use and the license server name(s).
- ☐ You have installed and activated any supporting tools and utilities.
- ☐ You have located your product serial number and product key. The serial number and product key are located on the outside of the product packaging, or in the email you received if you downloaded your product.
- ☐ You know how you're going to personalize the program(s) during registration. Using consistent registration data is very important.

Deployment Checklist

- ☐ You have identified the location (such as a shared folder) where deployments will reside for each program you plan to deploy.
- ☐ You have closed all other programs and disabled anti-virus software.
- ☐ You have decided what language(s) you will include in your administrative image, and what language(s) you will use for your deployment package.
- ☐ You have determined if your deployment plan involves using imaging software to distribute your program(s) to client workstations.
- ☐ You have specified whether you want to create log files that contain deployment and installation data, run silent mode, and participate in the Customer Involvement Program.
- ☐ You know which type of installation you'll perform—typical or custom.
- ☐ You have chosen the installation folder option, and locations of your support file content.
- ☐ You may want to set search paths to custom files or file locations that may have changed in this release of software.
- ☐ You have decided if you want to include additional files with your deployment such as drawing files, AutoLISP routines, or script files.
- ☐ You have checked for service packs that might be available for your product.
- ☐ You have configured access to Communication Center. Live Update notifications let you know when product updates are posted and configuring Communication Center lets users access technical information.
- ☐ You have set up access and participation in features like the Customer Involvement Program, and Customer Error Reporting.

Configure Button

During the deployment process, you can create a deployment that uses the default settings, or you can create a customized deployment. To customize,

you begin in the Review - Configure - Create Deployments dialog box. Select the appropriate product from the drop-down list, and click the Configure button.

The following options are available after you click the Configure button. See [Your Deployment Choices](#) (page 15) for more details about deployment options.

- Select the License Type - Stand-alone or Network license
- Select the Installation Type - Typical or Custom
- Select Installation Folders for Support Content
- Define Search Paths and File Locations
- Install Additional Files
- Specify User Preferences
- Include Service Packs
- Configure InfoCenter Communication Center
- Configure Access to Online Resources

When you finish selecting options for your customization, click the Configuration Complete button. The Review - Configure - Create Deployments dialog box is displayed again, and you can review your selections. Once you have confirmed your selections, click Create Deployment.

NOTE To get a copy of your settings, select the Copy to Clipboard button.

If you do not wish to make configuration changes on the Review - Configure - Create Deployments page, click Create Deployment. Then click Yes, to continue creating your deployment using the default configuration.

Your Deployment Choices

When you create a deployment, you will make several choices during the process to create various client deployment images and deployment types. The following sections outline your choices in more detail.

Enter Product and User Information

The Product and User Information page is used to personalize the program for your environment. The information you enter is permanently retained with the product and is displayed in the Help menu on all workstations. Because you can't change this information later without uninstalling, take care when entering the information.

You must also enter the product serial number and product key in order to run the product. The product serial number and product key are located on the product packaging, or in the electronic fulfillment messaging. The serial number must contain a three-digit prefix followed by an eight-digit number. The product key consists of five digits.

Your client's can review this product information later, on the InfoCenter toolbar, click the drop-down arrow next to the Help button (the question mark). Then click About.

Specify Log File Locations

The program has two types of log files with which you can monitor information about deployments and installations.

- **Network log.** The network log file keeps a record of all workstations that run the deployment. On the General Deployment Settings page of the deployment process, you choose whether or not to create a network log file. The log lists the user name, workstation name, and the status of the installation. Refer to this file for status information and details about problems that users encountered during installation (for example, low disc space or inadequate permissions).

The network log is named with the same name you chose for your deployment. You can specify where the log file is created by entering either a valid UNC (universal naming convention) path or hard-coded path on your network, for example `\\MyComputer\Autodesk\<Autodesk product>`. Users should use their actual computer name in place of *MyComputer*.

NOTE The folder where the network log resides must be a shared folder where users who install the program have Change permissions. Otherwise, successes or failures for user installations cannot be written to the log file.

- **Client log.** The client log contains detailed installation information for each workstation. This information may be useful in diagnosing installation

problems. The client log is located in the *%Temp%* directory of each client workstation.

To specify a log file location

- 1 While creating a deployment, on the General Deployment Settings page, select the check box next to the Create Network Log box. Enter the name of the folder where you want the network log to be located.
- 2 If you want to create a client log, select the Create Client Log option.
- 3 Click Next.

What Is Silent Mode?

When silent mode is active and a user initiates the deployment, the installation proceeds without any explicit user input. Users cannot change any of your installation settings. No dialog boxes are presented that require interaction from the user.

Select a License Type (optional)

When you set up your deployment, you choose the type of installation to deploy based on the type of software license you purchased: stand-alone or network. You also select the network license server model you want to use to distribute product licenses.

IMPORTANT Depending on the type of option you choose on the configuration page, network or stand-alone license, note that you **must** use the same type of installation for *all* those products in your deployment session. If you select products that do not support the type of license you purchased, you will not be able to activate those products.

Specify the license type to use during deployment

Stand-alone license (a single serial number for a single seat) For a stand-alone license, you install, register, and activate the program on each workstation.

Network license With this type of installation, you install the program to workstations with the files and registry entries that allow the program to communicate with the Network License Manager. You also define the configuration of the Network License Manager so that the licenses can be

accessed. Workstations running the program based on a network installation do not require individual activation. Licensing of this program is managed by at least one license server.

To deploy a stand-alone license

- 1 While creating a deployment, on the Select the License Type page, select Stand-alone License.
- 2 Click Next.

Specify the license server model during deployment

If you choose the Network License option, you need to decide which license server model to use to distribute your product licenses - single, distributed or redundant license server model. For more information about license server models, see [Choose a License Server Model](#) (page 6).

If you are deploying a stand-alone or multi-seat stand-alone installation type, you do not use a license server model.

To deploy a network license using a single license server model

- 1 While creating a deployment, on the Select the License Type page, select the Network license option.
- 2 Select Single License Server as the license server model you want to use with the Network License Manager.

If you have already used the Network License Manager to create a license server model, you must select the same license server model in this step. If you have not yet used the Network License Manager to create a license server model, make sure that you select the same settings in the Network License Manager that you choose here.
- 3 Enter the server name of the server that will run the Network License Manager, or click the Browse button to locate the server. Click Next.

For more information about license server models and setting up your license server, see [Choose a License Server Model](#) (page 6) or [Configure Your License Server](#) (page 8).

To deploy a network license using a distributed license server model

- 1 While creating a deployment, on the Select the License Type page, select the Network license option.

- 2 Select Distributed License Server as the license server model you want to use with the Network License Manager.

If you have already used the Network License Manager to create a license server model, you must select the same license server model in this step. If you have not yet used the Network License Manager to create a license server model, make sure that you select the same settings in the Network License Manager that you choose here.

- 3 Enter the name of one of the servers that will run the Network License Manager, or click the Browse button to locate the server. Click Add to add the server to the Server Pool. Once all the servers are added to the Server Pool list, use the Move Up and Move Down buttons to arrange the servers in the order you want them to be searched by a user's workstation. You must enter at least two servers. Click Next.

For more information about license server models and setting up your license server, see [Choose a License Server Model](#) (page 6) or [Configure Your License Server](#) (page 8).

To deploy a network license using a redundant license server model

- 1 While creating a deployment, on the Select the License Type page, select the Network License option.
- 2 Select Redundant License Server as the license server model you want to use with the Network License Manager.

If you have already used the Network License Manager to create a license server model, you must select the same license server model in this step. If you have not yet used the Network License Manager to create a license server model, make sure that you select the same settings in the Network License Manager that you choose here.
- 3 In the First Server Name field, enter a server name of one server that will run the Network License Manager, or click the Browse button to locate the server. Enter the server names for the remaining two servers that you will use in the redundant server pool. Click Next.

For more information about license server models and setting up your license server, see [Choose a License Server Model](#) (page 6) or [Configure Your License Server](#) (page 8).

Select the Installation Type (optional)

As part of making your deployment choices, you select the type of installation that users receive when they install the program, choose which optional tools or features are included, and specify where the product is installed on each workstation.

You choose the location where program files are installed on the client workstation in the Product Install Path. To help decide where the product is installed, a chart of drives and disc space is provided.

To deploy a typical installation, choose optional tools, and specify a product location

- 1 During the deployment, on the Select the Installation Type page, select Typical as the type of installation that you want.
- 2 Enter the path on the client workstation where you want to install the program, for example *C:\Program Files\<Autodesk product>*.
The Disc Space Requirements chart lets you review available drives and disc space.
- 3 Click Next.

To deploy a custom installation, choose optional tools, and specify a product location

- 1 During the deployment, on the Select the Installation Type page, select the Custom option as the type of installation that you want.
- 2 From the Select Features to install list, select the features that you want to install.
If, after making feature changes, you decide you want the original selections, click the Restore Defaults button on the Select the Installation Type page.
- 3 Enter the path on the client workstation where you want to install the program, for example *C:\Program Files\<Autodesk product>*.
The Disc Space Requirements chart lets you review available drives and disc space.
- 4 Click Next.

Select Installation Folders for Support Content

On the Select Installation Folders for Support Content page, you choose where your support content gets installed by specifying a folder other than the default user profile folder used in previous releases. As a network administrator, these options give you greater control over where you place support content during installations or deployments.

Support files consist of five main types:

- Support - Includes default font, customization (.cui files), menu source, hatch pattern, and linetype files.
- Plotter - Includes plot style (.ctb files), and plot configuration files (.pc3 and .pmp files).
- Data Link - Contains data links files.
- Template - Drawing and Sheet Set, and Publish to Web templates.
- Render - Texture and bump maps, WebLight files.

Among the four options available, you can now choose a single shared location, local or network, where all your support content is installed. The illustration and table below outline the other available options.

There are four support content folder options:

Options	Notes
Local user profile folders	<ul style="list-style-type: none">■ Texture maps installed to %ALLUSERSPROFILE%■ All other content installed to %USERPROFILE%\Roaming AppData■ No content stored in %USERPROFILE%\Local AppData
Program install folder	<ul style="list-style-type: none">■ All content is installed to the AutoCAD Raster Design installation folder on individual user station■ User may need power user privilege to install AutoCAD Raster Design■ User may need power user privilege to run AutoCAD Raster Design on a system where support content is installed to the <i>OS Program Files</i> folder

Options	Notes
Single shared folder	<ul style="list-style-type: none"> ■ Allows for a unique network path to be specified for all content types ■ Subfolders for content types installed within this location ■ When a deployment is pushed to individual workstations, content is copied into the network location only once when the deployment is created
Custom folders	<ul style="list-style-type: none"> ■ Allows a unique path to be specified for different content types ■ Supports local folders and UNC or mapped network paths

An Overwrite Existing Files in Shared Network Folders check box is available when either the Single Shared folder or Custom folder options is selected. If the box is checked, the existing files in the chosen folder are overwritten. No additional warning is given. If the box is unchecked, a warning message is displayed.

Install Additional Files (optional)

On the Install Additional Files page, when you click Browse, you can specify additional files to include with a deployment. By default, these files are installed in the program's installation directory on client workstations when the deployment is run. You can install files to multiple directories if desired.

You can perform the following operations:

- Specify additional files (such as drawing files, AutoLISP® routines, or script files) to include with your deployment.
- Install user files, of any format, and place them in any directory on the client's workstation.
- Add subfolders under the installation folder (for example, a folder called *LSP* to contain custom AutoLISP routines).
- Add files to the same location as program files (for example, add sample drawings for a project).
- Add files to the root of the installation directory.

NOTE It is recommended that you install these files to a location within the program's directory structure. You cannot install files with the same file name as an installed program file. For example, you cannot add a file named *acad.cui*.

To install additional files

- 1 While creating a deployment, on the Install Additional Files page, set the location where the files will be installed.
- 2 Do any of the following:
 - Click Browse to open the Add Files dialog box, where you can select files to add to the installation directory.
 - Click Add Folder to create a new folder in the installation directory.
 - Click Add Drive to add a drive name to the file location structure. The drive name must be a valid drive letter and colon, for example C: or F:. Uniform Naming Convention (UNC) paths are not supported.
 - Click Remove to delete a file, folder, or drive from the installation directory.
- 3 Click Next.

Specify User Preferences (optional)

On the Specify User Preferences page, you can specify whether installations based on this deployment can proceed if Microsoft Internet Explorer is not installed, specify a default profile name, choose to display the product shortcut icon on the desktop, or create a custom desktop shortcut.

To specify user preferences settings

- 1 While creating a deployment, on the Specify User Preferences page, clear the check box for the Internet Explorer option if you do not require Microsoft Internet Explorer to be installed before AutoCAD Raster Design is installed, and select your default publishing format.
- 2 In the Default Profile Name box, specify a default profile name that will be current for all users who run the deployment.
- 3 Clear the check box for Create an Autodesk Product Desktop Shortcut if you do not want the product shortcut icon to appear on the user's desktop.

- 4 If you want to create a custom desktop shortcut, specify a shortcut name and any parameters, such as switches that will call profiles, startup scripts, and so on.
- 5 Click Next.

Include Service Packs (optional)

You have the option to include service packs for your product. You can select to download and apply a service pack from *autodesk.com*, or choose to use a locally stored (local hard drive or local network) service pack. 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.

If you choose to include a service pack from a local or network drive, you will need to plan how you want the service pack handled from the two options below. You will also need to complete the following steps.

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

- **Append the Service Packs 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 Packs into the Administrative Image MSI File.** When you merge a service pack, the service pack is merged into the administrative image. Once merged, a service pack may not be removed from the administrative image. Multiple service packs may be included in a single administrative image.

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

- 1 Download the service pack from the AutoCAD Raster Design support site.
- 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, such as:

```
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.

Configure InfoCenter Communication Center (optional)

The Communications Center is accessed through InfoCenter. Products are updated with Live Update, which downloads patches to your product using Communication Center. Beyond Live Update, other information channels and feeds can be displayed by the Communication Center.

The Communication Center settings you can make include the following:

- **Enable Live Updates.** Users can use Live Update to check for updates when a Web connection is established. If a product patch is available, notification of its availability is received on the program's status bar, and the patch can be either downloaded directly from an Autodesk server or modified first before being copied to users' workstations. If you don't want users to receive updates or announcements, you can turn off Live Update.

NOTE You can also turn Live Update options on or off in the CAD Manager Control utility.

- **Enable Information Channels.** When active, information channels notify users with various pieces of information such as product support information.
- **Enable CAD Manager Channel.** Controls the display of the CAD Manager Channels in InfoCenter. Aside from being able to toggle CAD Manager Channels, you can also define the CAD Manager feed location and set the display name for the CAD Manager Channel.
- **Enable RSS Feeds.** Users can subscribe to any number of RSS feeds. Each feed is contained within a discrete InfoCenter category. Additionally, you can specify whether users can add RSS feeds.

To configure Communication Center

- 1 When creating a deployment, on the Configure InfoCenter Communication Center page, make the following Live Update settings:
 - **Enable Live Updates.** Users can receive product updates or support announcements from Autodesk servers.
 - **Receive Live Updates from Autodesk.** Users can receive product updates and support announcements from Autodesk servers with Live Update.
 - **Receive Live Updates from Local Server.** You can maintain a patch list on a local server. A patch list is an XML file that specifies a list of patches available for installation on your computer. If you select this option, the Local Patch List Location box is available. Use the Browse button to locate the path to a server location where you want a patch list. More information about how to use a local patch list is available by installing Autodesk CAD Manager Tools 4.0, running the CAD Manager Control utility, and then clicking Help in the CAD Manager Control utility window.

NOTE You can name a file to use for patch information. By naming a file and using an *.npl* extension now, you are creating a placeholder file, not creating the file itself. In the location that you specify in the Local Patch List Location box, you must create a text file with the same name you specify here.

- 2 Specify whether Information channels should be enabled.

- 3 Specify whether CAD Manager channels should be enabled. When active, you can make the following settings:
 - **Feed Location.** Defines the location of the CAD Manager channel RSS feed. RSS feeds are in XML format.
 - **Display Name.** Sets the display name of the CAD Manager channel.
- 4 Specify whether RSS Feeds are enabled and if users are allowed to add feeds.
- 5 Click Next.

Allow Users to Access Online Resources (optional)

On the Configure Access to Online Resources pages, you can specify whether users can access online resources such as receiving live updates from Autodesk, enabling information or CAD Manager channels, or subscribing to RSS feeds. You can also allow access to the DesignCenter as well as specifying Customer Error Reporting and InfoCenter settings.

DesignCenter

The DC Online tab in DesignCenter provides access to pre-drawn content such as blocks, symbol libraries, manufacturers' content, and online catalogs. This content can be used in common design applications to assist users in creating drawings.

NOTE DesignCenter Online is not selected by default. If you choose not to enable DC Online at the time of installation, you can enable it later from the CAD Manager Control utility.

Customer Error Reporting (CER)

If your Autodesk product closes unexpectedly, users have the opportunity to send an error report directly to Autodesk, which helps Autodesk to determine and resolve the error. You can determine whether users can also receive notification from Autodesk when their reported errors are resolved.

NOTE You can also turn Customer Error Reporting notification on or off in the CAD Manager Control utility.

Configure InfoCenter Search Settings

The Search Results tab of InfoCenter can be configured to display content from various sources, such as the product Help system, CAD Manager Channels, or the Internet.

You can specify whether users who install from the deployment can customize access to their InfoCenter search locations.

To configure access to online resources

- 1 While creating a deployment, on the Configure Access to Online Resources page, do the following to configure DesignCenter Online:
 - To enable DesignCenter Online, select the check box next to Enable DC Online.
- 2 If you want to receive notification of problem resolutions, do the following:
 - Select the check box next to Allow Users to Receive Notification of Resolution so that users are made aware of resolutions to issues and can download applicable updates provided by Autodesk. This option is enabled by default.

NOTE Users must have administrative permissions to install an update provided by Autodesk.

 - Select the check box next to Include Computer Name to include the user's computer name in error reports. The computer name is included in notifications to the user and in reports available to subscription administrators. This option is disabled by default.
- 3 Specify whether users have the option to customize their InfoCenter search locations. This option is enabled by default.
- 4 Click Configuration Complete.

Creating a Default Deployment

If you do not plan on customizing your deployment, you can create a default deployment.

The following procedures illustrate how quickly you can set up a default deployment using the Deployment wizard. This procedure details a *single-server* network deployment with a *Typical* client setup type and *no customizations*. For

information about setting up a configured or customized deployment, see [Creating a Configured or Customized Deployment](#) (page 31).

To create a default deployment

- 1 In AutoCAD Raster Design's initial Installation page, click Create Deployments.
- 2 On the Begin Deployment page, you need to specify the following: administrative image location, deployment name, and if your target system is 32 or 64-bit.
 - In the administrative image field, enter the path to your existing shared network location, or use the Browse button to navigate to that location. This area is where you create and store your administrative image. Users install the program from this location.

NOTE If you do not know how to create a network share, see [Create a Network Share](#) (page 10).

- In the deployment name field, enter the new deployment's name. The name you enter here is the name of the shortcut users will access to install the product.
- Under *This is to be a:*, select either 32-bit or 64-bit for your target operating system. This selection does not identify the system your deployment was created on; it identifies your target system.

Click Next.

- 3 On the Select the Products to Include in the Deployment page, select the products you want to include, the language(s) to include in your administrative image, and the language of your deployment. After making your choices, click Next.
- 4 On the Select the Products to Include in the Deployment page, select the products you want to include in your administrative image. After making your choices, click Next.
- 5 Review the Autodesk software license agreement for your country or region. You must accept this agreement to proceed with the deployment process. Choose your country or region, click I Accept, and then click Next.

NOTE If you do not agree to the terms of the license and want to terminate the installation, click Cancel.

- 6 On the Product and User Information page, enter your serial number, product key, and user information. Review the Privacy Policy, and then click Next.

NOTE The information you enter here is permanent and is displayed in the Help menu on your computer. Because you can't change this information later without uninstalling the product, make sure you enter the information carefully.

- 7 On the General Deployment Settings page, choose if you want the deployment to create a network log and/or a client log, if you want to run the client installation in silent mode, and if you want users to participate in the Customer Involvement Program.
 - When you choose to create a network log file, you also have to specify where the log file is created by entering either a valid UNC (universal naming convention) path or hard-coded path on your network. The network log file is optional.

NOTE The folder where the network log resides must be a shared folder where users who install the program have Change permissions. Otherwise, successes or failures for user installations cannot be written to the log file.

- Choose whether you want a client log file created.
- If you want to prevent users from changing installation settings when they install, select Silent mode.
- If you choose participation in the Customer Involvement Program, Autodesk sends helpful information about the product.

For more information regarding log files, refer to [Specify Log File Locations](#) (page 16).

Click Next.

- 8 On the Review - Configure - Create Deployment page, click Create Deployment, then select Yes to continue creating the deployment using the default configuration.

By clicking Create Deployment, an administrative image is created in your shared folder using the deployment options listed in the Current Settings field. If you would like a summary of your deployment settings, click the Copy to Clipboard button.

- 9 On the Deployment Complete page, click Finish.

Creating a Configured or Customized Deployment

If you plan on altering your deployment by removing features or restricting access to online resources you can create a configured or customized deployment.

To create a configured or customized deployment

- 1 In the AutoCAD Raster Design Deployment wizard, click Create Deployments.
- 2 On the Begin Deployment page, specify the following: the administrative image location, deployment name, and if your target system is either 32 or 64-bit.
 - In the administrative image field, enter the path to your existing shared network location, or use the Browse button to navigate to that location. This area is where you create and store your administrative image. Users install the program from this location.

NOTE If you do not know how to create a network share, see [Create a Network Share](#) (page 10).

- In the deployment name field, enter the new deployment's name. The name you enter here is the name of the shortcut users will access to install the product.
- Under *This is to be a:*, select either 32-bit or 64-bit for your target operating system. This selection does not identify the system your deployment was created on; it identifies your target system.

Click Next.

- 3 On the Select the Products to Include in the Deployment page, select the products you want to include, the language(s) to include in your administrative image, and the language of your deployment. After making your choices, click Next.
- 4 On the Select the Products to Include in the Deployment page, select the products you want to include in your administrative image. After making your choices, click Next.
- 5 Review the Autodesk software license agreement for your country or region. You must accept this agreement to proceed with the installation. Choose your country or region, click I Accept, and then click Next.

NOTE If you do not agree to the terms of the license and want to terminate the installation, click Cancel.

- 6 On the Product and User Information page, enter your serial number, product key, user information. Review the Privacy Policy, and then click Next.

NOTE The information you enter here is permanent and is displayed in the Help menu on your computer. Because you can't change this information later without uninstalling the product, make sure you enter the information carefully.

- 7 On the General Deployment Settings page, choose if you want the deployment to create a network log and/or a client log, if you want to run the client installation in silent mode, and if you want users to participate in the Customer Involvement Program.
 - When you choose to create a network log file, you also have to specify where the log file is created by entering either a valid UNC (universal naming convention) path or hard-coded path on your network. The network log file is optional.

NOTE The folder where the network log resides must be a shared folder where users who install the program have Change permissions. Otherwise, successes or failures for user installations cannot be written to the log file.

- Choose whether you want a client log file created.
- If you want to prevent users from changing installation settings when they install, select Silent mode.
- If you choose participation in the Customer Involvement Program, Autodesk sends helpful information about the product.

For more information regarding log files, refer to [Specify Log File Locations](#) (page 16).

Click Next.

- 8 On the Review - Configure - Create Deployments page, click the Configure button to make changes to the administrative image.
- 9 On the Select the License Type page, select a Stand-alone or Network license installation, and then click Next.

- 10 On the Select the Installation Type page, you can choose to make the following configuration changes:
- Typical - Installs the most common application features.
 - Custom - Installs only the application features that you select from the Select Features To Install list.
 - Product Install Path - Specifies the drive and location where Autodesk product will be installed.

Click Next to proceed with the configuration process.

- 11 On the Select Installation Folders for Support Content page, choose the location where your support content will reside. For more information about support file locations and options, see [Select Installation Folders for Support Content](#) (page 21). Click Next.
- 12 Define search paths, file names, and file locations on the Define Search Paths and File Locations page, and then click Next.

WARNING Do not remove the DRV path and always add paths as secondary paths.

- 13 To include additional files in the deployment, select the location where the files will be installed, then select the file names that you want included on the Install Additional Files page. After making your selections, click Next.
- 14 On the Specify User Preferences page, decide if the Internet Explorer browser is required, set the default publish format, the default profile name, and whether or not you want a desktop shortcut. Click Next.
- 15 On the Include Service Packs page, if service packs are available for your product, you can select to include them.
- The installer automatically checks *autodesk.com* for available updates. If updates are available, a link is displayed. If no updates are available a link is not displayed.
- 16 On the Configure InfoCenter Communications Center page, you choose to allow users access to the latest information and product discussions by enabling live updates from Autodesk, Information and CAD Manager channels, and RSS feeds. After making your choices, click Next.
- 17 On the Configure Access to Online Resources page, you can set up users access to online tools such as DesignCenter, Customer Error Reporting, and InfoCenter searches. Make your selections, and then click Next.

- 18 On the Configuration Complete page, you can select a product tab to configure another product, or click Configuration Complete to review your choices.
- 19 On the Review - Configure - Create Deployment page, click Create Deployment. If you want a summary of your deployment settings, click the Copy to Clipboard button.
- 20 On the Deployment Complete page, click Finish.

Final Review and Complete Setup

To complete your deployment setup, confirm the settings you selected.

- 1 On the Review - Configure - Create Deployments page, scroll the list of current settings and verify your installation selections.
- 2 Click the Configure button if you need to change any selections.
- 3 Click the Copy to Clipboard button if you want a copy of the installation information.
- 4 Click Create Deployment.
- 5 On the Deployment Complete page, click Finish.

You have created an Autodesk product deployment with precise options that are specific to your group of users. You can now use this deployment to install the program.

Modify a Deployment (optional)

After a deployment is created, it may be necessary to modify the deployment for some client workstations. You can apply a patch or select various custom files that are not part of the base administrative image. You can also perform modifications such as changing the installation directory from drive C to drive D.

To modify a deployment

- 1 Open the shared network folder where you originally chose to place your product deployment.

- 2 In the Tools folder, double-click the Create & Modify a Deployment shortcut.
This re-opens the Deployment wizard.
- 3 Click through the deployment pages and make the necessary changes.
- 4 After all the modifications have been made, click Create Deployment.

Point Users to the Administrative Image

When you have completed the deployment process, you are ready to have users install the newly created or modified deployment. You need to notify your users of the shortcut that was created in the administrative image. The shortcut is the same name that you chose in [Creating a Default Deployment](#) (page 28).

To point users to the administrative image

- The simplest method of notifying users how to install the deployment is to email them with instructions about using the shortcut. At a minimum, the instructions need to include the location of the deployment and instructions about double-clicking the shortcut to the deployment.

Uninstall an Autodesk Product

When you uninstall an Autodesk product, all components are removed. This means that even if you've previously added or removed components, or if you've reinstalled or repaired an Autodesk product, the uninstall removes all Autodesk product installation files from your system.

To uninstall an Autodesk product

- 1 Do one of the following:
 - (Windows XP) Click Start menu ► Settings ► Control Panel ► Add or Remove Programs.
 - (Windows Vista) Click Start menu ► Control Panel ► Programs and Features ► Uninstall or change a program.
- 2 In the Add or Remove Programs *or* Uninstall or Change a Program window, select AutoCAD Raster Design, and then click Change/Remove *or* Uninstall/Change.

- 3 Click Uninstall.
- 4 On the Uninstall <Autodesk product> page, click Next to remove AutoCAD Raster Design from the system.
- 5 When informed that the product has been successfully uninstalled, click Finish.

NOTE Even though AutoCAD Raster Design is removed from your system, the software license remains. If you reinstall AutoCAD Raster Design at some future time, you will not have to register and re-activate the program.

Use Scripts to Deploy the Program

3

A script executes a command or a set of commands. Scripts are similar to batch files but are more flexible. Installation scripts are most useful for stand-alone installation of programs on computers that are connected to a network. Scripts are also useful for installing service packs, extensions, and object enablers on a network.

In order for AutoCAD Raster Design to run properly, the following software and prerequisites must be installed and met on the computer where the program is being installed:

- Microsoft Internet Explorer version 6.0 Service Pack 1 or later (You can download Microsoft Internet Explorer from the Microsoft website by visiting www.microsoft.com)
- Microsoft Scripting Engine
The sample scripts in this section are based on Microsoft Scripting Engine 5.6, which works with both VBScripts and JavaScript. If you don't have the scripting engine installed, you can download it for free from the Microsoft website at www.msdn.microsoft.com/scripting. Sample scripts and Help files are also available there for download.
- Administrative permissions

Create Scripts That Install Programs

You create a script by using a text editor such as Notepad and then saving it in ASCII format in a file with the file extension *.vbs*. The script consists of one or more commands, as well as command switches that specify options, and flags that modify the options. An installation script also contains path names.

An installation script points to the location of the product's *setup.exe* file. You must point to the *setup.exe* file on your product disc. For example:

Autodesk product CDR0M1\setup.exe

A Sample Installation Script

The sample script in this section installs the program in a typical configuration. To make it easy to copy this sample script and substitute your own information, the same names are used throughout for variable items. The log file name is based on the product being installed. You can either use the log file name in the script or change it to something else.

Serial number prefix: 123

Serial number: 12345678

First name: My First Name

Last name: My Last Name

Organization: Organization

A sample script for a silent installation of this program uses the syntax shown in this section.

Scripted installation for the AutoCAD

```
' Scripted installation for AutoCAD 2010 - English
option explicit
'

' Create variables
dim shell
dim productType
dim strADSKFirstName
dim strADSKLastName
dim strADSKOrganization
dim strADSKSNPrefix
dim strADSKSNNumber
dim strADSKProdKey
dim strLocale
dim strACADStandaloneNetworkType
dim strADSKLicenseServerType
dim strADSKLicenseType
dim strADSKServerName
dim strADSKServerPath
dim strADSKServerHostID
dim strADSKPath
dim strSourcePath
'
```

```

' Script initialization
Set shell = CreateObject("WScript.Shell")

productType = "ACAD"
'

' Name and Organization information
strADSKFirstName = "My First Name"
strADSKLastName = "My Last Name"
strADSKOrganization = "Organization"
'

' Serial Number information
strADSKSNPrefix = "123"
strADSKSNNumber = "12345678"
strADSKProdKey="ABCDE"
'Locale information, for example en-US = US English, de-DE =
Deutschland German, ja-JP = Japan Japanese
strLocale="" ' en-US, de-DE, ja-JP
'

' Source to install from (e.g. D: is assumed to be Install Media)

strSourcePath = "D:\"
'

' Destination to install to
strADSKPath = Shell.ExpandEnvironmentStrings("%ProgramFiles%") +
"\\" + "AutoCAD 2010"
If strLocale <> "" Then strADSKPath = strADSKPath + " " + strLocale
strADSKPath = strADSKPath + "\"

'''''' Uncomment the relevant version of your installation - De
fault is Standalone
' For Standalone
RunStandaloneInstall()
'

' For Single Network License Server
'RunSingleLicenseServerInstall()
'

' End of Script
Wscript.quit()
'

Function RunStandaloneInstall
    shell.run DefaultCommand(),2,1
end function
'

```

```

Function RunSingleLicenseServerInstall
' Update with the correct information for the license server
strACADStandaloneNetworkType = "3"
strADSKLicenseServerType = "Single Server License"
strADSKLicenseType = "Network License"
strADSKServerPath = "myFlexNetServer"
' HOSTID or MAC address
strADSKServerHOSTID = "000000000000"
'
' Consolidate the two values
strADSKServerPath = strADSKServerPath & " " & strADSKServerHOSTID
shell.run MakeCommand(),2,1
end function
'

Function DefaultCommand
dim retString
' /qb for silent install ' /c [key] override parameters for the
key
' /w wait until installation completes before returning to script
' /o reboot after install completes

```

```

retString = "" & strSourcePath & "\setup.exe" & "" & " /t /qb
"
If strLocale <> "" then
    retString = retString & "/Language " & strLocale
End if
retString = retString & " /c " & productType & ": "
retString = retString & "INSTALLDIR=" & "" & strADSKPath & ""
& " "
retString = retString & "ACADSERIALPREFIX=" & strADSKSNPrefix & "
"
retString = retString & "ACADSERIALNUMBER=" & strADSKSNNumber & "
"
retString = retString & "ADLM_PRODKEY=" & strADSKProdKey & " "
retString = retString & "ACADFIRSTNAME=" & "" & strADSKFirstName
& "" & " "
retString = retString & "ACADLASTNAME=" & "" & strADSKLastName
& "" & " "
retString = retString & "ACADORGANIZATION=" & "" & strADSKOrgan
ization & "" & " "
retString = retString & "InstallLevel=5 "
DefaultCommand = retString & " "
end function
'

Function MakeCommand
dim retString
retString = DefaultCommand() & " "
retString = retString & "ACADSTANDALONENETWORKTYPE=" & "" &
strACADStandaloneNetworkType & "" & " "
retString = retString & "ACADLICENSESERVERTYPE=" & "" & strADSK
LicenseServerType & "" & " "
retString = retString & "ACADLICENSETYPE=" & "" & strADSKLicense
Type & "" & " "
retString = retString & "ACADSERVERPATH=" & "" & strADSKServer
Path & "" & " "
MakeCommand = retString
end function

```

Scripted installation for AutoCAD LT

```

' Scripted installation for AutoCAD LT 2010
option explicit
'

```

```

' Create variables
dim shell
dim productType
dim strADSKFirstName
dim strADSKLastName
dim strADSKOrganization
dim strADSKSNPrefix
dim strADSKSNNumber
dim strADSKProdKey
dim strADSKPath
dim strSourcePath
'

' Script initialization
Set shell = CreateObject("WScript.Shell")
productType = "ACADLT"
'

' Name and Organization information
strADSKFirstName = "My First Name"
strADSKLastName = "My Last Name"
strADSKOrganization = "Organization"
'

' Serial Number information
strADSKSNPrefix = "123"
strADSKSNNumber = "12345678"
strADSKProdKey="ABCDE"
'

' Source to install from (e.g. D: is assumed to be Install Media)

strSourcePath = "D:\"
'

' Destination to install to
strADSKPath = Shell.ExpandEnvironmentStrings("%ProgramFiles%") +
"\\" + "AutoCAD LT 2010"
strADSKPath = strADSKPath + "\"
RunStandaloneInstall()
' End of Script
Wscript.quit()
function RunStandaloneInstall()
dim retString
'

```

```

retString = "" & strSourcePath & "\setup.exe" & "" & "/w /t
/qb "
retString = retString & " /c " & productType & ": "
retString = retString & "INSTALLDIR=" & "" & strADSKPath & ""
& " "
retString = retString & "ACADSERIALPREFIX=" & strADSKSNPrefix &
" "
retString = retString & "ACADSERIALNUMBER=" & strADSKSNNumber &
" "
retString = retString & "ADLM_PRODKEY=" & strADSKProdKey & " "
retString = retString & "ACADFIRSTNAME=" & "" & strADSKFirstName
& "" & " "
retString = retString & "ACADLASTNAME=" & "" & strADSKLastName
& "" & " "
retString = retString & "ACADORGANIZATION=" & "" & strADSKOrgan
ization & "" & " "
retString = retString & "InstallLevel=5 "

shell.run retString,2,1
end function

```

Use Switches and Flags in Scripts

The following table lists all of the switches and flags that are relevant to installation.

NOTE You must set the installation switch to INSTALLDIR=. If this is not done, programs that run outside AutoCAD Raster Design (such as the License Transfer utility) are not installed.

Switches in Installation Scripts

Switch	Description
INSTALLDIR=	Specifies the location to install the product.
ACADSERIALPREFIX=	Specifies the numbers that precede the hyphen in the serial number.
ACADSERIALNUMBER=	Specifies the serial number.
INSTALLLEVEL=	Specifies the type of installation: 3=Typical

Switches in Installation Scripts	
Switch	Description
ACADFIRSTNAME=	Specifies the first name personalization.
ACADLASTNAME=	Specifies the last name personalization.
ACADORGANIZATION=	Specifies the company name.
ADLM_PRODKEY=	Specifies the product key (found on the same label as the serial number).
User Interface Flags	
Flag	Description
q	Designates that the installation is performed in silent mode.

Run Scripts

After creating a script, you move it to a server or use a mapped drive letter or a UNC (universal naming convention) path. If you place it on a server for users to run, create a share on the server, and then add users to the share with the rights they need. Because all that users need to do is run the script, provide read-only access to the share directory.

Next (on the same server or on a different server), create a directory for each product you want to install. Choose a location for this directory that won't be changed so that you can point to the MSI files in your scripts. Copy the product disc(s) to that directory. You may also want to create directories for service packs, extensions, and your own customization tools.

You can use any of the following methods to run an installation script:

- Run the script manually at each individual workstation. To run the installation, paste the script into the Run dialog box or run it from the Windows command prompt.
- Send an email with the UNC path to each user who should run the script. To run the script, the user follows your instructions.
- Email the script to each user with instructions for use.
- Set up the script so that it runs on login.

Use Group Policies to Install a Deployment

4

With group policies, you can advertise this program by assigning the deployment to computers.

In order for AutoCAD Raster Design to run properly, the following software and prerequisites must be installed and met on the computer where the program is being installed:

- Microsoft .NET 3.5 SP1 (available on the product disc)
- Microsoft Internet Explorer version 6.0 Service Pack 1 or later (You can download Microsoft Internet Explorer from the Microsoft website by visiting www.microsoft.com).
- Microsoft Installer Package (MSI) 4.5
- Microsoft Windows Media Format 9.5 (prerequisite for 64-bit)
- Macromedia Flash Player 9.0 or later (not installed by default)
- Autodesk Design Review 2010 (not installed by default)
- VC++ 2008 SP1 and VC++2005 SP1 runtimes for x86 operating systems; and VC++2008 SP1 and VC++2005 SP1 runtimes for x64 for 64-bit operating systems (available on the product disc)
- Microsoft National Language Support Downlevel APIs (available on the product disc)

Introduction

With group policy objects, this program can be advertised to any computer that meets the minimum requirements for the product, that is part of Windows 2000, Windows 2003, and Windows 2008 Server Active Directory environments.

Assign a Deployment Using Group Policies

Assign a deployment that was created during the deployment process by the Deployment wizard to a computer. Assigning a deployment to a computer installs the program the next time the computer is restarted.

A deployment that is assigned to a computer can be used by any user of that computer. Generally, you should assign the program to a computer if the computer is used by a large number of users.

NOTE Autodesk products are designed to be installed on a computer so that any user who logs on to the computer can run the software. If you attempt to assign this program for a specific user rather than a computer, you may encounter problems when a second specified user tries to install or uninstall a copy of the program.

Advantages and Disadvantages of Using Group Policies

The following table outlines the advantages and disadvantages of using group policies.

Advantages and disadvantages of group policies	
Advantage	Disadvantage
■ Works well with the deployment functionality of the Deployment wizard.	■ Cannot pass command-line parameters to MSI executable. The solution is to use scripts.
■ Easy to add custom files through the deployment functionality of the Deployment wizard.	■ Cannot customize application settings other than what is set while creating a deployment with the Deployment wizard.
■ Deployed to workstation.	
■ Simple to implement.	

Distribute a Deployment Through Group Policies

There are three main steps to distributing this program through group policies.

- 1 **Create an application distribution share point.** The application distribution share point is created using the Deployment wizard. Follow the steps outlined in [Creating a Default Deployment](#) (page 28) or [Creating a Configured or Customized Deployment](#) (page 31) to create a deployment.
- 2 **Assign the program to a computer.**
- 3 **Verify the installation.** Make sure that the program has been correctly installed.

Assign a Deployment to Computers

When the program is assigned to a computer, it is available to all users of the computer. The following procedures must be run from the server that has access to the Windows 2003 Server, Windows XP, or Windows 2000 Active Directory for assigning this program to computers.

NOTE This documentation assumes that you have the Group Policy Management Console installed.

To assign a deployment to a computer

- 1 Launch the Group Policy Management Console (*gpmc.msc*).
- 2 Right-click the organizational unit where you want to create the group policy object. Then select **Create and Link a GPO Here** and name the Group Policy.
- 3 In the Group Policy Object Editor window, under **Computer Configuration**, click the plus sign (+) next to the **Software Settings** folder to expand it.
- 4 Under **Software Settings**, right-click **Software Installation**, and then click **Properties**.
- 5 In the **Software Installation Properties** dialog box, on the **General** tab, click **Browse**.
- 6 In the **Browse for Folder** dialog box, locate the application distribution share point created in the Deployment wizard, and select the *AdminImage* folder. Then click **OK**.

The **Software Installation Properties** dialog box displays (in UNC format) the default package location, the server name, the shared folder that you selected, and *AdminImage*. For example:

\\server123\Deployment\AdminImage\x86 \acad (for x64 deployments,
\\server123\Deployment\AdminImage\x64 \acad)

- 7 Do one of the following:
 - **For Windows 2003 Active Directory:** On the General tab, under New Packages, click Advanced to specify a method to be used when a new package is created. This method also allows the transform file created by the Deployment wizard to be selected.
 - **For Windows 2000 Active Directory:** On the General tab, under New Packages, click Advanced Published or Assigned to specify a method to be used when a new package is created. This method also allows the transform file created by the Deployment wizard to be selected.
- 8 Click OK to close the Software Installation Properties dialog box.
- 9 Do one of the following:
 - **For Windows 2003 Active Directory:** In the Group Policy Object Editor dialog box, under *Software Settings*, right-click Software Installation, and click New ► Package.
 - **For Windows 2000 Active Directory:** In the Group Policy dialog box, under *Software Settings*, right-click Software Installation, and click New ► Package.
- 10 In the Open dialog box, make sure the Windows Installer Packages file (*acad-
<deployment name>-for-GPO.msi*) is selected, and click Open.

If you created the administrative image in a location different from the application distribution share point, find the administrative image location, and click *acad-
<deployment name>-for-GPO.msi*. Substituting *<deployment name>* for the name of the deployment used as the basis for this GPO package.
- 11 In the *<product name>* Properties dialog box, click the Deployment tab. Under Deployment Type, verify that Assigned is selected.
- 12 On the Modifications tab, click Add.
- 13 In the Open dialog box, click the transform package file (*acad-
<deployment name>.mst*) created by the Deployment wizard, and then click Open.

If you created the administrative image in a location different from the application distribution share point, find the administrative image location and select the transform package file (*acad-
<deployment name>.mst*).

- 14 In the *<product name>* Properties dialog box, on the Modifications tab, the transform package you selected is added to the Modifications list. Repeat the process of adding the transform package, but this time, add in the gpo.mst transform in the *<deployment location>*\Tools folder. Click OK.

NOTE You must select the transform package file created by the Deployment wizard when you created the group policy object. You cannot add or remove transform package files after the group policy object has been created. If you fail to select the transform package files, the program cannot be installed on the client computer.

This must be repeated for the language pack which is located at \\server123\Deployment\AdminImage\x86\acad\en-US\AcadLP.msi. For x64 deployments the path would be

\\server123\Deployment\AdminImage\x64\acad\en-US\AcadLP.msi.)

For example, if the deployment for a US English 32-bit product is stored at \\server123\Deployment and the deployment name was *MyDeployment*. Then you would create the GPO software package with the following:

First .msi for AutoCAD Raster Design 2010

\\server123\Deployment\AdminImage\x86\acad\acad-MyDeployment-for-GPO.msi with the following transforms added in the modifications tab:

\\server123\Deployment\AdminImage\x86\acad\acad-MyDeployment.mst

\\server123\Deployment\Tools\gpo.mst

Second .msi for the language pack

\\server123\Deployment\AdminImage\x86\acad\en-us\AcadLP.msi with the following transforms added in the modifications tab:

\\server123\Deployment\AdminImage\x86\acad\acad-MyDeployment.mst

\\server123\Deployment\Tools\gpo.mst

- 15 Do one of the following:
- **For Windows 2003 Active Directory:** In the Group Policy Object Editor window, under Computer Configuration, click Software Installation. The newly created program package is displayed in the right pane.
 - **For Windows 2000 Active Directory:** In the Group Policy window, under Computer Configuration, click Software Installation. The newly created program package is displayed in the right pane.

16 Do one of the following:

- **For Windows 2003 Active Directory:** Close the Group Policy Object Editor window and any other open Active Directory windows.
- **For Windows 2000 Active Directory:** Close the Group Policy window and any other open Active Directory windows.

This program is assigned to all computers that are members of the organizational unit for which the group policy object has been created. The next time a computer in the organizational unit is restarted, the program will be installed and will be available for all users of the computer. See [Verify the Installation of a Deployment](#) (page 50) to validate that the group policy has been created correctly.

Verify the Installation of a Deployment

As a computer is restarted, the operating system displays messages about group policy, generally just before or after the Windows Login dialog box is displayed. These messages include the following:

- Windows starting up
- Applying computer settings
- Installing managed software <application>
- Applying software installation settings
- Loading your personal settings
- Applying your personal settings

From a Windows XP or Windows 2000 workstation, users log in under the organizational unit or computer for which the group policy has been created.

NOTE If problems arise, an entry is logged in the system's Event Viewer under Applications.

Verify That the Program Is Assigned to a Computer

To verify that this program has been correctly assigned to a computer, restart a computer that is in the organizational unit for which the group policy was created. The program is installed before the login prompt is displayed. After

logging in, double-click the program icon on the desktop. A second-time installation begins. At the completion of the installation, the program starts.

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Use Microsoft System Center Configuration Manager to Install a Deployment

The following information provides details for deploying Autodesk software using Microsoft® System Center Configuration Manager (SCCM). SCCM allows you to manage software distribution to selected target systems through a remote process.

Introduction

To deploy Autodesk software, you should be familiar with the SCCM/SMS software distribution process. For more information about this topic, consult your Microsoft SCCM documentation and support resources.

Tasks for Deploying Autodesk Software with SCCM

To deploy Autodesk software with SCCM, it is recommended that you complete the following:

- Identify or create a collection of target systems to receive the software package
- Create a source directory using the Deployment wizard
- Create a SCCM package to deploy to your target systems
- Provide the path for the source files

- Distribute the SCCM package to the distribution points
- Create an advertisement to notify users of the availability of the software package

Set Up a Source Directory Using the Deployment Wizard

When you use SCCM to deploy Autodesk software, you set up the source directory using the Deployment wizard.

The Deployment wizard creates an administrative image that is used by SCCM to distribute the Autodesk software to the target systems. The location where you perform the administrative installation becomes the location of the package source directory.

To learn more about deployments and setting up the source directory for Autodesk software, see the following topics in the *Network Administrator's Guide*:

- [Deployment Preparation](#) (page 1)
- [Preliminary Tasks for a Network Deployment](#) (page 13)
- [Creating a Default Deployment](#) (page 28)
- [Creating a Configured or Customized Deployment](#) (page 31)
- [Modify a Deployment \(optional\)](#) (page 34)

NOTE It is recommended that you test the deployment created by the Deployment wizard before trying to configure SCCM to deploy the program to ensure that there are no problems with the administrative image and deployment.

To test the Deployment wizard deployment

- 1 Log on to a Windows XP Professional or Vista workstation as a user who has administrative privileges.
- 2 Navigate to the source directory where your deployment was created.
- 3 Double-click the deployment shortcut created by the Deployment wizard. The program will either be installed or error information will be written to the log file at %temp%.

Create the SCCM Software Installation Package

After creating the source directory using the Deployment wizard, you create the SCCM software installation package. An SCCM package contains the files and instructions that SCCM uses to distribute the software and advertise the package. The Deployment wizard creates the files and instructions, but SCCM must be configured to use these files.

To create a software installation package using SCCM

- 1 Do one of the following:
 - (Windows XP or Windows Vista) Click Start menu ► All Programs ► Microsoft System Center ► Configuration Manager 2007 ► ConfigMgr 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 to where SCCM retrieves the files and how it manages them. Click Next.

NOTE In this procedure, "Always Obtain Files from a Source Directory" was selected.

- 8 In the Source Directory dialog box, specify the directory where the source files are stored. 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 systems. 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 **AdminImage\setup.exe /W /Q /I AdminImage\<deployment name>.ini /Lang en-US**. In this case, our deployment is named AutoCAD Raster Design 2010, so you would enter

AdminImage\setup.exe /W /Q /I AdminImage\AutoCAD Raster Design 2010.ini /Lang en-US. Click Next.

NOTE The example above assumes the language pack you wish to install is US English. /W is the flag for SMS and SCCM, /Q is the silent install, /I indicates this is a deployment installation.

- 11 In the Program Properties dialog box, Program Can Run drop-down list, select how you want your program to install. 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 deployed. Your choices are
 - No Action Required
 - Program Restarts Computer
 - ConfigMgr Restarts Computer
 - ConfigMgr Logs User Off

NOTE AutoCAD Raster Design requires you to restart your system after installation.

Click Next.

- 13 In the Advertise Program dialog box, select Yes to advertise the program. 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 to which 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.

Distribute the Product Using Imaging Software

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The following information is provided for those who use imaging software, such as Norton Ghost, to create a master image to distribute Autodesk products. Once created, the master image is then replicated to other computers throughout your facility.

Care needs to be taken since the use of imaging software can result in the following situations:

- Conflicts with the product licensing
- Incomplete installations and problems with activation

NOTE If you are experiencing licensing instability in a SATA RAID environment, using imaging software to distribute Autodesk products can cause product activation problems, such as “Activation code limit exceeded” when you attempt to activate.

Use a Master Image to Distribute Multi-Seat Stand-Alone Products to Multiple Systems

You can distribute the product using a master image for a multi-seat stand-alone product.

NOTE When using Norton Ghost, you must use the *-ib* switch to include the boot sector in your master image. Consult your imaging software for more details on including the boot sector as part of the master image.

Master images should not be created if you’ve previously run Autodesk products on the master computer. Cleaning the system may be necessary.

To distribute a multi-seat stand-alone product to multiple computers using a master image

- 1 Create a network deployment for a multi-seat stand-alone product. For more information, see [Creating a Configured or Customized Deployment](#) (page 31).
- 2 Install AutoCAD Raster Design from the deployment onto the master computer.
- 3 Do one of the following on the master computer:
 - Create a master image, including the boot sector. Test the product on a machine other than the master computer before distributing the product. Launch the product on the other machine, and register and activate it. Users have a 30-day grace period to register and activate the product on their machines.
 - Launch and customize the product as necessary. Create a master image and distribute it to users. If users' computers are connected to the Internet, the product is automatically activated. Users whose computers are not connected to the Internet have a 7-day grace period to register and activate the product.
- 4 Apply the master image to the target computers.

Use a Master Image to Distribute Network Licensed Products to Multiple Systems

You can distribute the product using a master image for a network licensed product.

To distribute a network licensed product to multiple computers using a master image

- 1 Create a network deployment for a network licensed product. For more information, see [Creating a Configured or Customized Deployment](#) (page 31).
- 2 Install AutoCAD Raster Design from the deployment onto the master computer.

NOTE A license server must be running, and each computer must be connected to the network in order for the product to obtain a license.

- 3 After AutoCAD Raster Design has been installed, use imaging software to create a master image of the system's hard drive.
- 4 Apply the master image to the target computers.

Restore the Master Image

The following procedure assumes that you have saved a copy of each workstation's *AdLM* folder (and *Product Licenses* folder, if present) to either another workstation or a disc before you reformat the workstation.

To restore a product using a master image

- 1 Exit the application. Do not run the application again until after you have completed this procedure.
- 2 In Windows Explorer, copy the *AdLM* folder from the appropriate path shown below to a location other than the disc that will be restored.
C:\Documents and Settings\All Users\Application Data\FLEXnet
- 3 Reformat the workstation and restore the master image.

NOTE Do not perform a low-level format of the hard drive.

- 4 Copy the *AdLM* folder that you created in step 2 to its original workstation and location on that workstation.

NOTE When you restore the disc image, any files that were altered are put back in their original state and ready to use again. The license files are preserved, and no reactivation of products is necessary.

Clean a Master System and Restore the Operating System

If you have already run AutoCAD Raster Design on the master computer, the master computer should be properly cleaned first.

To clean a master computer and restore the operating system

- 1 Clean the hard drive, including the boot sector.

For example, if you use Norton's GDISK utility, use the following command:

gdisk 1 /diskwipe

Where *1* is the hard disk that is being wiped.

NOTE If you use a utility other than Norton Ghost, make sure that it cleans the boot sector; otherwise, you will not be able to activate Autodesk products.

- 2 Create a new partition and use the restore disc or product disc to install the operating system.

Glossary

7

activate Part of the Autodesk software registration process, it allows you to run a product in compliance with the product's end-user license agreement.

Active Directory A directory service from Microsoft that is part of Windows 2000 and Windows 2003 Server that manages the identities and relationships that make up network environments.

administrative image A collection of shared file resources created by the Deployment wizard and used by deployments to install the program to network workstations.

advertising A pull technology that notifies users of an updated software product that is available for installation. Users typically double-click a shortcut (or do a similar operation) to complete the installation of the advertised product.

Autodesk product startup accelerator (*acstart17.exe*) A runtime process that can accelerate the initial startup of AutoCAD Raster Design.

Autodesk product startup accelerator (*acstart17.exe*) A runtime process that can accelerate the initial startup of AutoCAD Raster Design.

deploy The process of installing an Autodesk product to one or more computers on a network.

deployment A link to a unique MST (Microsoft Transform) file that serves as a basis for an installation. Using the Deployment wizard, administrators can create multiple deployments that result in different types of installations for users.

directory service A network service that identifies all resources on a network and makes them accessible to users and applications. Resources include email addresses, computers, and peripheral devices such as printers. Ideally, the directory service should make the physical network topology and protocols transparent so that a user on a network can access any resource without knowing where or how it is physically connected. Virtually all directory services are based on the X.500 ITU standard.

FLEXnet License management technology from Acreso Software, Inc. FLEXnet provides administrative tools that help to simplify management of network licenses. FLEXnet can be

used to monitor network license status, reset licenses lost to a system failure, troubleshoot license servers, and update existing license files.

group policy Microsoft server technology that provides a way to do push installations and advertising-based installations using standard Microsoft 2000 Server administration components.

installation image A deployment that consists of an MSI file, any associated transforms, additional user-specified custom files, and profile and registry settings.

language pack Provides for installation of a core product plus a language of choice. A pack consists of the localized content of a program, plus installer files.

License Transfer utility Allows you to use an Autodesk product on more than one computer without purchasing a separate license for each computer.

MSI Microsoft installer that supports a variety of parameters that can be scripted.

MSP Microsoft patch file (see patch).

MST Microsoft transform file. Modifies the components installed by the MSI file. For example, the Deployment wizard creates an MST file with the settings that you specify. The deployment created by the Deployment wizard uses the MST file in conjunction with the MSI file and MSIEEXEC to install the program on local workstations.

multi-seat stand-alone installation A type of installation where multiple stand-alone seats of the program are installed using a single serial number.

network license installation A type of installation where you install the program to workstations with the files and registry entries that allow the program to communicate with the Network License Manager.

partial profile A profile that contains partial registry information corresponding to a subset of the options available from the Files tab of the Options dialog box.

patch A software update to an application.

power user A user with rights to access and write to the *Program Files* folder and the *HKEY_Local_Machine* folder of the registry.

pull technology An installation technology that requires user interaction to complete the installation.

push technology An installation technology that installs files to a remote desktop without any user interaction.

scripting The process of using scripting languages such as VB Script to facilitate the deployment of software packages.

service pack Autodesk terminology for an application patch.

silent mode An installation that proceeds without any explicit user input. No dialog boxes are presented that require interaction from the user.

SCCM Microsoft System Center Configuration Manager. A tool that helps administer networked machines by allowing remote configuration, push deployments, and user administration. SCCM is an expensive technology that must be purchased as an additional server.

transform See MST.

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