AutoCAD Civil 3D 2011

Installation

Autodesk®

April 2010

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Stand-Alone Installation 1

The *AutoCAD Civil 3D Installation* guide provides instructions about how to prepare, and then install AutoCAD Civil 3D 2011. If you have never installed the product before, you should familiarize yourself with the entire installation process and options before beginning.

If you have a previous release installed, you should review the Migrating and Customizing (page 23) section, so you can take full advantage of your custom settings.

For information about network-licensed versions of the program, see Plan an Installation Type (page 30).

Preparing for Installation

Before You Begin Installation

- Review the system requirements (page 1).
- Understand administrative permission requirements (page 4).
- Locate your AutoCAD Civil 3D serial number and product key (page 4).
- Close all running applications.

System Requirements

The first task you need to complete is to make sure that your computer meets the minimum system requirements. If your system does not meet these requirements, problems can occur, both within AutoCAD Civil 3D and at the operating system level.

Ensure you use the appropriate AutoCAD Civil 3D 2011 DVD, depending on whether your Windows operating system is the 32-bit or the 64-bit version. A 64-bit version of AutoCAD Civil 3D cannot be installed on a 32-bit system and vice-versa.

See the following table for hardware and software requirements.

32-bit Hardware and Software Requirements

Operating systems	Microsoft® Windows® XP Home and Professional Edition SP3; Microsoft Windows Vista® Enterprise SP1 or SP2; Microsoft Windows 7 including the following editions: ■ Enterprise ■ Ultimate ■ Professional ■ Home Premium Microsoft Windows 7 is recommended.	■ For more information on Windows Vista versions see *http://www.microsoft.com/windowsvista/versions/* ■ For more information on Windows 7 see *http://www.microsoft.com/windows7*
Browser	Internet Explorer® 7.0 or later	
CPU type	Intel® Pentium® 4 or AMD Athlon™, 3.0 GHz or higher, or Intel Pentium or AMD Athlon Dual Core processor, 2.0 GHZ or higher	
Memory	4 GB minimum recommended	
Display resolution	1280 x 1024 (1600 x 1200 recommended) with True Color, 128 MB or greater, Pixel Shader 3.0 or later, Direct 3D® - capable, workstation-class graphics card. Multiple monitors are supported.	■ For graphic cards that support Hardware Acceleration, DirectX 9.0c or later must be installed. For more information about tested and certified graphics cards, visit *http://autodesk.com/graphicscard/*
Hard disk	7 GB for installation 2 GB available after installation	A 32-bit AutoCAD Civil 3D cannot be installed on a 64-bit Windows operating system and vice-versa.

32-bit Hardware and Software Requirements

Pointing device	Microsoft mouse compliant

64-bit Hardware and Software Requirements

Operating systems	Microsoft Windows XP Professional x64 Edition SP2; Microsoft Windows Vista Enterprise, Business, or Ultimate 64 bit; Microsoft Windows 7 including the following 64-bit editions: ■ Enterprise ■ Business ■ Ultimate ■ Professional ■ Home Premium Microsoft Windows 7 is recommended.	■ For more information on Windows Vista versions see *http://www.microsoft.com/windowsvista/versions/* ■ For more information on Windows 7 see *http://www.microsoft.com/windows7*
Browser	Internet Explorer 7.0 or later	
CPU type	AMD Athlon 64 AMD Opteron™ Intel Xeon with Intel EM64T support Intel Pentium 4 with Intel EM64T support	
Memory	4 GB minimum; 8 GB minimum recommended	
Display resolution	1280 x 1024 (1600 x 1200 recommended) with True Color, 128 MB or greater, Pixel Shader 3.0 or later, Direct 3D® - capable, workstation-class graphics card. Multiple monitors are supported.	■ For graphic cards that support Hardware Acceleration, DirectX 9.0c or later must be installed. For more information about tested and certified graphics cards, visit *http://autodesk.com/graphicscard/*
Hard disk	7 GB for installation 2 GB available after installation	A 64-bit AutoCAD Civil 3D cannot be installed on a 32-bit Windows operating system and vice-versa.

64-bit Hardware and Software Requirements	
Pointing device	MS-Mouse compliant
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

NOTE Adobe Flash Player is not installed by default. If a version of Flash is not currently installed on your system, a message is displayed requesting that you install it. Flash Player can be installed from the product media or Adobe's website - *www.adobe.com*.

Administrative Permission Requirements

To install AutoCAD Civil 3D, you must have administrator permissions. You do not need to have domain administrative permissions. See your system administrator for information about administrative permissions.

You do not need administrator permissions to run AutoCAD Civil 3D. You can run the program as a limited user.

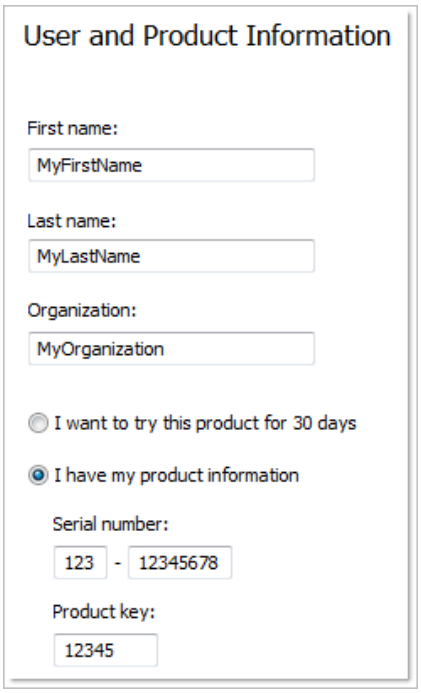
Locating Your Serial Number and Product Key

When you install AutoCAD Civil 3D, you are prompted for your serial number and product key in the Product and User Information page, or the option of installing the product in trial mode. You may enter your product information at any time during your trial mode period if you opt to install the product in that mode.

The serial number and product key are located on the outside of the product packaging, or in the Autodesk Upgrade and Licensing Information email. Make

sure to have these available before you install the program so that you don't have to stop in the middle of the installation.

The serial number must contain a three-digit prefix followed by an eight-digit number. The product key consists of five characters.



The information you enter is permanently retained with the product. Because you can't change this information later without uninstalling, take care when entering the information. To 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.

NOTE If you have lost your serial number or product key, contact the Autodesk Business Center (ABC) at 800-538-6401 for assistance.

Minimize the Chances of Installation Failure

The AutoCAD Civil 3D installation process may stop if some applications such as Microsoft® Outlook® or virus-checking programs are running. Close all running applications to avoid possible installation problems and data loss.

Migrating Custom Settings

You can migrate your custom settings and files from previous releases of AutoCAD Civil 3D (*AutoCAD Civil 3D 2005* through *AutoCAD Civil 3D 2011*). It is recommended that you migrate custom settings from a previous release right away. This prevents you from overwriting files or having to keep track of any custom settings you may make in the new release. Migrating settings overwrites any new settings.

For more details regarding migration, see Migrating and Customizing (page 23).

Installing and Running the Product

To use the product, you must install the product, register and activate it, and then launch it. You must have administrative permissions to install AutoCAD Civil 3D.

This section provides instructions for installing and activating AutoCAD Civil 3D for an individual user on a stand-alone computer. For information about installing network-licensed or multi-seat stand-alone versions of the program, see Network Administration and Deployment (page 29).

Installing AutoCAD Civil 3D

The AutoCAD Civil 3D installation wizard contains all installation-related material in one place. From the installation wizard, you can access user documentation, install supplemental tools, and add online support services.

- **Review the installation documentation.** It is recommended that you take the time to familiarize yourself with the complete installation process before you install AutoCAD Civil 3D. You can access information on installation from the installation wizard by selecting the *Read this Documentation* option, the *Documentation* and information links, or through the Help system.
  For late-breaking information, it is also recommended that you review the product *Readme*.

To install AutoCAD Civil 3D using default values on a stand-alone computer

This is the fastest means of installing AutoCAD Civil 3D on a single, stand-alone system. The installation performs the following:

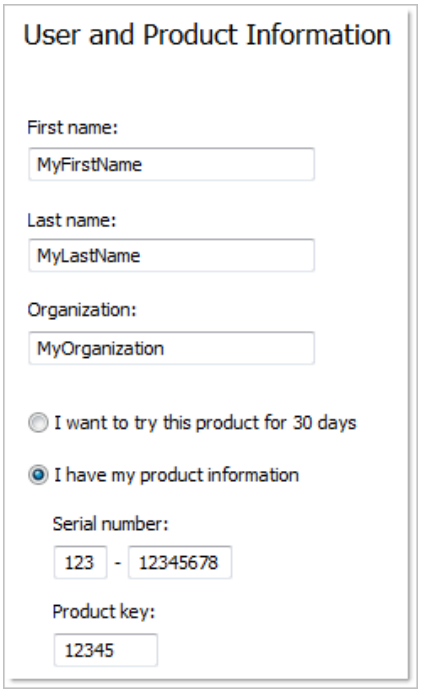
- Uses a Typical installation, which installs the most common application features.
- Includes the Express Tools library. The library provides additional productivity tools.
- Installs AutoCAD Civil 3D to the default install path of *C:\Program Files\Autodesk\<AutoCAD Civil 3D>*.

To install the product using default values

1. Select the product(s) and click Next.

   NOTE Autodesk Design Review 2011 is required by AutoCAD Civil 3D and Autodesk Vault and is installed by default. For more information, see Installing Design Review (page 17) and Installing Autodesk Vault (page 17).

2. Review the Autodesk software license agreement. Click I Accept, and then click Next.
3. On the User and Product Information page, enter your user information, serial number, and product key. Click Next.



4 On the Begin Installation page, click Install, then click Yes to the configuration warning message.

5 On the Installation Complete page, you can view the installation log, AutoCAD Civil 3D Readme, and Autodesk Design Review Readme.

6 Click Finish.

To install AutoCAD Civil 3D using customized values on a stand-alone computer

With this method, you can customize your installation.

To install the product using customized values

1 Select the product(s) to install. Click Next.

NOTE Autodesk Design Review 2011 is required by AutoCAD Civil 3D and Autodesk Vault and is installed by default. For more information, see Installing Design Review (page 17) and Installing Autodesk Vault (page 17).

2 Review the Autodesk software license agreement. Click I Accept, and then click Next.

3 On the User and Product Information page, enter your user information, serial number, and product key. Click Next.

NOTE After you click Next, you cannot change the information entered on this page unless you uninstall the product. Make sure you enter the information correctly.

4 On the Begin Installation page, click Configure.

5 On the Select the License Type page, select the license type - Stand-alone or Network. Click Next.

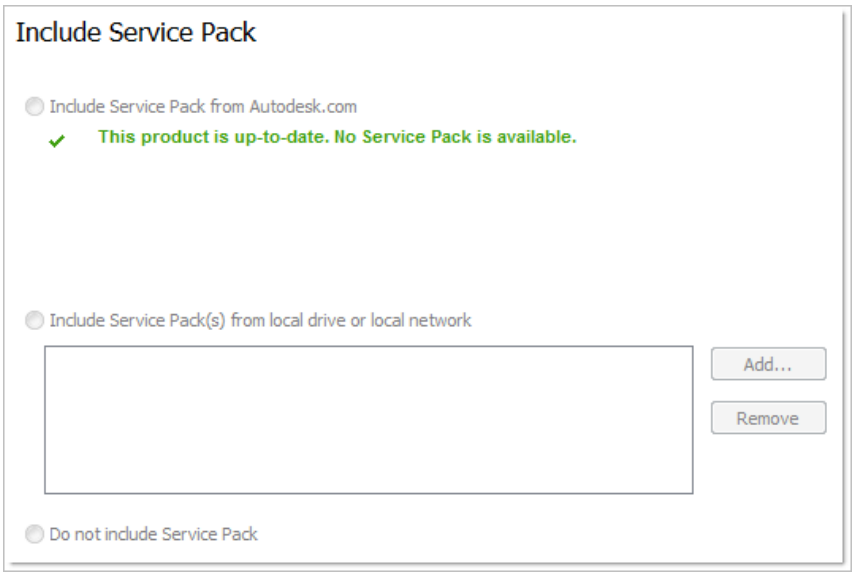
6 On the Select the Installation Type page, make one of the following configuration changes, and then click Next.

- 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 AutoCAD Civil 3D will be installed.

7 On the Configure Content Packs page, select the required content packs and specify whether to create a desktop shortcut.

8 On the Configurable Folders page, review the paths to the configurable content.

9 On the Include Service Pack page, select to include available service packs. The installer automatically checks *autodesk.com* for available updates.



10 Click another product tab to configure another product, or click Next and then Configuration Complete to return to the Begin Installation page. Then, click Install.

NOTE If you want a copy of your configuration summary information, click Copy to Clipboard.

11 On the Installation Complete page, you can view the installation log, AutoCAD Civil 3D Readme, and Autodesk Design Review Readme.

12 Click Finish.

You have successfully installed AutoCAD Civil 3D. You are now ready to register your product and start using the program. To register the product, start AutoCAD Civil 3D and follow the on-screen instructions.

Register and Activate AutoCAD Civil 3D

The first time you start AutoCAD Civil 3D, the Product License Activation wizard is displayed. You can either activate AutoCAD Civil 3D at that time, or try AutoCAD Civil 3D and activate it later. Until you register and enter a valid activation code for AutoCAD Civil 3D, you are operating the program

in *trial mode* and the Product License Activation wizard is displayed for 30 days from the first time that you run the program.

If after 30 days of running AutoCAD Civil 3D in trial mode you have not registered and provided a valid activation code, your only option is to register and activate AutoCAD Civil 3D. You will not be able to run in trial mode after the 30 days expires. Once you register and activate AutoCAD Civil 3D, the Product License Activation wizard is no longer displayed.

The fastest and most reliable way to register and activate your product is by using the Internet. Simply enter your registration information and send it to Autodesk over the Internet. Once you submit your information, registration and activation occur quickly.

To register and activate AutoCAD Civil 3D

1. Do one of the following:
   - (Windows XP) Click Start menu ➤ Programs ➤ Autodesk ➤ *<AutoCAD Civil 3D>* ➤ *<AutoCAD Civil 3D>*.
   - (Windows Vista) Click Start menu ➤ All Programs ➤ Autodesk ➤ *<AutoCAD Civil 3D>* ➤ *<AutoCAD Civil 3D>*.
2. In the AutoCAD Civil 3D Product License Activation wizard, select Activate, and then click Next.

   This starts the activation process.
3. Click Register and Activate (Get an Activation Code).
4. Click Next and follow the on-screen instructions.

   If you do not have Internet access, or if you want to use another method of registration, you can register and activate AutoCAD Civil 3D in one of the following ways:

   Email Create an email message with your registration information and send it to Autodesk.

   Fax or Post/Mail Enter your registration information, and fax or mail the information to Autodesk.

Launch AutoCAD Civil 3D

Assuming that you followed all of the previous steps outlined in this installation section, you can launch AutoCAD Civil 3D and start taking

advantage of its new and updated features. For more detailed information about the new features, learning videos, online Help, or AutoCAD Civil 3D services and support, see the Welcome screen after you launch the product.

You can start AutoCAD Civil 3D in the following ways:

- **Desktop shortcut icon.** When you install AutoCAD Civil 3D, an AutoCAD Civil 3D shortcut icon is placed on your desktop unless you cleared that option during installation. Double-click the AutoCAD Civil 3D shortcut icon to start the program.
- **Start menu.** On the Start menu (Windows XP), click Programs or (Windows Vista) All Programs ➤ Autodesk ➤ *<AutoCAD Civil 3D>* ➤ *<AutoCAD Civil 3D>*.
- **Location where the AutoCAD Civil 3D is installed.** If you have administrative permissions, you can run AutoCAD Civil 3D in the location where you installed it. If you are a limited-rights user, you must run AutoCAD Civil 3D from the Start menu or from the desktop shortcut icon. If you want to create a custom shortcut, make sure that the Start In directory for the shortcut points to a directory where you have write permissions.

Add or Remove Features

You can add or remove AutoCAD Civil 3D features at any time. For example, you may have chosen a Custom installation option when you first installed AutoCAD Civil 3D, but now you want to add features that you did not install originally. Or you may no longer need to use all of the features that were installed originally. You can add or remove features by using the Add or Remove Programs dialog box.

To add or remove features

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/Change.
2. In the Add or Remove Programs (XP) or Uninstall or Change a Program (Vista) dialog box, click AutoCAD Civil 3D, and then click Change/Remove.

   The AutoCAD Civil 3D installation wizard re-opens in Maintenance mode.

3 Click Add or Remove Features.

4 On the Add/Remove Features page, select a feature to install or uninstall. The icons to the left of the selections give you an indication of the action that will be taken.

Indicates a feature that was marked for installation will be in a typical installation.

Indicates a feature that is not currently scheduled for installation.

Indicates a feature that was not originally marked for installation, but was added to the installed feature list.

Indicates an installed feature that is chosen for removal.

NOTE If you need to revert to AutoCAD Civil 3D features that you selected in your original installation, click Cancel.

Click Next.

5 On the Update AutoCAD Civil 3D Installation page, click Next.

6 On the Update Complete page, you are informed when the updates have been performed. Click Finish.

Reinstall or Repair AutoCAD Civil 3D

If you accidentally delete or alter files that are required by AutoCAD Civil 3D, AutoCAD Civil 3D might not perform correctly, and you might receive error messages when you try to execute a command or find a file. You can attempt to fix this problem by reinstalling or repairing AutoCAD Civil 3D. The reinstallation or repair uses the features that were part of the installation type you chose when you initially installed the program.

To reinstall or repair AutoCAD Civil 3D

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/Change.

2 Then, do one of the following:

- (Windows XP) In the Add or Remove Programs window, select AutoCAD Civil 3D, then click Change/Remove.
- (Windows Vista) In the Uninstall or Change a Program, select AutoCAD Civil 3D, then click Uninstall/Change.

The AutoCAD Civil 3D installation wizard re-opens in Maintenance mode.

3 Select Repair or Reinstall. On the Select Repair or Reinstall page, select one of the following options, and then click Next to start the process.

- **Repair My <AutoCAD Civil 3D> Installation.** This option replaces all registry entries that AutoCAD Civil 3D initially installed and restores AutoCAD Civil 3D to its default state.
- **Reinstall My <AutoCAD Civil 3D> Installation.** This option repairs the registry and reinstalls all files from the original installation. Use this option if the Repair My <AutoCAD Civil 3D> Installation option does not solve the problem.

4 On the Repair Complete page, click Finish.

Uninstall AutoCAD Civil 3D

When you uninstall AutoCAD Civil 3D, all Civil 3D components are removed. Additional components, such as Autodesk Vault are retained. This means that even if you've previously added or removed components, or if you've reinstalled or repaired AutoCAD Civil 3D, the uninstall removes all AutoCAD Civil 3D installation files from your system.

To uninstall AutoCAD Civil 3D

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/Change.

2 Then, do one of the following:

- (Windows XP) In the Add or Remove Programs window, select AutoCAD Civil 3D, then click Change/Remove.

- (Windows Vista) In the Uninstall or Change a Program window, select AutoCAD Civil 3D, then click Uninstall/Change.

The AutoCAD Civil 3D installation wizard re-opens in Maintenance mode.

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

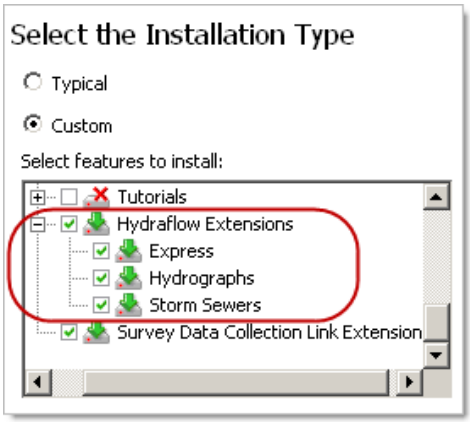
NOTE Even though AutoCAD Civil 3D is removed from your system, the software license remains. If you reinstall AutoCAD Civil 3D at some future time, you will not have to register and re-activate the program.

What are Hydraflow Extensions?

The Hydraflow extensions are comprised of the following applications:

- Hydraflow Storm Sewers Extension
  Hydraflow Storm Sewers Extension for AutoCAD Civil 3D is a full-featured application for urban hydrosystems engineering. It is designed primarily for hydrologic and hydraulic analysis of simple and complex storm sewer networks. It can be used as a basic tool for determining the hydraulic grade line in an existing system or planning and designing new systems.
- Hydraflow Hydrographs Extension
  Hydraflow Hydrographs Extension for AutoCAD Civil 3D is an application for urban hydrosystems engineering. It is designed primarily for hydrologic analysis of both simple and complex drainage basins. It can be used as a basic tool for determining runoff from various historical and synthetic storms, and in planning or modeling flood control measures, such as detention ponds.
- Hydraflow Express Extension
  Hydraflow Express Extension for AutoCAD Civil 3D is an application for performing everyday hydraulics and hydrology tasks, such as designing culverts, open channels, inlets, and weirs. Hydraflow Express Extension enables you to quickly generate informative graphs, rating curves, and on-screen reports as well as formal printed reports.

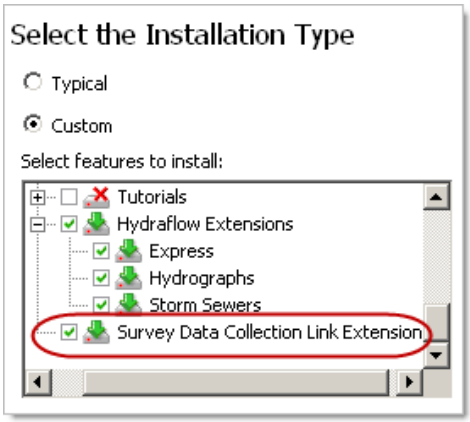
To install Hydraflow Extensions, ensure that the corresponding option is selected. It is selected by default in Typical installation.



What is Survey Data Collection Link Extension?

Survey Data Collection Link extension for AutoCAD Civil 3D is an application that enables you to transfer data from data collectors and convert raw data files and coordinate data files into field book (*.fbk*) format. You can then import the *.fbk* file using the AutoCAD Civil 3D Survey functionality.

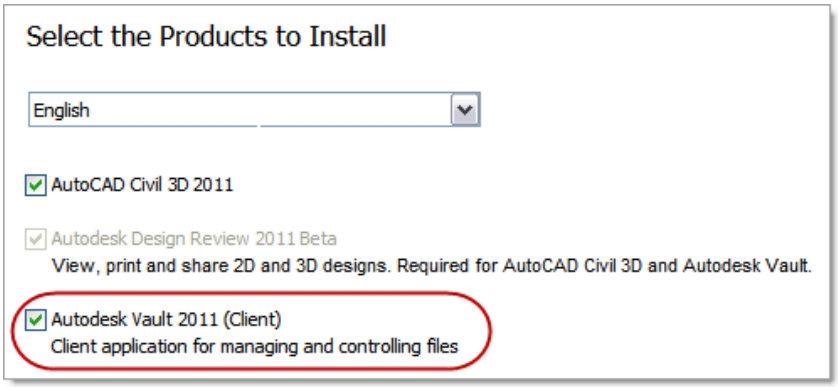
To install Survey Data Collection Link Extension, ensure that the corresponding option is selected. It is selected by default in Typical installation.



Installing Autodesk Vault

Autodesk Vault is a project management solution that can be used with AutoCAD Civil 3D in a collaborative environment involving multiple design teams. Based on the client-server networking model, the main Vault database resides on a designated server and can be accessed from client computers of project participants. Vault allows you to share and manage not only DWG files, but all of your engineering and related data, such as hydraulic designs, analyses, and data generated from Microsoft Office applications or other design software.

You can install Autodesk Vault during the AutoCAD Civil 3D installation. Select the corresponding option on the Select the Products to Install page of the Installation wizard.



For more information on Autodesk Vault, click the Documentation link from the AutoCAD Civil 3D 2011 Installation wizard.

Installing Design Review

Autodesk Design Review 2011 is required for AutoCAD Civil 3D and Autodesk Vault and is installed by default when you install AutoCAD Civil 3D. Autodesk Design Review is useful if you need to view DWF or DWFx files.

NOTE If you use Windows Vista, you can use the Microsoft XPS Viewer to view and print DWFx files.

Autodesk Design Review is a free program used for creating and reviewing DWF or DWFx files. An open, published, and secure file format developed by

Autodesk, DWF enables you to combine and publish rich 2D- and 3D-design data, and share it with others.

The following commands create DWF or DWFx files.

- PUBLISH
- PLOT
- 3DDWF
- PUBLISH TO WEB
- EXPORT
- AUTOPUBLISH
- SSM

What are Content Packs?

Content packs are collections of locale- and discipline-specific files to install with AutoCAD Civil 3D. The available content packs allow you to work on US or international projects and always reference the appropriate standards for each geographical region.

Files contained in content packs can include the following data:

- Layer standard files
- Standard blocks of various types
- Border sheets for plotting
- Civil drawing templates
- Symbol drawings
- Superelevation standards
- Reporting style sheets
- Pipe catalogs
- Corridor catalogs
- Tool Palettes for subassemblies, material styles, and landscape symbols
- API Samples

- Reports

You can select content packs on the Configure Content Packs page of the installation wizard. You can select the AutoCAD-only profile, Autodesk Metric or Imperial profiles, or any available country profile. By default, there is only one shortcut icon created on the desktop. You can specify whether to display additional desktop shortcuts for each of the installed profiles. You can also specify a new location for the Content Browser Library file.

Each content pack is installed in a separate program group, which allows you to create a content pack shortcut that was not created using the installation wizard. You must install at least one content pack.

You can add or remove content packs using the AutoCAD Civil 3D 2011 Add or Remove Features utility.

To add or remove content packs

1. On the Windows Control Panel, click Add or Remove Programs.
2. Select AutoCAD Civil 3D from the Currently Installed Programs list, and click Change/Remove.
3. In the AutoCAD Civil 3D installation wizard, click Add or Remove Features. Click Next.
4. On the Configure Content Packs page, select the content packs to add or remove, and then click Next.
5. Click Next to update your program installation.

What are Configurable Folders?

On the Configurable Folders page, you can specify custom locations for folders with specific content. Content folders are devided into two groups: Support and Survey.

The Support content folder group includes the following folders:

Folder name	Contains
Working Projects	Local copies of files for all the projects stored in the Vault database.
Data	Items, such as preview drawings, quantities reports style sheets, and layer and corridor standards.
Content Root	A predetermined folder structure that can be used for your new projects. When a new project is created, you can specify to use a project template, and the new project will inherit a folder structure defined in the Content Roots folder.
Corridor Model	Corridor model and pipe network support files.

The Survey content folder group includes the following folders:

Folder name	Contains
Survey Equipment Database	Survey Equipment database files. For example, each database can contain a library of equipment by manufacturer.
Survey Figure Database	Survey Figure Prefix database files. Each figure prefix database contains line feature naming conventions pertaining to company or third-party standards.
Survey Database Settings	SDB_SET files containing settings for the creation of new survey databases. Each file can be a survey database settings template.
Survey Extended Property Definitions	SDX_DEF (extended properties schema) files, as well as LandXML and user-defined extended property schema files.
Survey Linework Code Sets	User-defined linework coding definitions (or conventions), each set pertaining either to company or third-party standards.

Specify one of the following configurable folder modes for your content

- **Default**
  Default content files are installed in the default location in the Document and Settings folder in Windows XP and Program Data folder in Windows Vista. When you uninstall the program, default content files are also uninstalled.

- **Local**
  Local content files are installed in non-standard locations. You can install a content group to a location other than the default folder. When you uninstall the program, local content files are also uninstalled.

- **Shared**
  Shared content files are installed in a shared location, enabling multiple users to access the same copy of AutoCAD Civil 3D content. If you specify the same location for a subsequent installation, you will be prompted to overwrite the existing shared content files. When you uninstall the program, shared content files are not uninstalled.

Migrating and Customizing 2

If you have a previous version of AutoCAD Civil 3D installed on your system, you can install a newer version of AutoCAD Civil 3D and keep other versions of the program on the same system. This is called a *side-by-side* installation. If you have purchased an *upgrade* version of AutoCAD Civil 3D, you are required to uninstall the previous version within 120 days of installing your newer product. See your license agreement for more information.

In this section, you learn about migrating from previous releases and using customized files from previous releases.

Migrating Data

The complexity of migrating data from release to release depends on your customization of AutoCAD Civil 3D. There are multiple steps and approaches, depending on how much of the customization you want to migrate.

An important decision to make is whether to bring 'enterprise wide' customization forward and ignore 'user-based' customization.

Recommended Process

When you deploy the software on many computers, using either the stand-alone or network deployment, do the following:

1. Install AutoCAD Civil 3D on one computer. See Installing and Running the Product (page 6).
2. Complete all the migration steps to verify all the files have correctly migrated. See Migrating Data (page 23).
3. Deploy the software on all other computers. See Setting Up and Creating a Deployment (page 33).
4. Use a script to copy custom files.

Best Practices

Follow these rules:

- Keep a record of files that are customized or added to the default installation.
- Store customization files separately from the default files (for example, palettes, labels, pipe parts, and toolbox).
- For LISP routines, always use International (English) with an underscore " _" sign for command and parameter names.
- Do not change the original CUIs (*Acad.cuix*, *Civil.cuix*).
- Create a partial CUI for all your customization, except for the Workspaces. Keep customization in a partial CUI to avoid altering the original CUIs. Write-protect the partial CUI by setting the file to Read Only in Windows.
- Place customized files, such as LSPs, ARXs, and CUIs in individual folders. In some situations, you can place the files on a shared network drive, which helps avoid issues associated with having multiple copies of the same file.
- Place custom icons in a separate folder.

Migrating Customized Files

Customize and Migrate CUIs

For company-wide customization of menus, create a partial menu. This helps avoid working inside the CUI file and manually transfer menus and toolbars. Create a partial menu from the CUI Transfer tab by creating a new *.CUI*. See Control User Interface Elements in the CUI Editor in the *AutoCAD Customization Guide*.

Add your partial menu to the list of menus to load. The drop-down menu is displayed automatically after the AutoCAD Civil 3D menus, and the toolbars become available.

If you have defined custom icons, place them in a separate folder. You need to make them available when you load the CUI file. If necessary, you can create the corresponding *.MNR* file.

During migration, specify the default location for custom icons in the project files search path. If AutoCAD Civil 3D cannot find the custom icons a question

mark symbol is displayed. AutoCAD Civil 3D does not look at the *.MNR* file when loading a partial *.CUI* file.

Customize and Migrate Tool Palettes

When you create a new palette, an *.ATC* file is created that stores all the definitions of the tools in the palette. An image subfolder is also created that stores the PNG files displayed in the palette.

Assign palette and tool names that are unique and easy to identify. In preparation for migration, copy all *.ATC* files and PNG subfolders to a shared network folder. After upgrading, specify the path for tool palettes file locations to the folder on the network.

Customize and Migrate the Toolbox

To customize the Toolbox, copy and rename the original *ToolBoxCfg.xml* file in the *All Users* applications folder at *...\Autodesk\C3D <version>\enu\Data\ToolBox*.

Use an XML editor to remove all entries except the RootCategory and specify a name. Restart AutoCAD Civil 3D and use the Toolbox Editor to add new categories and tools. Save the new file in the Toolbox Editor Panorama.

When migrating, copy the custom *.xml* file located in the *All Users* applications folder at *...\Autodesk\C3D <version>\enu\Data\ToolBox*

The Report Settings file stores the Client and Owner data, and the units and precision that are used for LandXML reports. If the path for custom reports did not change, you do not need to do anything with this file.

RepGenSettings.xml is located in *C:\Documents and Settings\username\Local Settings\Application Data\Autodesk\LandXML Reporting*

There is no need to copy this file. The new product release locates and reads this file.

Migrate Custom Subassemblies

Autodesk provides updated libraries for each AutoCAD Civil 3D release. When migrating custom subassemblies, references to these libraries must be updated in VBA or .NET custom subassembly projects.

In VBA, check the new available References and update your code. You must update the following line:

```
Public Const g_AeccXModVersion As String = "7.0"
```

(to convert Civil 3D 2010 to Civil 3D 2011, replace "7.0" with "8.0")

In .NET, make sure the path to the reference libraries points to the installation directory for the correct version of AutoCAD Civil 3D. For more information, see the chapters on developing custom subassemblies in the *AutoCAD Civil 3D Developer's Guide* located in the installation folder or directly from the AutoCAD Civil 3D Help.

NOTE VBA custom subassemblies should be ported to .NET. See the *AutoCAD Civil 3D 2011 Developer's Guide* for information about porting VBA subassemblies to .NET.

Migrate Custom Pipe Catalogs

Migrate only the parts you have created. Do not copy the whole catalog because additional content may be included with the new release.

Each time you create new custom pipes or structures in a catalog, additional files are created in the following locations:

- New Chapters in the Pipe catalog create new folders in in the *All Users* applications folder at *...\Autodesk\C3D <vesion>\enu\Pipes Catalog*
- Each new part you create adds a *.DWG*, a *.BMP*, and an *.XML* file to the folder.

To migrate custom pipes and structures:

- Copy these "additional" folders and files into a new pipe catalog folder.
- Start AutoCAD Civil 3D and run the PIPECATALOGREGEN command to rebuild the new pipe catalog.
- Using the Pipe Catalog, open each new part in Part Builder and save it.

Migrate Survey Files

Migrate the following AutoCAD Civil 3D Survey files:

- Survey user settings.
- Survey databases.
- Survey equipment databases.
- Figure prefix databases.
- Linework code sets databases.

Survey User Settings

This file defines where the survey database, the survey equipment database, the figure prefix database, and other survey specific settings are stored. You can export the Survey User Settings to a *.USR_SET* file and then re-import the file into the new release.

In Toolspace, on the Survey tab, click in the upper left corner to open the Survey User Settings dialog box where you can specify the Import/Export options.

IMPORTANT Due to the requirement to support a 64-bit operating system, in AutoCAD Civil 3D survey database, equipment database, and figure prefix database files must be migrated to Microsoft SQL Server Compact format from Microsoft Access Database format. On the Survey tab in Toolspace, a database item that requires migration will display the "out-of-date" icon to provide a visual cue that it requires migration. To complete the migration, right-click the item and select the migration command.

Survey Databases

The survey database consists of two parts, the SDB and SDX files which are stored in the project folder. Specify the path or re-import the Survey User Settings to point to the location of your survey database. After you migrate the survey database to Microsoft SQL Server Compact format the file extensions will be SDBX and SDXX.

Survey Database Settings

The survey databases settings are stored in an *.SDB_SET* file. This file can be exported or imported by right-clicking on a survey database, and choosing the Edit Survey Database settings. This operation is not part of migrating from one release to the next but can be used in a situation where you need to have a survey database match an older one.

Survey Equipment Databases

The survey Equipment databases are stored in an *.EDB* file. The default location is *C:\Documents and Settings\All Users\Application Data\Autodesk\C3D <version>\enu\Survey* . Specify the path or reimport the Survey User Settings to point to the location of your survey database. After you migrate the equipment database to Microsoft SQL Server Compact format the file extension will be EDB_XDEF.

Figure Prefix Database

The Figure Prefix databases are stored in an *.FDB* file in the project folder. Specify the path or reimport the Survey User Settings and make sure to point to the location of your survey database. After you migrate the figure prefix database to Microsoft SQL Server Compact format the file extension will be FDB_XDEF.

Linework Code Sets Database

The Linework Code Sets database stored in an *.F2F_xdef* file in the project folder. Specify the path or reimport the Survey User Settings and make sure to point to the location of your survey database.

Network Administration and Deployment

3

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

Preparing a Deployment

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

System Requirements for Administrative Image

This section contains the system requirements for the location of the administrative image.

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. For complete system requirements, see System Requirements (page 1).

Ensure you use the appropriate AutoCAD Civil 3D 2011 DVD, depending on whether your Windows operating system is the 32-bit or the 64-bit version. A 64-bit version of AutoCAD Civil 3D cannot be installed on a 32-bit system and vice-versa.

See the following tables for administrative image 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.

Plan an Installation Type

When you set up your deployment, you need to choose the type of installation to deploy. In the AutoCAD Civil 3D deployment wizard, you specify one of the following installation types:

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.

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 Civil 3D 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.

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 Civil 3D 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 Civil

3D runs on the maximum number of systems for which you have licenses. This means you get a true floating license.

Plan for 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.

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 *Autodesk Licensing* guide. It is strongly recommended that you also read that guide before you deploy the program. You can find *Autodesk 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.

Create a Network Share

Once you have fully prepared for creating a deployment, you are ready to set up and distribute AutoCAD Civil 3D by creating a network share location (folder). 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.

A network, 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 your network server's desktop, 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, enter your group or user names, and make sure Full Control is selected. Click OK.

   In Vista, right-click the *Deployments* folder and then click Share. In the File Sharing dialog box type in or browse to the name of the group or user you want to share the folder with. Click Add, and then click Share.
6. For each product you plan to install, create a subfolder in the *Deployments* folder. Name each folder with the pertinent product name.

Network Tools and Your License Server

If users are running the program using network licenses, you need to use the Network License Manager. The Network License Manager helps you configure and manage license servers. For information about installing and setting up the Network License Manager and licensing tools, see the *Autodesk Licensing* guide.

Setting Up and Creating a Deployment

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 your review the following checklist and information before you begin. The deployment process is initiated from the Installation wizard's Create Deployments selection. 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. 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 Autodesk Upgrade and Licensing Information email.
- ❒ You know how you're going to personalize the program(s) during registration. Using consistent registration data is very important.
- ❒ You have identified the location, and created 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.

  NOTE Language packs can only be included in an administrative image during the creation of the deployment and not during modification.

- ❒ 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, and run silent mode.

  NOTE When the product is installed from a deployment using silent mode, users' systems will reboot automatically and without warning when the installation is complete.

- ❒ You know which type of installation you want—typical or custom, and you have decided if you want Express Tools installed (if applicable).

- ❒ You have chosen the installation folder option, and locations for your support file content.

- ❒ You have determined your defined search paths and file locations.

- ❒ You have decided if you want to include additional files with your deployment such as drawing files, AutoLISP routines, or script files.

- ❒ You have specified user preferences—displaying the Welcome Screen, requiring Internet Explorer for installation, setting the default publishing format, and creating a desktop shortcut.

- ❒ 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 to online resources such as DesignCenter, Subscription Center, online Help, Customer Error Reporting, and InfoCenter search settings.

Deployment Best Practices

A properly executed installation or deployment of your product is important, as it affects the performance of AutoCAD Civil 3D. To speed up the process and ensure a successful installation of AutoCAD Civil 3D, the following practices are recommended:

- Close all running applications, such as Microsoft® Outlook, and disable any antivirus utilities.
- Copy the AutoCAD Civil 3D DVD media contents to your hard drive and initiate the deployment or installation procedure locally.
- Run the AutoCAD Civil 3D deployment wizard from a client workstation, rather than from a server. This can reduce the strain on the workstation system resources and save you some time.
- Do not perform a deployment over a WAN or using a VPN connection. These connections can be slow and can cause installation errors.

See also:

- Preliminary Tasks for a Network Deployment (page 33)

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, on the Create Deployment page, select the appropriate product and click Configure.

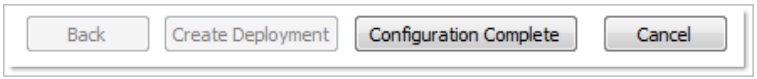
The following options are available after you click the Configure button. See Your Deployment Choices (page 36)for more details about deployment options.

- Select the License Type - Stand-alone or Network license
- Select the Installation Type - Typical or Custom
- Install Express Tools

- Configure content packs
- Modify configurable folders
- 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 Create Deployment 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.



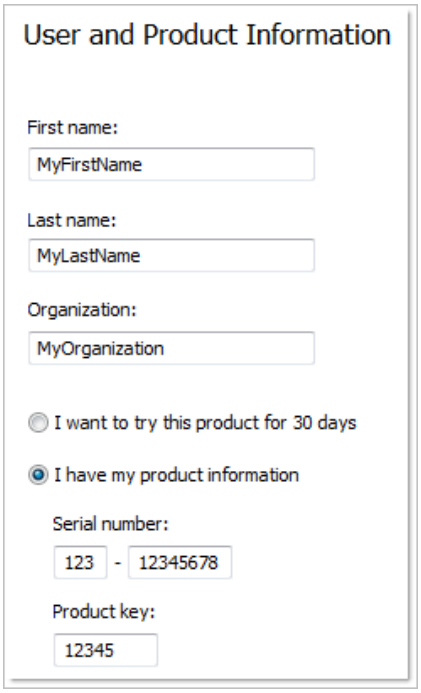
If you do not wish to make configuration changes on the Create Deployment page, click Create Deployment. Then click Yes, to continue creating your deployment using the default configuration.

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 User and Product Information

The User and Product 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 serial number and product key are located on the outside of the product packaging, or in the Autodesk Upgrade and Licensing Information email. The serial number must contain a three-digit prefix followed by an eight-digit number. The product key consists of five characters.

Your clients 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

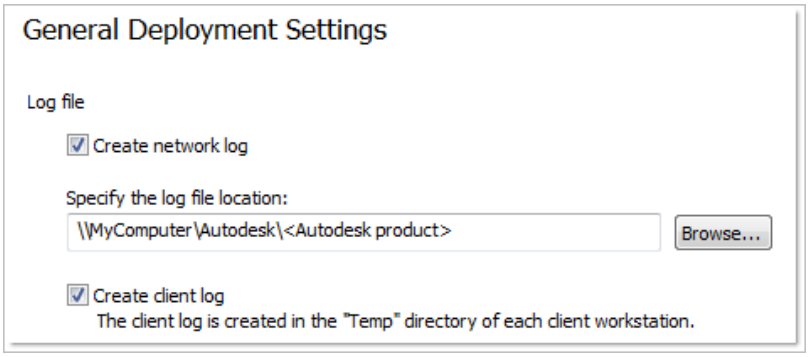
From the General Deployment Settings dialog, you can setup two types of log files with which you can monitor information about deployments and installations.

- **Create network log** The network log file keeps a record of all workstations that run the deployment. On the General Deployment Settings page, 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*.

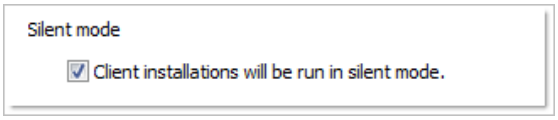
NOTE The folder where the network log resides must be a shared folder where users who install the program have Change permissions. Otherwise, successes or failures for user installations cannot be written to the log file.

- **Create 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.



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.



WARNING When the product is installed from a deployment using silent mode, users' systems will reboot automatically and without warning when the installation is complete.

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.

NOTE Depending on the type of option you choose on the configuration page, stand-alone or network 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.

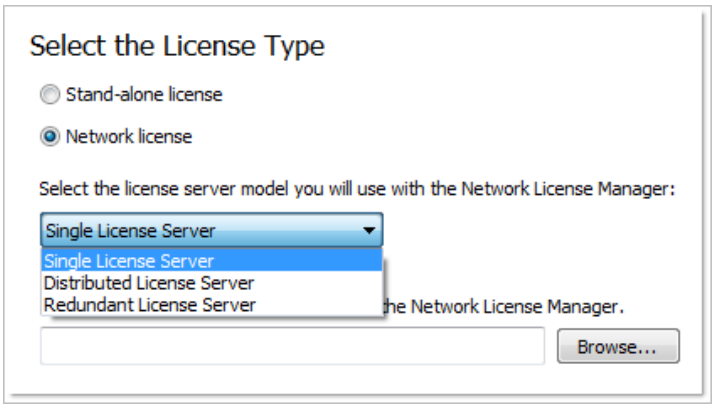
Network license With this type of installation, you install the program to workstations with the files and registry entries that allow the program to communicate with the Network License Manager. You also define the configuration of the Network License Manager so that the licenses can be accessed. Workstations 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 Plan for a License Server Model (page 31).



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 Plan Your Network Licensing in *Autodesk Licensing*.

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 Plan Your Network Licensing in *Autodesk Licensing*.

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.

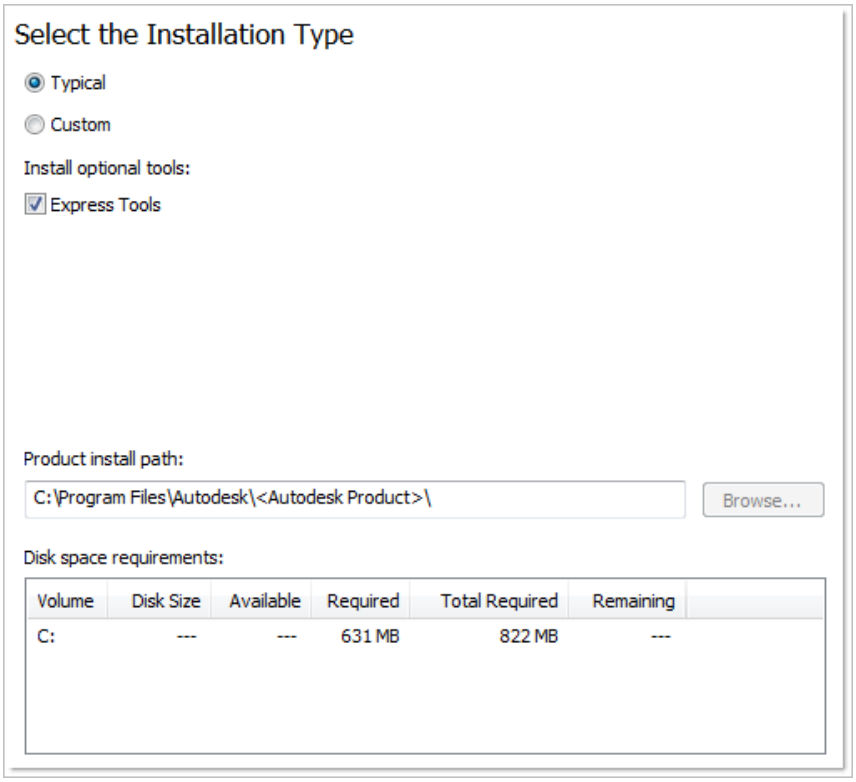
If you have already used the Network License Manager to create a license server model, you must select the same license server model in this step. If you have not yet used the Network License Manager to create a license server model, make sure that you select the same settings in the Network License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

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

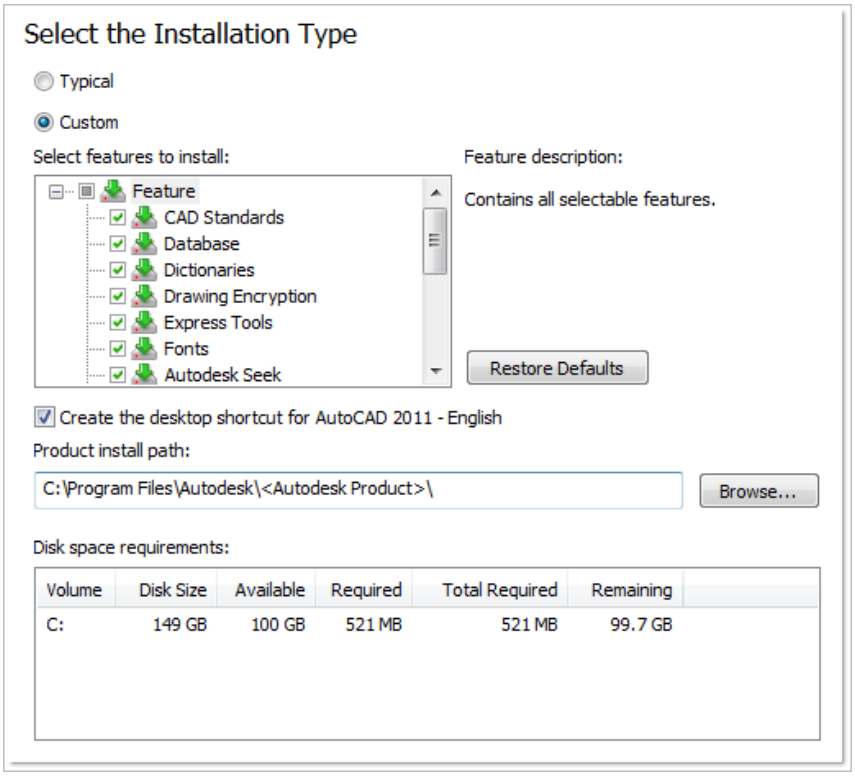
1. During the deployment, on the Select the Installation Type page, select Typical as the type of installation that you want.
2. Enter the path on the client workstation where you want to install the program, for example *C:\Program Files\Autodesk\<Autodesk product>*.

   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\<Autodesk product>*.

   The Disc Space Requirements chart lets you review available drives and disc space.
4. Click Next.

Configure Content Packs

Select at least one content pack and click Next.

See What are Content Packs? (page 18)

Configurable Folders

Specify custom locations for content group file folders. Click Append to add a default folder name to a content group path. Click Next.

See What are Configurable Folders? (page 19)

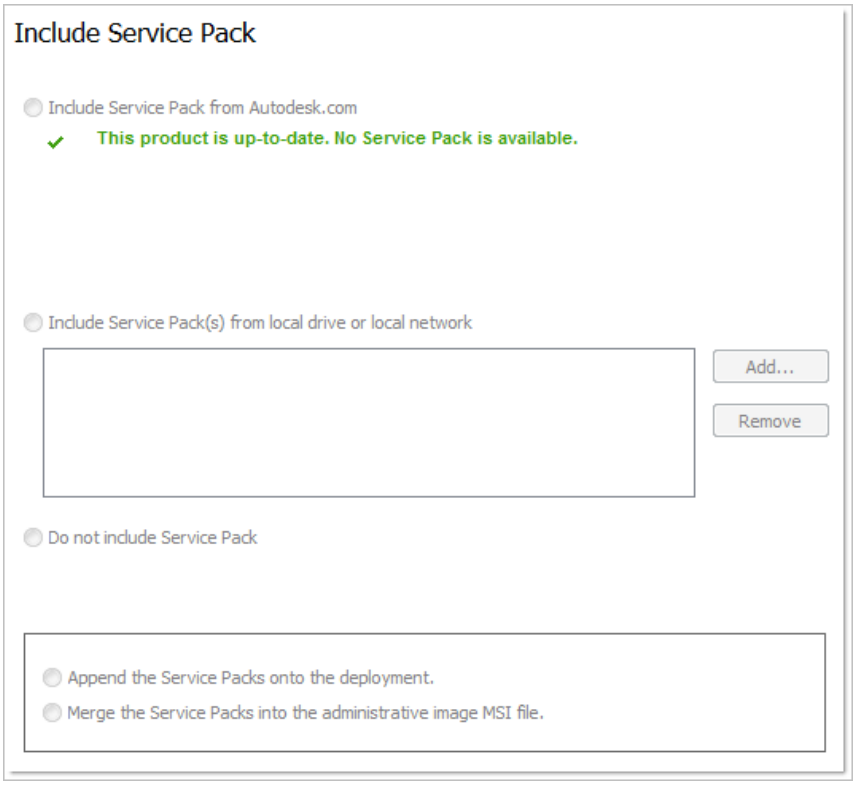
Include Service Packs (optional)

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 Civil 3D 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.

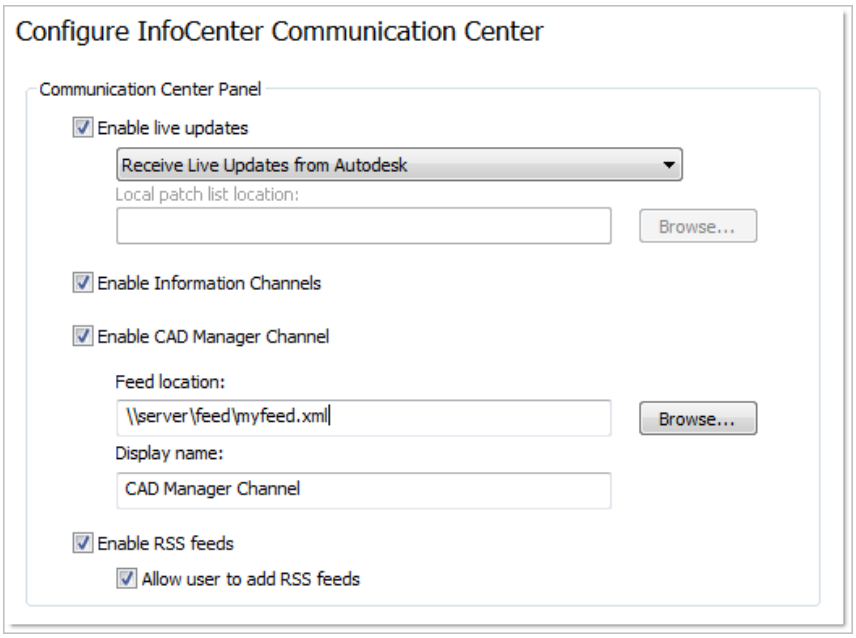
3 Select the MSP file and click Open.

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

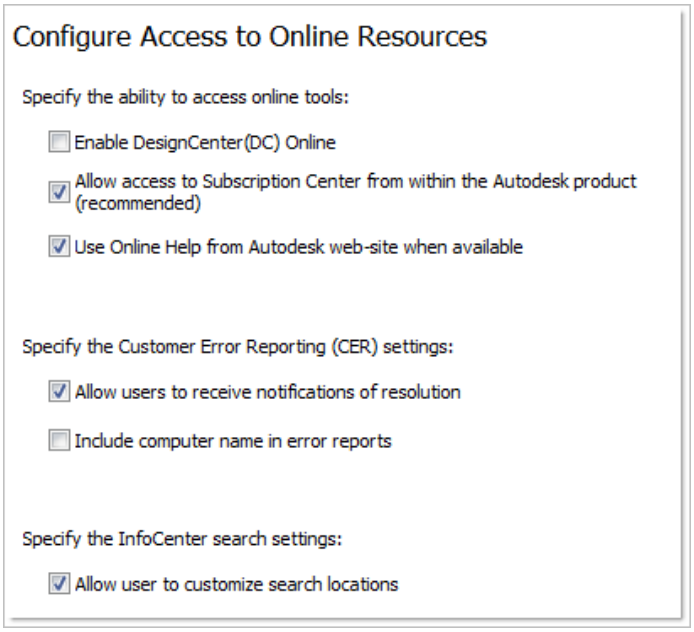
1. When creating a deployment, on the Configure InfoCenter Communication Center page, make the following Live Update settings:
   - **Enable Live Updates.** Users can receive product updates or support announcements from Autodesk servers.
   - **Receive Live Updates from Autodesk.** Users can receive 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, 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.

Subscription Center

With Autodesk Subscription, users receive the following:

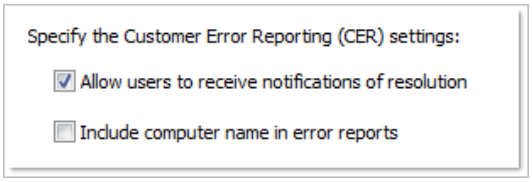
- Software upgrades and exclusive product downloads
- Access to training and learning materials
- One-on-one product support
- Exclusive license terms on any Autodesk products under contract
- Access to Autodesk Knowledge Base

Online Help

The Help documentation includes a product Readme that contains late-breaking information on your product. The Readme is also available from the Installation Complete page.

Customer Error Reporting (CER)

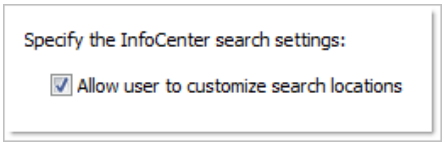
If your Autodesk product closes unexpectedly, users have the opportunity to send an error report directly to Autodesk, which helps Autodesk to determine and resolve the error. You can determine whether users can also receive notification from Autodesk when their reported errors are resolved.



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

Specify 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.

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 53).

To create a deployment using default values

1. In the AutoCAD Civil 3D installation wizard, click Create Deployments.

2 On the Begin Deployment page, specify the following:

- 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 31).

- 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.

Click Next.

3 On the Select the Products to Include in the Deployment page, select the products you want to include, and the language(s) to include in your administrative image and your deployment. Click Next.

NOTE Autodesk Design Review 2011 is required by AutoCAD Civil 3D and Autodesk Vault and is installed by default. For more information, see Installing Design Review (page 17) and Installing Autodesk Vault (page 17).

4 Review the Autodesk software license agreement. Click I Accept, and then click Next.

5 On the User and Product Information page, enter your user information, serial number, and product key, and then click Next.

6 On the General Deployment Settings page you select the following:

- Creation of 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.

- Whether you want a client log file created.

- Prevent users from changing installation settings when they install by selecting Silent mode.

For more information regarding log files, refer to Specify Log File Locations (page 37). For more information on silent mode, see What Is Silent Mode? (page 38).

Click Next.

7 On the Create Deployment page, click Create Deployment, then select Yes to continue creating the deployment using the default configuration.

An administrative image is created in your shared folder using the deployment options listed in the Current Settings fields. If you would like a summary of your deployment settings, click the Copy to Clipboard button.

8 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 deployment using configured or customized values

1 In the AutoCAD Civil 3D installation wizard, select a language for the install instructions. Click Create Deployments.

2 On the Begin Deployment page, specify the following:

- 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 31).

- 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.

Click Next.

3 On the Select the Products to Include in the Deployment page, select the products you want to include, and the language(s) to include in your administrative image and your deployment. Click Next.

NOTE Autodesk Design Review 2011 is required by AutoCAD Civil 3D and Autodesk Vault and is installed by default. For more information, see Installing Design Review (page 17) and Installing Autodesk Vault (page 17).

4. Review the Autodesk software license agreement. Click I Accept, and then click Next.
5. On the User and Product Information page, enter your user information, serial number, and product key, and then click Next.
6. On the General Deployment Settings page you select the following:
   - Creation of 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.

   - Whether you want a client log file created.
   - Prevent users from changing installation settings when they install by selecting Silent mode.

   For more information regarding log files, refer to Specify Log File Locations (page 37). For more information on silent mode, see What Is Silent Mode? (page 38)

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

CAD Standards	Contains tools for reviewing design files for compliance with your standards.

Database	Contains database access tools.
Dictionaries	Contains multi-language dictionaries.
Drawing Encryption	Allows you to use the Security Options dialog box to protect a drawing with a password.
Express Tools	Contains AutoCAD Civil 3D support tools and utilities (not supported by Autodesk).
Fonts	Contains AutoCAD Civil 3D fonts and TrueType fonts.
Autodesk Seek	Autodesk Seek. **NOTE** Autodesk Seek is installed only with the English version of AutoCAD Civil 3D.
Material Library	Contains over 300 professionally built materials to apply to your model.
Welcome Screen	Contains learning resources to help discover the product.
License Transfer Utility	Allows users to transfer an Autodesk product license between computers.
Initial Setup	Allows users to set up their initial configuration of AutoCAD Civil 3D (online content, workspaces) based on their units system, industry, and commonly used task-based tools.
Reference Manager	Allows users to view and edit the paths of externally referenced files associated with a drawing.
Samples	Contains various feature sample files.
Tutorials	Contains product tutorials.
Hydraflow Extensions	Contain hydraulics and hydrology applications, including Hydraflow Storm Sewers, Hydraflow Hydrographs, and Hydraflow Express.

Survey Data Collection Link Extension	The Survey Data Collection Link Extension allows to transfer data from survey data collectors and convert raw data files and coordinate data files into field book (.fbk) format.

- Install Optional Tools - AutoCAD Civil 3D Express Tools Volumes 1-9 contain a library of productivity tools designed to help you extend the power of AutoCAD Civil 3D.
- Product Install Path - Specifies the drive and location where Autodesk product will be installed.

Click Next to proceed with the configuration process.

10 On the Configure Content Packs page, select at least one content pack and click Next. See What are Content Packs? (page 18)

11 On the Configurable Folders page, review the paths to custom locations for content group file folders. Click Append to add a default folder name to a content group path. Click Next. See What are Configurable Folders? (page 19)

12 If service packs are available, you can select to include them on the Include Service Packs page. The installer automatically checks *autodesk.com* for available updates.

13 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.

14 On the Configure Access to Online Resources page, you set up access to online tools like DesignCenter, Subscription Center, and Online Help. You also specify Customer Error Reporting settings, and allow users to customize InfoCenter searches. Click Next.

15 On the Configuration Complete page, you select a product tab to configure another product, or click Configuration Complete to review your choices.

16 On the Create Deployment page, click Create Deployment. If you want a summary of your deployment settings, click Copy to Clipboard.

17 On the Deployment Complete page, click Finish.

Final Review and Complete Setup

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

To complete your deployment setup

1. On the Create Deployments page, scroll the list of current settings and verify your deployment 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 deployment 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 51).

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.

Distributing an Autodesk Program

4

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.

- **Group Policy Objects (GPOs).** See Use Group Policies to Run a Deployment (page 59).
- **Microsoft System Center Configuration Manager (SCCM)**. See Use Microsoft System Center Configuration Manager to Install a Deployment (page 67).
- **Imaging Software.** See Distribute the Product Using Imaging Software (page 71).

Use Group Policies to Run a Deployment

With group policies, you can advertise and install a program by assigning a deployment to computers. A deployment that is assigned to a computer can be used by any user of that computer. Generally, you would assign the deployment to a computer that 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 assign a deployment to 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.

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

Advantages

- Works well with deployment functionality.
- Allows you to add custom files through the deployment wizard.
- Allows deployment to workstations.

Disadvantages

- Prohibits the passing of command-line parameters to an MSI executable.
- Prohibits customization of application settings, other than what is set while creating a deployment.

In order for AutoCAD Civil 3D to run properly, the following software must be installed on the computer where the program is being installed:

Available on the product disc
Microsoft .NET 3.5 SP1
DirectX 9.0C
VC++ 2008 SP1 and VC++2005 SP1 runtimes for x86 operating systems; VC++2008 SP1 and VC++2005 SP1 runtimes for x64 for 64-bit operating systems
Microsoft National Language Support Downlevel APIs
FARO LS
Autodesk Design Review 2011
Macromedia Flash Player 9.0 or later (*Not installed by default*)
Autodesk Material Library 2011 Base Image Library (ILL)
Other
Microsoft Internet Explorer version 7.0 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)
SQL Server Express (32 bit or 64 bit)
VB PowerPacks

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

- **Create an application distribution share point.** The application distribution share point is created using the deployment wizard. See *Creating a Default Deployment* or *Creating a Configured or Customized Deployment* to create a deployment.
- **Assign the deployment to a computer.** See Use Group Policies to Assign a Deployment to Computers (page 61).
- **Verify the installation.** Confirm that the program has been correctly installed. See Verify a Group Policy Deployment (page 67).

Use Group Policies to Assign a Deployment to Computers

Perform the following procedures from a Windows XP workstation or a Windows 2000 or 2003 server that has Group Policy Management Console installed, and has access to the Active Directory server.

NOTE For more information about Group Policy Management, see *http://technet.microsoft.com/en-us/windowsserver/grouppolicy*.

To assign a deployment to a computer

1. Start 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. Edit the policy.
4. In the Group Policy Object Editor dialog box, under Software Settings, right-click Software Installation, and click New ➤ Package.

5 In the Open dialog box, navigate to the administrative image's location that you specified in the deployment wizard. Navigate to *AdminImage*\<*processor type*>\<*product name folder*>. The processor type is either x86 or x64, depending on the processor type for which you created your deployment.

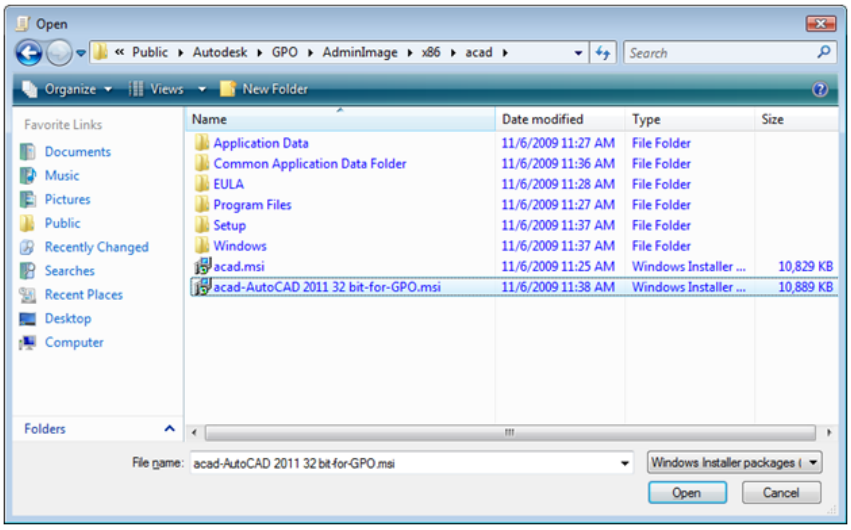
Examples

For x86 deployments:
\\server123\Deployment\AdminImage\x86\acad

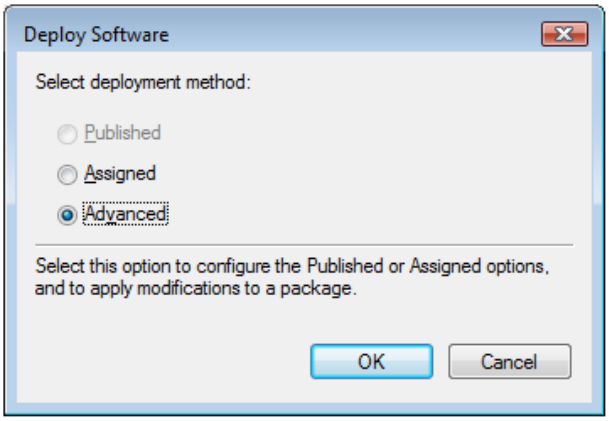
For x64 deployments:
\\server123\Deployment\AdminImage\x64\acad

6 Select the Windows Installer Packages file called *acad-<deployment name>-for-GPO.msi*. Click Open.

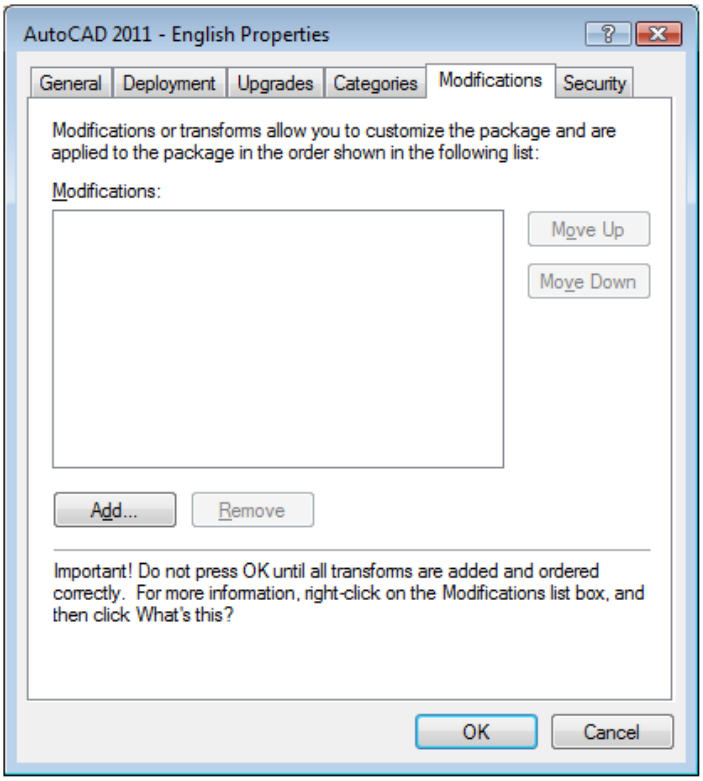
If the deployment was called "AutoCAD Civil 3D 2011 32 bit," then the deployment's the MSI file would be *acad-AutoCAD Civil 3D 2011 32 bit-for-GPO.msi*.



7 In the Deploy Software dialog box, select Advanced and click OK.



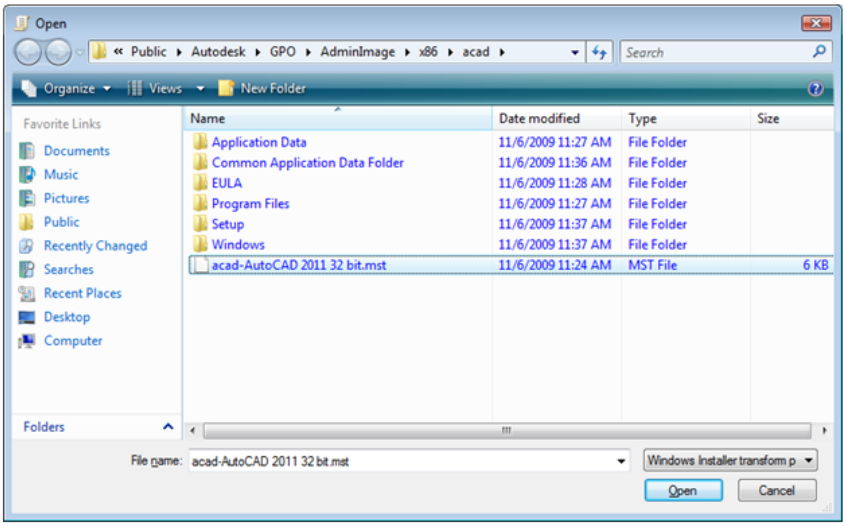
8 In the Properties dialog box, Modifications tab, click Add.



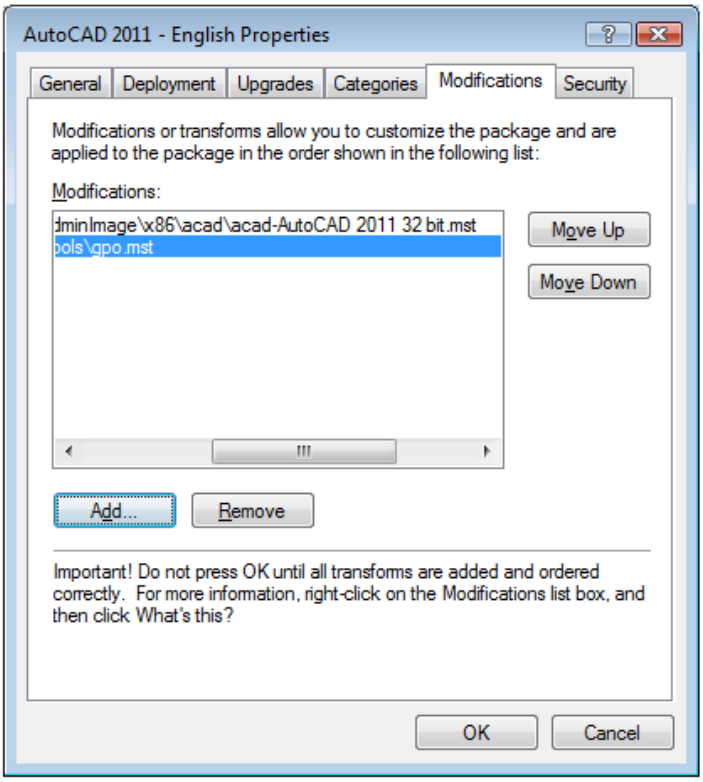
9 In the Open dialog box, select the Transform Package file called *acad-<deployment name>.mst*). Click Open.

10 In the Properties dialog box, Modifications tab, click Add.

11 In the Open dialog box, navigate to *<deployment location>\Tools* and select the Transform Package file called *gpo.mst*.



After clicking Open, the Properties dialog should look like the following:



12 Click OK to complete the package.

Adding a Language Pack

Next, you will need add a language pack to your package.

To add a language pack

1 In the Group Policy Object Editor dialog box, under Software Settings, right-click Software Installation for the same object, and then click New ➤ Package.

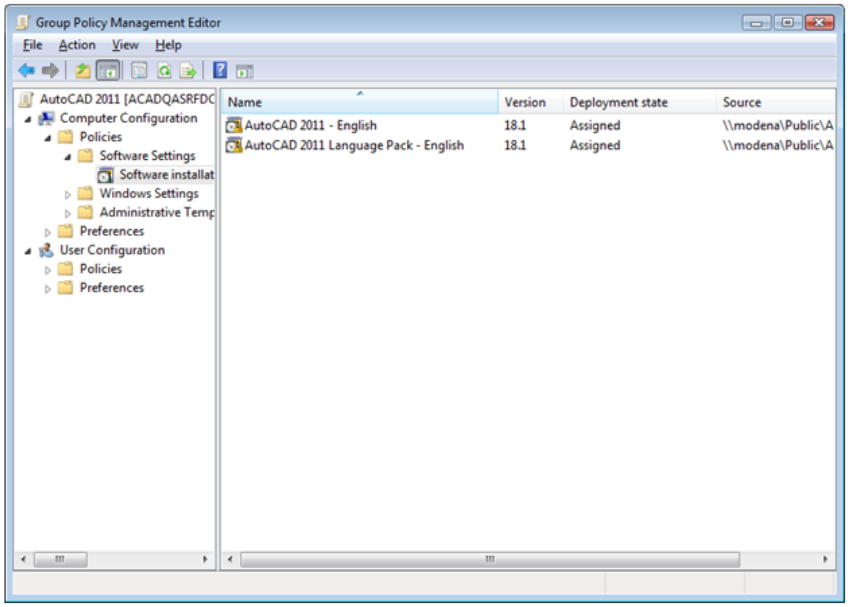
2 In the Open dialog box, navigate to the administrative image's location you specified in the deployment wizard. Navigate to *AdminImage*\<*processor type*>\<*locale*>*acad*. Click Open.

The <*locale*> used in the examples is *en-us* for US English.

Examples
For x86 deployments: *server123**Deployment**AdminImage**x86**en-us**acad*
For x64 deployments: *server123**Deployment**AdminImage**x64**en-us**acad*

3. In the Deploy Software dialog box select Advanced and click OK.
4. In the <*product name*> Properties dialog box, Modifications tab, click Add.
5. In the Open dialog box, select the Transform Package file called *acad-<deployment name>.mst* located at *AdminImage*\<*processor type*>*acad*. Click Open.
6. In the <*product name*> Properties dialog box, Modifications tab, click Add.
7. In the Open dialog box, navigate to <*deployment location*>*Tools* and select the Transform Package file called *gpo.mst*.
8. Click OK to complete the package.

Your final group policy object should resemble the following:



The group policy object is now 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 a Group Policy Deployment (page 67) to confirm that the group policy has been created correctly.

Verify a Group Policy Deployment

To verify that this deployment 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 installation begins before the login prompt is displayed. The operating system displays group policy messages, including a message indicating the installation of any managed software.

After logging in, double-click the program icon on the desktop to complete the installation and start the program.

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

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:

- Preparing a Deployment (page 29)
- Preliminary Tasks for a Network Deployment (page 33)
- Creating a Default Deployment (page 51)
- Creating a Configured or Customized Deployment (page 53)
- Modify a Deployment (optional) (page 57)

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 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 Civil 3D 2011, so you would enter **AdminImage\setup.exe /W /Q /I AdminImage\AutoCAD Civil 3D 2011.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 Civil 3D 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

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.

NOTE Autodesk does not recommend or support the distribution of AutoCAD Civil 3D using imaging software. However, if you plan to use this method of distribution, please review the following instructions carefully.

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*.
2. Install AutoCAD Civil 3D 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*.

2 Install AutoCAD Civil 3D 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 Civil 3D 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 Civil 3D 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.

Installation Troubleshooting 5

This section provides solutions to installation issues and answers to commonly asked questions that may arise while installing your product(s). Additional troubleshooting information and support is also available at *http://autodesk.com/servicesandsupport*

General Installation Issues

This section outlines common issues and their solutions that may arise while performing a general install of your product(s).

How can I check my graphics card driver to see if it needs to be updated?

It is recommended that you verify and update your graphics card driver to optimize your program. Use the following procedure to identify your current graphics card driver.

To identify your graphics card driver

1. Start AutoCAD Civil 3D.
2. At the command line, enter **3dconfig**.
3. In the Adaptive Degradation and Performance Tuning dialog box, click View Tune Log.
4. Review the 3D Device section for information about your system's graphics card driver and driver version.

TIP Many newer graphic cards offer tabbed pages where you can learn more precise information about your specific graphic card. If specific tab pages are present, refer to them instead of the Adapter tab.

What is the text editor used for?

The text editor you designate during installation is used for editing text files such as PGP and CUS dictionary files while you are running your product.

What is the difference between a stand-alone license and a network license?

Stand-alone licensed products are registered and activated to an individual workstation. While the software can be installed on multiple systems in your facility, the license only allows one system to be operational. If you need to run more systems, you need to purchase more stand-alone licensed products, or consider converting to network licenses.

Network licensed products rely on the Network License Manager to keep track of software licenses. The software can be installed and run on multiple systems, up to the maximum number of licenses you've purchased. The Network License Manager "checks out" licenses until they are all in use. No further systems can run the program until a license is "checked in." If you need to run more systems, you can purchase additional licenses for the Network License Manager to maintain.

What is the benefit of using a network licensed version of the software?

Network licensed products are recommended for large drafting/design facilities, classrooms, and lab environments. The main advantage is that you can install products 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, products will run on the maximum number of systems for which you have licenses. This means you get a true floating license. If software needs to be run on more systems, additional licenses can be purchased.

What features get installed during a Typical or Custom installation?

A Typical installation includes all of the following features. If you choose to do a Custom installation, you can pick and choose from the feature list below.

A Typical installation also includes the Express Tools library. The library provides additional productivity tools.

CAD Standards	Contains tools for reviewing design files for compliance with your standards.
Database	Contains database access tools.
Dictionaries	Contains multi-language dictionaries.
Drawing Encryption	Allows you to use the Security Options dialog box to protect a drawing with a password.
Express Tools	Contains AutoCAD Civil 3D support tools and utilities (not supported by Autodesk).
Fonts	Contains AutoCAD Civil 3D fonts and TrueType fonts.
Autodesk Seek	Autodesk Seek. **NOTE** Autodesk Seek is installed only with the English version of AutoCAD Civil 3D.
Material Library	Contains over 300 professionally built materials to apply to your model.
Welcome Screen	Contains learning resources to help discover the product.
License Transfer Utility	Allows users to transfer an Autodesk product license between computers.
Initial Setup	Allows users to set up their initial configuration of AutoCAD Civil 3D (online content, workspaces) based on their units system, industry, and commonly used task-based tools.
Reference Manager	Allows users to view and edit the paths of externally referenced files associated with a drawing.

Samples	Contains various feature sample files.
Tutorials	Contains product tutorials.
Hydraflow Extensions	Contain hydraulics and hydrology applications, including Hydraflow Storm Sewers, Hydraflow Hydrographs, and Hydraflow Express.
Survey Data Collection Link Extension	The Survey Data Collection Link Extension allows to transfer data from survey data collectors and convert raw data files and coordinate data files into field book (.fbk) format.

How do I access my documentation?

A Help file is available on the product media. The complete Help system is installed during the product installation. During the installation process, you can access specific installation and licensing topics by clicking the information links in the left panel of the installation wizard, or by clicking Read the Documentation on the first page of the wizard or Documentation in the lower left corner of the wizard pages.

For late-breaking information see the product *Readme* file available on the Documentation page. The Readme is also available from the Installation Complete page, or through the Help system.

What is SAMreport-Lite?

SAMreport-Lite is a report generator that helps you monitor the usage of applications that use FLEXnet™. SAMreport-Lite complements FLEXnet by providing a graphical user interface (GUI) from which to run usage reports. SAMreport-Lite can help you make better decisions about your software assets. For more information, see the *SAMreport-Lite User's Guide* in Help.

Deployment Issues

This section outlines common issues and their solutions with regards to software deployments.

Is there a checklist I can refer to when performing a deployment?

The *AutoCAD Civil 3D* Installation guide contains a checlist that describes preliminary actions of the deployment process. See Preparing a Deployment (page 29).

Where should deployments be located?

Shared folders are required for both network license and multi-seat stand-alone methods of installation. The shared folder (*network share*) is created before you run the installation wizard and is where product deployments are stored.

It is recommended that you name the network share folder *Deployments* on the desktop of the system where you want deployments stored. You can then add subfolders inside the shared *Deployments* folder that clearly convey the names of products you plan to deploy. For example, any subfolders that are placed inside a shared folder are automatically shared.

TIP 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.

Where can I check if service packs are available for my software?

To find out if a patch or Service Pack is available for your product, visit AutoCAD Civil 3D Support page at *http://autodesk.com/servicesandsupport*.

How do I extract an MSP file?

A Microsoft Patch (MSP) file is usually contained in a Service Pack executable that you download from AutoCAD Civil 3D Support website. To extract the MSP file from the executable, run the patch program from the Windows command prompt using the */e* switch.

Pay particular attention to the location where the files are extracted. For details about using the patch file, review the *Readme* file for that patch.

Can Online Resource settings be modified later?

Yes. If you want to change the state of online resources after a product is installed, you can do that from the CAD Manager Control utility. The CAD Manager Control utility is installed separately from AutoCAD Civil 3D.

From the installation wizard, select Install Tools and Utilities and then select the CAD Manager Control utility. After installation is complete, you can open the utility from the Start menu. Do one of the following:

- (Windows XP *or* Windows Vista) click All Programs ➤ Autodesk ➤ CAD Manager Tools ➤ CAD Manager Control Utility.

Where can I learn about InfoCenter?

You can use InfoCenter to enter a question for help, display the Communication Center panel for product updates and announcements, or display the Favorites panel to access saved topics. For more information, see Configure InfoCenter Communication Center (optional) (page 46).

What are information channels?

The Communication Center component of InfoCenter allows you to receive announcements from various information channels. Through information channels, you can receive the following:

- Product Support information, including maintenance patch notifications.
- Subscription Center announcements and subscription program news, as well as links to e-Learning Lessons, if you are an Autodesk subscription member.
- Notifications of new articles and tips posted on Autodesk websites.

What are the benefits to enabling CAD Manager Channels?

CAD Manager Channels allow access to Internet-based content and information feeds from a specified feed location.

What are RSS feeds and how do they benefit my installation?

An RSS feed is a live link you initiate by subscribing to someone's website. Once subscribed, the primary benefit is a constantly updating stream of content that is delivered to your system in the form of summarized articles, forum threads, blog posts, and so on. RSS stands for Rich Site Summary (or Really Simple Syndication).

Where can I learn about InfoCenter search locations?

You can use InfoCenter to search multiple sources (for example, Help and specified files) at one time, or choose to search a single file or location.

For more information, see Configure InfoCenter Communication Center (optional) (page 46).

How do I set or customize search locations?

InfoCenter Search and Communication Center settings can be set in the InfoCenter Settings dialog box or in the CAD Manager Control utility. You must use the CAD Manager Control utility to specify CAD Manager Channel settings.

See Configure InfoCenter Communication Center (optional) (page 46) for more information regarding the settings you can configure.

Networking Issues

This section outlines common issues and their solutions with regards to performing a network installation or configuring your network license server(s).

When installing tools and utilities, which selections are applicable for a multi-seat stand-alone installation?

Since a multi-seat stand-alone licensed product does not rely upon a license server to manage or activate the license, the only tool that is beneficial is the Autodesk CAD Manager tool.

You need the CAD Manager tool if you want to make changes to CAD Manager Channels.

When installing tools and utilities, which selections are applicable for a stand-alone installation?

The Autodesk CAD Manager tool is the only tool that is beneficial to a stand-alone licensed product. With the CAD Manager tool, you can modify CAD Manager Channels.

Where do I find my server name?

When installing a network licensed product, you must specify the name of the server that will run the Network License Manager. If you don't know the server name, you can quickly find it by opening a Windows command prompt on the system that will be the Network License Manager. At the prompt, enter **ipconfig /all** and note the Host Name entry.

When specifying user workstation settings, I am given the option to specify a profile. What are profiles?

Profiles are created on the Profiles tab of the Options dialog box. Profiles can contain configuration settings for just about anything that is not a drawing based system variable. For example, a profile can contain things like support paths, grip settings, and plot settings.

When you specify a profile on the Specify User Preferences page during the deployment process, it ensures that all workstations that use that deployment to install the product will be configured the same way.

Can I create custom desktop shortcuts?

You can choose to create custom desktop shortcuts that use command line switches to specify several options when you start the program. For example, command line switches can be set to run a script during program launch, create a drawing based on a template or prototype drawing, or designate a workspace that should be restored on startup.

For more information, see Customize Startup in the *AutoCAD User's Guide*.

What happens when you choose to append or merge service packs?

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.

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.

You can choose to append or merge service packs from the Include Service Packs page when creating a deployment.

What is an administrative image (MSI) file?

An *administrative image* is a collection of shared file resources created during the deployment process and is used by deployments to install the program to networked workstations. Service packs (patches) can be applied to an administrative image when you create the deployment. An *.msi* file is a Microsoft Installer file.

What is the impact of selecting all products for the administrative image, and can I add products later?

If you elect to include all products in your deployment, the administrative image will be larger. You should select all products only when you create multiple deployments from this image and prefer not to use the installation disc. If there are products you rarely or never use, and you do not expect to create additional deployments, you should only select a subset of products.

You can still create a deployment at a later date, and include additional products, but you need to create a new administrative image. You need the installation disc to do so.

Uninstall and Maintenance Issues

This section outlines common issues and their solutions with regards to adding and removing features, reinstalling or repairing your installation, and uninstalling products.

When adding or removing features, how can I tell what features get installed by default?

To quickly see what gets installed during a Typical, default installation, click the Restore Defaults button on the Add/Remove Features page.

CAD Standards	Contains tools for reviewing design files for compliance with your standards.
Database	Contains database access tools.
Dictionaries	Contains multi-language dictionaries.
Drawing Encryption	Allows you to use the Security Options dialog box to protect a drawing with a password.
Express Tools	Contains AutoCAD Civil 3D support tools and utilities (not supported by Autodesk).
Fonts	Contains AutoCAD Civil 3D fonts and TrueType fonts.
Autodesk Seek	Autodesk Seek. **NOTE** Autodesk Seek is installed only with the English version of AutoCAD Civil 3D.
Material Library	Contains over 300 professionally built materials to apply to your model.
Welcome Screen	Contains learning resources to help discover the product.
License Transfer Utility	Allows users to transfer an Autodesk product license between computers.

Initial Setup	Allows users to set up their initial configuration of AutoCAD Civil 3D (online content, workspaces) based on their units system, industry, and commonly used task-based tools.
Reference Manager	Allows users to view and edit the paths of externally referenced files associated with a drawing.
Samples	Contains various feature sample files.
Tutorials	Contains product tutorials.
Hydraflow Extensions	Contain hydraulics and hydrology applications, including Hydraflow Storm Sewers, Hydraflow Hydrographs, and Hydraflow Express.
Survey Data Collection Link Extension	The Survey Data Collection Link Extension allows to transfer data from survey data collectors and convert raw data files and coordinate data files into field book (.fbk) format.

Is it possible to change the installation folder when adding or removing features?

Once your product is installed, you cannot change the installation path from the Add/Remove Features page. Changing the path while adding features results in program corruption, so it is not an option.

When should I reinstall the product instead of a repair?

You should reinstall your product if you accidentally delete or alter files that are required by the program. Missing or altered files adversely affect the performance of your product and cause error messages when you try to execute a command or find a file.

If an attempt to repair an installation fails, reinstalling is the next best option.

Do I need my original disc to reinstall my software?

When performing a reinstall of the product, you are prompted to load your original disc(s). Installation data is cached locally on your drive and that data is reused when reinstalling.

When I uninstall my software, what files are left on my system?

If you uninstall the product, some files remain on your system such as files you created or edited (drawings or custom menus).

Your license file also stays on your workstation when you uninstall your product. If you reinstall on the same workstation, the license information remains valid and you do not have to reactivate the product.

Glossary

6

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.

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 Acresso™ 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 A set of installed files that enable the user to work in the application in the language specified by the Language Pack.

language family A set of languages (core product, plus language packs) that are distributed together, typically based on a geographic grouping.

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 MSIEXEC 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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