

AutoCAD 2004 Installation

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A Different AutoCAD Install

Companies both large and small will have to take a new look at how to install and customize the installation of AutoCAD 2004. Sharing Plot files, Plot Styles, Fonts, and even Templates between users, offices, and partners is a growing need. Even one seat firms will need to know how to back up these important files and keep them separate from the default AutoCAD install locations.

The default location of where AutoCAD support files are located has moved. The AutoCAD 2004 installation will install many of the supporting files for AutoCAD into the Windows Profile and My Documents folder for the AutoCAD Users on that machine. Each new user who employs AutoCAD 2004 will be automatically set up to run an individualized version of the software. This means that each AutoCAD 2004 user will have their own version of Fonts, Plotters, Plot Styles, Templates, etc. If you want to share the typical common support files among users, you will want to examine your installation choices carefully and then develop a plan.

Secondly, if you employ AutoCAD in a network environment that environment needs to be carefully assessed and perhaps adjusted somewhat when you deploy AutoCAD 2004.

This document will assist you in setting up your AutoCAD 2004 installation, and getting it working effectively.

About the Authors

Portions of this document were produced and edited by multiple members of CVIS Technical Services staff without whose knowledge and expertise this document would be impossible to produce.

Special recognition to the Clients of CVIS and their staffs who aided in the validation and review of the contents.

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Windows XP Compliant

AutoCAD 2004 is Windows 2000 and Windows XP compliant. This means that you no longer need to be a Windows Power User on the local computer to RUN the software. However, you must have local computer Administrator rights to INSTALL the software.

To make the software Windows 2000 and Windows XP compliant, Autodesk had to move file locations to the User profiles rather than to Registry Keys and Program Files alone. This means that the installation routines are different than previous releases. It is designed to insure that the software will RUN for every user who logs into the computer. Where the installation places files to accomplish this MAY not be what you really want.

How Does This Affect You?

All of the AutoCAD System Settings (Options dialog box) used to be saved to a somewhat separate AutoCAD Profile area in the Windows Registry. Now these settings are unique to your Current Windows User Profile, which does not require Power User rights to change. This means that two users on the same machine may have different AutoCAD System Settings. The only exception to this rule is pointing device configuration parameters that are saved in an acad2004.cfg file. This file is located in each User's Local Settings folder by default.

Support files for Plot Files, Plot Styles, Menu Files, etc. are no longer located in the default Installation directory for AutoCAD (C:\Program Files\AutoCAD 2004\). If you want to use support files from previous AutoCAD versions, you will need to know where AutoCAD is looking for these files. When a User runs AutoCAD for the first time, an installation routine automatically moves the support files from the default location (C:\Program Files\AutoCAD 2004\UserDataCache\) to the User's Profile.

If you employ Roaming Profiles on your network some of the support files are roamable and some are non-roamable. The roamable support files (Plotters, Plot Styles, and Support folders) are located inside the end-user profile in C:\Documents and Settings\\Application Data\AutoCAD 2004 folder. These files are backed up on the server with the user's profile. If the user logs on to another machine, the files will be copied to it from the server.

The non-roamable support files (Templates and Textures folders) are located in the end-user profile in C:\Documents and Settings\\Local Settings\Application Data\Autodesk\AutoCAD 2004\ . These files only reside on the local machines. (These folders may be hidden by default in your operating system. You can change the View Options of Windows Explorer to allow you to see hidden system folders and files.)

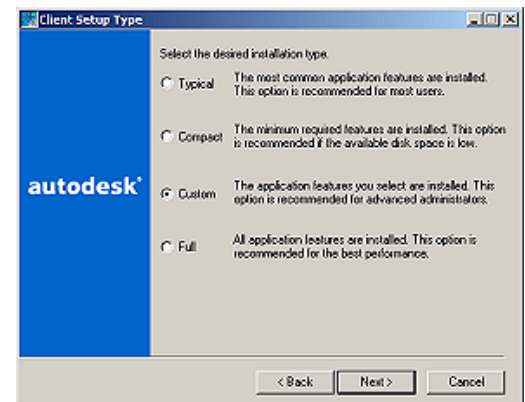
The multiple locations for support files make things a bit confusing at first, and you need to plan the level of individual customization allowed. The default install effectively allows EVERY user to have complete control of an individualized and independent support file structure. This is probably not what most firms will want to do. Most companies want all the users to employ the same support files to be able to centralize and standardize the output from AutoCAD.

Where Are The Default Installation Locations?

As is traditional with almost all Windows software, there are multiple installation Setup types available: Typical, Compact, Custom and Full.

These default "CD" Setup types:

- o Create AutoCAD 2004 specific folders in the All Users folder of Windows.
- o Create AutoCAD 2004 specific folders in C:\Documents And Settings\\Application Settings\ folders of the current user and also in the C:\Documents and Settings\\Local Settings\Application Settings\ folder.
- o Create support file locations in the Windows My Documents folder of each AutoCAD user.
- o Install the core program files in the typical Windows Program Files directory (C:\Program Files\AutoCAD 2004\).



Where is the My Documents folder located on your machines?

The location of the My Documents folder can be set by the Windows Active Directory and Active Directory Group Policy. Therefore, you need to KNOW where the My Documents folders are actually located on your computer or network before you install and/or deploy AutoCAD 2004.

The My Documents folder may be relocated to a network server location by your network configuration. The default CD Setup types add about 20MB to the folders. Therefore you need to make sure that the current network disk quota policy allows for this extra disk usage AND the server itself has enough open disk space to accommodate the new AutoCAD deployment.

Compatibility with Previous Releases

None of the CD Setup types will overwrite other AutoCAD software that is already installed on the computer UNLESS you install to those existing installation folder locations. Therefore, AutoCAD 2004 works fine on the same computer as earlier releases of the software. It does NOT force you to upgrade existing AutoCAD installations.

AutoCAD 2004 will NOT Save back to AutoCAD R14 format. You can save to an AutoCAD 2000 format .dwg file and use AutoCAD 2000, 2000i, or 2002 product, or Migration Assistance from AutoCAD 2000-2002 to save back to R14 format if you must.

Tools Palette Precautions

AutoCAD 2004 includes a new Tool Palettes interface to help you rapidly customize AutoCAD and improve user productivity. The Tool Palette feature can be employed to individually customize AutoCAD and/or to customize every user's working environment. By default, Tool Palettes install to the User Profile, so they are individually customized for each user. They are also tied to Windows Registry keys so they cannot be manually copied from workstation to workstation. You must use the Export/Import commands to move them to new computers.

Tool Palettes are based on XML technology and the location of the included images, blocks and other files are based on URL type file path locations. Therefore, in some respects, Tool Palettes and items on a Tool Palette work as hyperlinks. You can export and import customized Tool Palettes, however you also need to consider the shared location of the Tool Palettes themselves and the items (blocks and images) that they point to when you construct them.

If you want to share new Tool Palettes between users, you must place your Blocks or other DWG files that are being referenced to a shared location on the network before you create the Tool Palettes. If you want to share the default AutoCAD Tool Palettes between users, you will have to move the Files that it references for Blocks to a shared location on the network. Then, you must go to the Tool Palettes and change the path location for the blocks to the new location.

Upgrade Warnings and Cautions

If you are upgrading from a much older release of AutoCAD (i.e. R14) and your company has skipped implementing any 2000+ release products here are a few things you should consider carefully:

- Plotting WILL be an issue. Plotting in 2000+ software is DIFFERENT from R14 and earlier releases. If you get and deliver end user training you will save yourself a lot of aggravation, time and money.
- Do NOT attempt to force the new software to work like the older version of the software by installing old menus and Lisp routines. Typically, this is problematic for a number of reasons, but is also counter productive. If you are persistent enough to succeed, you end up with brand new software that works like ten year old software. You will effectively customize out an incredible amount of potential user productivity. People are ALWAYS more adaptive than computer hardware or software.

- If you want to customize the software, AutoCAD 2004 has powerful customization features built into it that work more effectively than menu coding and LISP routines. The Design Center and Tool Palettes will meet most organization's customization needs more than adequately. AutoCAD 2004 also ships with a huge amount of built-in functionality that replaces a lot of older code. Finally, AutoCAD 2004 also includes a full version of Express Tools that includes even more user requested productivity tools AND the code work is done, maintained by someone else, and you already paid for it.
- Train your staff BEFORE you deploy the software. While it seems like a good idea to let people play around for awhile before they get trained, this never works in the real world with most people. Most people redefine their use of new software to what they already KNOW how to do. They actually become harder to train and less receptive to new ways of doing things when given the opportunity.

AutoCAD 2004 Installation Choices

There are a host of ways to roll out the software to your end users. Some involve lots of manual configuration and some less manual work, but more planning and setup work prior to rolling out the software.

Installing directly off the CD is the simplest way to install AutoCAD 2004. After you install you can adjust your user profile and move support files around as needed.

The Network Installation Wizard will help you create a customized deployment folder for Network or Stand Alone installations of the software. You can include Support Files and a customized User Profile to be installed instead of Autodesk's default profile.

Option A - Install Directly From The CD

If you essentially have only a couple of workstations to set up, this is probably your best option. This choice limits your customization to a manual configuration of the User profile and perhaps some movement of support files. You can even get tricky and install all the Sample stuff to one computer using a Full install, move parts of it to a shared location, and then use a smaller Custom set-up on the other computers. This can significantly reduce the disk footprint of the actual working software installs, but still allow users to have access to tutorials and other sample data.

A word of caution: DO install the Help files on each workstation. You can share these on a network location and save disk space on the local machines. (If you only have one or two machines, it may not matter.)

You will also want to read through the Network Installation Wizard even if you don't use that method. It will give you a better understanding of where files are located and how to adjust your AutoCAD Profile after you install AutoCAD 2004.

Option B - Use the Network Installation Wizard

Use this option if you need to install multiple seats of AutoCAD as Network or Stand Alone seats. The Network Installation Wizard will help you customize the AutoCAD installation for your company. You can do all the things it does manually, but that is too much work.

The Network Installation Wizard allows you to set up one or more AutoCAD 2004 deployments with the right settings so you don't have to manually change the AutoCAD settings on multiple machines after you install the software. You can employ it to add Service Packs; customize the default AutoCAD Profile to company specifications; and add other folders and files to the default installation folders.

Unfortunately the Network Installation Wizard will still install the support folders to each local computer. You cannot redirect where the support files are installed with the tool. Therefore, you will also have to copy the installed support files from one install to a network or separate workstation location so all your users can access them from the "same" location. You will also probably want to delete the support files from the default install locations on the workstations to eliminate end user confusion and to reduce potential inconsistencies. You can easily create and run a simple batch file to do this task.

Install the Network Installation Wizard

You will want to be logged in as an Administrator to install the Network Installation Wizard. You don't have to be logged on as an Administrator to run and set up a Deployment, but it makes it easier if you are.

1. Place your AutoCAD CD into your CD drive

The Autorun should start automatically. It brings up the Installation Window similar to what you see on the right.

To install the Network Installation Wizard,

2. Click on the Network Deployment link in the top bar

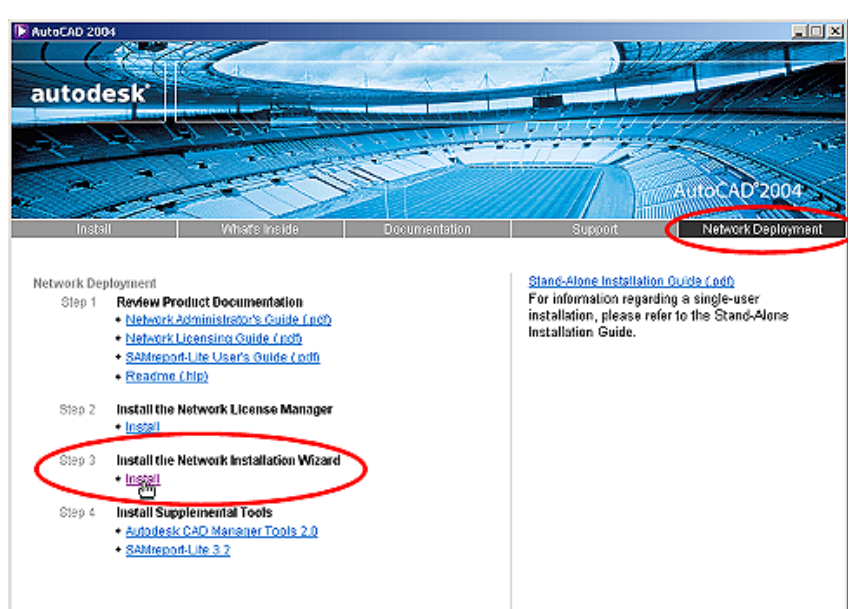
3. Click on the Install link under Install the Network Installation Wizard.

The Network installation Wizard will install and then finish.

It does not, however, start automatically.

In order to use it you must:

4. Go to Start>>All Programs >>AutoCAD>>Network Installation



The install for the network deployment tool installs to the profile of the currently logged on Windows User and DOES NOT automatically add the Tool to the Start Menu and/or Desktop of the Default or All User setup for the workstation. This is why we recommended that you log on as Administrator before you install the Network Installation Wizard.

If you installed the Network Installation Wizard as a different Windows User you can still run the Wizard. You should have Administrative rights to use the tool AND make and create the necessary folders needed in your deployment. Browse to the C:\Program Files\Autodesk Network Installation Wizard\ folder and double click the NetSetup.exe executable.

Before you start...

- Consider carefully whether or not you want to build an entire new workstation configuration, or just deploy AutoCAD 2004. **If your operating system install is more than one year old, you probably SHOULD rebuild the entire workstation configuration.** If you have to upgrade more than one or two workstations, you probably should own a copy of Norton Ghost or use a Microsoft RIS server.
 - We routinely rebuild workstations from scratch that include complex installations of Microsoft Office, a lot of other software, and multiple installations of different releases of Autodesk software. Even our very complex installations take less than two days to build from scratch and 30 to 45 minutes to deploy to multiple workstations using Ghost.
- We emphatically state that **you should NOT use the "Upgrade" installation option** for your workstation operating system, even if Microsoft says it will work. (Buying an upgrade to your operating system is fine. It is the installation that we are talking about.) You need to totally reformat the hard drive. If you don't, you are simply carrying along any Windows registry entries (most of them problematic at best) when you upgrade the operating system. This almost ALWAYS comes back to bite you, usually at the MOST inconvenient time.
- We also emphatically state that **you should NOT use Windows XP Home** as your operating system. Pay the extra money for the Pro version of XP even if you work alone. You will have far less problems and a much more stable workstation.

- Take the upgrade opportunity to make your production CAD seats consistent and easier to maintain. We have some clients who simply buy new hard drives for every machine to install new production workstation configurations to.
- Check to make sure your hardware will adequately support the software. AutoCAD and all Autodesk applications are particularly sensitive to how much memory is AVAILABLE to the application. Windows XP and AutoCAD 2004 have larger memory footprints than earlier releases. Typically, you want 512 MB of RAM on a production CAD seat. If you have small simple drawings you can probably get away with 256 MB of RAM. Finally, be aware that putting more than 750 MB of RAM on a Windows XP single processor computer will not necessarily make your computer faster. If you routinely open large drawings, you may want to consider upgrading to Autodesk Map instead of raw AutoCAD.
- Turn off ALL virus checkers BEFORE you start the CD install or creation of the deployment.
- You may want to copy the CD to a hard drive to eliminate the possibility that the install will fail due to CD driver issues which are not that uncommon with CDR and CDRW drives, even from mainstream manufacturers.

Building a Stand Alone Deployment of AutoCAD 2004

If your Network Installation Wizard is not yet started,

1. **Go to Start>>All Programs>>AutoCAD>>Network Installation**

The **Network Installation Wizard** allows you to either **Create a new Administrative Image**, or **modify an existing one**.

This is really handy for IT personnel who need to modify existing images when Service Packs come out.

2. **Pick Create an Administrative Image radio button**
3. **Click Next**



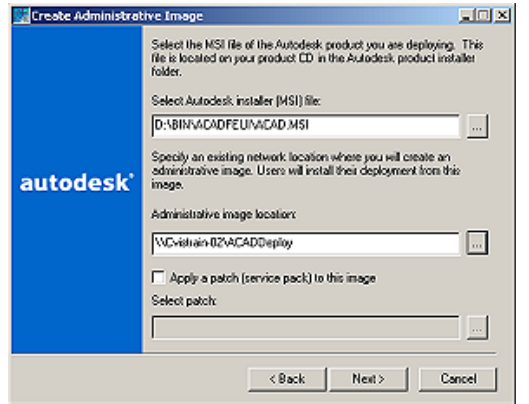
This box allows you to choose your AutoCAD **MSI** file. This could be either on your CD or on a copy of a local or network drive.

Some CD drivers cause the installation to end prematurely. You may need to copy the contents of the AutoCAD 2004 CD to a folder on your hard drive and then choose the MSI file from that location.

4. **Click the Ellipse button (...)** to choose a **MSI** file

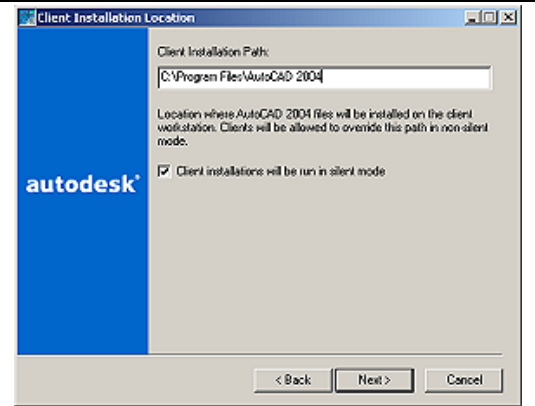
You will need to set up a Shared Folder on your network server before choosing the Administrative Image location.

5. **Click the Ellipse button (...)** to choose the **Administrative Image location**



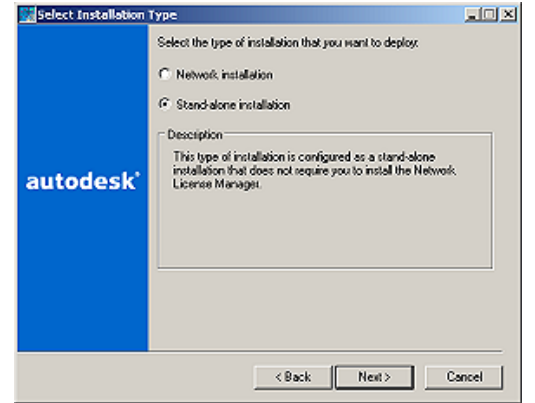
You can change the default Client Installation Path for AutoCAD on the local workstation, or just leave the default.

6. **Click Next** to accept the default installation location



The Select Installation Type box allows you to select either a Network or Stand-alone installation.

7. **Select** the Stand-alone installation radio button



8. **Click Next** to accept the default log file location

This log records which client workstations install the deployment. Running the installation creates additional logs on the client workstations that may help you debug problems with the install.



9. **Click** the Create a deployment radio button

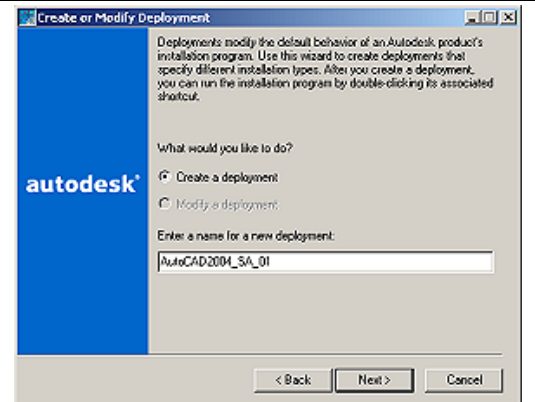
10. **Type** a name for the new deployment

Usually it is good to use some sort of file naming convention for the deployment name like this example:

AutoCAD2004_SA_01

<Product>_<Stand-alone/Network>_<Revision Number>

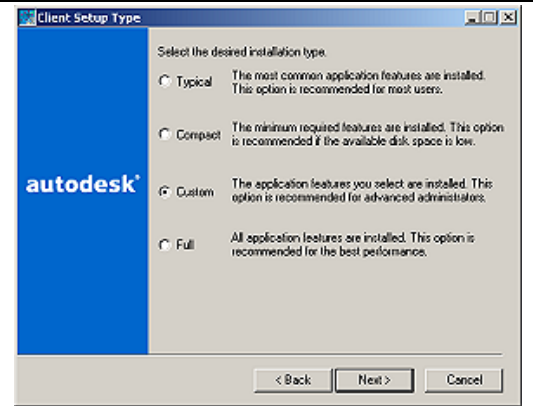
11. **Click Next**



Custom allows you to see what options are available for the install. Even if you end up choosing Full, it is always good to see what else might be available.

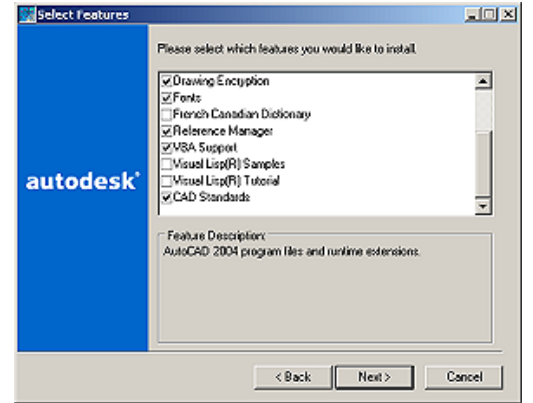
12. **Select** the Custom Radio button

13. **Click Next**



You can change what is installed by checking or un-checking the options.

14. **Click Next** to accept the default selections



If you are not using Internet Explorer 6.0, you will want to read the instructions as to what is needed.

15. **Type** a Profile Name for the default AutoCAD profile

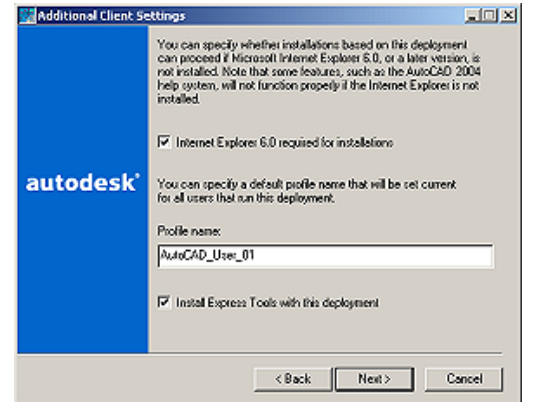
Usually it is good to use some sort of file naming convention for any named object like this example:

AutoCAD_User_01

<Product>_<User Information>_<Revision Number>

16. **Check** the box next to Install Express Tools if you want them included with this deployment

17. **Click Next** to continue



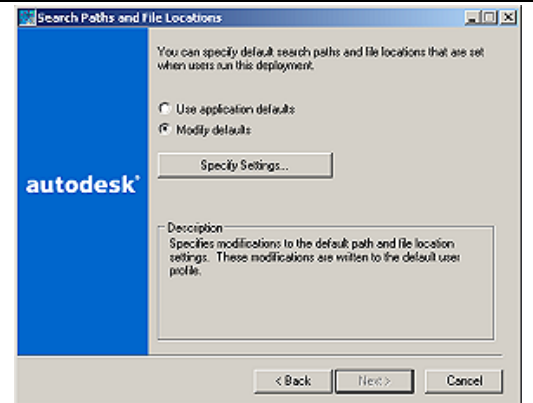
The Search Paths and File Locations box allows you to change the default AutoCAD Profile so that it looks to your custom support locations on your drive or on the network.

18. **Pick** the Modify defaults radio button

19. **Click Specify Settings** to edit the default AutoCAD Profile

These are AutoCAD System settings that you typically access inside AutoCAD via Options.

In AutoCAD 2004, all of these settings are stored in Windows Registry keys.



READ THIS SECTION FIRST
before you continue in modifying the
default profile.

You will NOT see this picture during
the installation.

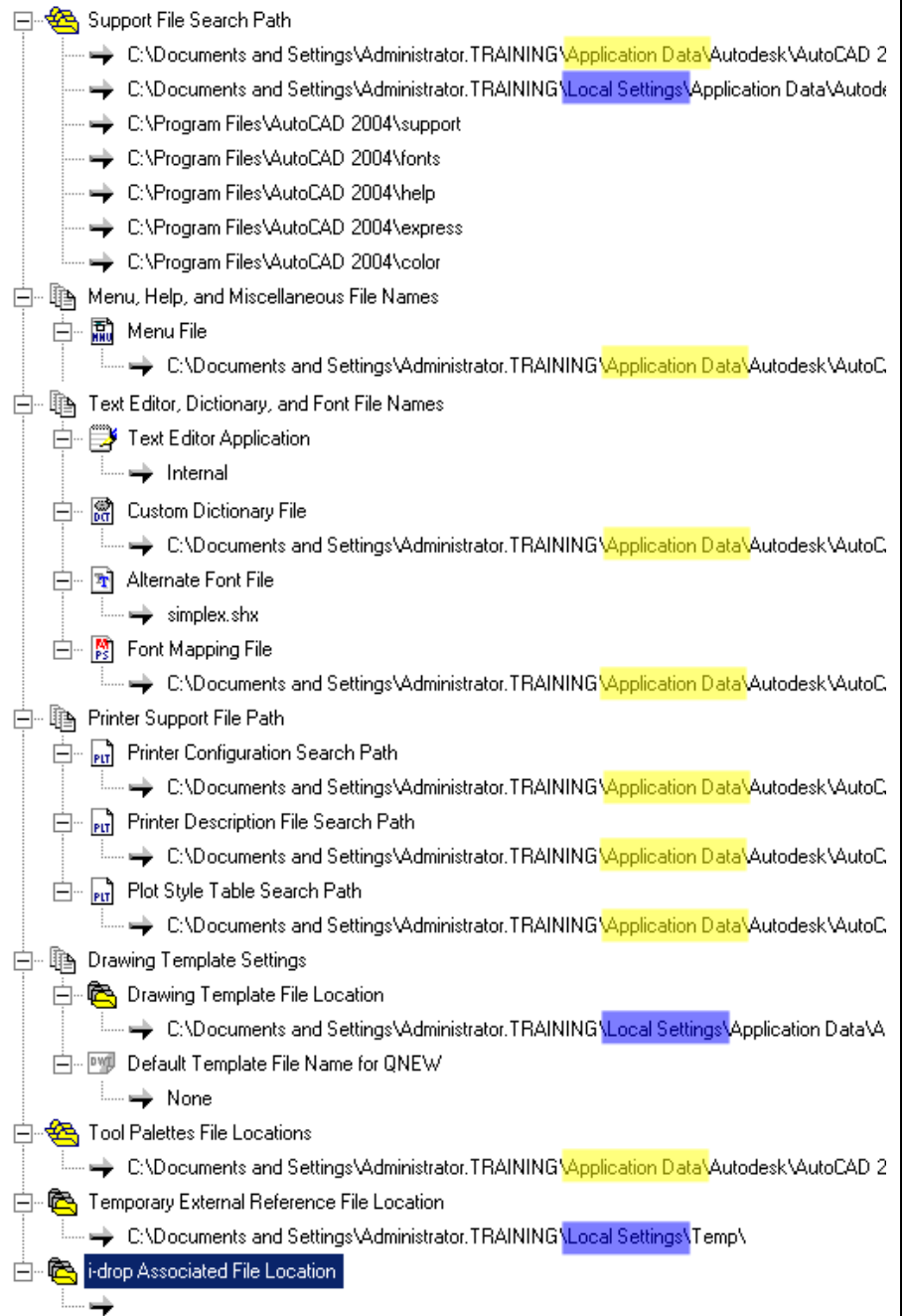
This is a picture of the Default Profile in AutoCAD, unmodified. The paths highlighted in this picture for Application Data and Local Settings reflect the default installation of AutoCAD.

WARNING: In the next dialog box (Specify Settings), the paths listed for Application Data and Local Settings DO NOT APPEAR CORRECTLY. They appear to be reversed:

- o When it says:
 <User Profile Local Settings>
 It is actually referencing the Application Data folder in the user profile.
- o When it says:
 <User Profile Application Data>
 It is actually referencing the Local Settings folder in the profile.

Use this as a reference for the correct paths in the following dialog box (Specify Settings).

Note: This problem only seems to be a miss-labeling in the Specify Settings dialog box. AutoCAD still runs and installs correctly.



In the **Specify Settings** box there are four default types of locations that you can change.

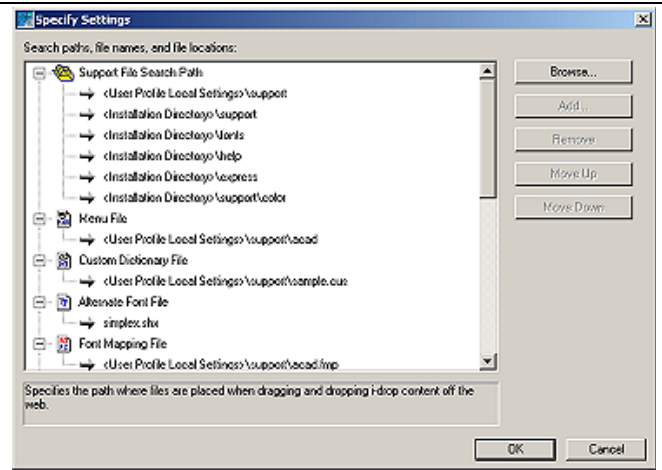
Note: The **Application Data** and **Local Settings** appear to be reversed in this box. For an explanation see the previous page.

1) <User Profile Local Settings>

This is actually the **Application Data** folder; the location for the **roamable** files that are installed in the end-user profile in C:\Documents and Settings\\Application Data\Autodesk\AutoCAD 2004\.

2) <User Profile Application Data>

This is actually the **Local Settings** folder; the location of the **non-roamable** files that are installed in the end-user profile in C:\Documents and Settings\\Local Settings\Application Data\AutoCAD 2004\.



3) <User Application Temporary folder>

This is a user and application specific temp folder contained within the user profile on the workstation.

4) <Installation Directory>

This is the install folder for the software. Typically located in the C:\Program Files\AutoCAD 2004\ folder of the workstation.

Realize that you are NOT changing the installation folders for any of the files in this dialog box.

The files will still be installed as per the MSI file you picked earlier.

You are simply changing the values saved to the default named AutoCAD User Profile that is built during the install.

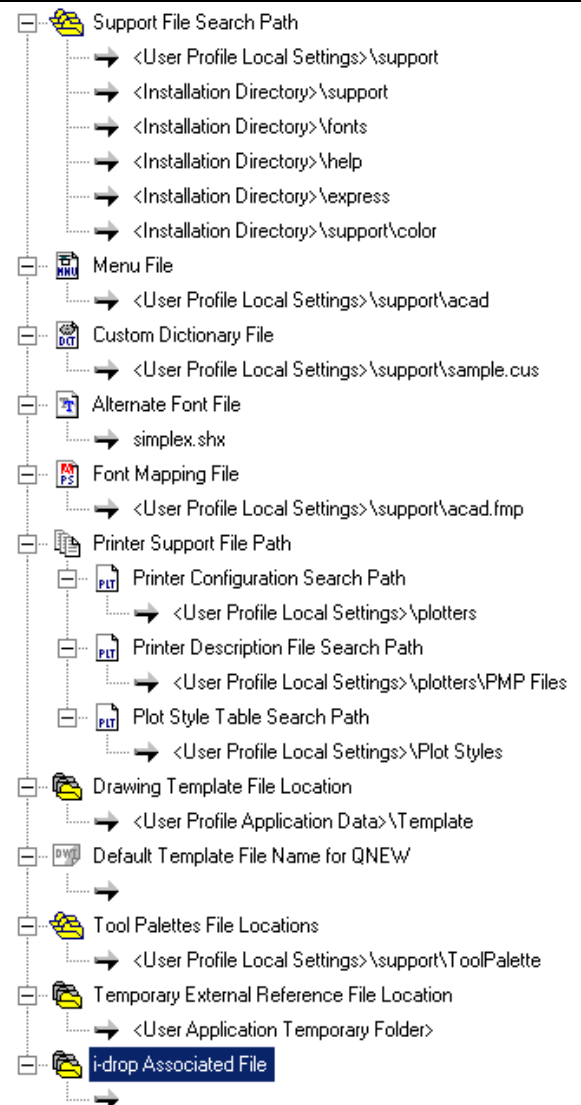
The paths you use in the **Support File Search Path** portion will become the **Working Support File Search Path** that the AutoCAD profile actually uses.

*If the software is unable to find the locations you set here, the software automatically reverts to using the default installation paths and these are displayed in the **Working Support File Search Path** section of the profile inside AutoCAD.*

This is a fail safe procedure employed by AutoCAD to keep the software running in case the support files are unavailable for one reason or another.

Therefore, BEFORE you actually start AutoCAD make sure that the shared folder locations that you have specified exist and that the folders actually contain the appropriate file and/or subfolders and files. Also, make sure the end-user has proper permissions to access the locations of the folders and files.

Most of the actual support file locations are defaulted to the <UserProfile Local Settings> which is actually the **Application Data** folder containing the roamable files.



For our example Profile we changed almost everything to point to a network server and shared set of common support folders. We tested to see whether or not all the locations could be changed and all the support files moved to another location.

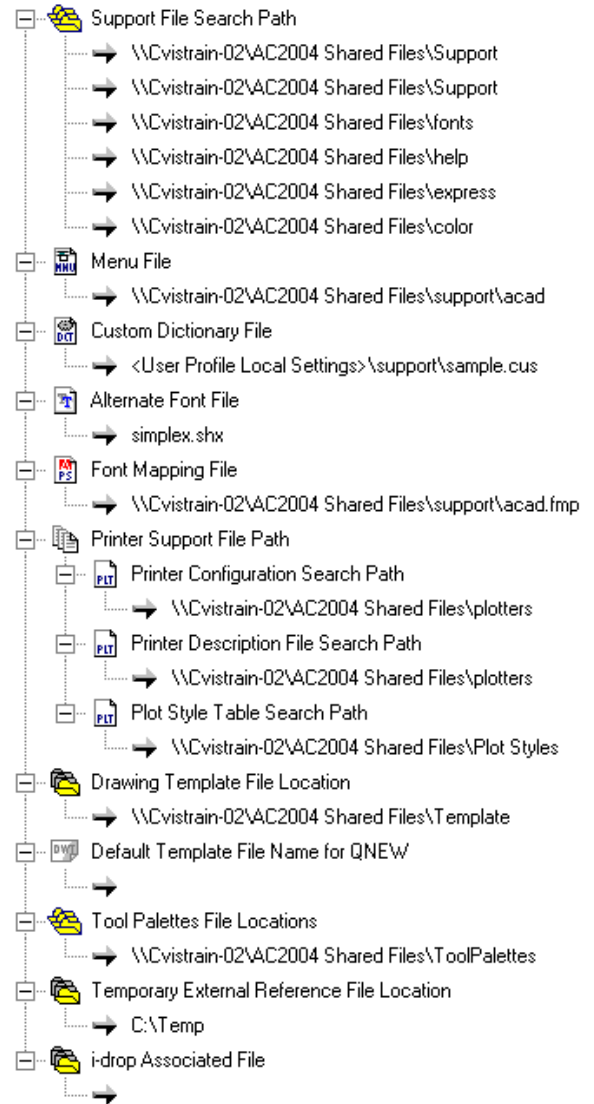
This installation would result in:

Every user employing the same:

- o Core support file locations for Fonts, Help, Express Tools, and Color configurations
- o acad menu file
- o Font mapping file
- o available Plotters, PMP files, and Plot Styles tables
- o Templates folder
- o Tool Palette file location

If your workstation became disconnected from the server with the shared folders for the Support Files, Tool Palettes, Plotters, and Templates, but you left copies of all these files in their default locations on the workstations, then:

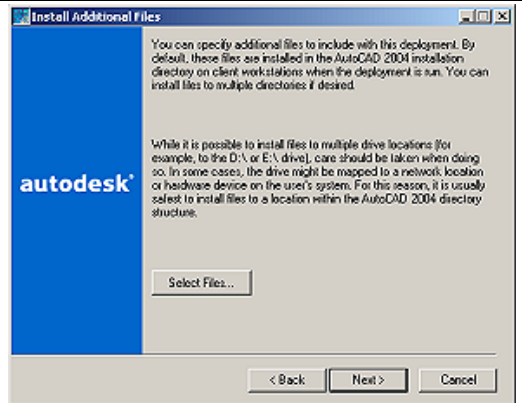
- o The Working Support File Search Path in AutoCAD would default to include all of the default install locations.
- o The Tool Palettes would create a new blank Tool Palette, but you would not have any existing Tool Palettes.
- o If you attempted to access any plotting resources, you would receive errors.
- o If you tried to use a Template, you would be forced to Browse for an appropriate dwt file.



The **Install Additional Files** dialog box allows you to customize your installation by adding files to the default installation directory.

This means that you can add Fonts (*.shx), Plot Files (*.pc3), Plot Styles (*.ctb, *.stb), etc. to your default installation.

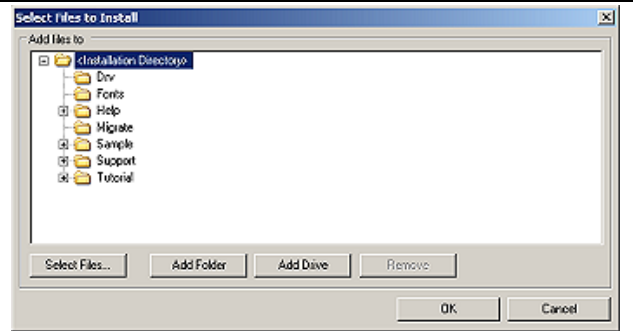
20. Click on the **Select Files to add files to the installation directory**



In the **Select Files to Install** box you can see the existing folders and you can add new folders for your customized installation.

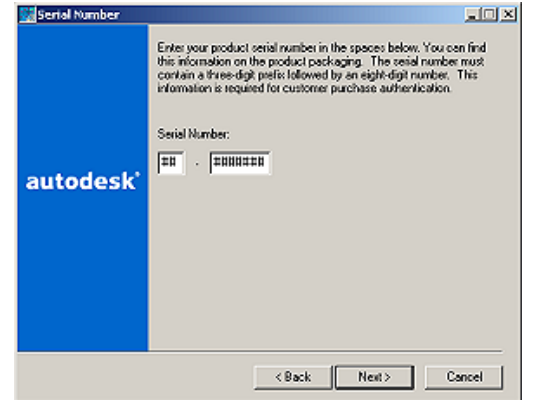
If you add a new folder, make sure the path is included in the profile created earlier.

21. **Click OK** when finished



22. **Type** in the **Serial Number** for the AutoCAD CD

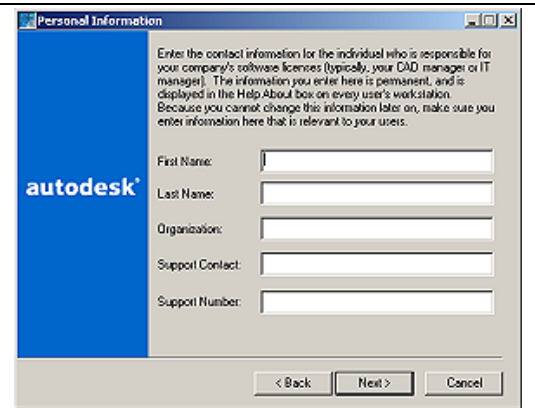
23. **Click Next**



The **Personal Information** box is fairly straight forward. For Support Contact and Number you can put CVIS, 1-800-511-8020.

24. **Type** in your **personal information**

25. **Click Next**



The **Live Updates** box controls if and how you are notified when Service Packs are released for AutoCAD. We do not recommend disabling this service because it keeps you up to date with the latest Service Packs and Patches

26. **Select Receive Live Updates from...**

- o ...Autodesk if you are a small company
- o ...Internal Server if you have many users and the IT department or CAD Manager wants to test the Service Packs before they are installed.

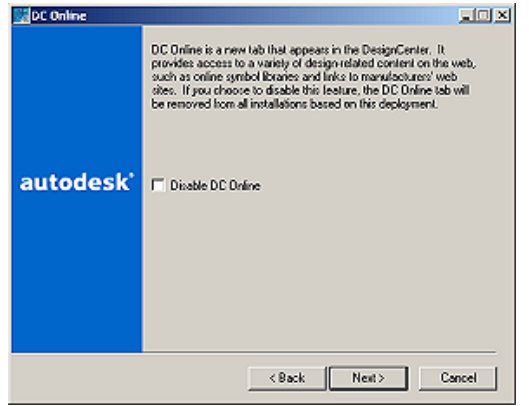
27. **Click Next** to continue



DC Online enables you to access blocks and other content on Autodesk's website through the Design Center.

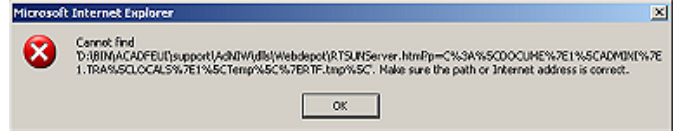
Disable this option if you do not have a connection to the web, or you do not want access for your users to this site.

28. **Click Next** to continue



If you get an error similar to this, it means that you need to copy the whole AutoCAD CD to your hard drive. This usually happens because of conflicts with the CD driver.

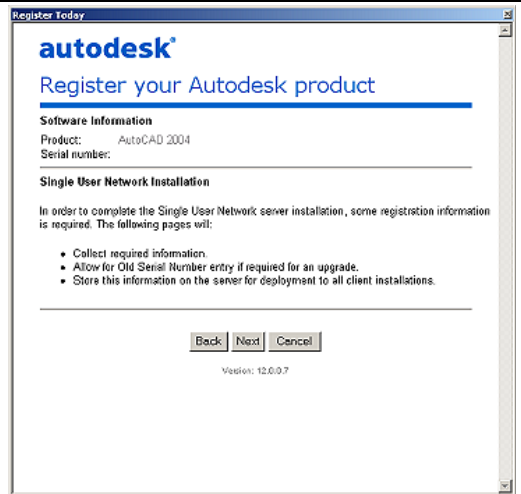
Start the Wizard again and select the MSI file that you just copied to your hard drive instead of using the CD.



Register Today begins the registration process for the installation.

29. **Check** your **Serial Number** to make sure it is correct

30. **Click Next** to continue



Fill out the following information

31. **Select** Company or Individual

32. **Select** the Country

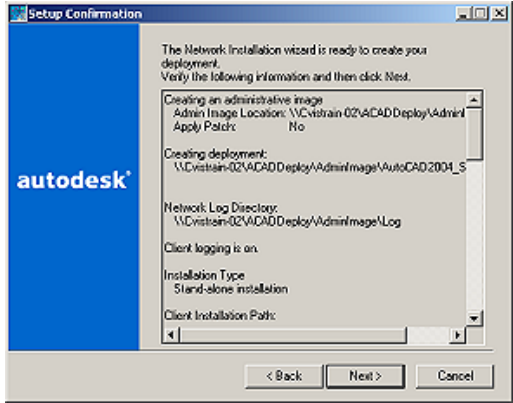
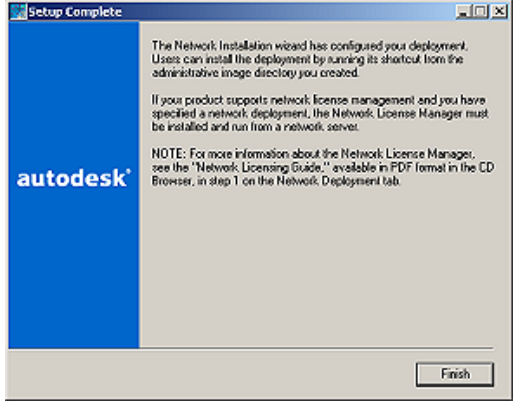
33. **Select** the Upgrade status

34. **Click Next**

35. **Fill out the following page** for **Company Information** (not shown here)

36. **Click Next**



<p>37. Review the information to make sure everything is correct</p> <p>38. Click Next</p> <p>This will begin the installation of the Stand-alone Administrative image.</p>	
<p>39. Click Finish to exit the Network Installation Wizard</p> <p>This finishes the installation of the Stand-alone image. Now you can go to a workstation and install AutoCAD over the network using this image.</p>	

After You Create the Image

Once you have completed the creation of the image, ALWAYS test an installation of the image.

It is also likely you will need the support folders and files to copy to your shared location or local drive location.

After you have moved and/or copied the appropriate file to the locations you have configured, Start AutoCAD and immediately check the Options:

- o Did the Working Support File Search Path match your configuration?
- o Do the other locations appear as you expected them to?

Check the install locations using Windows Explorer:

- o Did your added files get installed and to the correct locations as expected?

Check the functionality of AutoCAD:

- o Can you Add and/or configure a plotter?
- o Are your template files loading properly and producing the results you expect?
- o Are your customized support files loading?
- o Do your customized support files need to be moved up in the Search order? (in the Options dialog box)
- o Does the Design Center open properly? (FYI - You can set the Home directory for the Design Center by right-clicking on a folder and selecting "set as Home". This allows you to click on the Home button in the Design Center toolbar and go to that location.)
- o Do your Tool Palettes work?
- o Can you create a new custom Tool Palette?

How Will You Roll Out the Installs?

You have multiple choices of how you roll the install out.

We have already mentioned that you could take this opportunity to build the new upgrade install into a maintenance rebuild of your product CAD seats. In the scenario you probably want to employ Norton Ghost, Microsoft SMS Server, and/or Microsoft RIS Server to do this.

If you choose not to rebuild your CAD seats, remember that the user who initially installs the software must be an Administrator on the local machine.

It might be handy to make a temporary installation Administrator login to install the software. This allows you to remove that specific user profile from all the workstations when you are through and not mess with your typical maintenance Administrator account's profile. You can even install the new software from the shared deployment folder by simply emailing your end-users the temporary login name, temporary password, and shared folder location. You can get tricky here and have a batch file that runs when they log out as the temporary user which would do the profile and support file clean-up operation for you.

You can employ the Microsoft Active Directory's Group Policy tools to publish the install as an icon on Windows Desktops either by Computer or by User if the Computers or Users are members of a Group which allows you to manage their Group policy. The Autodesk Network Installation guide covers these methods and the "plus and minus" of both approaches effectively.

What If You Want To Tailor The Install In More Detail?

The Network Installation Wizard is a basic tool that accomplishes what most firms need to do in a standard install. However, it is far from perfect and very generalized in its application. If you want to get more control of the installation process you can use the Microsoft Scripting Host, to manually create your own MST files that adjust the supplied MSI file. This is NOT a task for the uninitiated. You must possess a good knowledge of VB scripting, Microsoft installation methodologies and technology, and how the new AutoCAD both installs and how it works.

About the Authors

Portions of this document were produced and edited by multiple members of CVIS Technical Services staff without whose knowledge and expertise this document would be impossible to produce.

Special recognition to the Clients of CVIS and their staffs who aided in the validation and review of the contents.

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Late updated on 1/22/2004 4:28 PM