

Nate Bartley and Jerry Milana

IT23-1 In this session, you'll leverage the new functionality in the Network Installation wizard and learn a step-by-step process for using group policies to install AutoCAD® 2004 to local workstations.

About the Speakers:

Nate Bartley has worked for Autodesk for over 10 years, most recently as a quality assurance engineer on the interoperability team specializing in network and operating system issues. As an Autodesk® software user since 1984, he has used, trained, tested, and supported AutoCAD® and AutoCAD-based products. Before joining Autodesk, he was a CAD manager for a small architectural firm in San Jose, California. Nate earned his B.S. degree in Architectural Engineering from the University of Colorado, Boulder. nate.bartley@autodesk.com

Jerry Milana is a senior principal consultant with Autodesk Professional Services (APS), specializing in network and operating-specific issues. In addition to providing support and training to dealers and major accounts, Jerry also represents the Product Support Department at product development meetings. Prior to joining Autodesk, he was in charge of sales and support for an AutoCAD® dealer. Jerry served as president of an AutoCAD user group and on advisory councils for local collages. He has accepted numerous invitations to lecture on TCP/IP networking and AutoCAD topics. Jerry has also contributed to CADENCE magazine on networking AutoCAD.

This paper provides a step-by-step process for creating a Group Policy that will install AutoCAD 2004 or AutoCAD 2004-based products to a computer. The Group Policy method used is *Assigned to Computer*.

NOTES:

- Windows XP Pro and Windows 2000 are the only supported operating systems for group policies
- The computer where AutoCAD will be installed must have Internet Explorer 6.0 or later installed. If it does not, you can install it from the AutoCAD product CD.
- The computer where AutoCAD will be installed must have Microsoft Installer (MSI) version 2.0 or later installed. The easiest way to check the version of MSI is to check the properties of *MSIEXEC.exe* and the version found on the Version tab. MSIEXEC.exe is located in the *SYSTEM32* folder. If it is not version 2.0 or later install MSI from the AutoCAD CD.

If IE6.0 or MSI version 2.0 is not installed when trying to apply the GPO, it will fail.

 In order to use Group Policies to install AutoCAD 2004 under Windows 2000, you must download the AutoCAD GPO fix from www.autodesk.com at:

http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=3427158&linkID=2475161

- There are two other methods of Group Policy installations that are not covered in this document: Assigned to User and Published to user. Currently we document how to use these two methods in the Network Administrator's Guide but both have their limitations and are NOT the recommended methods.
- \circ $\;$ The screen captures in this document are for reference only.
- Whenever AutoCAD is mentioned in this document, it can be replaced by AutoCAD 2004 or most AutoCAD 2004-based product.
- AutoCAD 2004 is used as an example. Other AutoCAD 2004-based products will work with small modifications.

Installing AutoCAD using Group Policy

Below are the main steps and requirements for using group policies to install AutoCAD 2004 or AutoCAD 2004-based products.

General steps and requirements:

- 1. Create a deployment (AdminImage) using the *Network Installation Wizard* (NIW). The AdminImage will be used by the Group Policy to install AutoCAD to a workstation.
- 2. (Windows 2000 only) Download the AutoCAD GPO (MST) fix from www.autodesk.com that allows AutoCAD to be installed using group policies.
- 3. Workstations must be part of a domain and assigned to an Organization Unit (OU) in the Active Directory tree. The workstation must also have Internet Explorer 6.0 or later installed and Microsoft Installer (MSI) version 2.0 or later prior to applying the group policy.
- 4. Create a Group Policy Object (GPO) in the Organizational Unit where AutoCAD will be installed. Only computers within this OU or child OU will receive the GPO thus installing AutoCAD. You must apply the AutoCAD GPO fix during the creation of the GPO, if you are targeting any computers running Windows 2000.
- 5. Reboot each computer to receive the group policy
- 6. Verify that AutoCAD was installed and runs.

Create a deployment (AdminImage)

NOTES:

 If you want to include a Service Pack in the Administrative Image for AutoCAD 2004-based products, you must first apply the Network Installation Wizard Service Pack (patch) first. You can find the NIW SP and its instructions at:

http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=3527639&linkID=2475161

 It is recommended that you test the deployment created by the NIW before creating the group policy, this ensures that AutoCAD installs correctly without group policies being involved.

Using the Network Installation Wizard (NIW) create a deployment. The deployment creates an Administrative Image (AdminImage) to be used by the group policy. Note the share name (UNC path) where the AdminImage is located. You will need the share name when creating the group policy.

🧱 Create Administrat	ive Image
autodesk'	Select the MSI file of the Autodesk product you are deploying. This file is located on your product CD in the Autodesk product installer folder. Select Autodesk installer (MSI) file: F:\BIN\ACADFEUI\ACAD.MSI Specify an existing network location where you will create an administrative image. Users will install their deployment from this This is the UNC path that you will need image. Administrative image location: \\POSSRV\deploy\a2k4sp1 Apply a patch (service pack) to this image Select patch: D:\fixes\v124.r2\v086_v124_acad_unl.msp
	< Back Next > Cancel



In this example, the MST created by the NIW will be *standalone.MST* and can be found in *POSSRV\deploy\a2k4sp1\AdminImage*.

NOTE: The steps to actually create the AdminImage using the Network Installation wizard are not documented. Consult the Network Administrator's Guide if you need help using the NIW. The NIW was demonstrated in class.

Copying the AutoCAD GPO (MST) fix into AdminImage folder (Windows 2000 only)

To make applying the fixed MST for installing via group policies easy, copy the file *GPOa2k4sp1.mst* that you downloaded from the web to:

\\<UNC Path where deployment was created>\AdminImage

In our example, the path would be \\POSSRV\deploy\a2k4sp1\AdminImage.

NOTE: The GPO MST fix may be applied to a deployment that will be installed to both Windows 2000 and Windows XP computer with no ill affect on the XP computers.

Adding a computer to an OU within the Active Directory

Adding a computer to an OU within the Active Directory tree:

- 1. First add the computer to the domain. By default when a computer is added to the domain, it is placed in the *COMPUTER* organization unit (OU) within the Active Directory Tree. This can be verified by:
 - a. Start the *Active Directory Users and Computers* management console, Start menu | Programs | Administrative Tools | Active Directory Users and Computers.
 - b. In the management console under the left-hand pane under the Tree tab you should see your domain (domainname.com). If the Domain tree is not expanded click on the plus (+) symbol next to the name to expand it. Select the *COMPUTERS* folder.
 - c. In the *COMPUTERS* folder, verify that the computer for which the group policy will be applied is contained within this folder. You will be moving this computer to the correct OU in step 3 below.

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Tree	Computers 1 obje	cts		
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E Domain Controllers				
Hardware				
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E Goppertop				
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- 2. Create a *TEST* organizational unit or use an existing OU. This OU will be used when creating the GPO that will be used for installing AutoCAD.
 - a. Start the Active Directory Users and Computers management console if it is not already started.
 - b. Select the domain (domainname.com) in the left-hand pane of the management console and right-click. In the popup menu, select New | Organizational Unit.

🐗 Active Directory Users and Co	nputers			
Gonsole <u>W</u> indow <u>H</u> elp				_ 8 ×
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or the compution of the computer of the comput	ers Name	Туре	Description	
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Builtin Delegate Cont Gondator Compute Connect to Do Connect to Do Operations Ma Gereign Headque Mew	ol nain ters • • • • • • • •	Organizational Container Organizational Organizational Computer Contact Group Organizational Unit Printer User Shared Folder	Default container for upgr Default container for new Default container for secu	
Create a new object				

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The New Object – Organizational Unit windows will be displayed.

c. In the New Object – Organizational Unit window enter *TEST* for the name of the new OU. Click OK.

Ne	w Object	- Organizat	ional Unit	×
	3	Create in:	POSCO.com/	
	Name:			
	TEST			
-				
			ОК	Cancel

You have created a new OU called *TEST* which will be used for creating the GPO.

- 3. Move the computer to the *TEST* OU.
 - a. Start the *Active Directory Users and Computers* management console if it is not already started.
 - b. Select the COMPUTERS OU from the left-hand pane.
 - c. Select the computer to be used in testing in the right-hand pane and right-mouse click. In the popup menu select Move. A Move window is displayed.



d. In the Move window, navigate to the TEST OU and press OK.

Move	? ×
Container to move object to:	
POSCO Point Poi	
OK Can	cel

The computer is now in the OU where the Group Policy will be created and applied.

Create a GPO to install AutoCAD.

NOTE: This is where the AutoCAD GPO fix is applied for Windows 2000.

- 1. Start the *Active Directory Users and Computers* management console if it is not already started.
- 2. In the left-hand pane, right-click on the *TEST* OU and select Properties from the popup menu.

Console Window Action View Yee Image: Security Principals Image: Sec	🐗 Active Directory Users and Compu	uters			
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Export List Properties Help	Tree Active Directory Users and Computers POSCO.com Builtin Computers Computers Computers ForeignSecurityPrincipals ForeignSecurityPrincipals ForeignSecurityPrincipals ForeignSecurityPrincipals Delegate Control Add members to a gro Move Find New All Tasks View New Window from He Delete Rename Refresh	TEST 1 objects	Type Computer	Description	
Properties Help	Export List				
Help	Properties				
Opens property sheet for the current selection.	Help Opens property sheet for the current select	tion.			

This brings up the *TEST Properties* window.

- 3. In the *TEST Properties* window select the Group Policy tab.
- 4. In the Group Policies tab click the *New* button. A "New Group Policy Object" is added to the *Group Policy Objects Links* list and is highlighted to be renamed. Change the name to *AutoCAD GPO test*. Click the *EDIT* button.

TEST Properties ?	x
General Managed By Group Policy	
Current Group Policy Object Links for TEST	
Group Policy Object Links No Override Disabled	
AutoCAD 2004 GPO test	
Group Policy Objects higher in the list have the highest priority. This list obtained from: possrv.POSCO.COM	
New Add Edit I Un	
Determined Determined Determined	
Uptions Delete Properties Down	
Block Policy inheritance	
Close Cancel Apply	

The Group Policy window is displayed.

- 5. In the left-hand pane under Computer Configuration select Software Settings. Click the plus (+) symbol next to Software Settings under Computer Configuration to expand the tree view. This will display *Software installation* object.
- 6. Select the *Software Installation* object and right-click. Select *Properties* from the popup menu.

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Tree	Name	Version	Deployment state	Auto-install	Upgrade T
AutoCAD 2004 GPO test [possrv.PC Computer Configuration Good Software Settings Software installation Computer Configuration Computer Con	ew iew efresh xport List roperties elp				<u>.</u>
Upens property sheet for the current sel	ection.				

The *Software installation Properties* window is displayed.

7. In the *Software installation Properties* window click the *Browse* button.

Software installation Properties
General File Extensions Categories
Default package location:
Browse
New packages
When adding new packages to user settings:
O Display the Deploy Software dialog box
C Publish
C Assign
O Advanced published or assigned
Installation user interface options
Basic
O Maximum
Uninstall the applications when they fall out of the scope of management.
OK Cancel Apply

The *Browse for Folder* window is displayed. Navigate to the *AdminImage* folder found under the UNC path used when creating the deployment in the NIW. Be sure to go through Microsoft Windows Network and NOT the Directory path. Click OK.



You are returned to Software installation Properties window.

8. In the *Software installation Properties* window under *New Packages* section select *Advanced published or assigned* radio button.

Software installation Properties
General File Extensions Categories
Default package location:
\\Possrv\deploy\a2k4sp1\AdminImage Browse
New packages
When adding new packages to user settings:
O Display the Deploy Software dialog box
C Publish
C Assign
Advanced published or assigned
Installation user interface options
Basic
C Maximum
Uninstall the applications when they fall out of the scope of management.
OK Cancel Apply

- NOTE: While Windows 2003 server is not currently supported, the option "Advanced published or assigned" has changed to just "Advanced".
- 9. Click *OK* to close the Software installation Properties window and return to the Group Policy window.
- 10. Again right-click on *Software installation* under Computer Configuration | Software Settings. In the popup menu select New | Package.

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Adds a package.					

An *Open* window is displayed and the location opened is the *AdminImage* folder created by the NIW. Select the *<Products>* MSI file and click *Open*.

Open				? ×
Look in:	🔁 AdminImage	•	+ 🗈 💣 🎟+	
History Desktop My Documents My Computer	Lula Log Msi Program Files support Windows			
My Network P	, File name: Files of type:	ACAD.MSI Windows Installer packages (*.msi)	•	Open Cancel

The AutoCAD Properties window is displayed.

- 11. (Only required if installing a language version of AutoCAD that is not the same language as the Operating systems be used. For example: Installing a German build of AutoCAD on English version of the operating system).In the *AutoCAD Properties* window, select the Deployment tab and click the *Advanced* button. The *Advanced Deployment Options* window is displayed.
- 12. (Only required if step 11 above is used). In the *Advanced Deployment Options* window, check "Ignore language when deploying this package". Click OK.

Advanced Deployr	nent Options ? ×		
Advanced deployment options: Ignore language when deploying this package Remove previous installs of this product from computers, if the product was not installed by Group Policy-based Software Installation			
Advanced diagno	stic information:		
Product code:	{5783F2D7-0201-0407-0002-0060B0CE6BBA}		
Deployment Count: 0			
Script name:	\\POSCD.com\ SysVol\ POSCD.com\ Policies\ {702A1573-B880-4D47-A954-507D6287E339}\ Machine\ Applications\ {77DC56A8-185D-4FA9-827B-0C9DE73057B1}.aas		
	OK Cancel		

difications tab. 13

4. I	In the Modifications tab click the Add butto	ne r on. ?\?
	General Deployment Upgrades Categories Modifications Securi Modifications or transforms allow you to customize the package and are applied to the package in the order shown in the following list:	ש <u>י</u> ש
	Modifications:	P
	Move Do	wn
	Add , Remove	
	Important! Do not press OK until all transforms are added and ordered correctly. For more information, right-click on the Modifications list box, then click What's this?	and

An Open window is displayed.

15. In the Open window select *GPOa2k4sp1.mst* and click *Open*.

Open		? ×
Look in:	Adminimage 🗾 🔶 🖆 🎫	
History Desktop My Documents My Computer	Eula Log Msi Program Files Support Windows Standalone.mst GPOa2k4sp1.mst	
	File name: GP0a2k4sp1.mst	pen
My Network P	Files of type: Windows Installer transform packages (*.mst)	ancel

You are returned to the *AutoCAD Properties* window with the MST file selected in the Modifications list.

- 16. Click the *Add* button again and select the MST file created by the NIW in the *Open* window. Click *Open* to return to the *AutoCAD Properties* window. The MST file created by the NIW now appears in the list.
 - NOTE: The order of in which steps 15 and 16 are executed are not important at this time. Should another transform (MST) file be released, it may be important to control the order.

AutoCAD 2004 Properties		? ×
General Deployment Upgrades Categories	Modifications	Security
Modifications or transforms allow you to customiz applied to the package in the order shown in the	e the package following list:	e and are
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\\Possrv\deploy\a2k4sp1\AdminImage\DID_4 \\Possrv\deploy\a2k4sp1\AdminImage\GPOa2	97311_/ 2k4sp1.r	Move Up
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Add Remove		
Important! Do not press OK until all transforms are correctly. For more information, right-click on the then click What's this?	e added and o Modifications	ordered : list box, and
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17. Click OK to close the AutoCAD Properties window and return to Group Policy window.

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$\Delta ction$ Yiew \Rightarrow E R B B					
Tree	Name 🛆	Version	Deployment state	Auto-install	Upgrade T
AutoCAD 2004 GPO test [possrv.PC Group of the configuration Group of the configurati	AutoCAD 2004	16.0	Assigned	Yes	Required
	•				<u> </u>
]					

The newly created package should appear in the right-hand pane when *Software installation* is selected in the left-hand pane of the Group Policy window. You can close the Group Policy window and the TEST Properties window. You are now ready to install AutoCAD to a workstation contained in the OU for which the GPO has been applied.

Verifying the GPO installs AutoCAD

Reboot a computer contained in the OU where the GPO has been created. During the boot up process you will see:

Applying software installation settings ...

Installing managed software AutoCAD

These messages appear in the startup message windows that are displayed after the operating systems logo screen.

At the completion of the boot up process, you will be at the system login screen. Login and verify that AutoCAD product runs.

NOTES:

- It is very important that no other group policy or group policy settings be changed. Changing settings without completely understanding what the setting does can cause conflicts that result in the installation failing.
- Group policies add entries into the systems event log. Installation messages appear under the Application Event log. This is a good place to see if the installation succeeded or failed. If failed, it may point you in the direction of where to correct the problem.

Verify that AutoCAD runs

Double-click on the AutoCAD icon. AutoCAD should start a second time user installation.

AutoCAD 2004		
1	Please wait while Windows configures AutoCAD 2004.	
Gathering required information		

At the completion of the setup, AutoCAD will be up and running. If your deployment included Service Pack go to Help | About | Product Information and verify that service pack has been applied.

Product Information	×
Product name:	Product release version:
AutoCAD 2004	2004.0.0
Product service pack:	Product serial number:
AutoCAD 2004 SP 1a	399-99999966
License type:	License expiration date:
Standalone - Unlocked	Saturday, October 25, 2003
License Agreement Sav	/e as Text File

NOTE: The Product Information dialog is different depending if you are running a stand-alone version of AutoCAD, Network version of AutoCAD or software locked version of AutoCAD. The example above is from a stand-alone deployment.

You can also run _VERNUM at the command prompt. _VERNUM will return version number (build) of AutoCAD. AutoCAD 2004 with no service pack is "V.0.86" with SP1 it is "V.1.22".

Conclusion:

As we saw in class, it is fairly simple to use a Group Policy to install AutoCAD 2004 to a workstation. In class, we also saw how to use the Network Installation Wizard to create a deployment to be used by a GPO. This paper provides the steps required to create a GPO to be used in installing AutoCAD. This paper did not cover all the different features of GPO but provides an outline of the recommended method on how to install AutoCAD 2004 through a group policy.