Autodesk University 2012

Supporting AutoCAD®: Tips, Tricks, and Troubleshooting Techniques

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AC3107

In this class, we will cover troubleshooting tips and techniques for issues that users may encounter in the latest versions of AutoCAD software.

We will look at the most frequent types of questions that the AutoCAD Support team has received in the last year, and attendees will learn how to troubleshoot and resolve these issues or how to avoid them.

The class will also include troubleshooting tips for some of the more recently added AutoCAD features, like the Autodesk® 360 cloud-based platform, model documentation, and Content Explorer.

Learning Objectives

At the end of this class, you will be able to:

- Better assist other users with AutoCAD issues
- Know best practices to avoid running into issues
- Be aware of some commonly-asked support issues and how to deal with them
- Diagnose and resolve some common issues

About the Speaker

Silvia Menon has worked with AutoCAD® since version 12, mainly as a architectural 3D visualization artist. She joined Autodesk Product Support in 2005, helping customers and partners with their questions and problems. Silvia used to be the Technical Lead for AutoCAD within Autodesk Product Support and is currently Product Support Manager for Autodesk in the UK.

Quick overview of the most frequent types of issues received by Autodesk Product Support

The range of issues and questions around AutoCAD that we receive in Autodesk Product Support is very diverse. However, there are some areas that do pop up more frequently than others.

One of the biggest groups are cases around Installation and Licensing. These typically account for around a third of the volume of support cases we receive.

This is closely followed by questions around Crashes or Error messages. Cases around Printing and Plotting are another large group followed by questions related to corrupted drawing files.

Due to the increase in malware out there, questions around AutoCAD viruses, and how to remove or prevent them, have also become a fairly large group.

Of all the features that were newly introduced in AutoCAD 2013, Autodesk 360 ranks as the one for which the most questions tend to come in, closely followed by questions around the new search-based Help System and questions regarding the new Model Documentation tools.

In AutoCAD 2012, one of the biggest areas in which we received cases was the Array command and the fact that there was no dialog box anymore. This was resolved in SP1 with the introduction of the ARRAYCLASSIC command.

Another new feature that generated a certain amount of support questions was the newly introduced Content Explorer.

Troubleshooting Installation and Licensing issues, crash errors, and corrupt files was already covered in my AutoCAD class “First Aid for AutoCAD – Troubleshooting Common Issues” at AU 2011.

The recording and the class materials can be found here:
http://au.autodesk.com/?nd=class&session_id=9757

We will therefore focus in this year’s class on troubleshooting issues around:

- Printing and Plotting
- Misc. Error messages
- Autodesk 360 / Sync
- Help System / Welcome Screen
- Virus Issues
- Content Explorer
- Model Documentation

Printing and Plotting

When encountering issues with printing, plotting or publishing, the first steps should always be to narrow down if the issue is drawing-specific or plotter-specific.

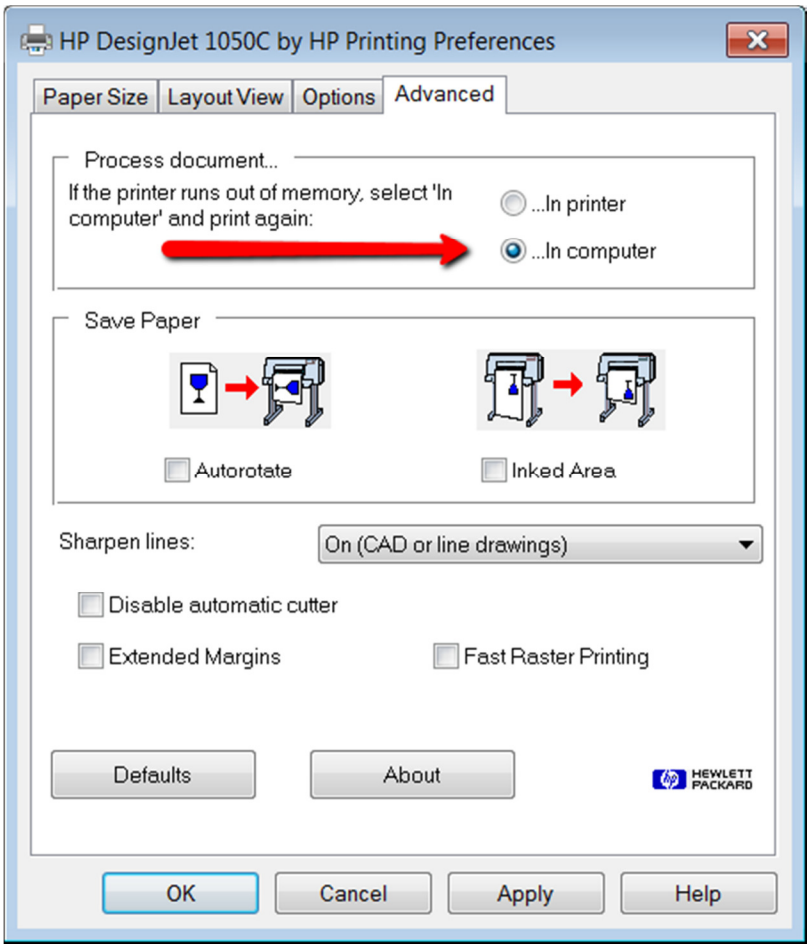
- Does it happen only with certain drawings, or with all files?
- Does it happen when you plot to another plotter or to a PDF or DWF?
- Do other users in the same network have the same problem?

Drawing –specific Issues

Images are not plotted or are incomplete

Often a memory issue

- If available (e.g. for HP-Plotters) set the process document option to “in Computer....”



- Plot directly to the plotter, without spooling

- Check the system variables:

  RASTERPERCENT

  Sets the maximum percentage of available virtual memory that is allowed for plotting a raster image

  RASTERTHRESHOLD

  Specifies a raster threshold in megabytes. If the plotted raster image exceeds this threshold, the availability of system memory is checked. The plot is aborted if the image is too big for the available memory

- Check if the drawing is set to plot with Transparency
  - Using transparency will cause the whole drawing to be rasterized, possibly causing a very large spool file, which in turn can result in memory issues.

    Possible workarounds:
    - Remove the transparency
    - Reduce DPI to 300
    - Print a pdf and afterwards print this pdf to the plotter

Crash when plotting specific drawing(s)

Things to check:

- Does the drawing contain proxy-elements? Does the issue still occur when they are removed?
- Does the drawing contain a large amount of hatches? (Memory on the machine can be exceeded)
- Page Setup: Set printer/plotter to 'None'

Clipped plot

If the plot output is cut off / clipped, check the following:

- Correct scale in the page settings?
- Drawing bigger than paper size?
- Check the plot offset
- Check the value of the system variable TARGET
  - Should have the value 0,0,0
  - Read-only system variable
  - Reset the value to 0,0,0 via DVIEW: http://usa.autodesk.com/getdoc/id=TS59340

Plotter-specific issues

No output from plotter

- Is the newest valid driver installed? (check manufacturer's website)
- Can the user print successfully to this plotter from other applications, like Word? (If not, then the issue is not caused by AutoCAD)
- Does the print queue hang on the print server?
    - Check the queue via browser. Switch off the external print server (put out the power connector), wait 1 minute (Cache will be cleared), then switch on again.
    - Disadvantage: All plots have to be plotted once more
- Does the print queue hang on the file server?
    - Stop and restart the service ‚Print Spooler'
    - Disadvantage: All plots have to be plotted once more

Crash when plotting (all drawings)

- Is the newest valid driver installed? (check manufacturer's website)
    - If it is a HP Designjet 500, and a 64 bit, try this driver.
- Check if the cause is a corrupt PC3-file
    - Under Options > Files > Printer Configuration Search Path, set the path to an empty folder (C:\test or something similar)
    - Copy your PC3 files one by one into this folder and keep testing if the error reappears

Printer cannot be selected in AutoCAD print dialog (keeps reverting to "none")

- Driver issue. Install the latest driver from the manufacturer's website. If the affected plotter is a HP Designjet 500, try the driver above.

Plot is rotated in AutoCAD 2013

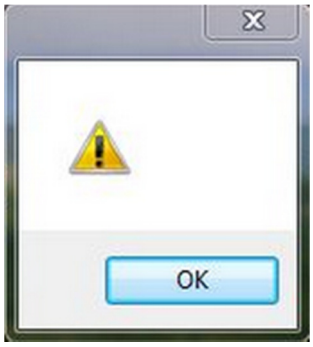
This can occur in some cases with older PC3 and PMP files. Re-creating the PMP file should resolve the issue.

Best Practices

- Use HPGL/2 drivers where possible
- Manage your PC3 files, avoid building up large numbers
- User transparency only when needed, be aware it will increase spool sizes

Misc. error messages

Empty error message when closing

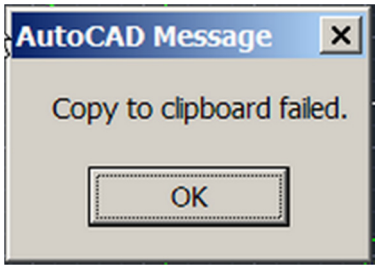


When running AutoCAD 2013 on a machine where previous versions of AutoCAD are installed, you may see this message when closing the previous version of AutoCAD.

The message is benign but can be annoying. Work on a fix is in progress. A repair installation of the affected AutoCAD version can remove the error, however, this can result in the error now appearing in the newer version.

Best practice: if you see this error, decide which version of AutoCAD is the one you use more frequently and repair this one.

Cannot copy to clipboard, Error “Copy to clipboard failed"



This message indicates that copy-pasting in the drawing is disabled because of the presence of Proxy Objects from another AutoCAD-based product.

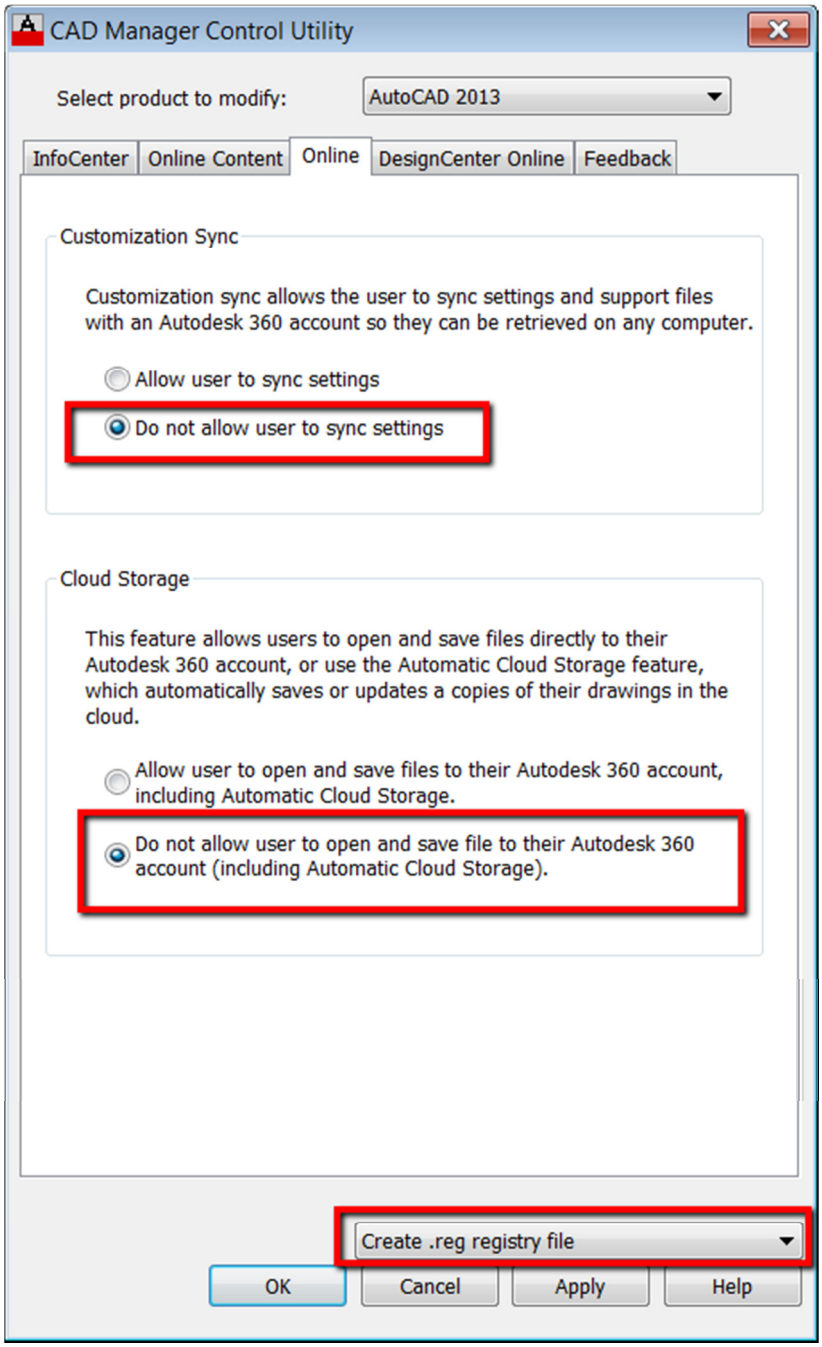
Export the drawing as a pure AutoCAD drawing using the –EXPORTTOAUTOCAD command.

If this does not resolve the issue, use the QSELECT command to select all objects of the type ACAD_PROXY_ENTITY and explode or delete them.

Autodesk 360 / Sync

Common question: How to disable saving to the Cloud for all users in your company

You can control this through the CAD Manager Control Utility



The CAD Manager Control Utility can be installed through the AutoCAD Installer, under “Install Tools & Utilities

Autodesk 360 Documents and XRefs

The folder paths of external references attached to drawings are *not* synchronized between your local computer and your Autodesk 360 account.

It is not recommended to try to maintain duplicate folder paths between your local computer and your Autodesk 360 account.

When working both in your Autodesk 360 account and locally on your computer, it is best to keep external references in the same folder as the parent drawing.

Issues uploading files larger than 500 MB via IE 8 or 9

Development is working on the issue. Workaround: use Firefox or Chrome

Issues viewing DWG files in 360

Make sure your browser supports HTML5 (latest Firefox or Google Chrome, or IE9)

3D Viewing of Dwf files not possible in IE

Need to use a Browser that supports WebGL, e.g. Firefox of Chrome. Or install Chrome Frame plugin for IE. Safari only supports WebGL on Macs running Snow Leopard.

Delay in seeing your uploaded files in Autodesk 360

You saved your drawing directly from AutoCAD in the Cloud, but when you log into 360 from your browser, you can't find the drawings

This is most likely the case when the local cache at

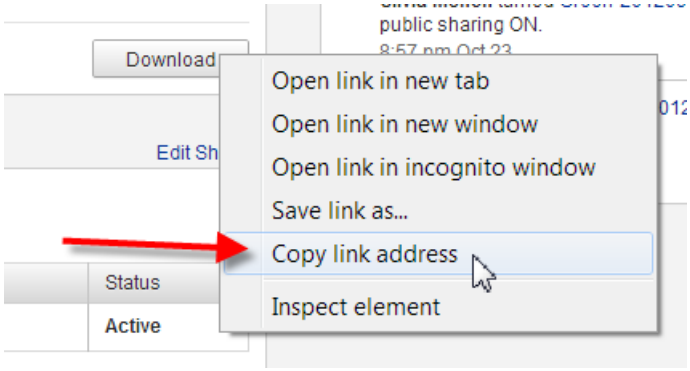
%localappdata%\Autodesk\Autodesk Sync\Cloud\<loginname>

was not yet synchronized with the cloud.

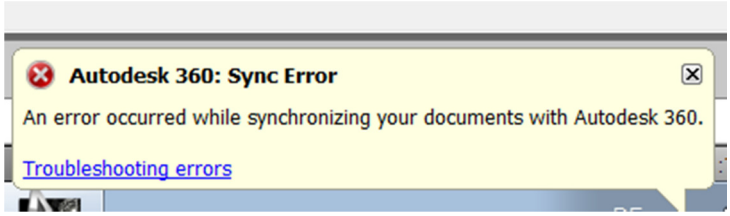
Another possible cause can be that the generation of the preview and metadata on the server is not complete yet.

No Download button for publicly shared ZIP files

Looked at by development. Workaround: right-click on the “Download” link > select “Copy Link Address”, “Copy Link Location” or “Copy Shortcut” (depending on your browser) > send this link to the person you want to share the file with



Sync Errors



Installing SP1.1 for AutoCAD 2013 should resolve most of these. If the error still persists, generate a Sync log to find out more about where the problem may be. If you contact Autodesk Product Support for this issue, we will be able to forward this to the Sync development team.

Steps to enable Sync logging

1. Log out from Autodesk 360 in AutoCAD.
2. Type REGEDIT in the ‘Run’ menu in Windows.
3. Navigate to HKEY_CURRENT_USER\Software\Autodesk\Autodesk Sync
4. In the right side window, right-click in the blank area > New > DWORD
5. Change the name of the new DWORD entry to *EnableLog*
6. Change the value of EnableLog to 1

7. Restart AutoCAD.
8. Sign-in to Autodesk 360, and allow it run for an hour.

This will generate the log files.

- AdSync.log
- AdSync.log.1

C:\Users\<your name>\AppData\Local\Autodesk\Autodesk Sync

To turn the logging off again:
Repeat steps 1 to 2 and delete the 'EnableLog' key that was added earlier from the registry.

Best practices

Recommended Browser

Latest Firefox or Chrome (support HTML5 and WebGL)

Security Settings

Firewalls/Proxy Servers should allow the below URL's.

*.akamaiedge.net

*.amazonaws.com

*.autodesk.com

Firewalls should allow ports 80 and 443 if possible.

Antivirus software needs to allow the Sync components to run:

AdSync.exe

AcCloudmanager.exe

AcSettingsSync.exe

Customization Sync

It is best to not keep the Customization Sync on all the time, but instead, switch it on only when you have made changes that you want to sync to the cloud.

The frequency of the Settings Synchronization is controlled by the ONLNESYNCTIME variable. The default value is 5. Values are in minutes. This means, AutoCAD will check your settings every 5 minutes and sync them to the Cloud.

Help System/Welcome Screen

Welcome Screen blank/online help not accessible

This can happen when the internet connection is not detected. In many cases this is when the client is behind an authenticated proxy. AutoCAD currently does not support Proxy Authentication.

Workaround:

Allow Anonymous access, or access for “All Users” to the following URLs:

*.autodesk.com

*.google-analytics.com

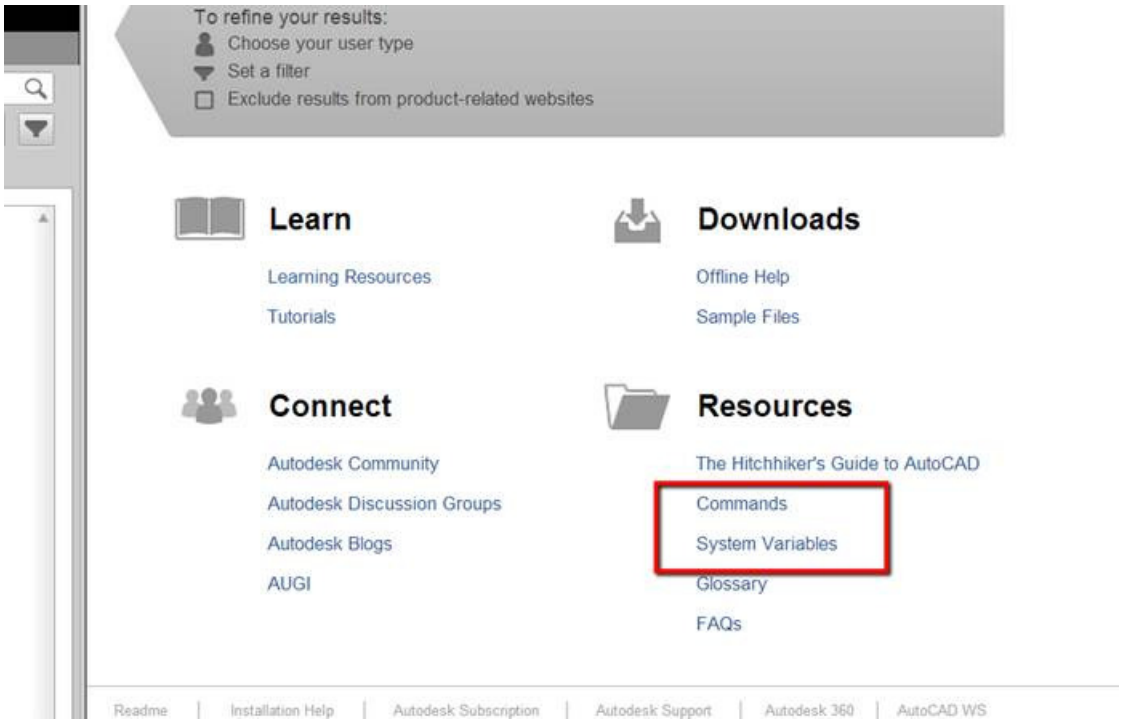
*.cloudfront.net

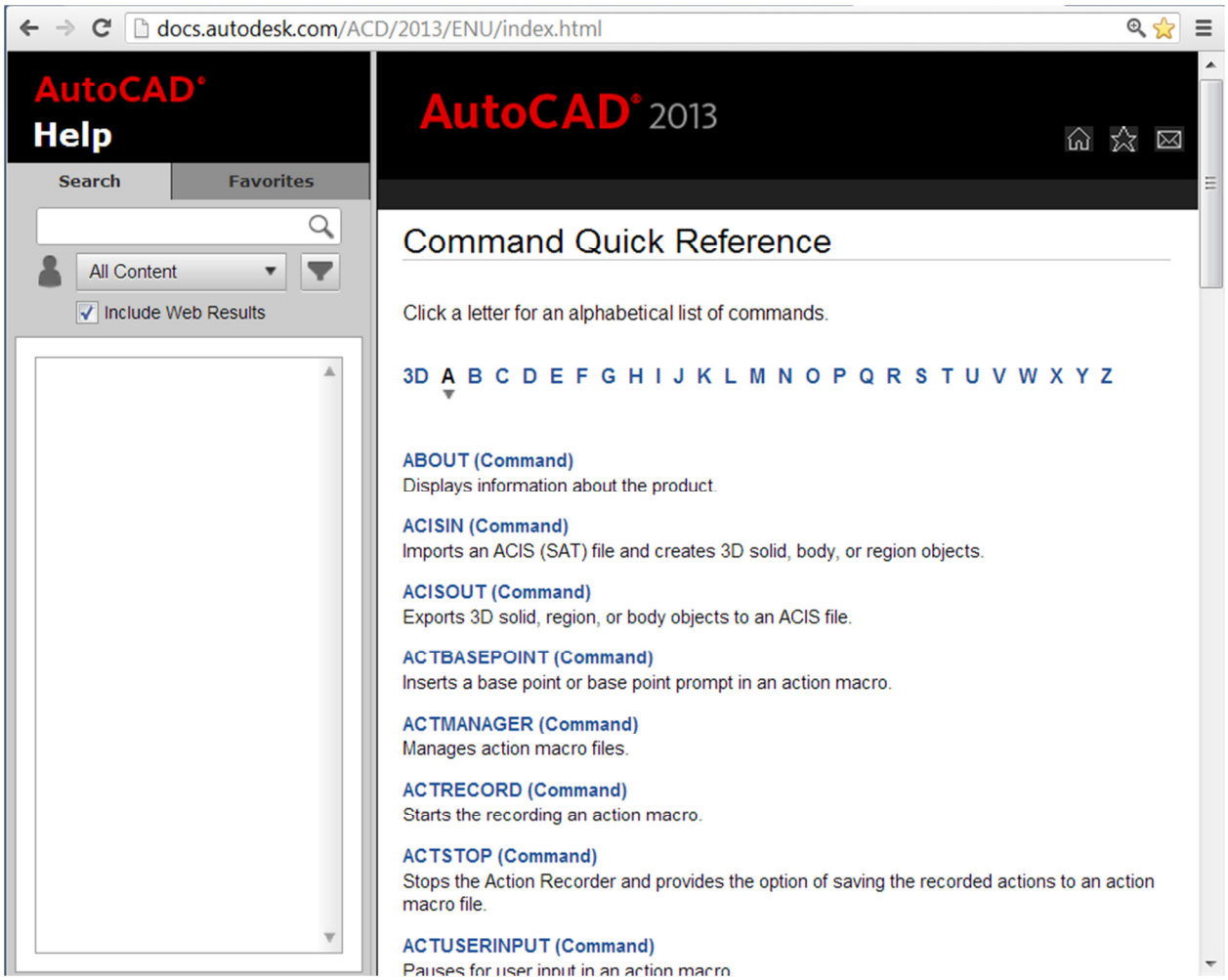
More details here: http://usa.autodesk.com/getdoc/id=TS16732564

List of commands and variables

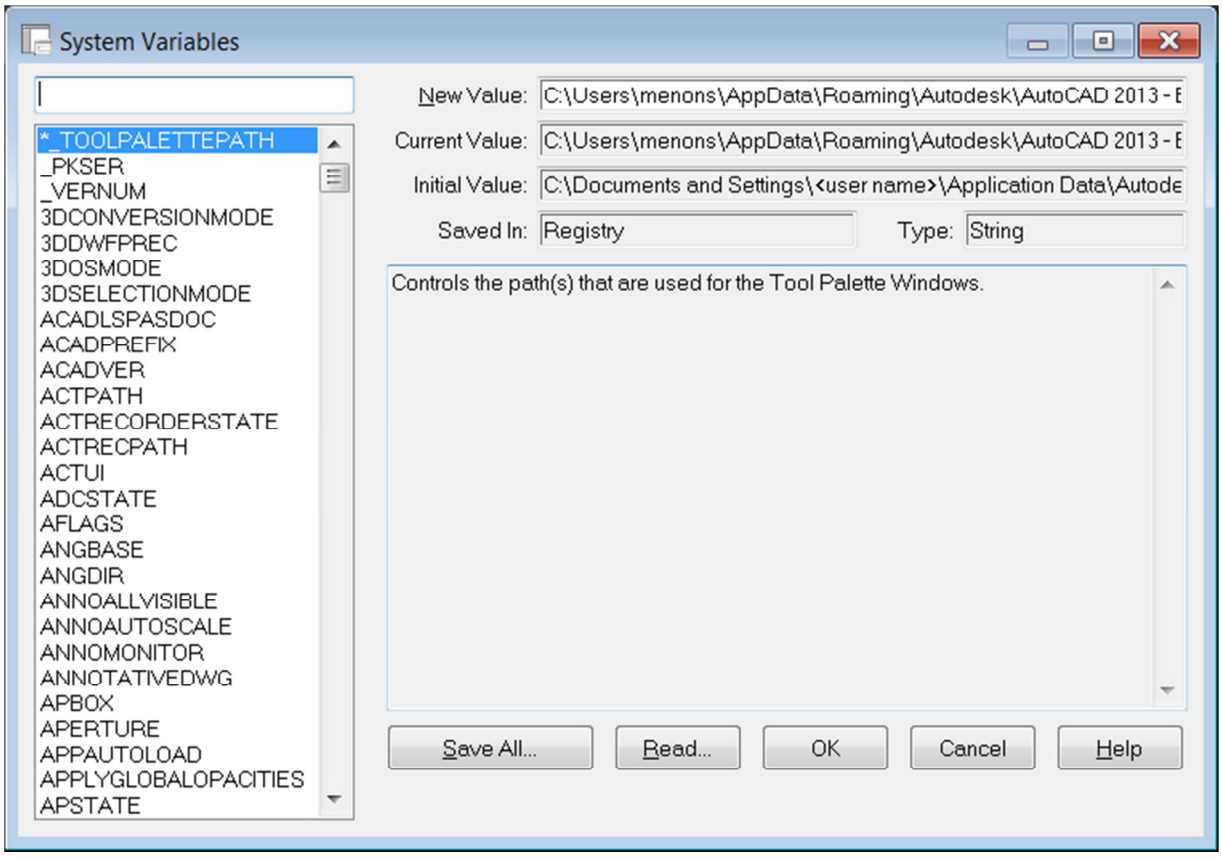
The first release of the AutoCAD 2013 help did not come with a list of commands and variables.

Based on the user feedback this generated, the online help got updated to include alphabetic lists of commands and variables now.




docs.autodesk.com/ACD/2013/ENU/index.html
AutoCAD® Help
Search
Favorites
All Content
Include Web Results
AutoCAD® 2013
Command Quick Reference
Click a letter for an alphabetical list of commands.
3D A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
ABOUT (Command)
Displays information about the product.
ACISIN (Command)
Imports an ACIS (SAT) file and creates 3D solid, body, or region objects.
ACISOUT (Command)
Exports 3D solid, region, or body objects to an ACIS file.
ACTBASEPOINT (Command)
Inserts a base point or base point prompt in an action macro.
ACTMANAGER (Command)
Manages action macro files.
ACTRECORD (Command)
Starts the recording an action macro.
ACTSTOP (Command)
Stops the Action Recorder and provides the option of saving the recorded actions to an action macro file.
ACTUSERINPUT (Command)
Pauses for user input in an action macro

For those who can't or don't want to use the offline help, the SYSVDLG command can be a useful tool to get an alphabetic list of all system variables:



Virus Issues

Macro viruses

Since AutoCAD 2000 it has been possible to embed VBA projects into drawing files. An embedded VBA macro can become active when the drawing is opened.

VBA macros are very powerful. For example, it is possible to create macros that are capable of manipulating your drawing data, accessing your hard drive and registry, and even calling Windows API methods.

These are the only viruses that actually infect the DWG file itself.

Since AutoCAD 2010, the VBA module does not get automatically installed with AutoCAD anymore- you need to download it separately. So, not installing the VBA module in the first place is an excellent way to protect yourself from Macro viruses.

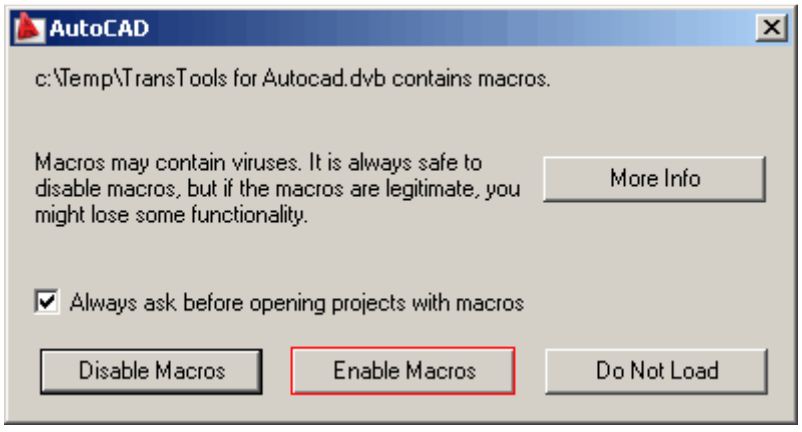
However, if you need to use VBA and the module is therefore installed, it is absolutely crucial to keep the in-built macro virus protection settings in AutoCAD enabled at all times

The virus protection mechanism for VBA macros is enabled by default, but it is still a good idea to verify that it is actually enabled:

1. On the Tools menu, click Macro > Macros.
2. In the Macros dialog box, click Options.
3. In the Options dialog box, select the Enable Macro Virus Protection option, and click OK.
4. Click Close to close the Macros dialog box.

When you open a drawing in AutoCAD with protection enabled, the program detects if a VBA project is embedded in the file.

If there is a VBA project in the file, a warning dialog box will be displayed with the following options:



Disable Macros.
This option loads the drawing or project file with the macros disabled. Click the Disable Macros option if you do not know for certain that the drawing came from a legitimate and reliable source.

Note: You cannot run any macros after you choose the Disable Macros option. However, you can still view, edit, and save the macros. If you then want to run the macros, you need to close the file, and reopen it with macros enabled.

Enable Macros.
Loads the drawing or project file with the macros enabled. Click the Enable Macros option, only if you know that the drawing or project file came from a legitimate and reliable source.

Do Not Load.
If you are loading a project file, the process is canceled and the project file is not loaded. If you are opening an AutoCAD drawing with an embedded project, the drawing is opened with the macros disabled.

Best practices to reduce the risk of infecting a computer with a macro virus in a drawing file

- Always work with the virus protection mechanism for VBA macros in AutoCAD enabled.
- Verify that drawings supplied to you are from a legitimate and reliable source.
- If you are in any doubt about the macros in a drawing file, disable macros when you open the file. You can then view the macros and verify if they are safe to use.
- Never run an unknown AutoLISP file or VBA macro without inspecting it first.
- There are many useful VBA and AutoLISP files available for download and shared by users and programmers all over the world. Most of these are probably fine, but if you don't know where a file came from, you shouldn't assume it is safe. VBA and AutoLISP are powerful languages that are capable of operations that will affect more than just the current drawing. Unless you are completely confident about the origin of a file and its creator, it's worth the extra time to inspect the file before using it.

Lisp viruses

These viruses exploit the automatic loading of Lisp code in AutoCAD. Unlike the VBA Macro viruses discussed above, Lisp viruses don't infect the DWGs themselves, but usually get transmitted together with the DWG in ZIP file (or other archive).

Lisp viruses in AutoCAD typically take advantage of the fact that when a drawing is opened, AutoCAD tries automatically to load any Lisp customization files that are located in the same folder as the drawing.

This autoloading behavior was designed to facilitate easy customization of AutoCAD.

AutoCAD prior to AutoCAD 2013 SP1.1 automatically loads the following files acad.lsp

- acad.fas
- acad.vlx
- acaddoc.lsp
- acaddoc.fas
- acaddoc.vlx
- acad.dvb

from the following locations in the order shown::

1. The AutoCAD startup folder
2. The folder where the current drawing is located
3. The folders in the AutoCAD Support Files search path

This means that when projects are zipped and passed around, this can also pass the viruses around. When the Zip file is extracted and a DWG from the folder gets opened, the code located in the Lisp file gets executed.

In most cases the virus will then create lots of copies of itself in the AutoCAD support folders, from where the virus code then will get automatically loaded each time AutoCAD starts.

Reputable Antivirus solutions should detect and remove these types of viruses. However, they can still be a big annoyance.

SP1.1 for AutoCAD 2013 introduced new options to help combat Lisp viruses.

AUTOLOADPATH system variable

This new variable let's you control and restrict the folder location from which AutoLISP and VBA applications are automatically loaded.

This should minimize the possibility of loading and running unauthorized or malicious AutoLISP and VBA applications.

The AUTOLOADPATH system variable controls the folders from which AutoCAD automatically loads the following AutoLISP and VBA files:

- acad.lsp
- acad.fas
- acad.vlx
- acaddoc.lsp
- acaddoc.fas
- acaddoc.vlx
- acad.dvb

The default value of AUTOLOADPATH is the empty string ("") or period (.). When it is set to either of these values, the autoloading process will follow the same behavior as in previous versions (see above). AutoCAD will automatically load the listed files without restrictions

This default setting is therefore ***not*** recommended, because malicious applications can be programmed to anticipate the folders listed above.

The recommended setting is to always set the AUTOLOADPATH system variable to a unique folder and place your lisp and VBA applications only there.

To specify multiple folders, you can use a semicolon as the separator. The value of AUTOLOADPATH is saved in the AutoCAD profile.

Important: To enable the autoloading changes to acad.dvb, you must uninstall the original AutoCAD 2013 VBA Enabler, and download and install the latest AutoCAD 2013 VBA module that was updated for the changes made in Service Pack 1 for AutoCAD 2013.

AUTOLOAD system variable

This variable limits the impact of malicious AutoLISP and VBA applications by completey disabling automatic loading of default AutoLISP and VBA files.

Setting AUTOLOAD to 0 completely prevents the previously listed AutoLISP files and acad.dvb from being automatically loaded.

Setting AUTOLOAD to 1 restores turns the autoloading behavior on. However, where the files are loaded from will depend on the value of the AUTOLOADPATH system variable (see above).

/nolisp startup switch

Setting this startup switch will completely disable AutoLISP at startup.

This means no LSP, FAS, and VLX files will get loaded.

Disabling AutoLISP will prevent the Express Tools and some AutoCAD command tools from functioning and should therefore only be used in emergency situations.

If your machine has already been infected by a Lisp based virus or work, this option helps to debug and clean up the machine and remove any infected files.

The read-only LISPENABLED system variable indicated whether AutoLISP is enabled in the current AutoCAD session. If LISPENABLED is 0, AutoLISP has been disabled by the /nolisp startup switch.

Changes to the Options Dialog Box

The “Load acad.lsp with every drawing” checkbox on the System tab of the Options dialog box (ACADLSPASDOC system variable) is disabled when AUTOLOAD or LISPENABLED has a value of 0.

Changes to acad2013.lsp and acad2013doc.lsp Autoloading Behavior

The acad2013.lsp and acad2013doc.lsp files will now be loaded only from their default installation folders:

<installation folder>\Support

<installation folder>\Support\<language>

What to do if you think your system is infected with a Lisp virus

If believe your AutoCAD installation has already been infected by a malicious virus or worm that runs in AutoCAD:

- Start AutoCAD with the /nolisp switch.
- Find and check all acad.Lsp, acad.fas. etc. files (see list of files above)
- Repair any affected files (remove any code that is not yours).
- Set AUTOLOADPATH to a unique folder location and set AUTOLOAD to 1.
- After taking these steps, you can remove the /nolisp startup switch from the shortcut properties of the desktop icon again..

Best practices to reduce the risk of infecting a computer with a Lisp virus

Use a reputable Virus scanner and keep it updated

AutoCAD 2013:
Install SP1.1. Set AUTOLOADPATH to a unique folder location and set AUTOLOAD to 1.

AutoCAD-Versions prior to AutoCAD 2013

Most leading antivirus packages are aware of the most common AutoLISP viruses and will quarantine the AutoLISP files when detected.

Apart from this, you need to simply be vigilant:

AutoLISP-based viruses usually get into a system because they accompany other files. In most cases the virus gets into the system through a Zip archive of drawing files.

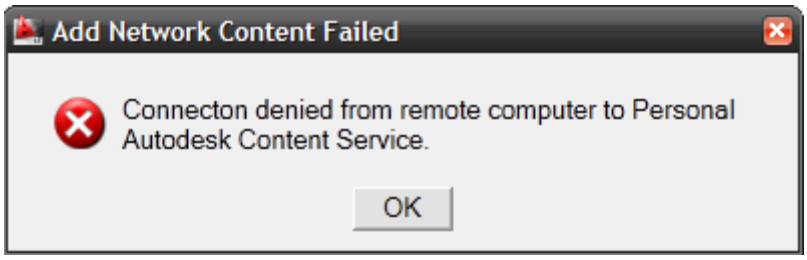
It is therefore important to never blindly extract an archive (Zip or other) without checking its contents

When you receive an archive (.zip, .rar, etc.), always inspect the contents before unpacking them onto a network or local drive.

You shouls also be very wary of any archives that include executable files like (.exe), ObjectARX files (.arx), or AutoLISP or VBA files.

Content Explorer

Connection Denied errors

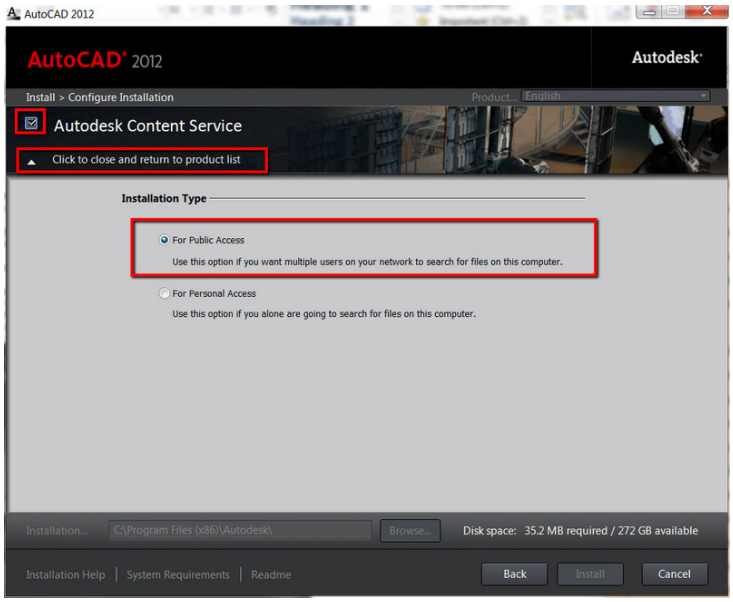


This error indicates that the Content Service on the remote machine was installed with the "Personal Access" option instead of the "Public Access" option. The "Personal" version of the Content Service does not allow remote connections from other machines.

In order to allow other machines to connect to content on this machine, the machine you are trying to connect to needs to have the "Public" version of the Content Service installed.

In order to resolve the situation, the following steps need to be performed on the remote machine (the machine you were trying to connect to):

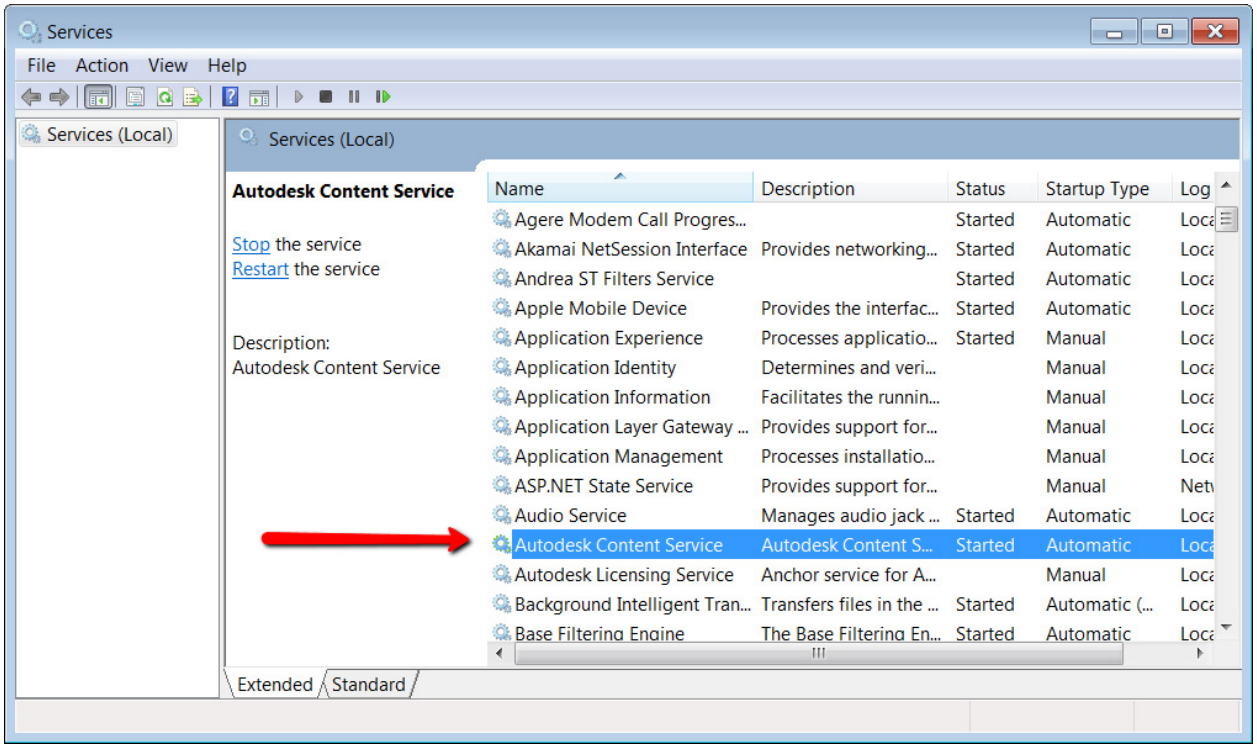
- Under Control Panel > Programs and Features, Uninstall the Autodesk Content Service
- Delete the folder %programdata%\Autodesk\Content Service\Server
- Install the 'public' version of the service from the install disk under "Tools and Utilities".
- If you click on the down arrow, you see two options under "Installation Type": "For Public Access" and "For Personal Access".
- Select the option "For Public Access" and proceed with the installation.



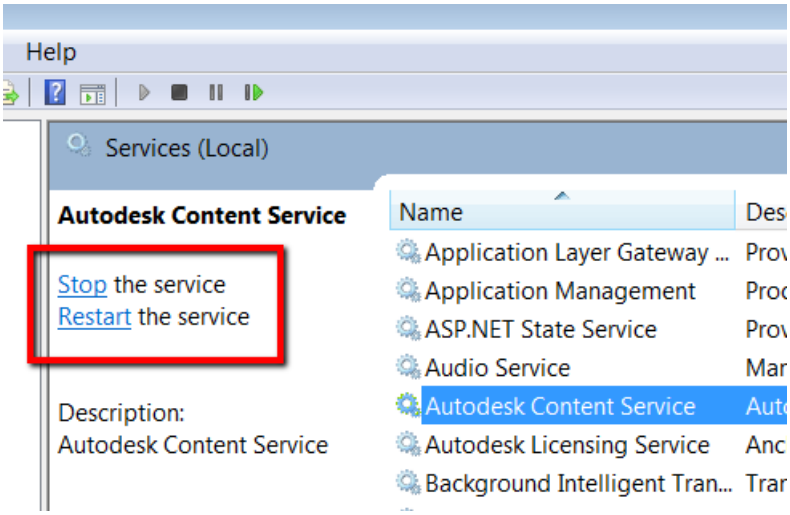
General Troubleshooting for Connection problems:

1. Check if you can connect to network source using Windows Explorer. This can help pinpoint if there is a permissions issue.

2. Check the "Autodesk Content Service" service; make sure that it is started and set to 'Automatic' (it should always be set to 'Automatic')



3. Stop and restart the service (Autodesk Content Service).



Sometimes the service has trouble restarting because the process is still running (and stuck).

In this case, go to Task Manager and end the process

Connect.Service.ContentService.exe *32.

Then restart the service.

4. Check the server log files (log file will be empty unless there is an error).

The log file is called “ContentService.log” and can be found here:

%programdata%\Autodesk\Content Service\Server

The log file will be empty unless there was a problem. If the log file contains errors, see if there is anything obvious you can determine from them. If not, send the log files to Autodesk Support.

Model Documentation

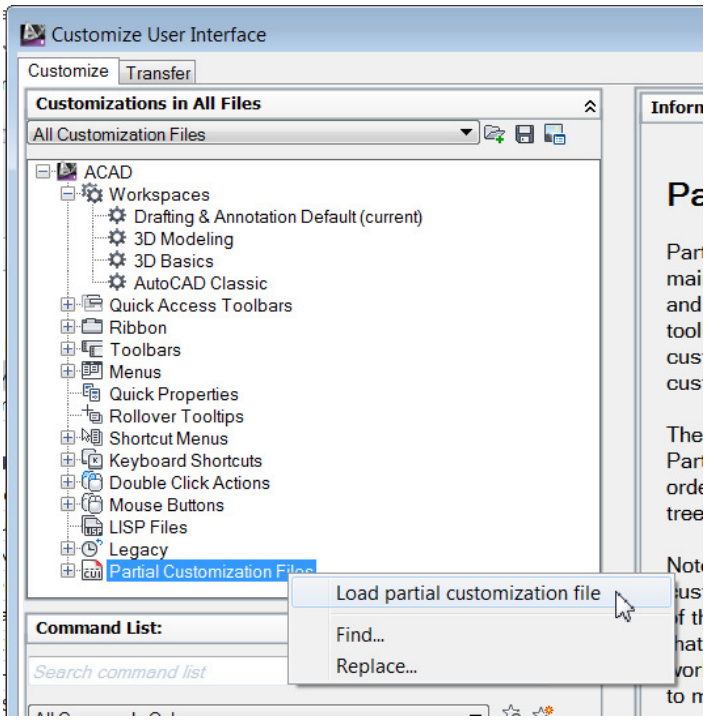
Model Documentation commands not available in Ribbon

This is actually normal in many AutoCAD-based products (e,g, AutoCAD Architecture or AutoCAD MEP). The reason is that the model documentation feature works only with solid objects and not with the intelligent 3D objects from these applications.

However, if you want to use the model documentation feature, you can easily add the commands back:

To load the Model documentation commands, please follow these steps:

1. Type CUI and press ENTER
2. Right-Click on Customization Files and select "Load Partial Customization File"

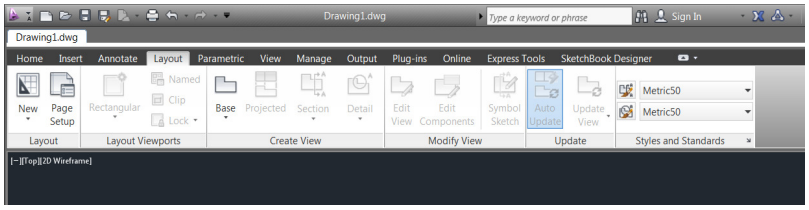


3. Navigate to the Support folder of your product.

   For example for AutoCAD Achitecture 2013 English, this would usually be

   %appdata%\Autodesk\ACA 2013\enu\Support
4. Select the file ModelDoc.Cuix and click Open
5. Click OK to save the changes and close the Customize User Interface dialog.

The model documentation will now be displayed in the Ribbon just like in Vanilla AutoCAD.



VIEWBASE command gives only the option to import Inventor file

This happens when there are no solids in the drawing. The model documentation commands only work with solid objects.

Model Documentation views disappearing

When a Layer State is restored that was saved before the MD (Model Documentation) Layers were created, the MD Layers get frozen and the Model Doc Views disappear from the Layouts

Model Documentation views can “disappear” in the following situations:

- When a previously saved layer state is loaded
- When a view that includes layer information is loaded
- When object isolation is used to isolate objects in model space

This is because the model documentation layers (or objects) are turned off in these situations.

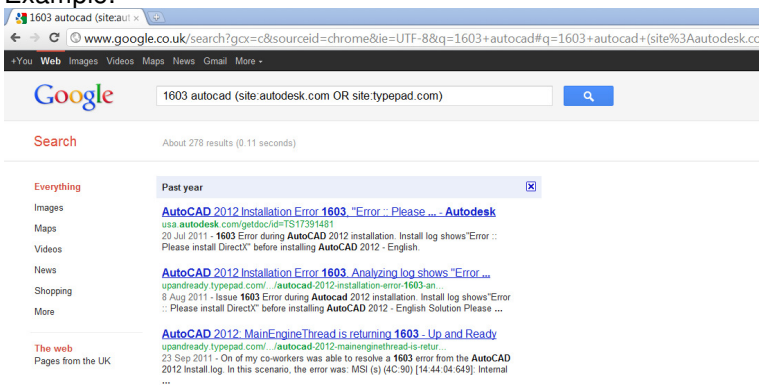
If you turn off Auto-Update you should experience less problems.

Best practice is to turn Auto-Update off, a and to not switch to your Layout with the MD-views until you editing in Model Space is finished and all Layers / objects restored.

Resources for Self Help

Google is still always the best place to start ☺

- Tip: restrict to only specific sites by using “site:”, for example using (site:autodesk.com OR site:typepad.com) will find information on the Autodesk KB, forums and blogs.
  Example:



Forums

- AutoCAD Forums
  http://forums.autodesk.com/t5/AutoCAD/ct-p/8
- Autodesk 360 Forum
  http://feedback.autodesk.com/cloudservices
- Installation and Licensing Forum
  http://forums.autodesk.com/t5/Installation-Licensing/bd-p/24

Documentation / Readme

  - AutoCAD 2013: http://docs.autodesk.com/ACD/2013/ENU/index.html
  - AutoCAD 2012: http://exchange.autodesk.com/autocad/enu/help
  - AutoCAD 2011: http://docs.autodesk.com/ACD/2011/ENU/landing.html

- AutoCAD Knowledgebase: http://autodesk.com/autocad-support
- Autodesk 360 Knowlegebase: http://autodesk.com/cloud-support

Blogs

- AutoCAD Support Blog:
  Without a Net http://withoutanet.typepad.com/without_a_net/
- Installation & Licensing Support Blog:
  Up and Ready http://upandready.typepad.com/up_and_ready/

Product Feedback form

- Form for submitting improvement ideas / wishes / feature requests directly to developers:
  http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=1109794