# Network License Server Lab: Leave Your Intimidation at Home

Darren Young – Southland Industries

**CM2520-L**   This hands-on lab is designed for CAD/BIM administrators or IT support staff who are intimidated by network licensing, knowing that if their license servers fail, all their users could be down. In the lab, each user gets the opportunity to walk through license server installation and configuration from start to finish. Users learn a variety of tips and tricks to make sure their network license infrastructure is resilient to outages.

## Learning Objectives

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

- Show that network licensing is simple and easy

- Use various deployment models and setup options to fine-tune your configuration

- Implement simple tricks to make deploying and moving users to new servers quick and painless

- Describe the contents of license and options files

## About the Speaker

*A Midwestern transplant now based in Southern California, veteran Autodesk University speaker Darren Young has held a variety of positions over the last 20 years, such as CAD/CAM engineer, CAD administrator, and CAD/CAM systems developer. Currently Darren is the Systems Integration Manager for Southland Industries, one of the largest mechanical engineering and construction companies in the United States. Darren manages the largest installation of Autodesk Fabrication licenses in the world. While Darren's true interest is the automation of manufacturing systems, his experience ranges from manufacturing to architecture, and this has led him to projects varying in scope from dress patterns to gas turbine piping. He founded a consulting and development business, has been technical editor and publication author.*
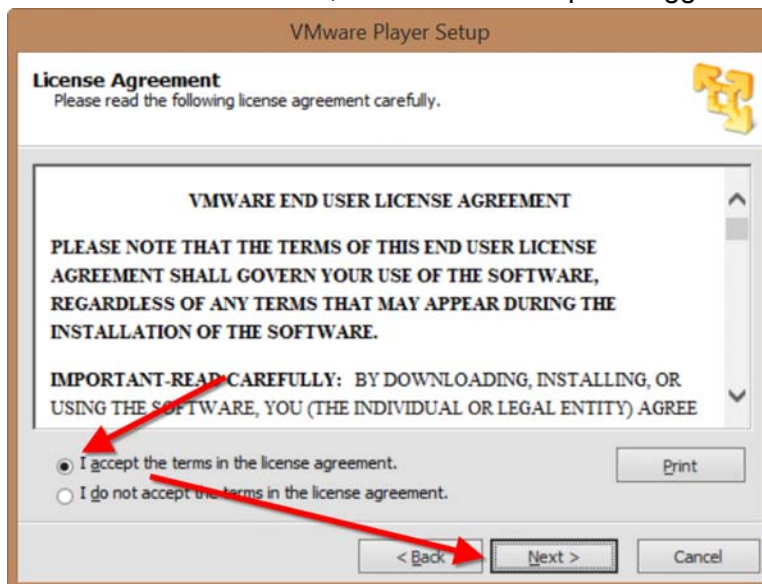[dyoung@southlandind.com](mailto:dyoung@southlandind.com)
[dyoung@mcwi.com](mailto:dyoung@mcwi.com)

## Part 1 – Install VMWare Player
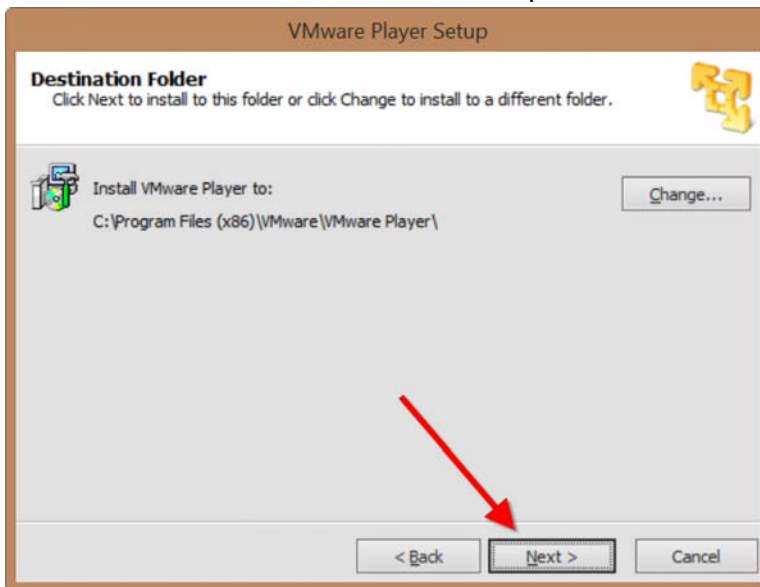
A. Double-Click the VMWare Player installation file…VMware-player-6.0.0-1295980.exe

B. If prompted by User Access Control (UAC) click "Yes"

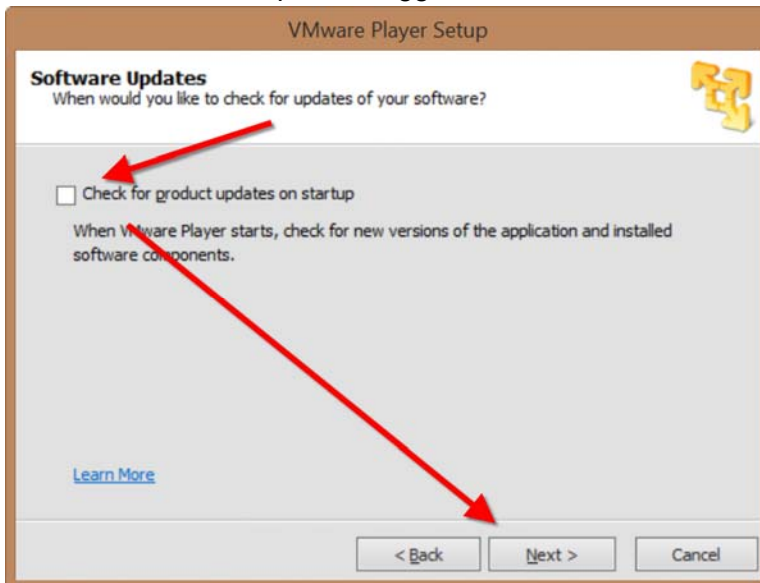C. From the Installation Welcome screen, click the "Next" button.
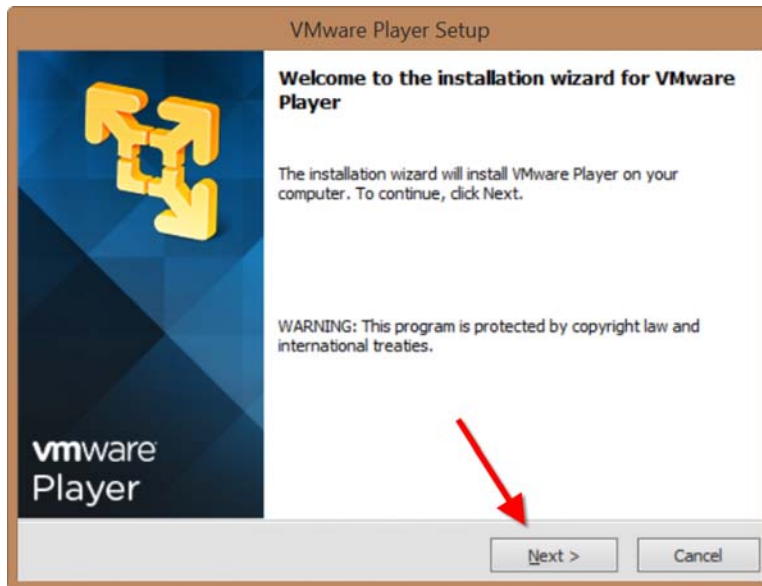


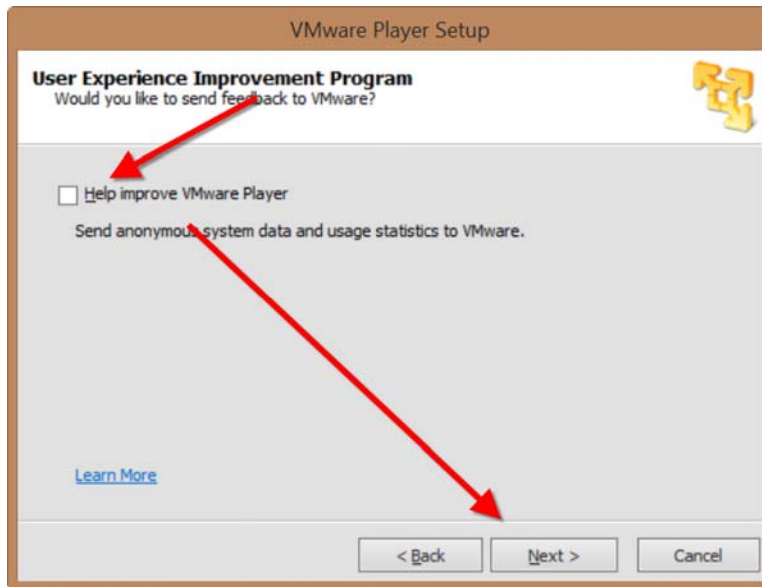D. From the License screen, select the "I accept…" toggle and click the "Next" button.

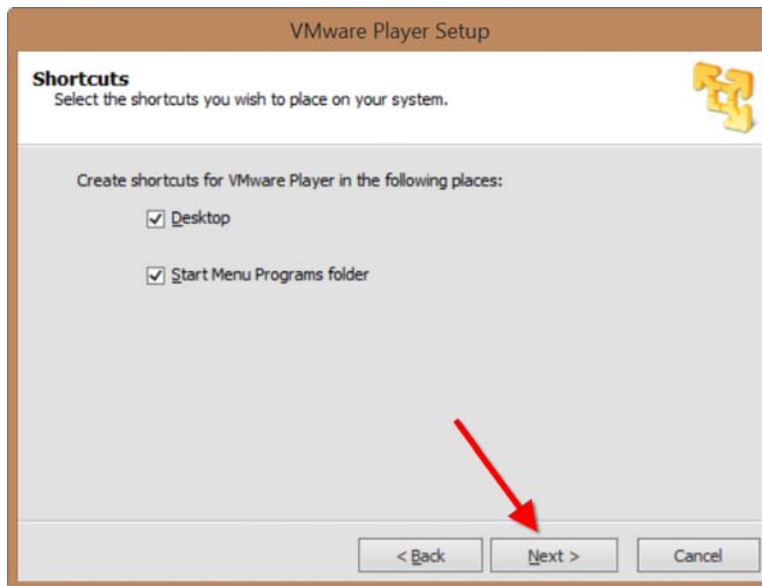E. From the Destination Folder screen, keep the default folder and click the "Next" button.
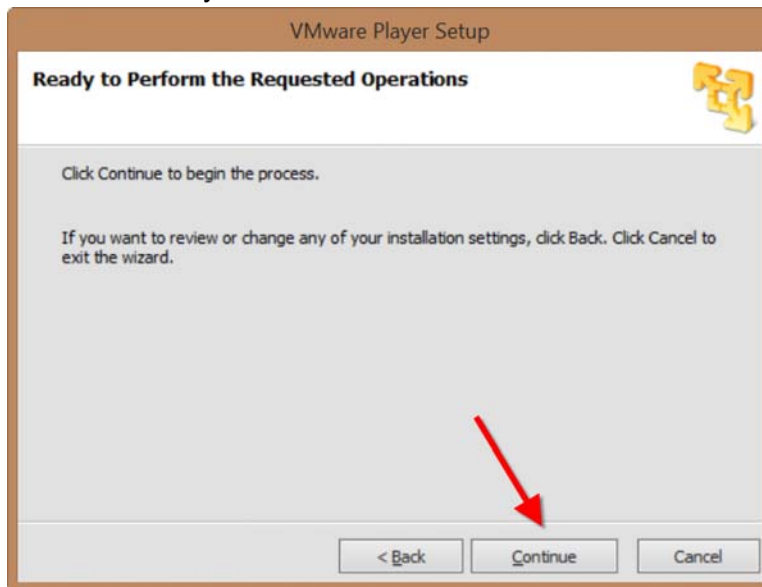


F. Clear the Software Updates toggle and click the "Next" button.

G. From the User Experience screen, clear the "Help Improve…" toggle and click the "Next" button…



H. From the Shortcuts screen, leave the defaults and click the "Next" button.

I. From the Ready to Perform screen, click the "Continue" button.
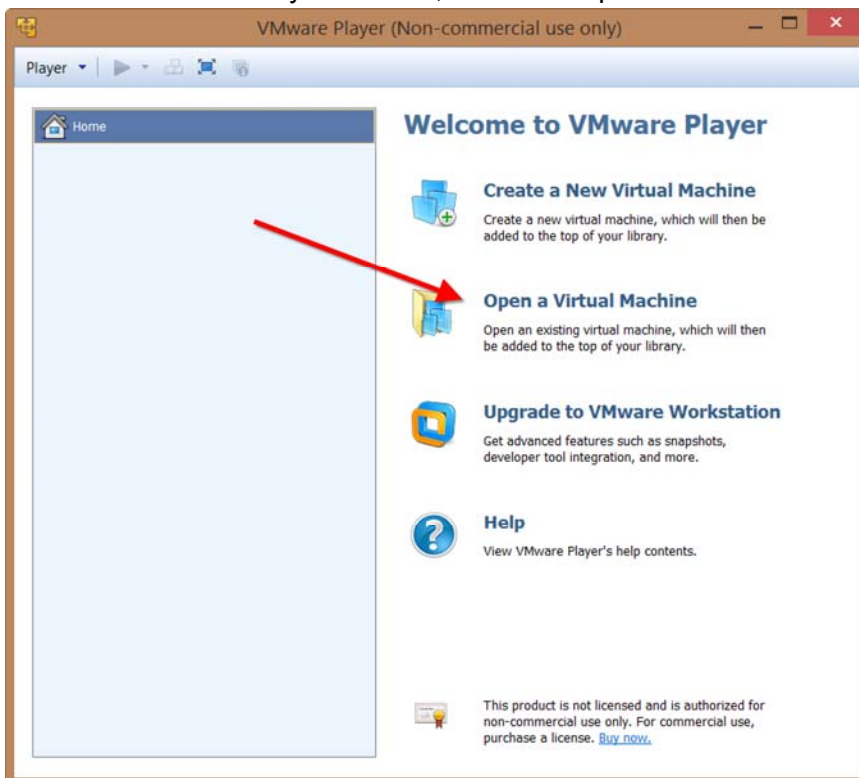


J. From the Setup Complete screen, click the "Finish" button.
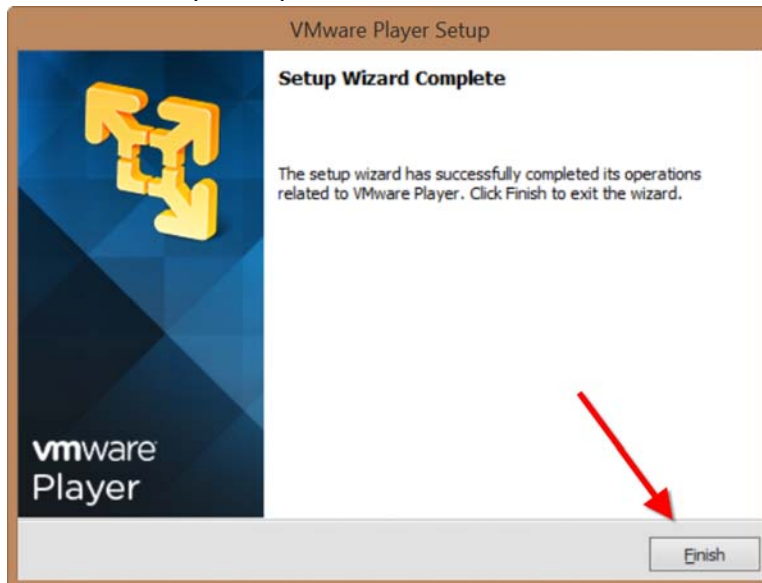
## Part 2 – Start VMware Player

A. Double-Click the VMware Player icon on the desktop

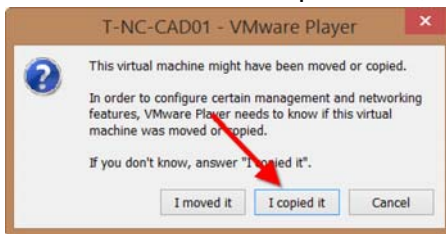B. From the VMware Player window, click the "Open a Virtual Machine link.

C. Browse to the "T-NC-CAD1.vmx" file in the class dataset and click the "Open" button.
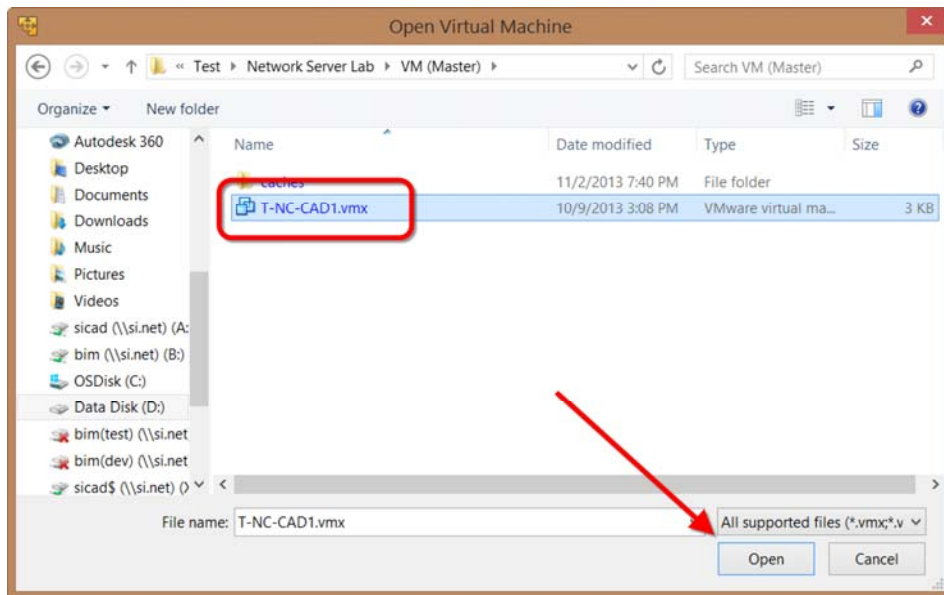


D. From the VMware player windows, highlight the "T-NC-CAD1.vmx" virtual machine and click the "Play virtual machine" link.
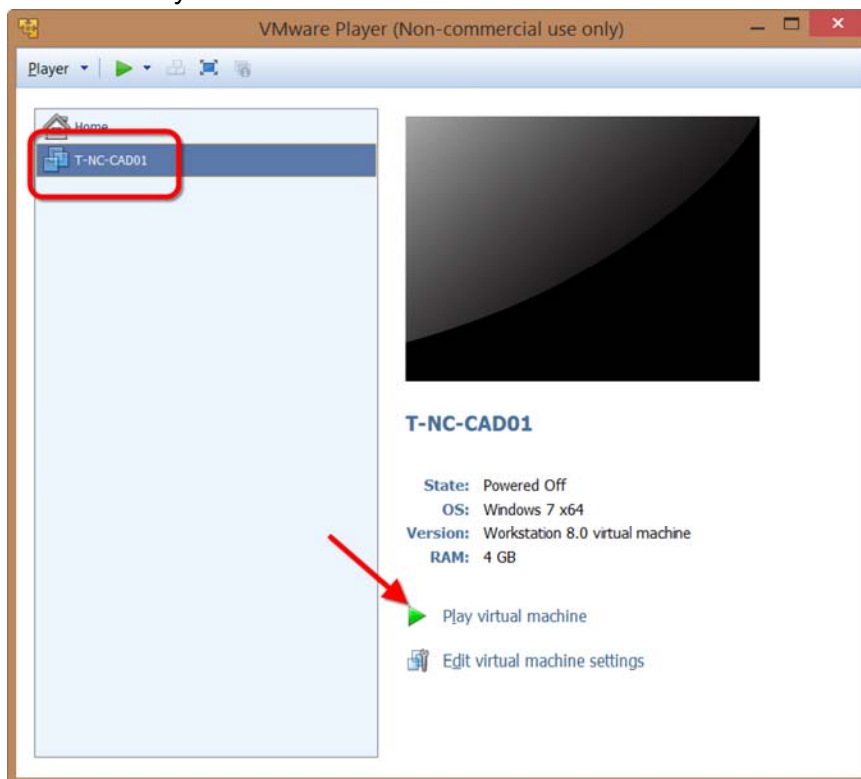
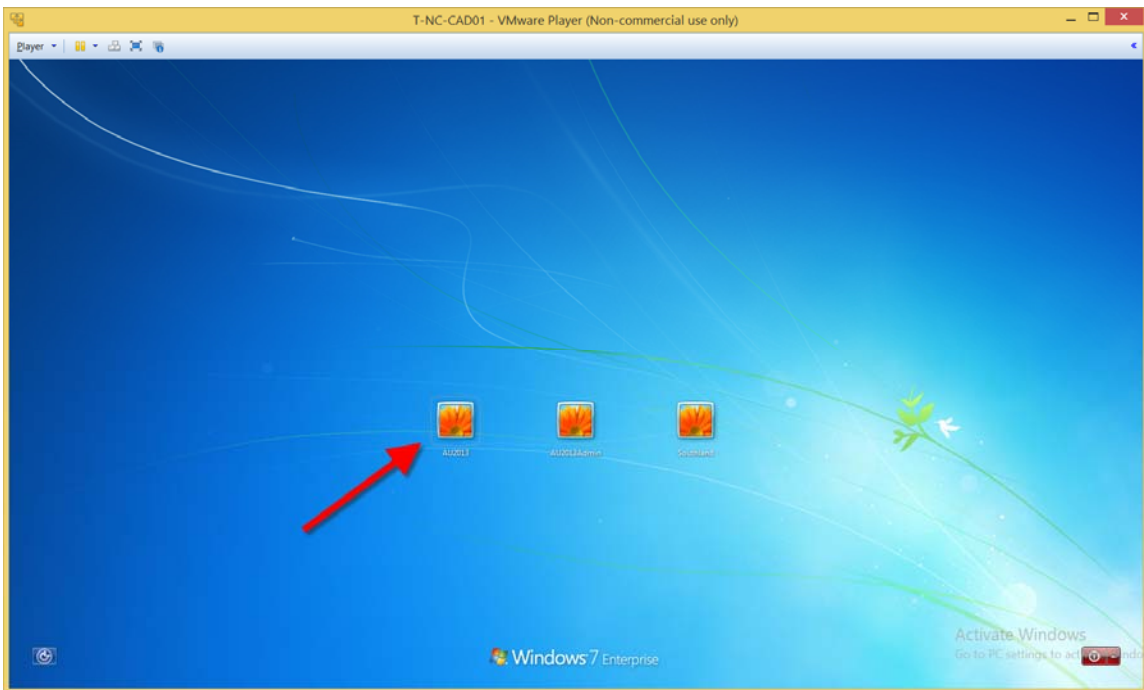E. From the Moved or Copied alert, click the "I copied it" button.



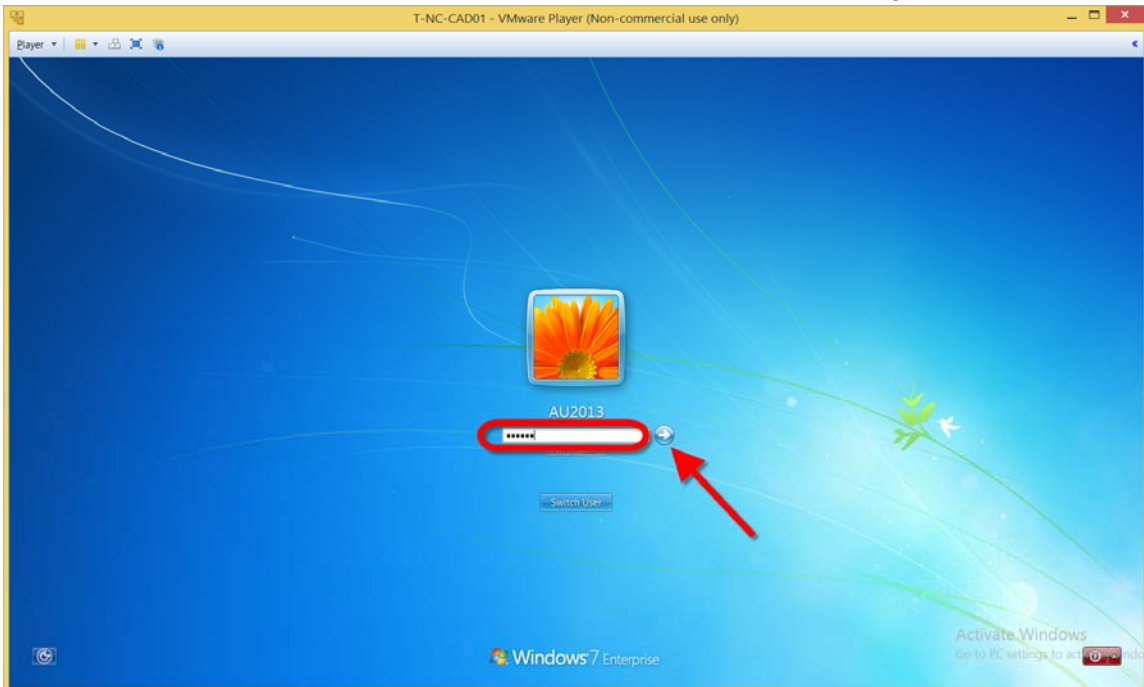F. From the Software Updates alert, click the "Remind Me Later" button.



G. Maximize the VMware Player console window.
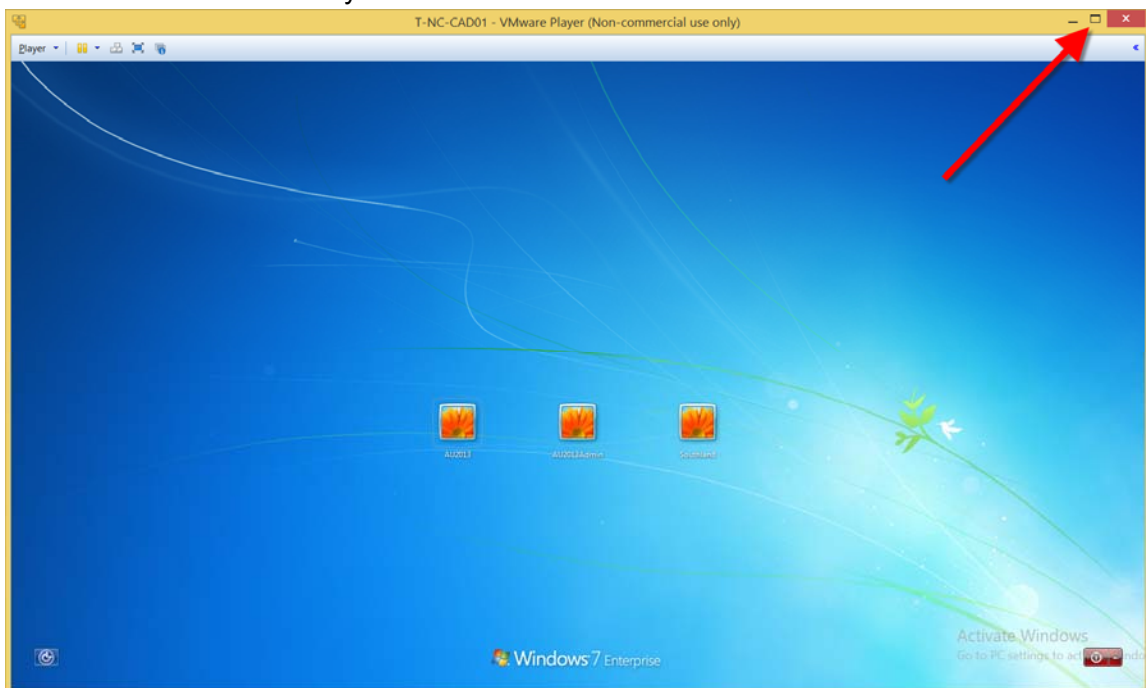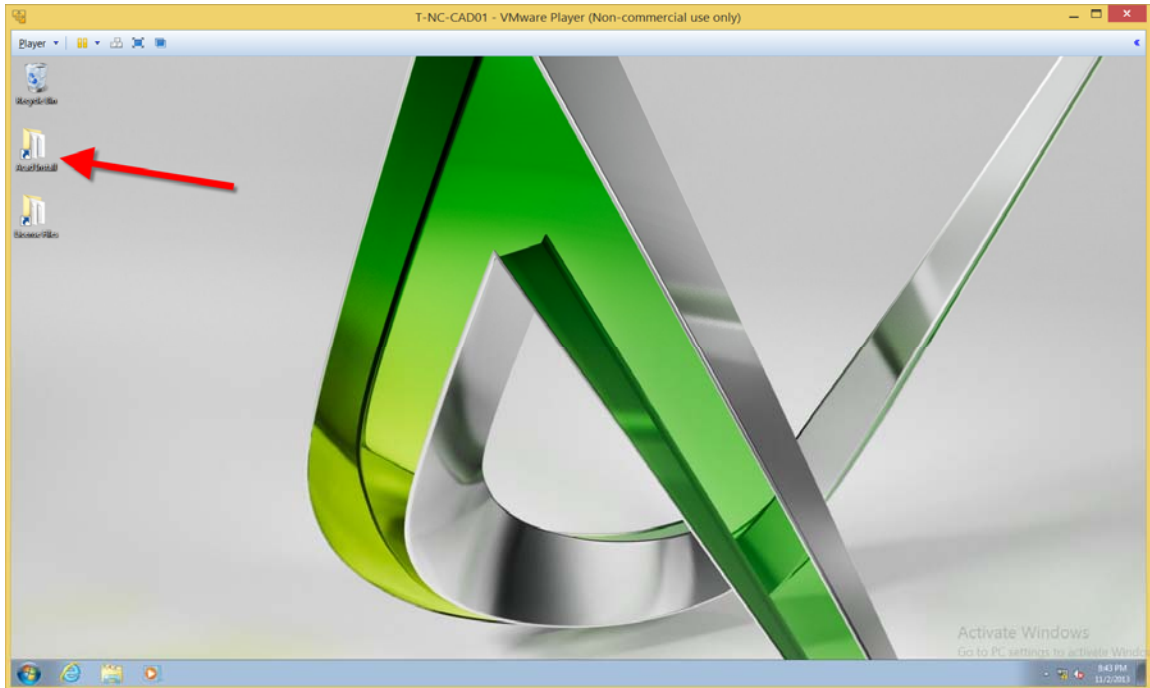
H.  Click the "AU2013" user account button.



I.  Enter "AU2013" (uppercase) in the password section and click the login icon.
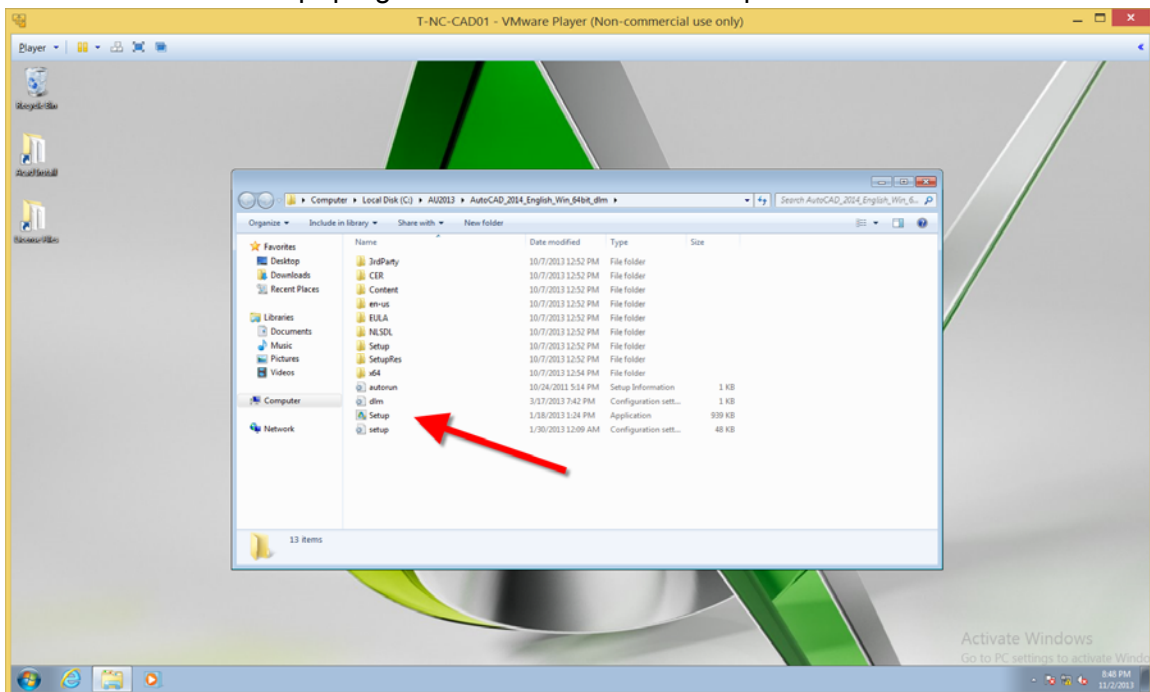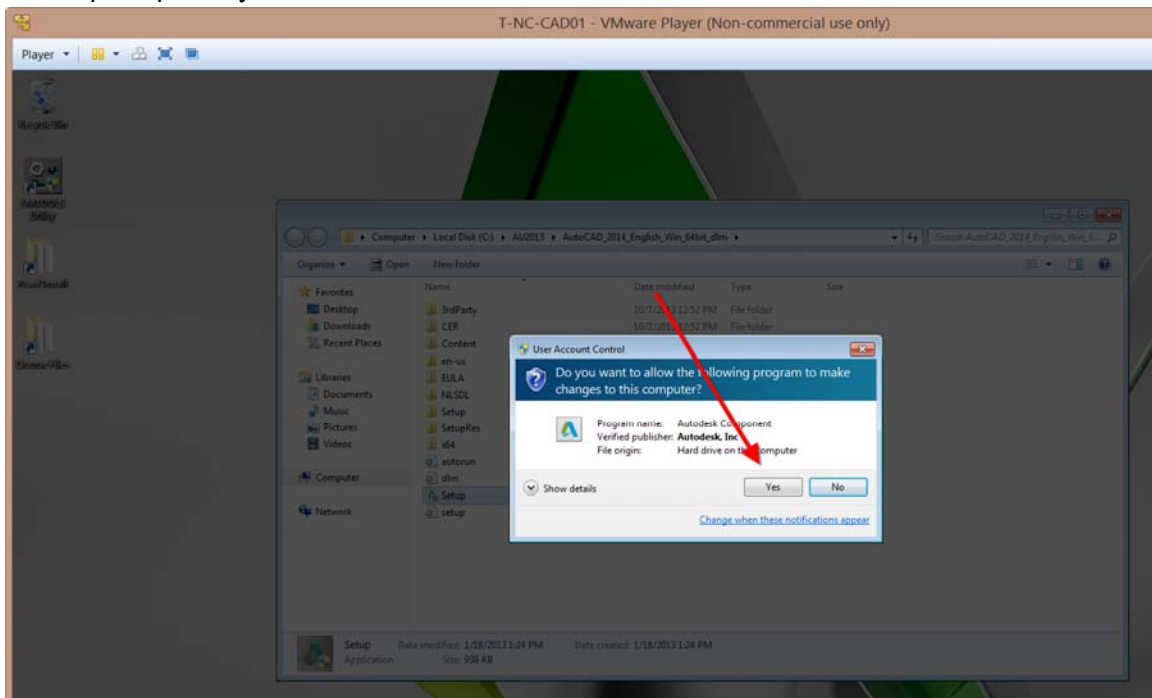
## Part 3 – Install the License Server

A. Click the "Acad Install" shortcut to open the folder where the installation files are.
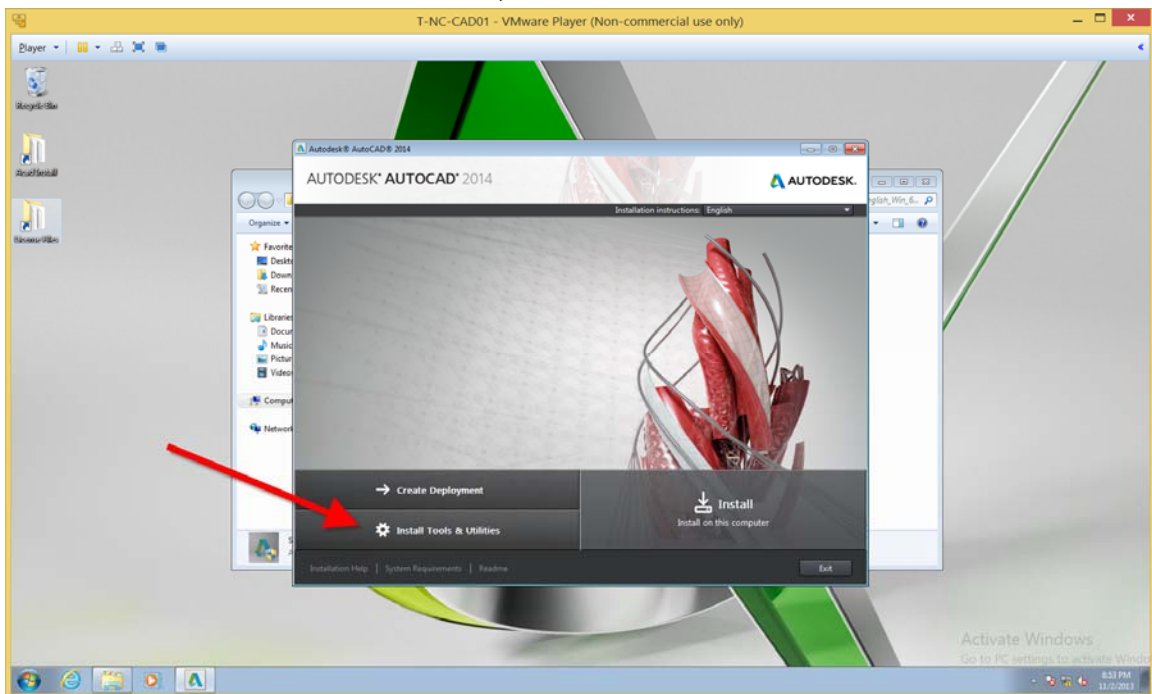


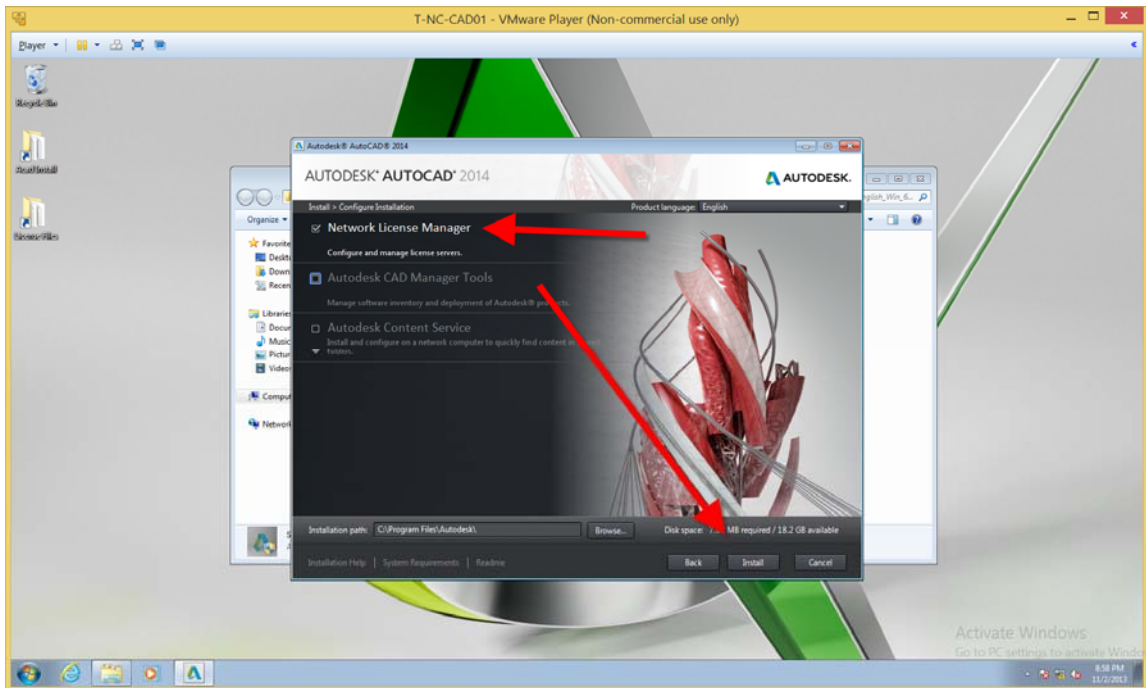B. Double-Click the "Setup" program to start the installation process.

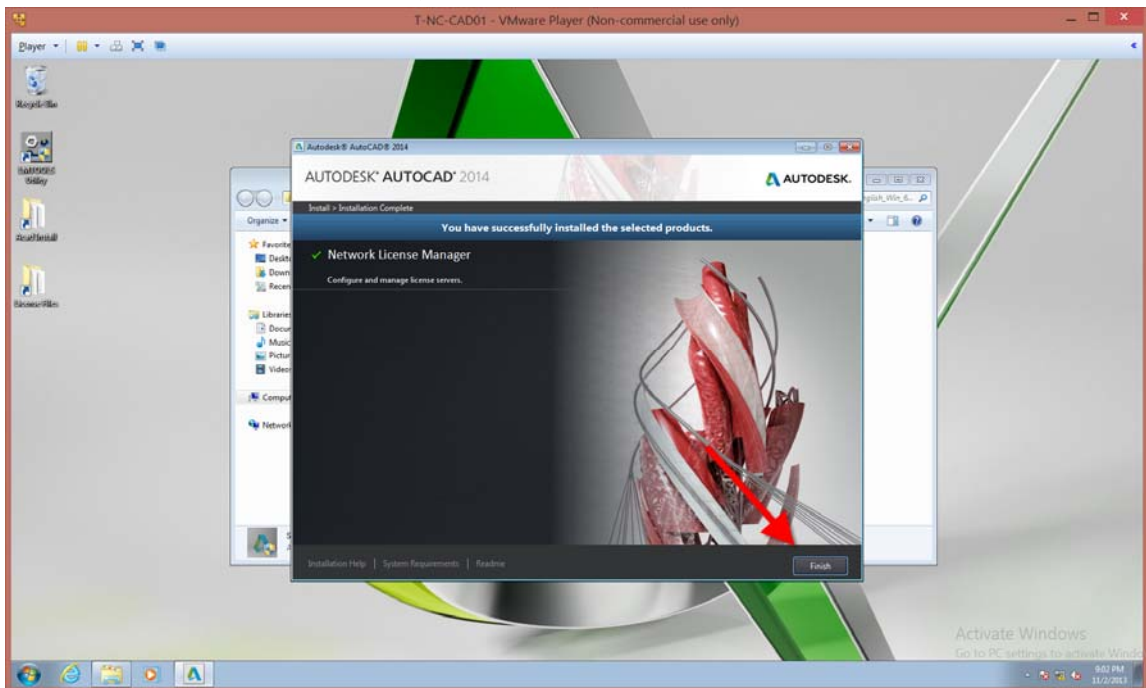C. When prompted by the "User Account Control" alert, click the "Yes" button.



D. From the AutoCAD Installation screen, click the "Install tools and utilities" button.

E.  From the Installation screen, check _ONLY_ "Network License Manager" then click the "Install" button.
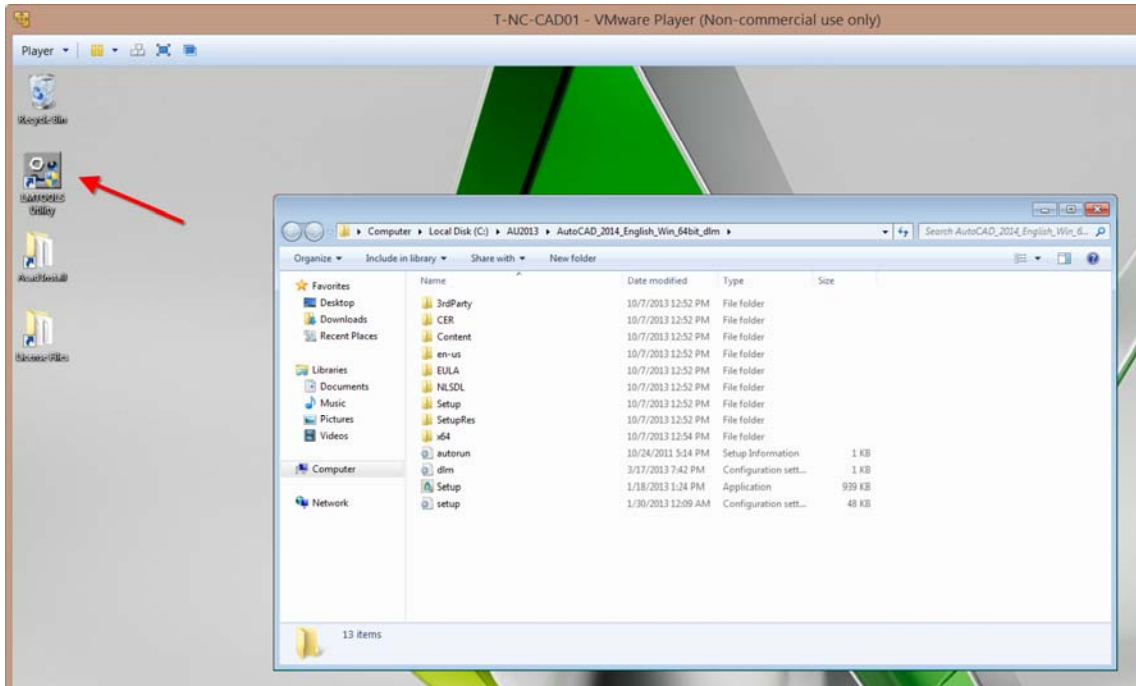


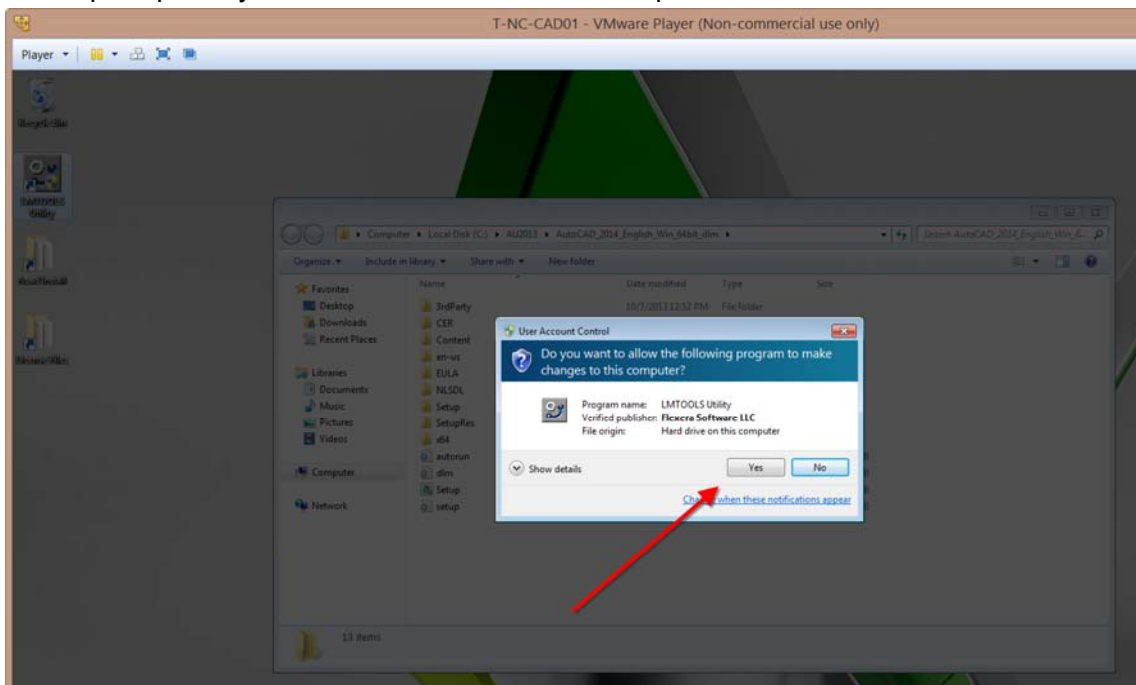F.  When the installation in finished, click the "Finish" button.
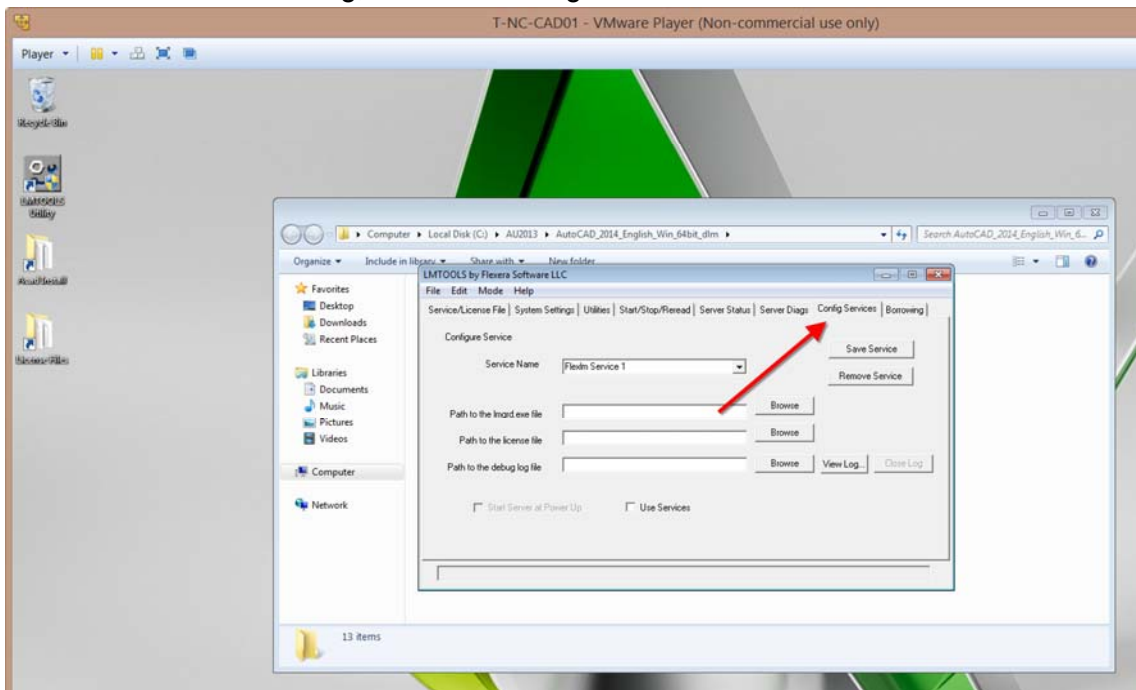
## Part 4 – Configure Licensing Service

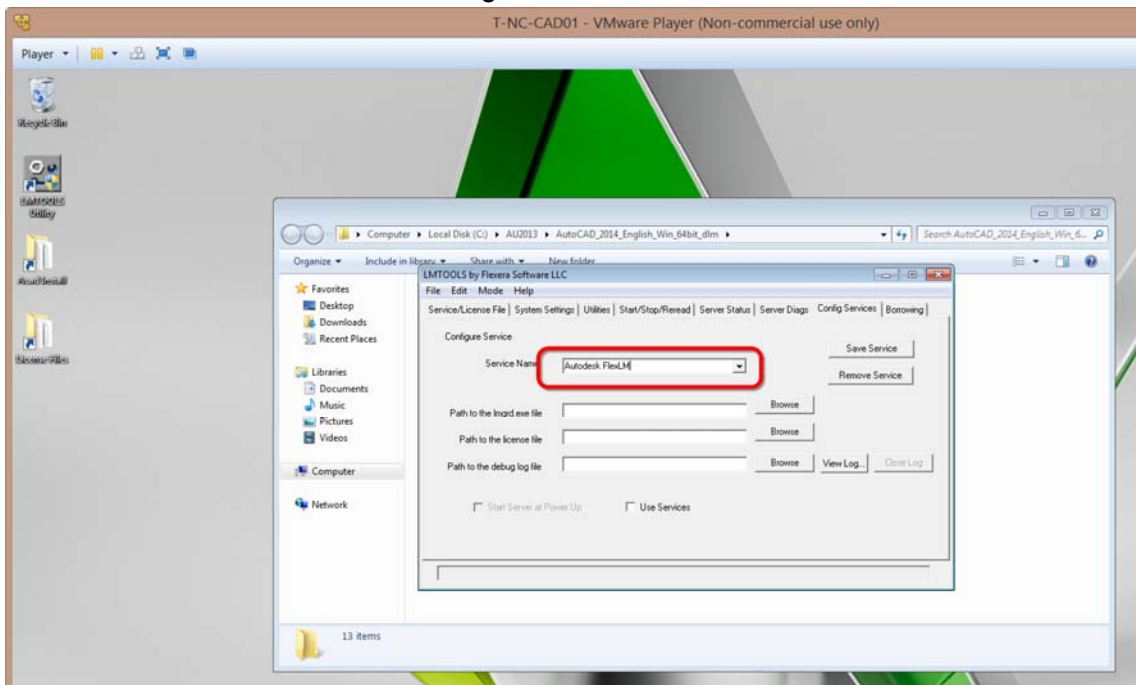A. Double-Click the "LMTOOLS" shortcut on the desktop.



B. When prompted by the User Access Control Prompt, click the "Yes" button.
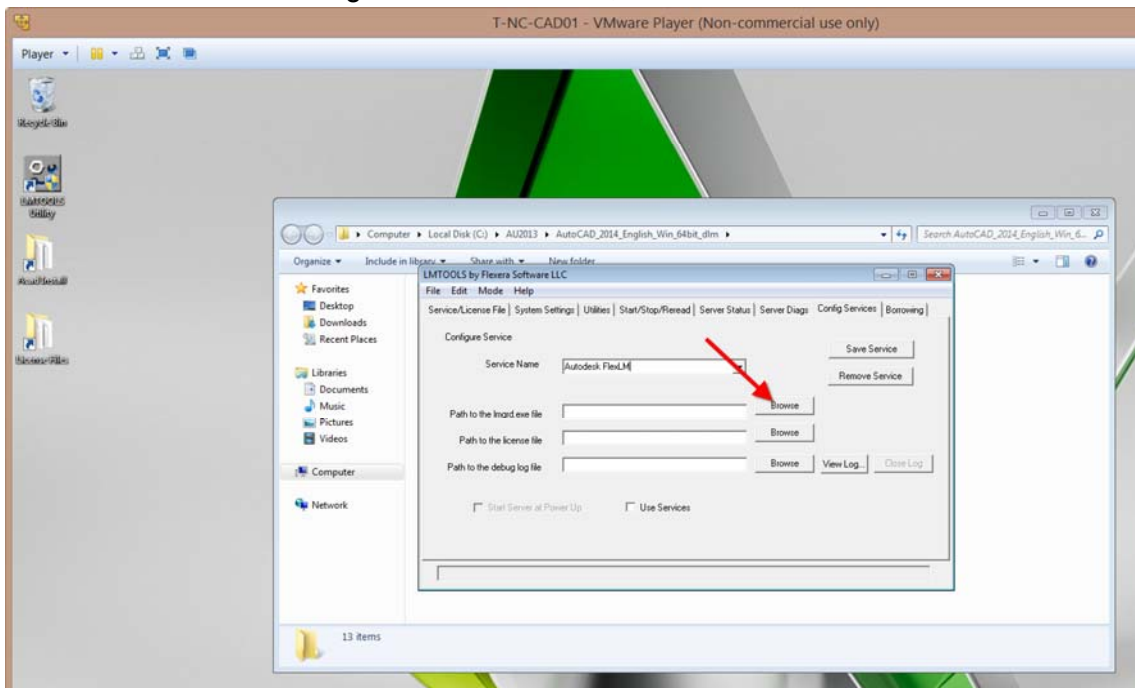
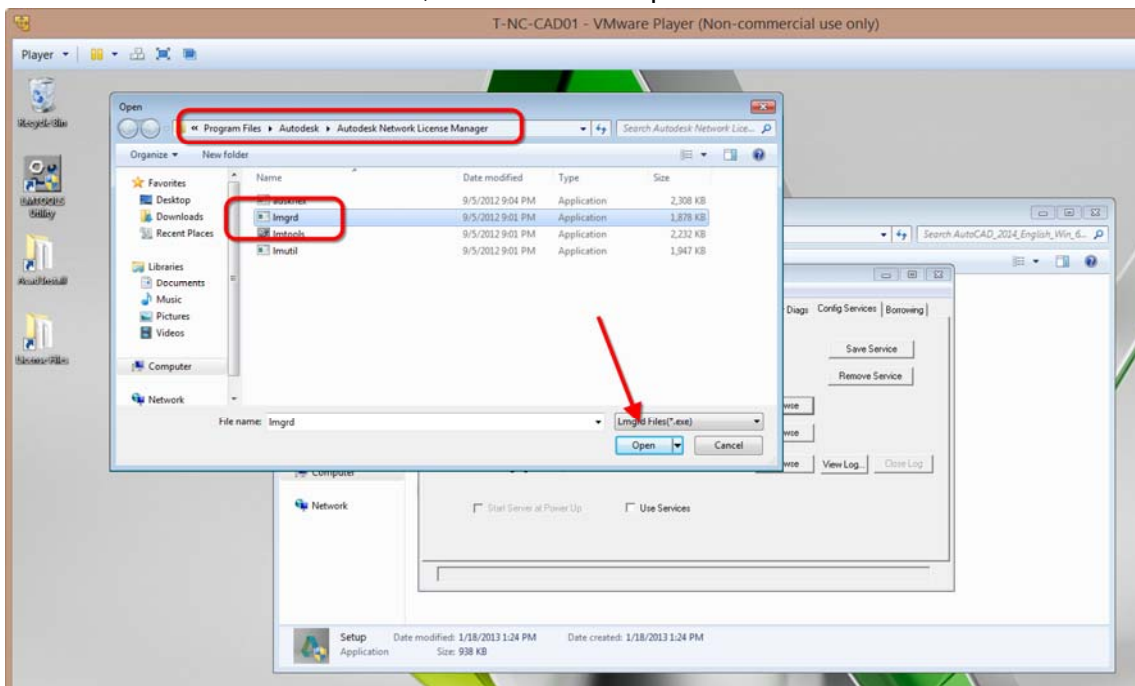C. From the LMTOOLS dialog, click the "Config Services" tab.



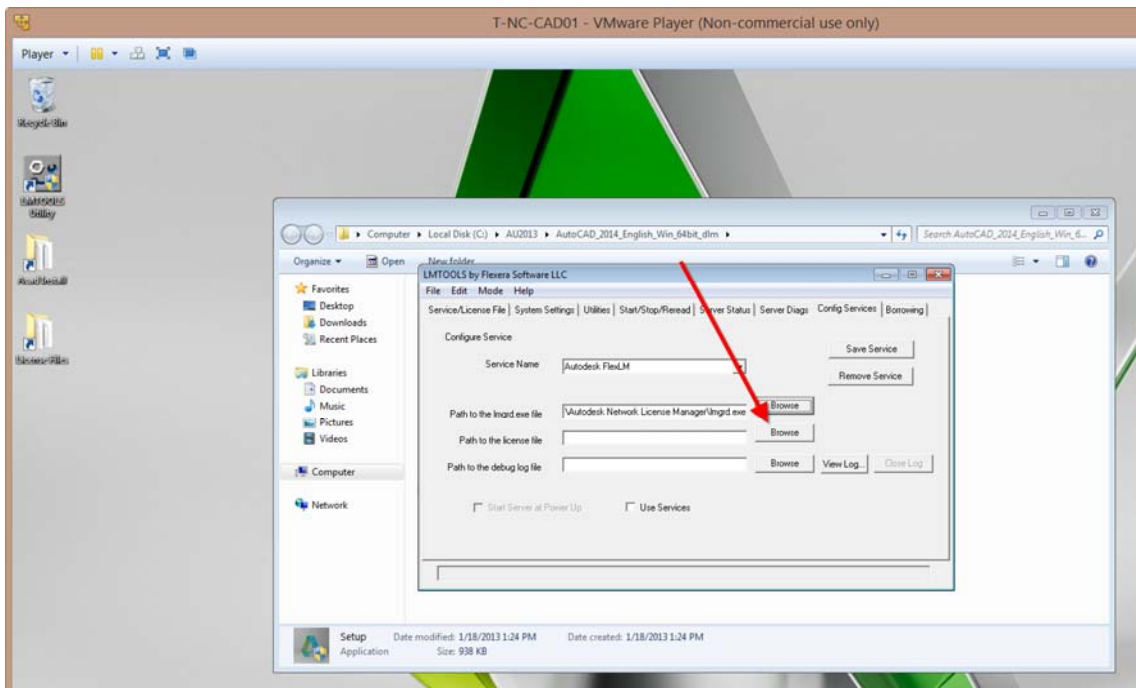D. In the "Service Name" edit box, change the name to "Autodesk FlexLM".

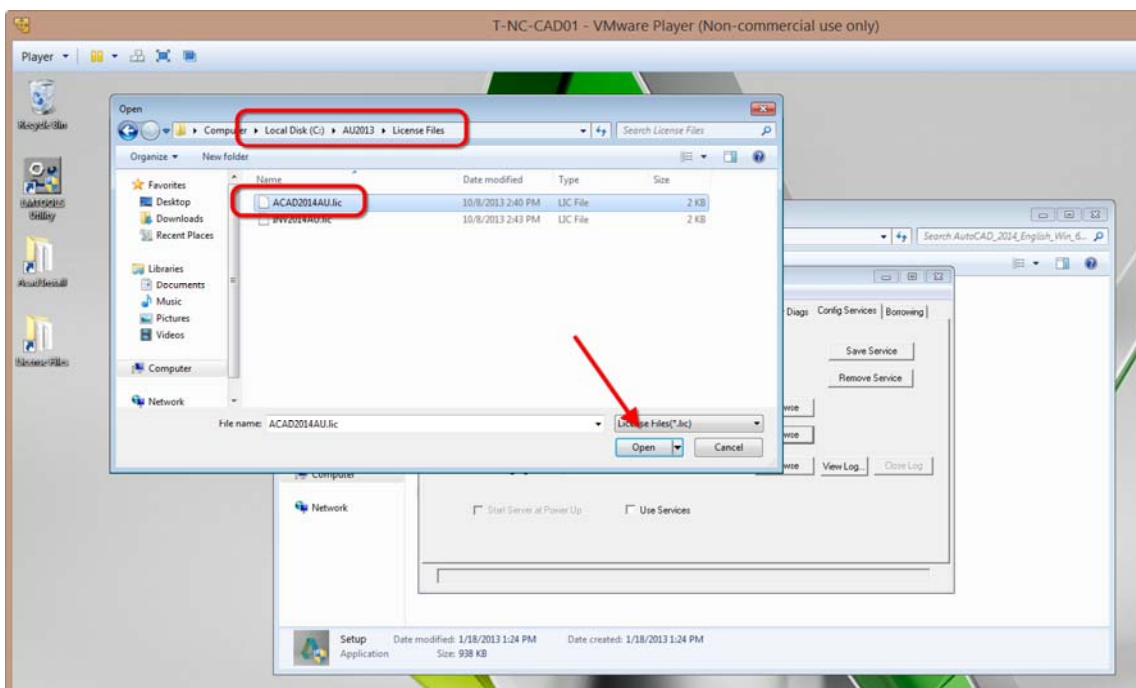E.  Next to the "Path to the lmgrd.exe file" edit box, click the "Browse" button.



F.  Browse to the "C:\Program Files\Autodesk\Autodesk Network License Manager" folder and select the "LMGRD.exe" file, then click the "Open" button.
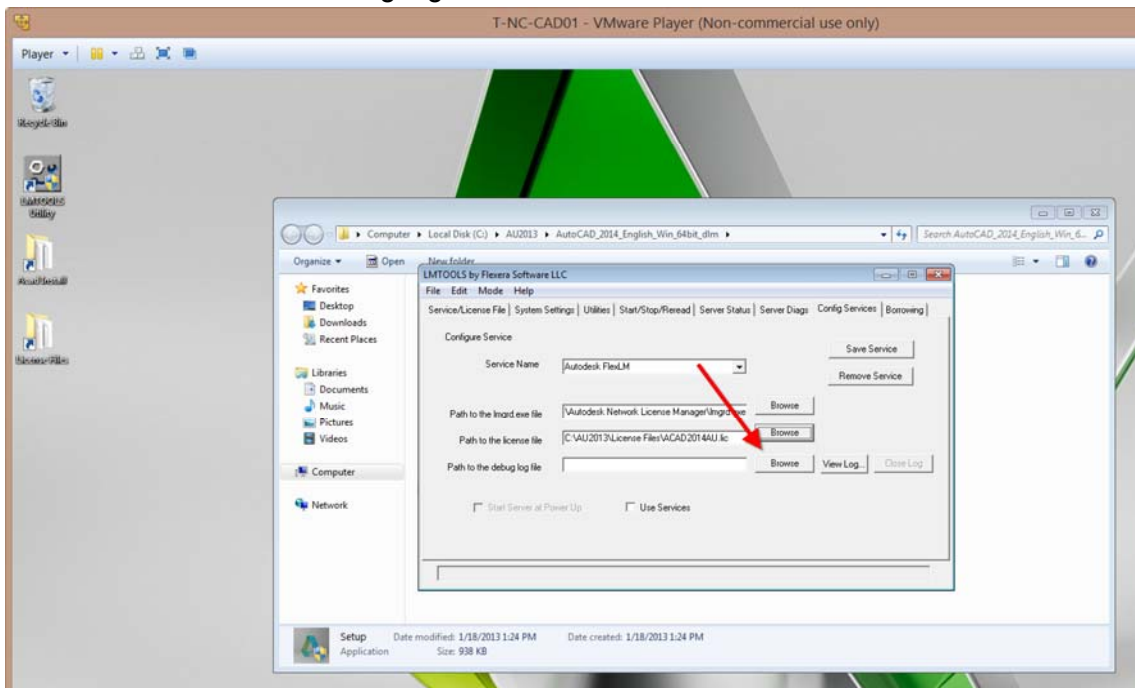
G. Next to the "Path to the license file" edit box, click the "Browse" button.


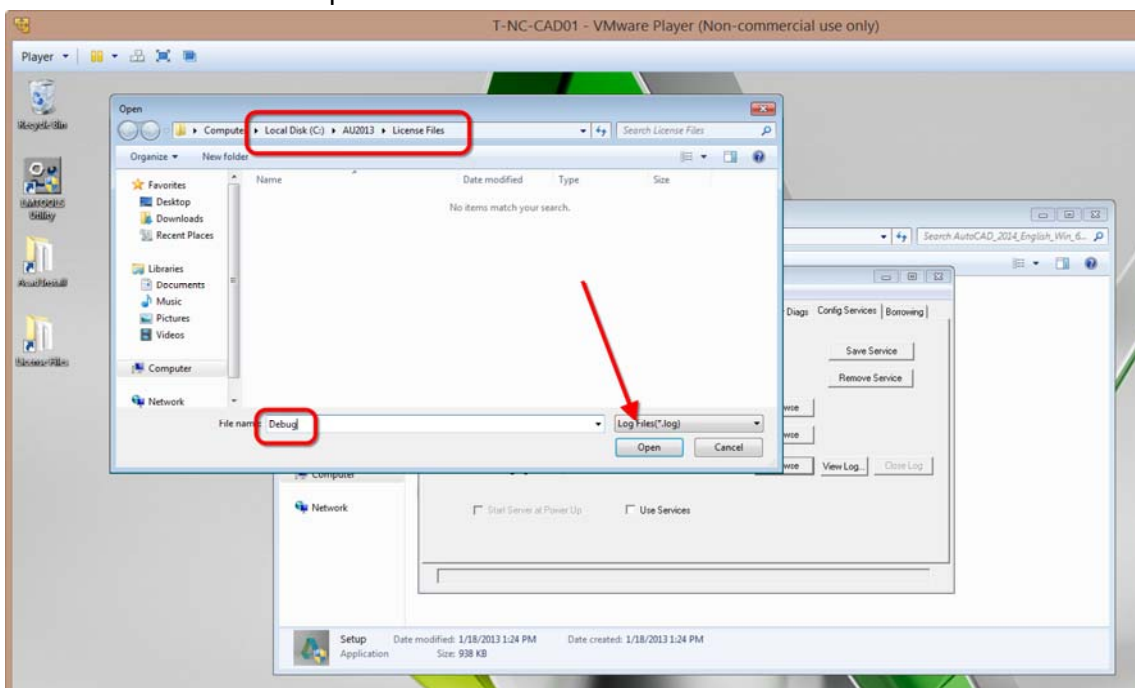
H. Browse to the "C:\AU2013\License Files\ACAD2014AU.lic" file and then click the "Open" button.
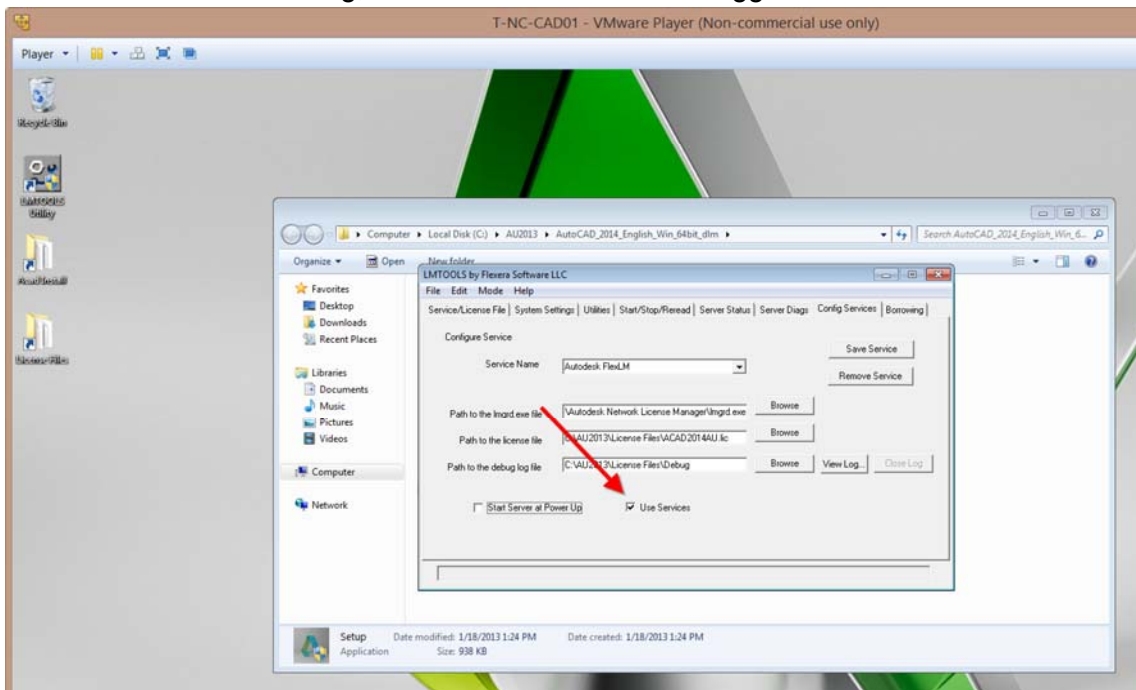
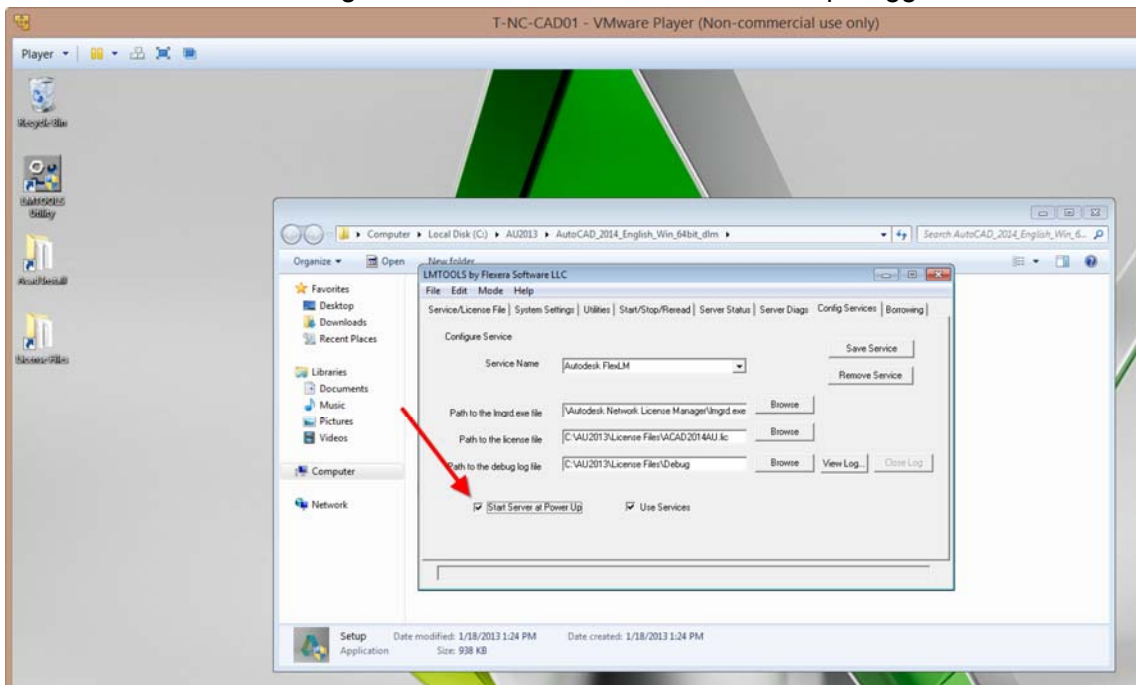I.  Next to the "Path to the debug log file" click the "Browse" button.



J.  Browse to the "C:\AU2013\License Files\" folder, type "Debug" in the "File name" edit box and then click the "Open" button.
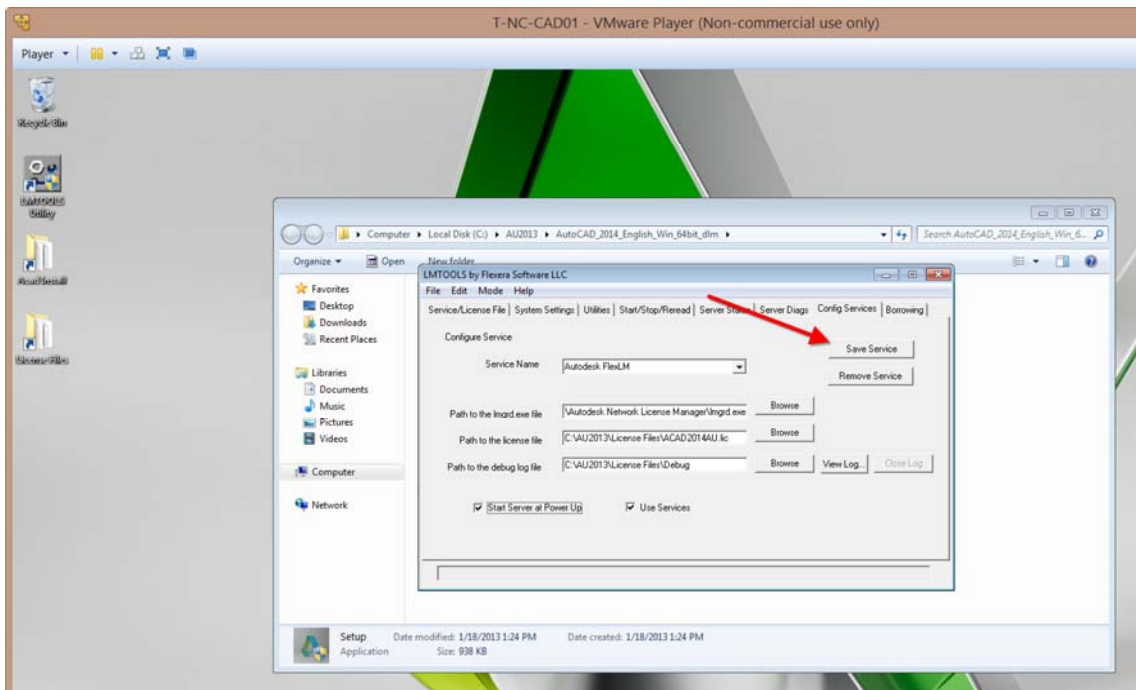
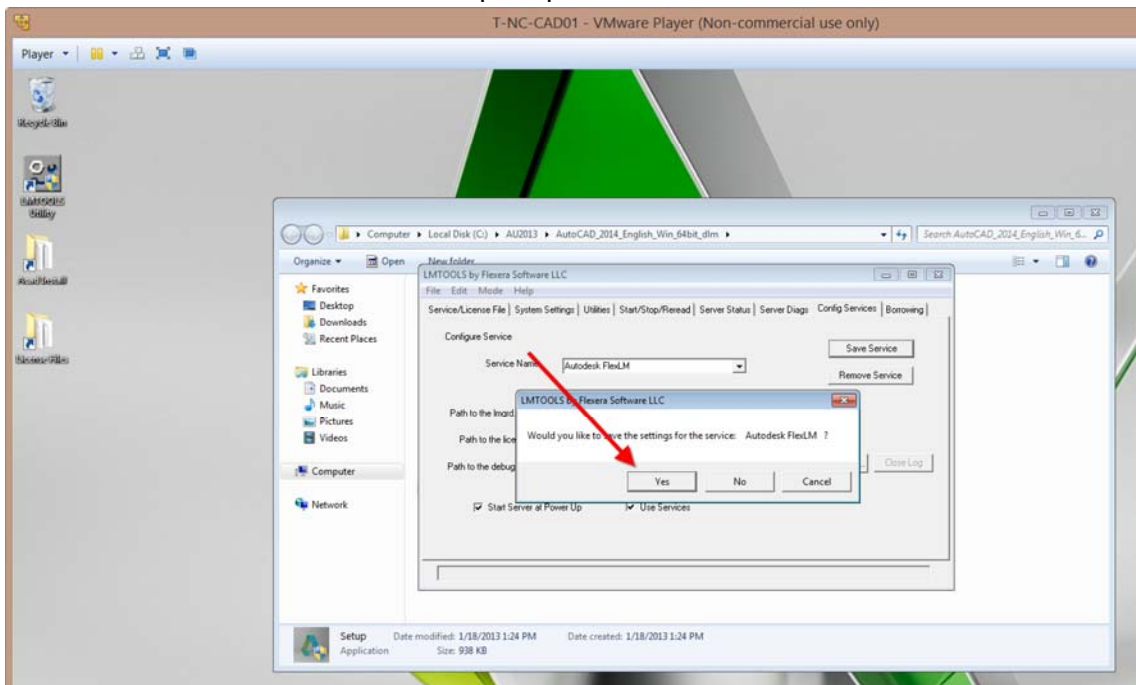K.  From the LMTOOLS dialog, check the "Use Services" toggle.



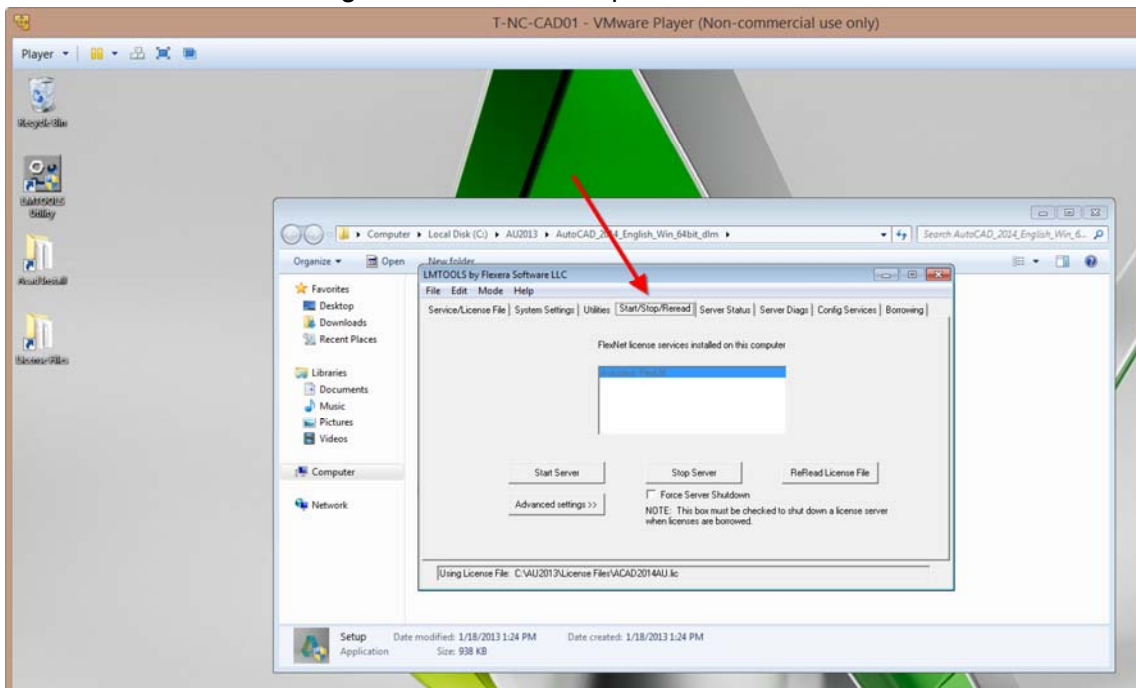L.  From the LMTOOLS dialog, check the "Start Server at Power Up" toggle.
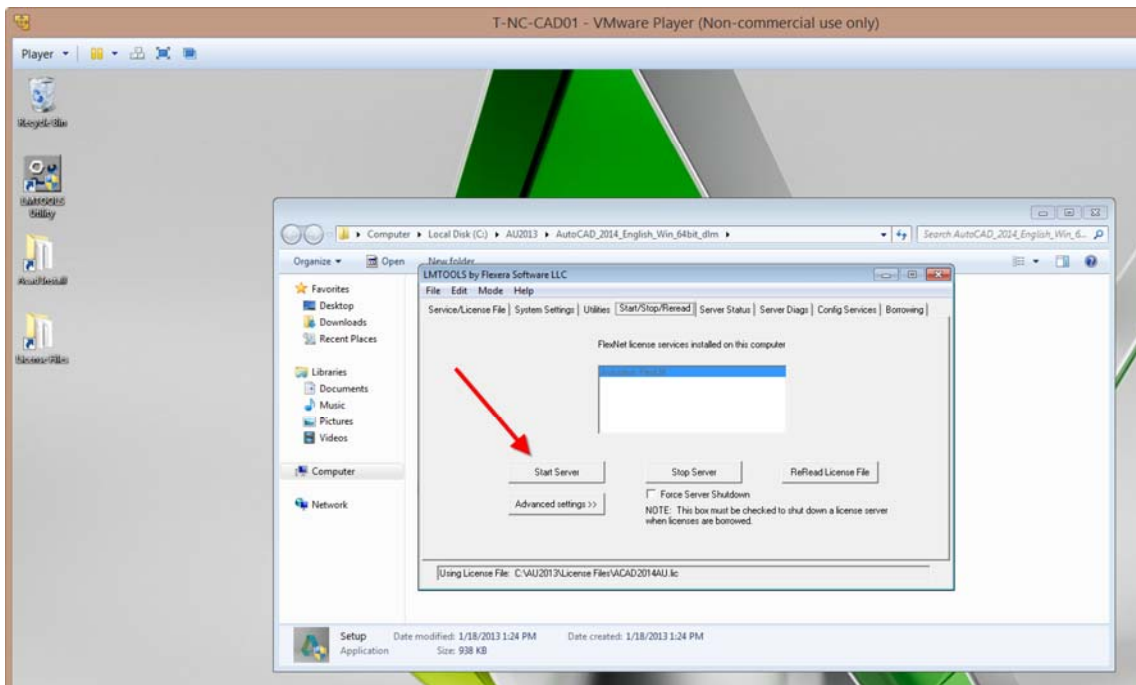
M.  Click the "Save Service" button.



N.  From the Save Service confirmation prompt, click the "Yes" button.

O. From the LMTOOLS dialog, click the "Start/Stop/Reread" tab.



P. Click the "Start Server" button.

Q. Click the "Server Status" tab.
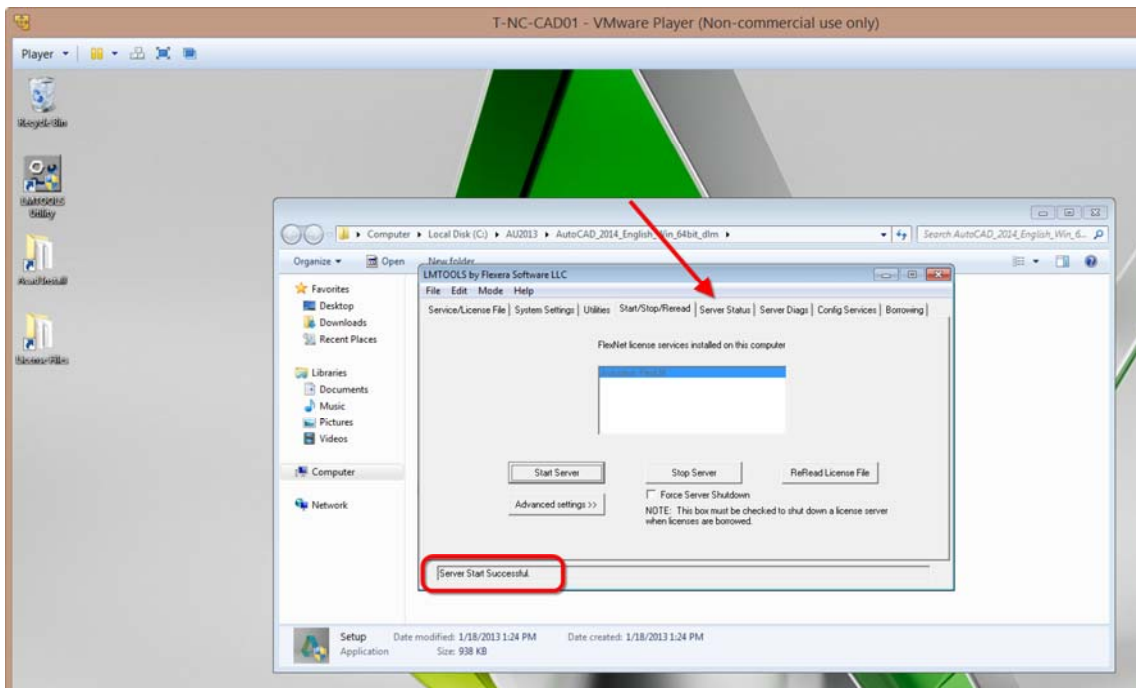


R. Click the "Perform Status Enquiry" button.
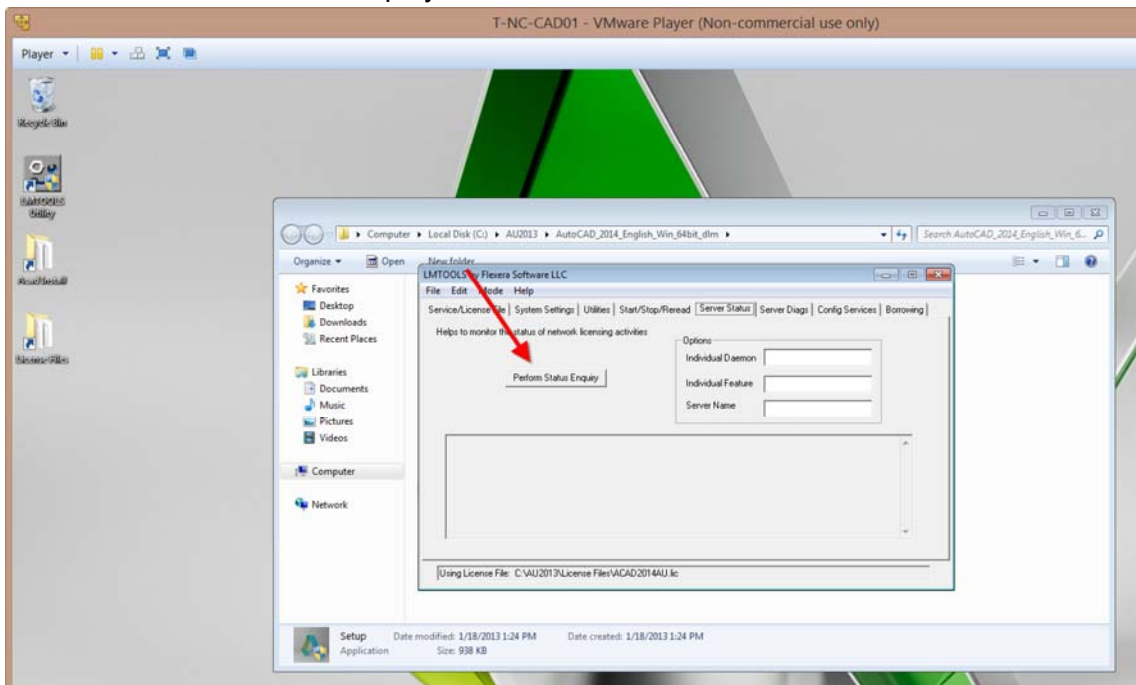
S.  Use the scroll bar on the right to examine the status and contents of the license server. Note any errors as well as license counts.
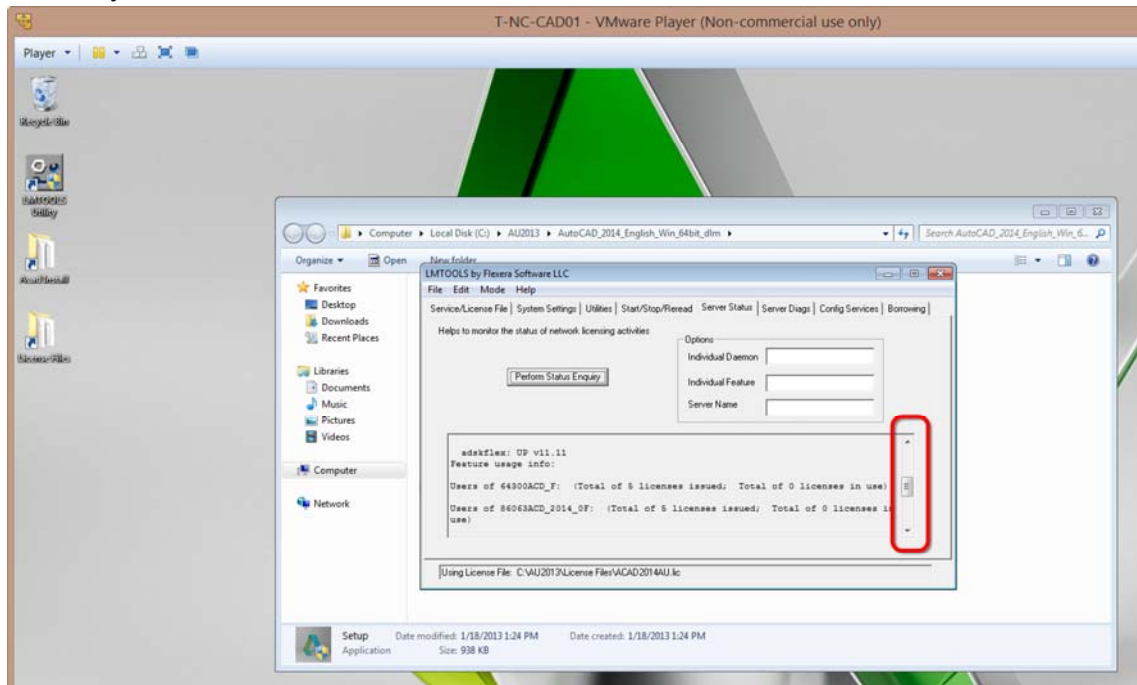


T.  Click the "X" button in the Upper-Right corner to exit the LMTOOLS dialog.
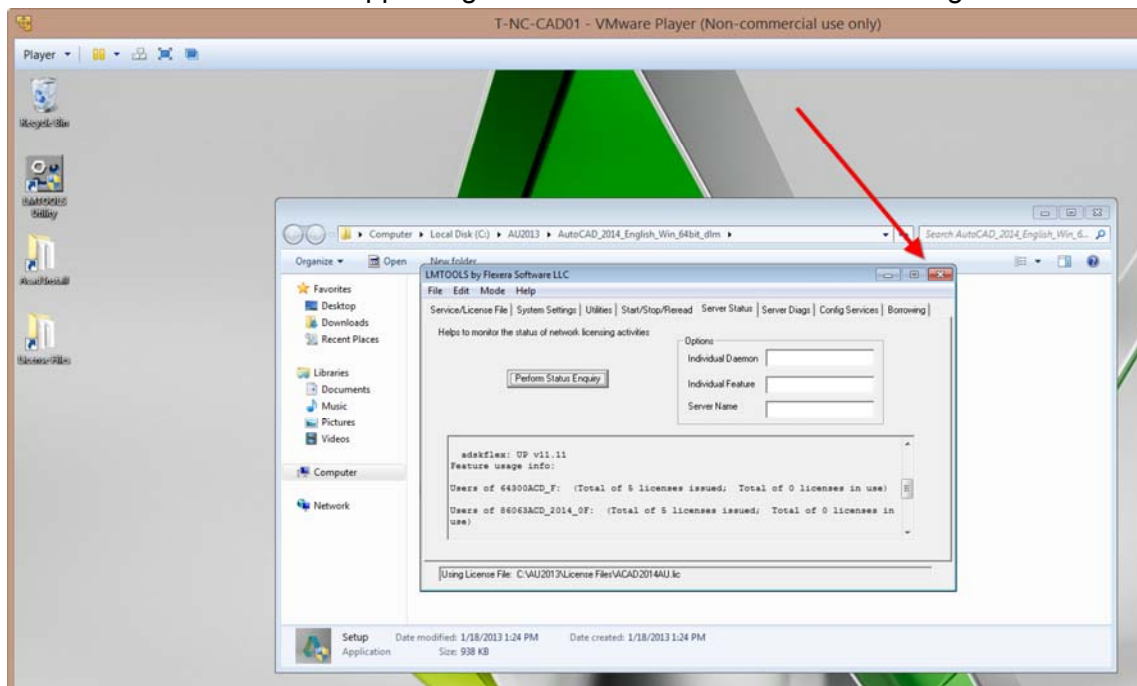
## Part 5 – Install AutoCAD Application as Network License

A.  In not already open, click the "Acad Install" shortcut to open the folder where the installation files are.
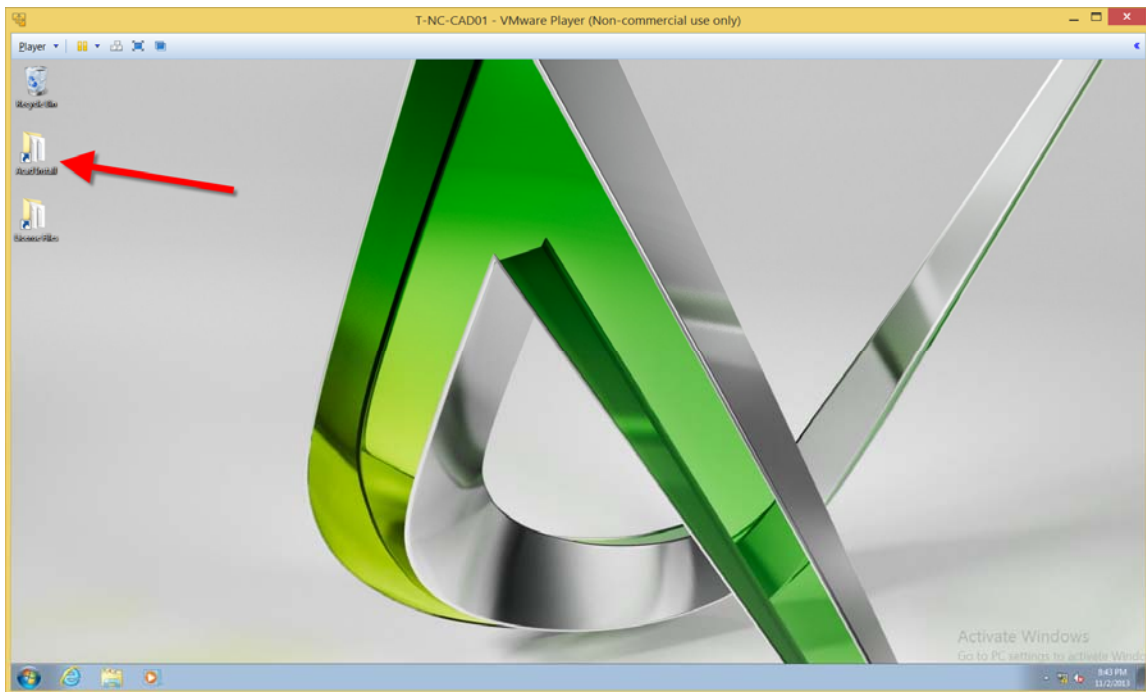


B.  Double-Click the "Setup" program to start the installation process.
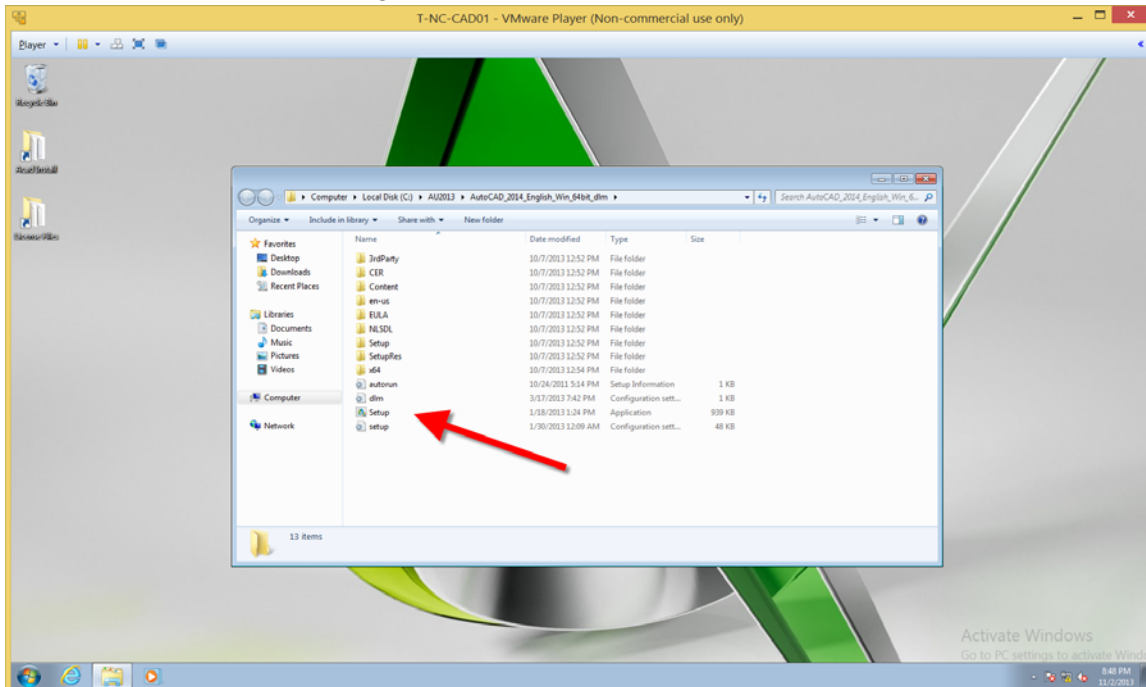
C. When prompted by the "User Account Control" alert, click the "Yes" button.
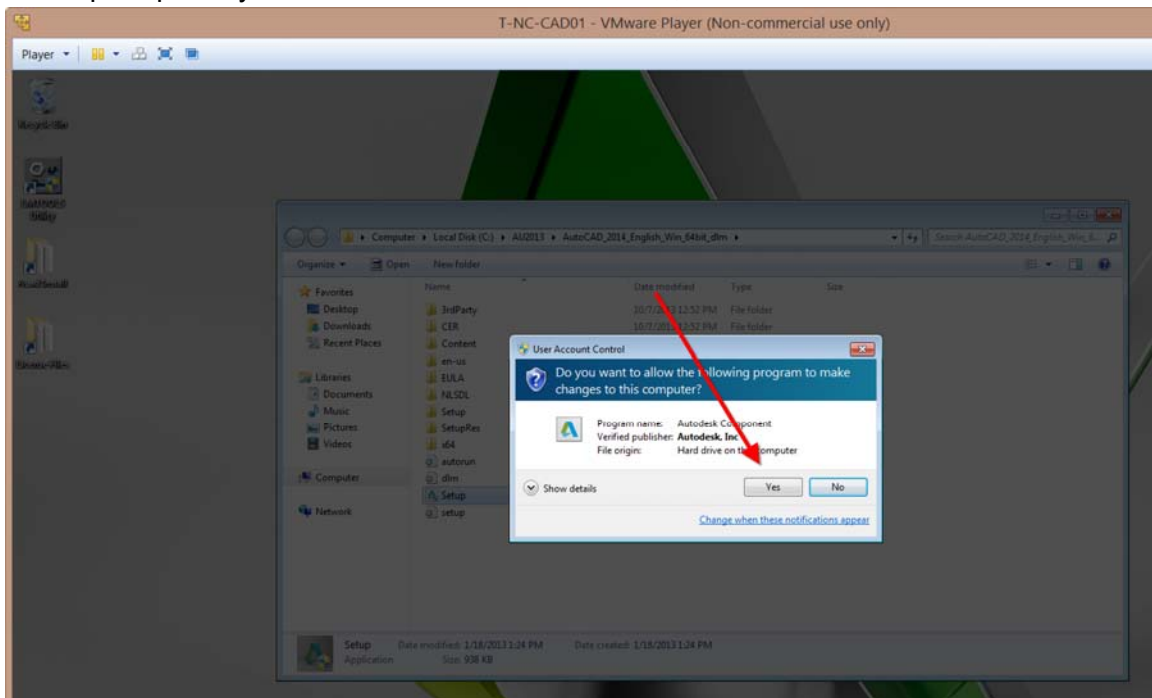


D. From the AutoCAD Installation screen, click the "Install" button.
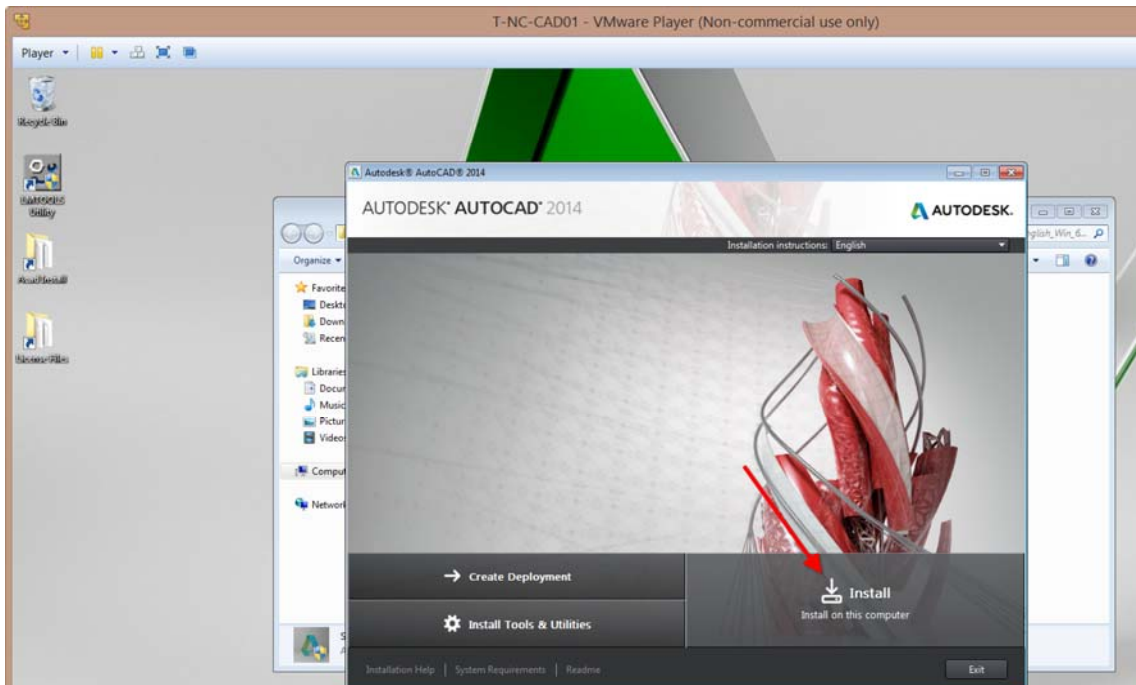
E.  From the License Agreement screen, select the "I Agree" option and then click on the "Next" button.
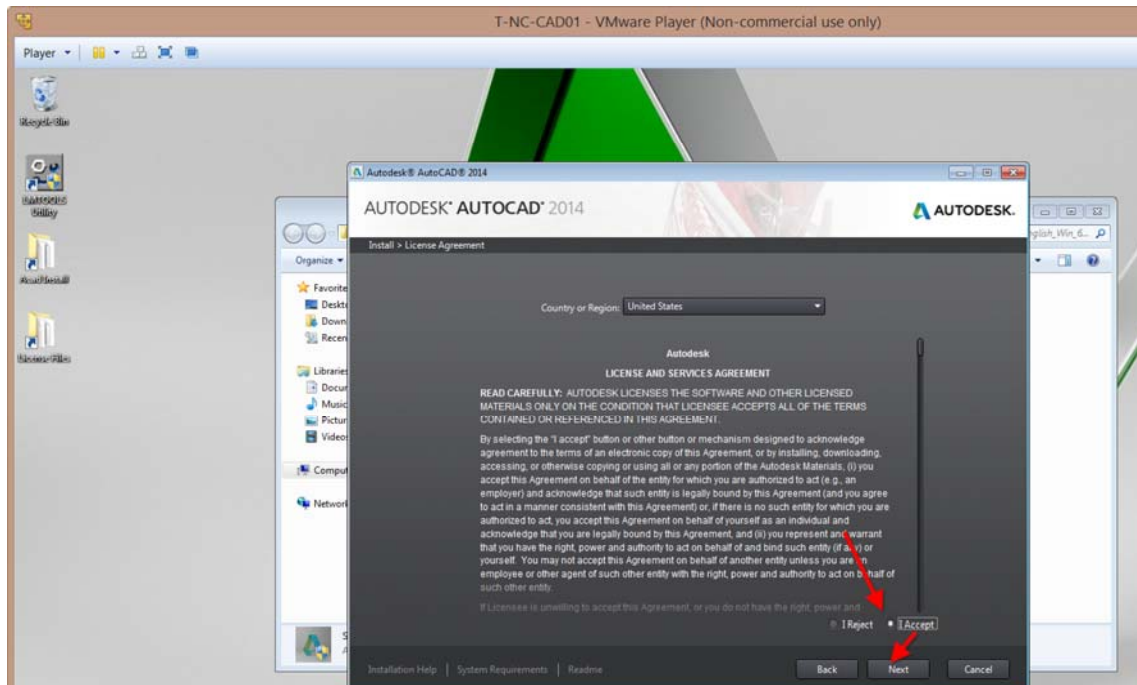


F.  From the Product Information page, select the License Type "Network".
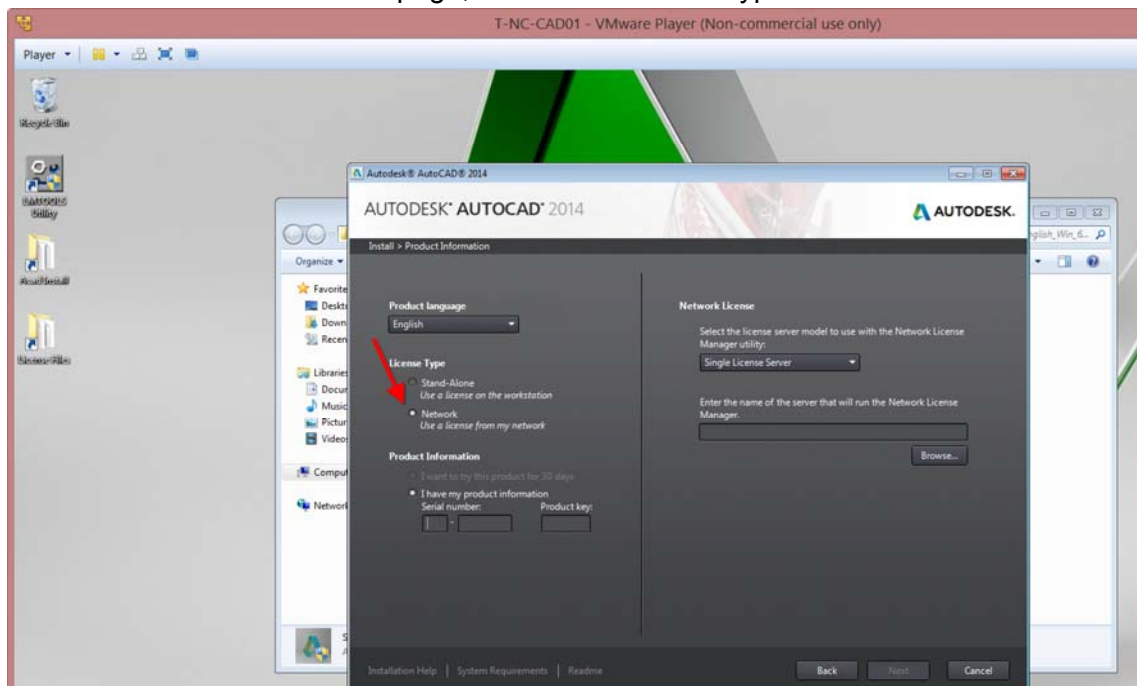
G. In the Product Information section, enter "399-99999999" for the serial number and "001F1" for the product key.
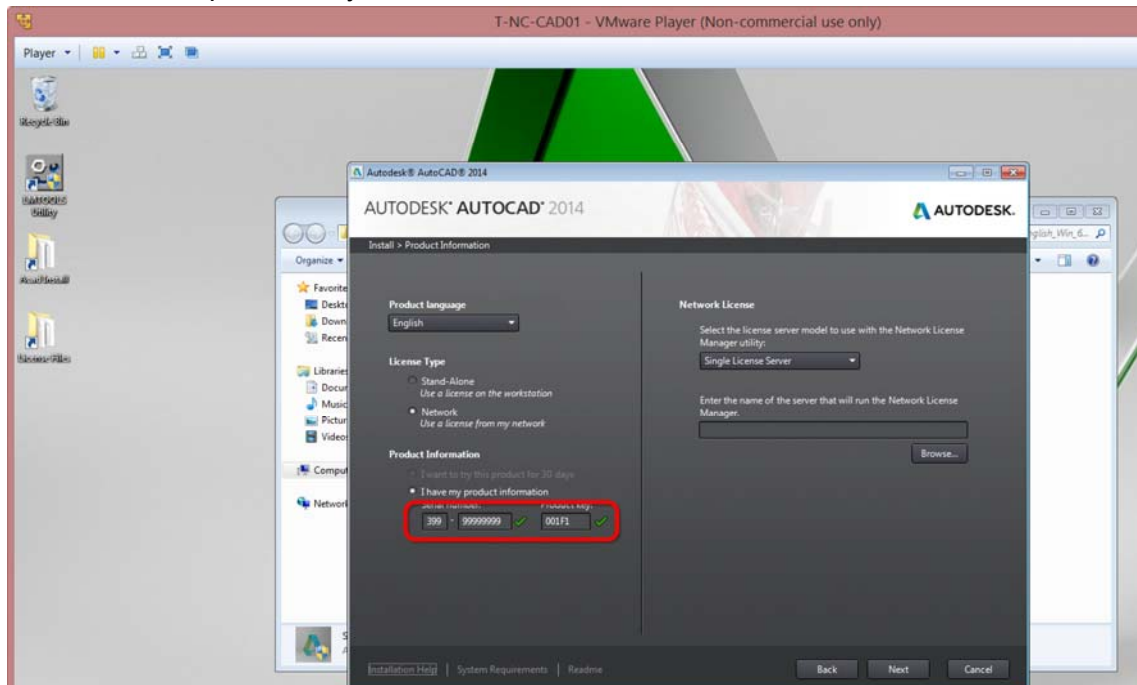


H. From the Network License section, make sure "Single License Server" is selected from the dropdown list and "T-NC-CAD01" is entered for the server name, then click the "Next" button.
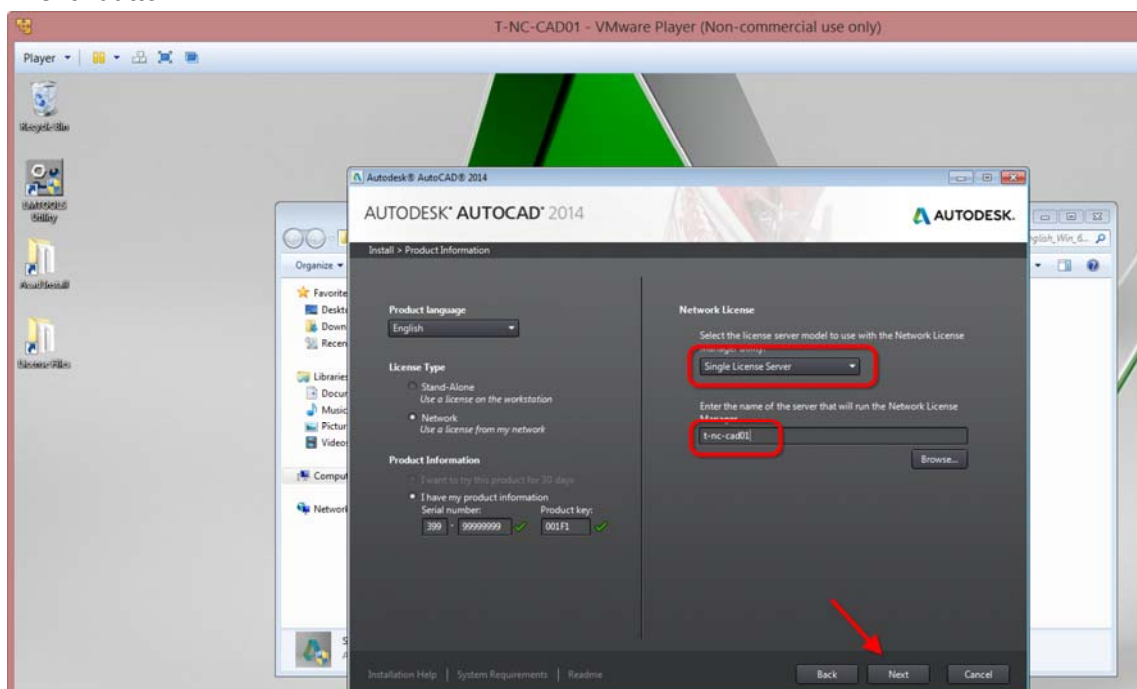
I.  From the Configure Installation screen, accept all defaults and click the "Install" button.
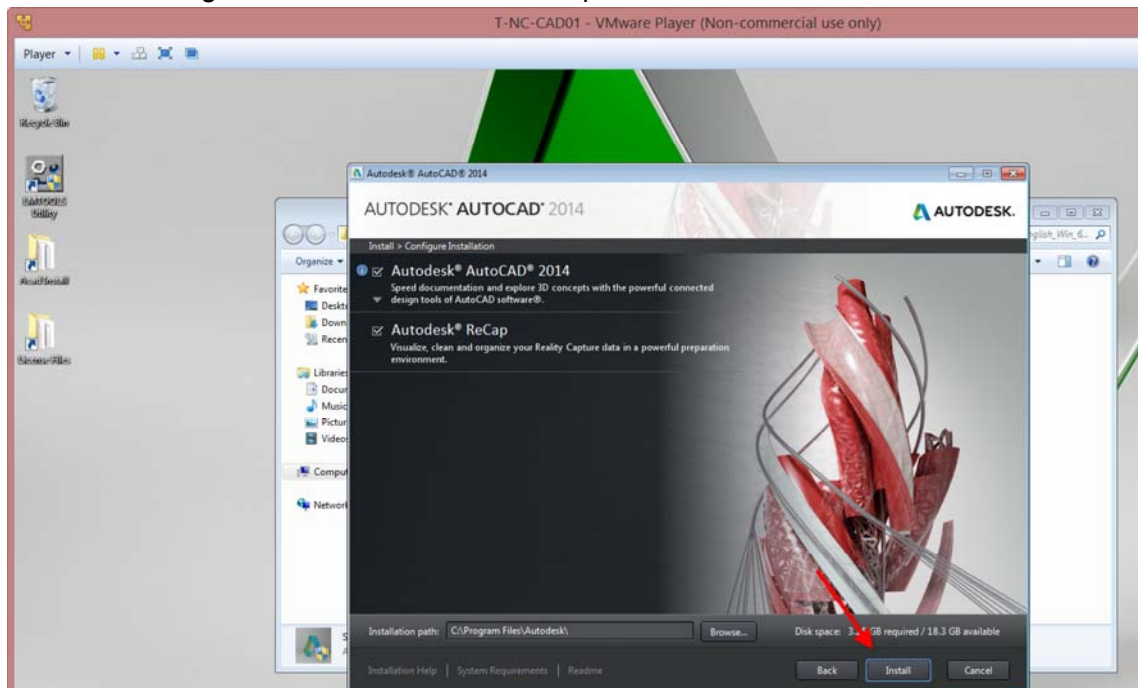


J.  Once finished, click the "Finish" button.
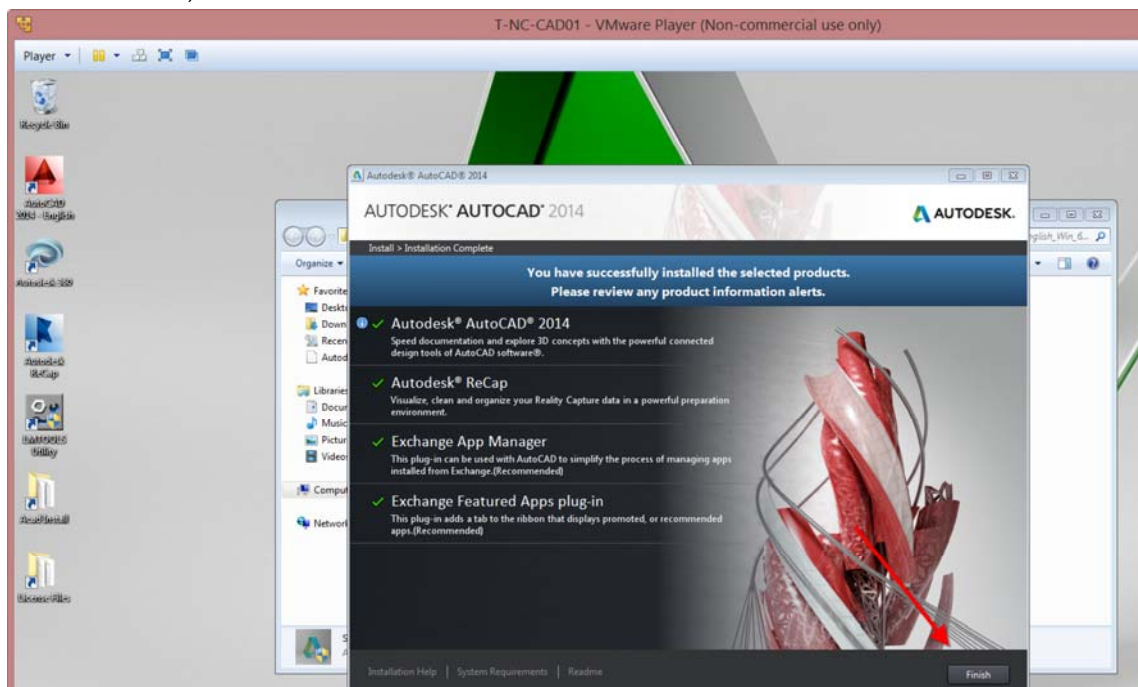
K. Double-Click the Autocad shortcut on the desktop.
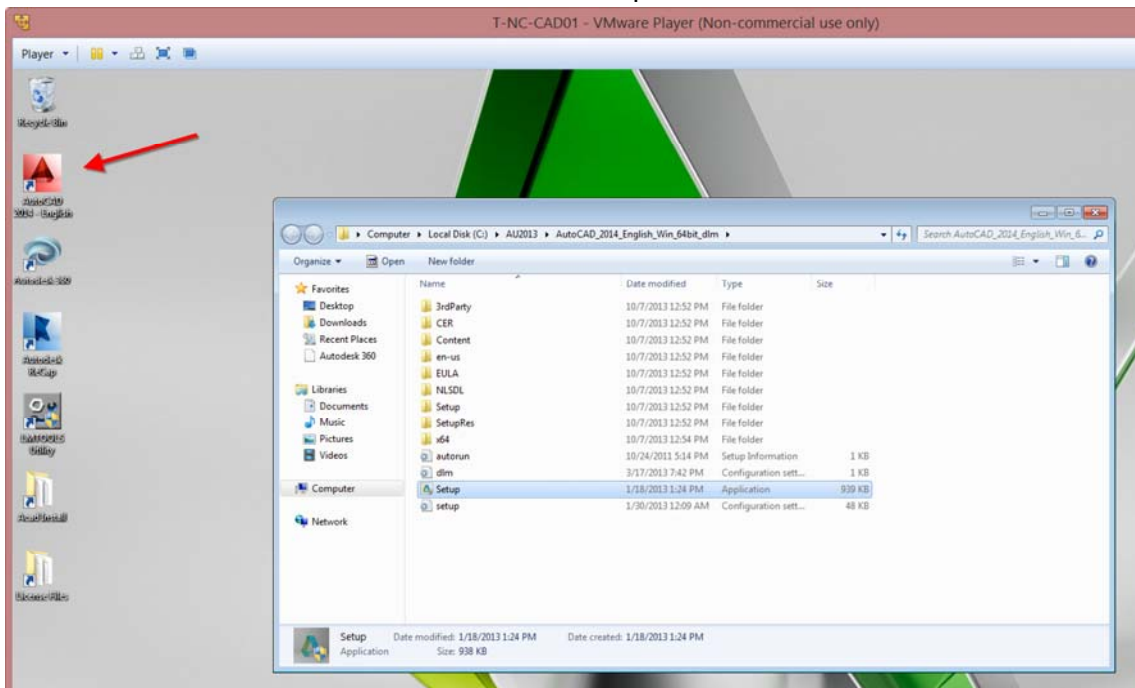


L. Click the drop down arrow next to the Question mark button in the upper right corner and select "About Autodesk AutoCAD 2014" menu option.

M.  Click the "Product Information" button.



N.  Review license information for this session.

# Part 6 – Other Considerations

A. Use an Options file to configure advanced options. File name should be the "adskflex.opt". Create with NOTEPAD or other plain ASCII text editor.

   Some frequently used entries….

   a. TIMEOUT
   b. TIMOUTALL
   c. DEBUGLOG
   d. REPORTLOG
   e. MAX_BORROW_HOURS
   f. BORROW_LOWWATER
   g. EXCLUDE
   h. EXCLUDE_BORROW
   i. EXCLUDEALL
   j. INLUDE
   k. INCLUDE_BORROW
   l. INCLUDEALL
   m. GROUP
   n. HOST_GROUP
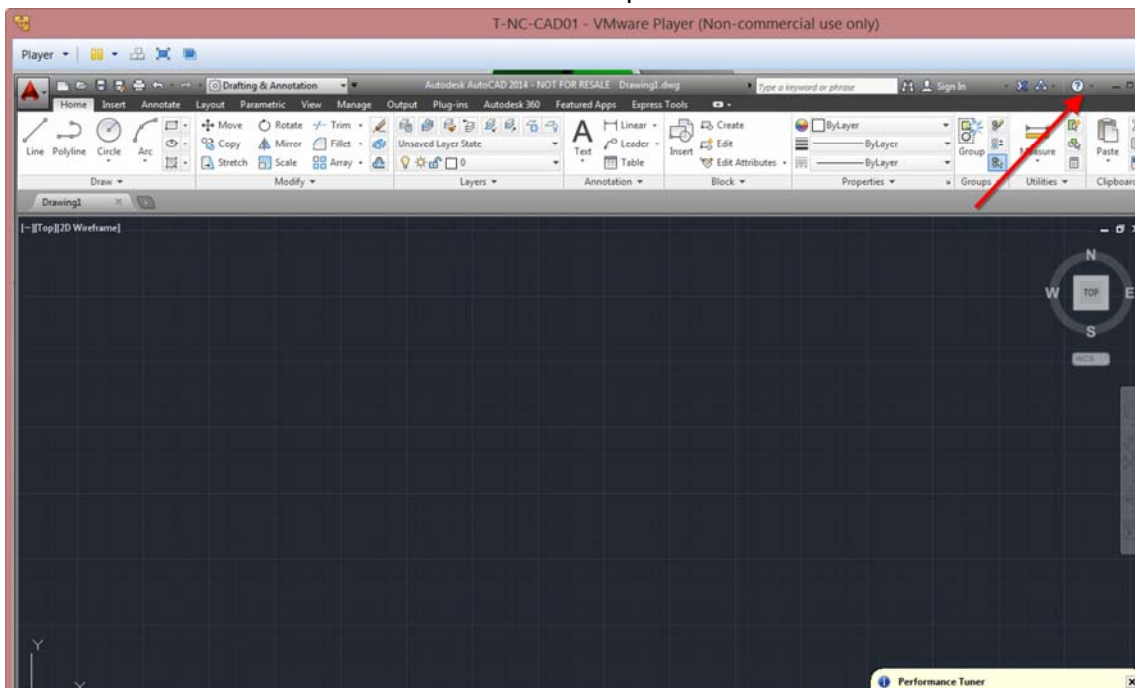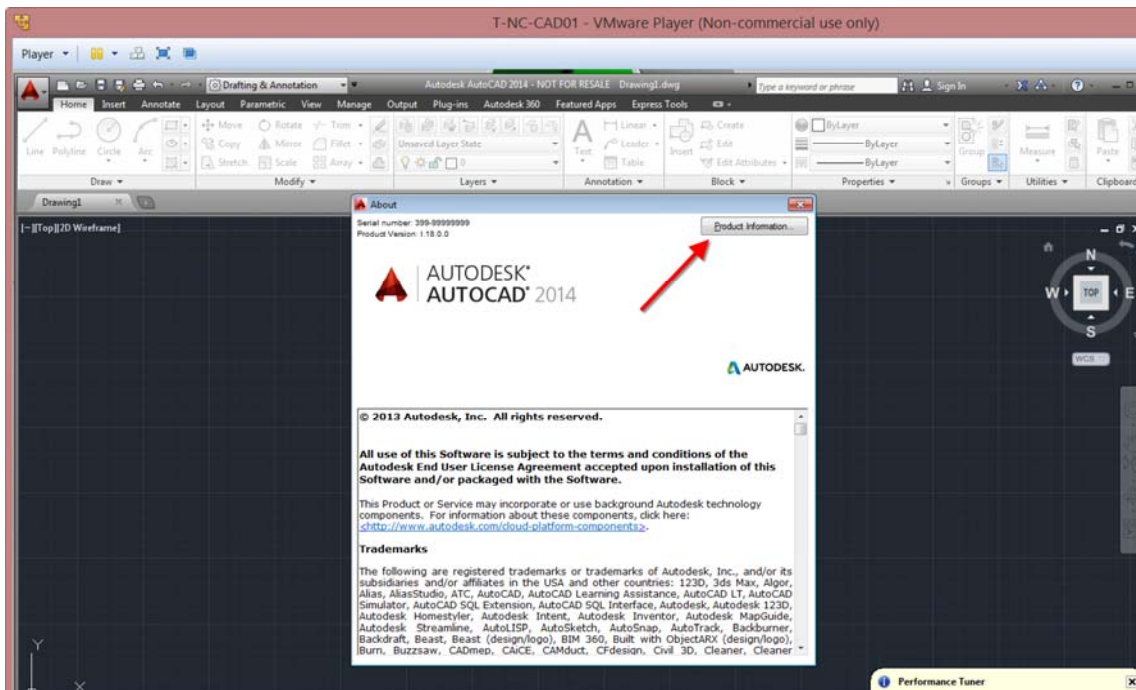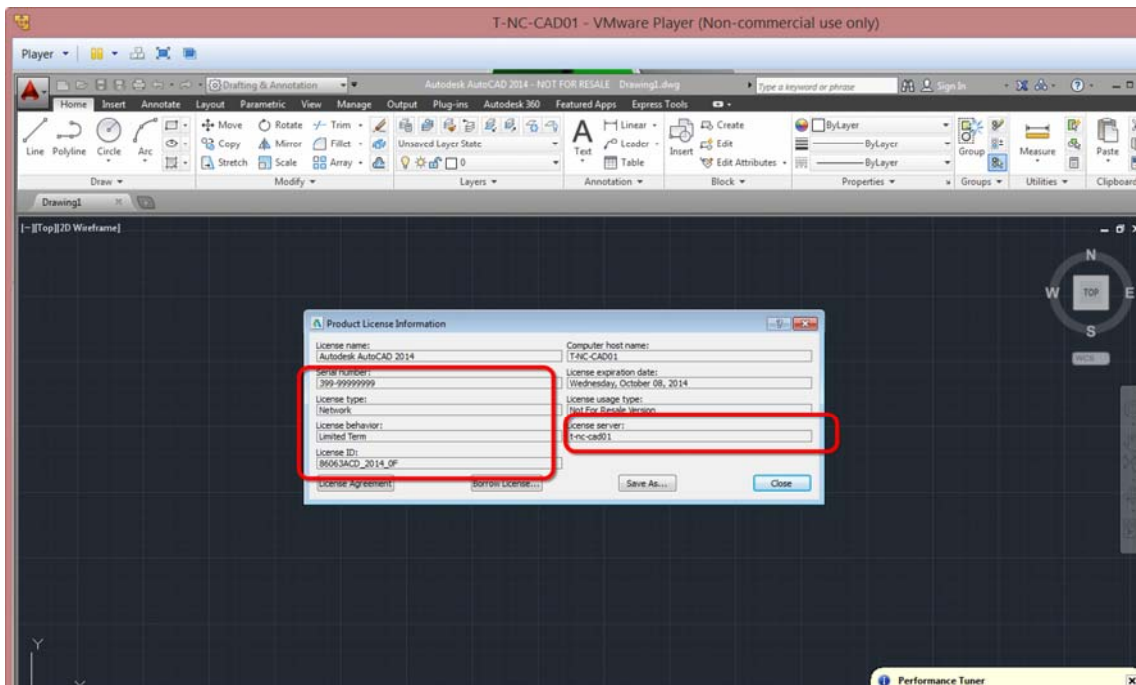   o. GROUPCASEINSENSITIVE
   p. RESERVE

B. Finding License Servers….
   a. Single License Server uses "Licpath.lic" file located in product root folder.
   b. Distributed License Server uses "ADSKFLEX_LICENSE_FILE" system variable.

C. Specify TCP/IP port numbers to resolve issues where you can't get a license with connections like VPN or DialUp Networking.

D. Use system variable "FLEXLM_TIMEOUT" to increase product "wait" time before giving up. Recommended setting is "1000000".

E. Prefix Debug/Report Log path with "+" to "Append" to existing log when license server restarts (otherwise overwrites)

F. Use DNS Alias to specify server names. Allows for simple DNS update to redirect all clients to new license server.
   a. Use "IPCONFIG /FLUSHDNS" from DOS to force DNS cache flush
   b. Use "IPCONFIG /REGISTERDNS" from DOS toi force DNS refresh

G. Repair/Reinstall of Product, install of another network license product or install of Service Packs of some products may overwrite your license server system variables or LICPATH.LIC file if you've made post install changes. Verify, verify, verify after any Autodesk product install/patch.

H. License reporting…
   a. Turn on Report logging (via Options file) to use SAM Lite reporting utility to report on licensing usage (free, limited)

  b. JTB FlexReport LT for free instant "snapshot" of usage.

  c. Buy  FlexNet for full, robust reporting and other options. (very expensive)

  d. JTB Flex Report (mid range price) for robust reporting.

I. Use "distributed" license model even for "single" servers (easier to manage than separate "licpath.lic" files.

J. Only include server/mac address information once in license file when combining products.

K. Get ALL product licenses for ALL servers in same day.

L. Leverage your reseller to get you the license files. Provide them with list of products, licenses (per server) server names and max addresses.