GibbsCAM® 12

Version 12 September 2017

Installation

3D SYSTEMS

Proprietary Notice

Contents

Introduction

Welcome

Congratulations on your purchase of GibbsCAM 12, version 12.0, the most productive CAM system available. This guide contains all the information you need to install the system and begin using the software. If you have any problems with the installation procedure, contact your reseller or the 3D Systems Technical Support department; they will be happy to assist you with the installation process.

GibbsCAM 12 ships on a flash drive. When you insert the flash drive, your language and platform should be automatically detected. (A different installer is available for each supported language.) In addition, customers who are current on Maintenance can download the appropriate installer from the Gibbs Online Services website, https://online.gibbscam.com.

The contents of the flash drive are accessed through an interface that should launch when the flash drive is inserted. For information on this tool, see “File Layout” on page 13.

Your order contains a Product Code. In the registration process, the Product Code and other information are supplied to obtain a license file. Licensing is secured by hardware key or Network License Option (NLO). At first startup, GibbsCAM will prompt you to supply the license file. All steps in this process are thoroughly explained in “Registration” on page 26.

If you want to migrate settings and preferences from a installation of GibbsCAM, run the Migration Tool ***before*** running the newly installed release for the first time. For complete information, see “Migrating from Previous Releases” on page 46.

What Your Order Should Contain

All orders should contain the following

- Packing slip with your Activation Number on it
- Cover letter
- Installation flash drive for GibbsCAM 12

This flash drive (also called the “product media”) contain GibbsCAM software for all product modules and options as well as documentation, sample part files, training videos, and extra software. For more information, see “File Layout” on page 13.

In addition, all new customers will receive a USB hardware key.

Important Information About Security

GibbsCAM security is provided by a license file that is linked to unique information from your computing environment, such as the serial number of a hardware key or a unique identifier over a network. The license file authorizes use of GibbsCAM products only when the hardware key is present and recognized by the corresponding driver, or when the license server is running and it validates the unique identifier.

GibbsCAM security is normally activated through the Internet. If you do not have Internet access available, you can activate security using e-mail or regular mail. Please allow adequate time to have the license file sent to you.

Method	Estimated Time
E-mail during Gibbs business hours	Same business day if received before 2:00PM Pacific Time
E-mail after hours	Next business day
Regular mail	1-2 business days plus regular mail shipping time

Installation Changes for GibbsCAM 12

Installation

Installation Media and Gibbs Online

GibbsCAM v12.*x* software is delivered on flash drives for most languages. When a release is first issued on flash drive, its installer executables are identical to the installer executables posted to Gibbs Online. As modifications occur, the Gibbs Online versions will be updated.

New and Changed Installation Capabilities

This release, as in the past, requires a 64-bit version of Microsoft Windows. The installation process uses InstallShield:

- You can selectively install or uninstall individual product options and components.
- You can easily repair an incomplete or damaged installation, such as when a file is accidentally moved, deleted, or overwritten.
- Optionally, you can associate GibbsCAM with the context menu (right-click menu) of filetypes other than `.vnc`, including `.sat`, `.sab`, `.asat`, `.asab`, `.dlv`, `.model`, `.dxf`, `.igs`, `.catpart`, `.catproduct`, `.x_t`, `.xmt`, `.par`, `.vda`, `.3dm`, `.prt`, `.stl`, `.iam`, `.ipt`, `.ckd`, `.asm`, `.sldprt`, `.sldasm`, `.x_b`, `.p_b`, `.dwg`, `.step`, and `.stp`.

Note: Because the installation is standardized to adhere to Microsoft Windows Installer guidelines, certain nonstandard features of GibbsCAM installations in previous releases became unavailable as of v10. For example:

- You cannot start GibbsCAM by dragging a `VNC` file (or `*.igs`, etc.) onto the standard desktop shortcut. Instead, right-click the file and choose Open (or Open with…). This type of shortcut is automatically healed any time the installation is repaired. If you want to create an old-style shortcut that bypasses automatic healing, you can `CTRL+ALT-drag` a copy of `…\Bin\Virtual.exe` to the desktop.
- When you right-click the standard GibbsCAM desktop shortcut and choose Open file location, Windows Explorer opens your desktop folder, not the installation folder. To learn the installation location, query the shortcut's Properties > Start in location. You can then copy this string (typically `C:\Program Files…\Bin\`) into Windows Explorer.

Folder/File Organization

The layout of GibbsCAM files installed on your machine is standardized. For example, binary executables are separated from resource files. For details, see "File Locations" on page 18.

Migrating Settings and Preferences

The GibbsCAM Migration Tool lets you detect all previously installed versions of GibbsCAM and copy compatible settings and preferences — display settings, custom MDDs and VMMs, bolt and tap table data, macro configuration file, machine models, and so forth — from a specified previous version to the current release. The previous GibbsCAM installation is not modified.

For details, see "Migrating from Previous Releases" on page 46.

Installing Post Packages by Drag-and-Drop or File > Open

When the 3D Systems Post department provides a post package in `.zip` file format, you can install it to a running instance of GibbsCAM simply by dragging and dropping it or by using

File > Open.

For details, see “Installing Post Packages” on page 48.

Packager

You can easily create and use package files (*.gcpkg) containing a GibbsCAM part and the transportable portion of the environment that the part requires or expects.

For more information, see the *Common Reference* guide, section “Pack and Go”.

Update Notifier

When GibbsCAM first starts, it checks for updated releases (if an Internet connection is available). If a later version of GibbsCAM is available, a message dialog appears:

- If you are current on Maintenance, the message prompts you to visit a web page where you can see information about the update and decide whether to download and install it. The update system will never automatically install any software.
- Otherwise, the message tells you that Maintenance is required if you want the latest version.

Notes on Update Notifier

- Help menu option Check for Updates allows you to perform a one-time update check or to resume/halt automatic checking.
- If you do not want GibbsCAM to check for updates each time it starts, go to File > Preferences, Interface tab, and clear the checkbox Automatically Check for Updates on Startup.

System Requirements

The requirements to run GibbsCAM do not have specific values. The requirements vary depending upon the operating system you use and the complexity of your part. We have a list of basic guidelines, seen below, that are common to all users. We also offer minimum supported requirements based upon your operating system, and we describe a recommended system.

Operating System	Windows 7, Windows 8.1, Windows 10, or Windows Vista (SP1 or SP2); or Windows Server (2008 • 2008 R2 • 2012). A 64-bit OS platform is required. Please install the latest available OS service packs and patches through Windows Update.
Microsoft .NET Framework	This release requires *two* versions of Microsoft .NET Framework: 3.5 and 4.0. Most machines will already have one or both of these (for example, if Office is installed), but if either is lacking, then the GibbsCAM installer will tell you what is needed.
Hardware	Minimum system requirements depend on the operating system. There are also

recommended hardware requirements. Please remember that the more complex a part, the higher your system requirements.

- “Minimum Requirements ” on page 10
- “Recommended System” on page 10
- At least 3 GB of free disk space is required to install the software.
- A flash drive is required to read the GibbsCAM product media. However, you can also download installers and other files from the GibbsCAM website.

Video Drivers Please install the latest available driver for your video card. The standard Windows drivers are typically not adequate, because of the GibbsCAM application’s advanced use of OpenGL and video RAM. We strongly recommend that you keep your system up-to-date with fully installed and updated drivers.

Network Licensing The Network Licensing Option (NLO) can be set up on 64-bit versions of any of the following platforms: Windows Server (2008 • 2008 R2 • 2012); Windows Vista (SP1 or SP2); Windows 7, 8, or 10.

Minimum Requirements

The requirements for running GibbsCAM on these systems — 64-bit Windows Vista / 7 / 8.1 / 10 or 64-bit Windows Server 2008 / 2008 R2 / 2012 — are as follows.

CPU

- Intel Core 2 or newer. This includes Core i3 / i5 / i7 / i9, Xeon, Pentium dual-core, and Celeron (1.7 GHz or faster)
- AMD Athlon 64 or newer. This includes Ryzen, FX, Opteron, Epyc, Phenom, Turion, and Sempron.
- Please note that all 64-bit CPUs meet our minimum requirements.

RAM 2+ GB of total RAM.

Video Card A quality 3D accelerated video card with 512+ MB of video memory.

Recommended System

A computer that matches or exceeds the following requirements will run GibbsCAM very comfortably. Please note that the larger or more complex your parts are, the more GibbsCAM will demand from your system.

Operating System Windows 10

CPU *Intel*: Quad core: Core i9, i7 or i5.

	AMD: Ryzen, FX, Opteron, or Epyc
RAM	16 GB RAM
Video Card	An NVIDIA video card with 1+ GB of video memory.

Contacting 3D Systems GibbsCAM

Feel free to contact us by telephone, fax, or e-mail.

Telephone numbers for Technical Support:

- (800) 654-9399
- +1.805.523.0004

Fax number for Technical Support:

- +1.805.523.0006

E-mail addresses:

- GibbsCAM.Support@3Dsystems.com
- GibbsCAM.Sales@3Dsystems.com
- GibbsCAM.Info@3Dsystems.com

Technical Support

Technical Support is available to all users. Our Technical Support department is available to answer your questions Monday through Friday, 5:00AM to 5:00PM Pacific Time.

When contacting the Technical Support department, it is helpful if you know the following information:

- Type of computer
- Operation system
- Amount of memory
- Version of GibbsCAM software. To find this, select Help menu item About.

If you need to send a file, you can zip the file and send it as an attachment in an e-mail. When sending files, it is extremely helpful to include a contact name and phone number and a brief description of any issues. If you have a file that is too large for e-mail, you can send the file to us via FTP or TeamPlatform. Contact your Reseller or Technical Support if you have any questions about FTPing a file.

Websites for 3D Systems GibbsCAM

3D Systems maintains a continuous permanent presence on the World Wide Web.

- The Gibbs website — http://www.GibbsCAM.com — can be accessed by anyone with Internet access. The site contains useful files available for downloading. This website contains company news, product information, e-mail links, technical support utilities, and much more. It is the preferred means of connecting to Gibbs electronically.
- For Resellers and customers with a Gibbs Online Services account, additional websites, such as https://online.gibbscam.com, provide access to software releases and release notes, updates to user guides, continuously updated documentation of GibbsCAM macros, and many other services and tools.

Installation

File Layout

When the flash drive for GibbsCAM is inserted, the GibbsCAM Installer does not start automatically.

- To install the software, run `AutoRun.exe` and follow the instructions in “Installing the System Files ” on page 19.
- To browse the files on the product media, use Windows Explorer. A summary of the files in the `Content\` folder is provided below.

Activation Check	Contains the `ActivationCheck` utility for testing the connection to the License Activation Server.
Documentation	Contains GibbsCAM user guides in PDF (portable document format). A ReadMe file provides information on Adobe Reader, obtaining the latest PDFs from https://online.gibbscam.com, and similar information.
Extras	Contains miscellaneous items, including: • Shortcut for downloading the Adobe Reader software. • Shortcut for downloading the Excel Viewer software. • The `NPT Threading Processes\` folder contains saved process files that you can import into your parts for threading. • `Utility for AVI Files\` contains a website link and an executable (`TSCC.EXE`) that will install the codec necessary to view the AVI files that are provided by 3D Systems. If you experience difficulties viewing our videos, please run this installer. • Forms, such as the `GibbsCAM-Post*.pdf` files for ordering custom post processors, and a `GibbsCAM-ContactForm.pdf` form for updating contact information.
Installers	Contains files for installing GibbsCAM 12, v12.0. For more information,

see “Installing the System Files ” on page 19.

Predator

Contains files for installing a version of the Predator CNC Editor and Predator Virtual CNC Viewer.

The version of Predator software that is included on the GibbsCAM 12 flash drive is a light version of the product. When you install the light version, use the serial number “LIGHT” to activate it. The light version is a very functional editor with no limitation on the size of the edited file. To understand the differences between the light version and the full-function version, see the `Predator CNC Editor Feature Grid` PDF file in the `Extras\` folder. Please visit http://www.predator-software.com for more information or if you are interested in upgrading to the full-function version of the product.

Samples

Contains sample part files, Machine Sim models, custom MDDs, and similar files. These files require a significant amount of hard disk space. Sample part files are also available from https://online.gibbscam.com.

Tools

Contains files for special installations on machines that might not run the GibbsCAM application:

SOLIDWORKS Add-In Installer. If you need to install the SOLIDWORKS Add-In on a workstation that does not run GibbsCAM, run the installer (`*.msi` file) provided here. The CAD Transfer Add-In for SOLIDWORKS must be installed on the system where SOLIDWORKS 2011 or later is installed for GibbsCAM to recognize part features while importing a SOLIDWORKS part.

NLO Installer. If you will be installing GibbsCAM NLO Server, running the installer (`*.msi` file) is the first step for installing Network Licensing.

Important: At this release of GibbsCAM NLO, the license server must run RLM ***10*** or later, and a firewall service must be running when NLO is installed or modified. *Most previous users of NLO will need to upgrade their RLM Server at this release.*If you use GibbsCAM NLO and your license server is set up for RLM 9 or earlier, an upgrade is required. Trying to run GibbsCAM application software with an out-of-date RLM service will result in an error message such as “***912 : No server to connect to***”. For instructions on uninstalling the old RLM service and upgrading to RLM 10 or later, see “NLO Step 1 - Setting Up The Server” on page 38.Trying to install or modify NLO Server with the firewall service in Stopped state results in an error message: “***GibbsCAM NLO Server v2.<x>.<y>.<z> Setup Wizard ended prematurely.***” Therefore, before installing or modifying NLO Server, ensure that the firewall service is started (Services (Local) > Windows Firewall, Status = Started). Then, run the NLO installer; this is an `*.msi`

	file, typically named `GibbsCAM NLO Server v2.<x>.<y>.<z> - <locale>.msi`. After the installation/modification is complete, you can stop your firewall service if necessary.
online.GibbsCAM.url **www.GibbsCAM.url**	Opens a browser window for http://www.GibbsCAM.com (requires login).

Before Installing

Before you install the software, ensure that you meet the system requirements and that you have installed the most recent service pack for your operating system and the latest drivers for your video card.

At some point before installing the new software, be sure to review the *Release Notes* (available online from http://www.GibbsCAM.com) to check for any last-minute information.

If a Version of GibbsCAM Is Already Installed

If you already have a version of GibbsCAM installed on your system:

- You should not uninstall the previous software.
- If you want to install multiple instances of the same version of GibbsCAM, see “Running Multiple Instances of the Product ” on page 22.
- Be aware that the installer associates all `.vnc` files with the *newly* installed version of GibbsCAM. If you want to open an existing part in an older version of GibbsCAM, simply drag the file to a shortcut or to the program window, or use the Open dialog.
- Also be aware that if an older file is opened and saved in a newer version of GibbsCAM, it can no longer be used in an older version. If necessary, you can work around this by using File > Save a Copy to save the part as an older version.
- Before starting a newly installed version of GibbsCAM, users may want to run the Migration Tool to migrate their settings and preferences from a previous release. The installation process ends with a link to Migration Tool.

Before Installing Network Licensing Option (NLO)

For complete information on GibbsCAM Network Licensing Option, see “About Network Licensing” on page 37.

Important: At this release of GibbsCAM NLO, the license server must run RLM ***10*** or later, and a firewall service must be running when NLO is installed or modified. *Most previous users of NLO will need to upgrade their RLM Server at this release.*

- If you use GibbsCAM NLO and your license server is set up for RLM 9 or earlier, an upgrade is required. Trying to run GibbsCAM application software with an out-of-date RLM service will result in an error message such as "***912 : No server to connect to***". For instructions on uninstalling the old RLM service and upgrading to RLM 10 or later, see "NLO Step 1 - Setting Up The Server" on page 38.
- Trying to install or modify NLO Server with the firewall service in Stopped state results in an error message: "***GibbsCAM NLO Server v2.<x>.<y>.<z> Setup Wizard ended prematurely.***" Therefore, before installing or modifying NLO Server, ensure that the firewall service is started (Services (Local) > Windows Firewall, Status = Started). Then, run the NLO installer; this is an `*.msi` file, typically named `GibbsCAM NLO Server v2.<x>.<y>.<z> - <Locale>.msi`. After the installation/modification is complete, you can stop your firewall service if necessary.

Before Installing With a Hardware Key

If you have a hardware key, attach it before running the installer.

Most users have the Rainbow Sentinel hardware key licensing scheme, which is a square, tan parallel port key or a purple USB key that gets attached to the computer.

Newer users may have the Aladdin HASP hardware key which is a white parallel port key or a very dark purple USB key.

The time-based system is also a HASP key but is either a blue parallel port key or a black USB key.

- If you use the HASP key, please do not use the "HASP HL" drivers. Please use the "HASP4" drivers. The HL drivers cause an incompatibility with the GibbsCAM system. Unfortunately this is beyond our control as the incompatibility can be from hardware, software, or the OS. If you have installed the HL drivers please download and install the HASP Device Driver GUI Installation drivers from here: www.aladdin.com/support/hasp/hasp4/enduser.aspx.

USB Key

If you use a USB key,place it into a USB port on your computer when you install the GibbsCAM software. The key can be hot-swapped. USB ports do not allow more than one device to be plugged into a port. You can purchase a USB hub to provide additional ports.

Rainbow HASP Cimatron Current Shipping

Parallel Port Key

If you use a parallel port key, attach it to your computer before you run GibbsCAM; the proper drivers for your system are installed automatically. Make sure the computer is turned off before attaching the hardware key. The hardware key should be placed in the parallel port (LPT1, or LPT2) in the back of your computer. The parallel port is the same port in which you plug your printer. A printer can be plugged into the hardware key.

Rainbow HASP HASP

Before Installing Across a Network

When installing GibbsCAM across a network to a system that has never had a version of GibbsCAM or the hardware key drivers, we recommend that you install the drivers first, to avoid encountering errors. If you encounter this error, simply click OK and continue the installation process; then, after the process ends, install the hardware key drivers.

About the Installer

The installer lets you do any of the following:

- Repair or uninstall an existing installation of GibbsCAM 12.
- Install the GibbsCAM 12 base components and, optionally, one or more add-ins:
  - GibbsCAM add-ins include ProAXYZ Posting support.

- CAD Transfer add-ins include Autodesk Inventor, Solid Edge, SOLIDWORKS, and many others.

When the base components are installed, the GibbsCAM PDFs and the Moorpark engraving font are automatically installed, and a desktop shortcut to the GibbsCAM 12 application is created.

File Locations

The GibbsCAM installer writes files to three different locations, because different kinds of data are accessed for different purposes:

- *User data* changes with each user.
- *Global data* applies to all users.
- *Install data* includes generic data and Reporter templates.

The installer is the only program that writes install data. The installer and the GibbsCAM application write global data and install data. However, if the installer is re-run, it will not affect user data and global data files that have been changed by the application.

Folders containing the three types of data are detailed below. If you customize these files or upgrade your version of GibbsCAM frequently, accessing and copying these files can become quite important. The GibbsCAM Migration Tool is the preferred method for migrating settings and preferences from previous GibbsCAM releases.

The following table shows the folder hierarchy.

User data	`C:\Users\<username>\AppData\Roaming\3D Systems\GibbsCAM\<version>`
Global data	`C:\ProgramData\3D Systems\GibbsCAM\<version>`
Install data	`C:\Program Files*\3D Systems\GibbsCAM\<version>`

User Data Files

User Data includes such files as: `sysdef.rsc` (what was entered in dialogs), `UIState.dat` (where your windows were and their size) and a `Plugins\` folder that contains what was entered in the plug-ins. Even users with limited privileges can migrate User Data from a previous release using the Migration Tool.

Global Data (Program Data) Files

Global data, also called *program data*, includes the bolt and tap tables, the CutDATA file (`Material.txt`), your communication setup data (`protocol.txt`), a file that stores the Hole

Wizard data (prefs.rsc), a folder that contains your custom MDDs, and the PostHASTE Library folder that contains PostHASTE library files.

The program data folder is the location where all customizable VMMs, MDDs, macros, and plug-ins should reside. Although the installation folder contains read-only *template* versions of these files — in other words, the original versions as shipped, before any customization — the intent is for each seat of GibbsCAM to have its own potentially customizable version of these files residing under the program data folder.

Only users with Administrator privileges can migrate program data files from a previous release using the Migration Tool.

The location of the CutDATA file can also customized within GibbsCAM: On the File menu, click Preferences and see the Files tab.

Installation Files

Installation files are read-only. They include generic versions of Global and User data files, the default user-interface (*.cui) files, and the Reporter Templates, which are located in the...\PlugIns\Data\Report\ folder. If you create custom reports, they should be placed in this folder.

Only users with Administrator privileges can migrate installation files from a previous release using the Migration Tool, and not all installation files can be migrated.

Existing Communications, CutDATA and Library Files

Installing a new version of GibbsCAM creates a default material database, a blank communications file, default PostHASTE library files, and default Reporter templates. Once the new version is installed you can copy protocol.txt, material.txt and the Library\ folder to the new GibbsCAM folder.

User Access To AppData Folders

Windows marks user AppData\ folders as invisible, and limited users cannot access them. If you do not use the Migration Tool, you may need an administrator's assistance to access and modify these folders.

Installing the System Files

Before you install the software, be sure to review "File Layout" on page 13 and "Before Installing" on page 15.

If you will be using the Network Licensing Option (NLO):

- ***Important:*** At this release of GibbsCAM NLO, the license server must run RLM ***10*** or later, and a firewall service must be running when NLO is installed or modified. *Most previous users of NLO will need to upgrade their RLM Server at this release.*If you use GibbsCAM

NLO and your license server is set up for RLM 9 or earlier, an upgrade is required. Trying to run GibbsCAM application software with an out-of-date RLM service will result in an error message such as "***912 : No server to connect to***". For instructions on uninstalling the old RLM service and upgrading to RLM 10 or later, see "NLO Step 1 - Setting Up The Server" on page 38.Trying to install or modify NLO Server with the firewall service in Stopped state results in an error message: "***GibbsCAM NLO Server v2.<x>.<y>.<z> Setup Wizard ended prematurely.***" Therefore, before installing or modifying NLO Server, ensure that the firewall service is started (Services (Local) > Windows Firewall, Status = Started). Then, run the NLO installer; this is an `*.msi` file, typically named `GibbsCAM NLO Server v2.<x>.<y>.<z> - <locale>.msi`. After the installation/modification is complete, you can stop your firewall service if necessary.

- The GibbsCAM application software must be installed on each client machine, using either the interactive installation wizard or the installer run in "silent" mode. The application software must be installed before the license files generated by 3D Systems GibbsCAM are installed.

If you are upgrading from a previous release, consider running the GibbsCAM Migration Tool after you install but *before* your first launch of the newly installed software. For more information, see "Migrating from Previous Releases" on page 46.

Step-By-Step Instructions

The following instructions assume you want to use the fully interactive installation wizard. If, instead, you prefer to install non-interactively without the wizard, see "Silent Installation Mode " on page 22.

To Install the System Files

1. Insert the product installation flash drive into a USB port.

   The installer should run automatically when you insert the media.

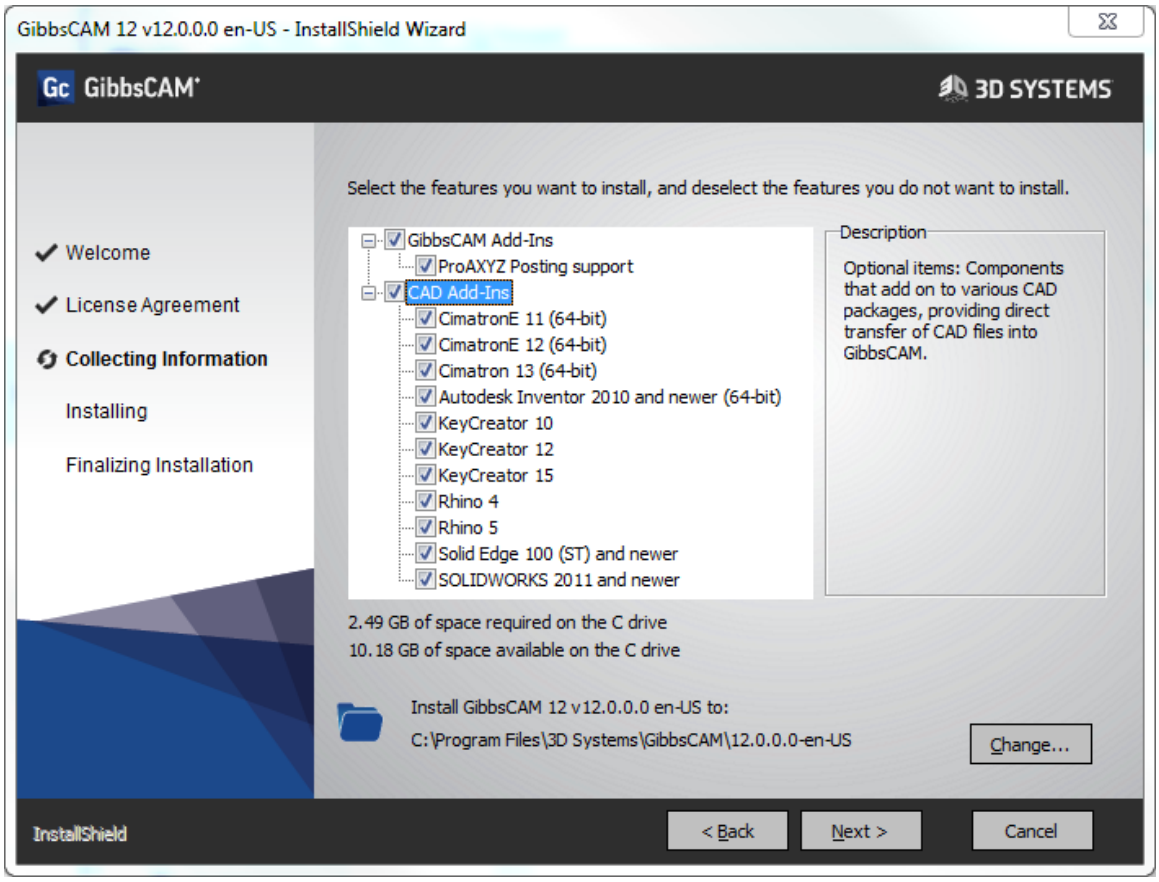
2. If prompted to do so, click Yes to give permission to the User Account Control dialog to install the software.

   The installer automatically detects your computer's environment (such as language and platform) and launches the appropriate setup wizard.

3. In the Welcome step: If you are installing the application software on this machine, click Next to continue. If, instead, you are setting up a Network License installation, click Cancel and refer to "About Network Licensing" on page 37.

   You will need to accept the terms of the GibbsCAM Software License Agreement to continue the installation.

4. In the **Collecting Information** step, optionally specify add-ins to install and optionally change the installation location (not recommended). When you are satisfied with your choices, click Next.



This release requires *two* versions of Microsoft .NET Framework: 3.5 and 4.0. Most machines will already have one or both of these (for example, if Office is installed), but if either is lacking, then the GibbsCAM installer will tell you what is needed. If you need either or both, they are available for download from the Microsoft website.

5. In the next step, click Install.

   If prompted by the User Account Control to use administrator privileges, click Yes.

6. The final question to answer is whether to launch Migration Tool after installation. The default is yes, to help remind you to migrate your old settings and preferences before starting the new version of GibbsCAM software. For more information on Migration Tool, see "Migrating from Previous Releases" on page 46.

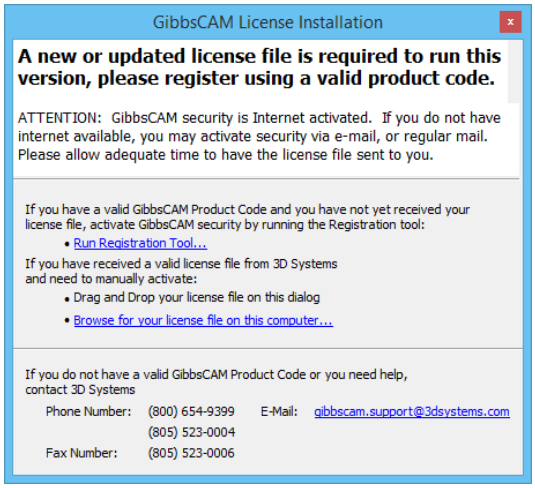
7. When the installation is complete, click Finish to close the setup.

To Launch the Application

To launch the GibbsCAM application, do one of the following:

- In Start > Programs, select the GibbsCAM item.
- Double-click the desktop shortcut to the GibbsCAM executable.
- Double-click a `*.vnc` file.

The first time you launch GibbsCAM, the following dialog appears:



If you are installing GibbsCAM for the first time, you must register the software. For more detailed information on registering the software, see “Registering GibbsCAM” on page 26.

Running Multiple Instances of the Product

GibbsCAM 12 natively supports simultaneously running multiple instances of the application — either different versions or different instances of the same version. If you want to install multiple instances of *the same version* GibbsCAM version, such as differently localized instances, make a copy of the existing instance in a different folder (such as `C:\Program Files\*\GibbsBackup\`, where "`*`" might be "`Gibbs`" or "`3D Systems`"), and then re-run the installer. First uninstall the previous instance, and then install the new one.

There is no problem running multiple versions of GibbsCAM at the same time. However, an earlier version might be unable to open parts saved in a later version. You can use the File > Save As Copy option to save the part as if it were a previous version. (But: See the Readme file about saving TMS files to versions before GibbsCAM 12.)

Reminder: For best results migrating settings and preferences from a previous release, each user should run the Migration Tool *before* starting a newly installed version of GibbsCAM. For more information, see “Migrating from Previous Releases” on page 46.

Silent Installation Mode

The process for installing in the background changed at GibbsCAM 12 to use InstallShield. Previously called “unattended” or “quiet” installation, it is now called "silent" installation.

Accepting All Defaults

The simplest and easiest way to use silent installation mode is to accept all defaults. To do this, you use the **`/s`** flag with no other flags or parameters, in this form:
`<installername>.exe /s`

For example, to silently install GibbsCAM 12.0.7.10 in English with all defaults:
`GibbsCAM_x64_v12.0.7.10_en-US.exe /s`

Uninstalling

To uninstall silently, use the **/x /s** flags, in this form:
<installername>.exe **/x /s**

For example, to silently uninstall Japanese-language GibbsCAM 12.0.9.2:
`GibbsCAM_x64_v12.0.9.2_ja-JP.exe /x /s`

Customizing a Silent Installation: Using an *.ISS File

You can also customize which options you install, which locations you install to, to not run Migration Tool, or other nondefault choices. To do this, you use an `*.ISS` file that contains the customizations, in conjunction with the GibbsCAM installer `*.exe` file. Note that when you perform a silent installation, the version of the installer executable must match the version of the installer executable that was used to record the `*.ISS` file.

- **To create an *.ISS:**
  Run the interactive GibbsCAM installer with the `/r` flag to record an `*.ISS` file. The file specified in the `/f1"<filename>.ISS"` flag captures all parameters and paths supplied in this interactive installation. For details, see below.
- **To install silently using an *ISS:**
  Run the GibbsCAM installer with the `/s` flag and the `/f1"<filename>.ISS"` flag. This silently installs GibbsCAM using parameters in the `*.ISS` file. For details, see below.

A. To create an ISS file

1. Run the installer with flags `/r` and `/f1` (and, optionally, `/f2`).
2. Supply information to the interactive installer.
3. When you click Finish, the `*.ISS` file is fully recorded and can be used for future silent installations.

Step 1 has the following form:
<installername>.exe **/r** /f1"*<path>**<ISSfilename>*"

- ***Example A1***
  To use the GibbsCAM 12.0.6.8 English-language installer to generate an ISS file named `Auto12068.ISS` located in folder `D:\temp\`, you would open a command prompt, change directories to the installer location, and enter the following command:
  `GibbsCAM_x64_v12.0.6.8_en-US.exe /r /f1"D:\temp\Auto12068.ISS"`
- ***Example A2***
  To use the GibbsCAM 12.0.10.0 French-language installer to generate an ISS file named `MonGC12.ISS` located in folder `H:\Gibbs\`, you would enter the following command:
  `GibbsCAM_x64_v12.0.10.0_fr-FR.exe /r /f1"H:\Gibbs\MonGC12.ISS"`

B. To silently install GibbsCAM using an ISS file

1. Run the installer with flags `/s` and `/f1` (and, optionally, `/f2`).
2. If necessary, authorize the UAC (user account control) to install to the location specified in the `*.ISS` file.

Step 1 has the following form:
`<installername>.exe /s /f1"<path>\<ISSfilename>"`

- ***Example B1***
  To use the GibbsCAM 12.0.8.2 Latin-American Spanish-language installer to silently install using the parameters in an ISS file named `myGC.ISS` located in the same folder as the installer, you would open a command prompt, change directories to the installer location, and enter the following command:
  `GibbsCAM_x64_v12.0.8.2_es-MX.exe /s /f1"myGC12.ISS"`
- ***Example B2***
  To use the GibbsCAM 12.0.9.10 English-language installer to silently install using the parameters in an ISS file named `GC_SilentInstall.ISS` located in folder `F:\GibbsData\`, you would open a command prompt, change directories to the installer location, and enter the following command:
  `GibbsCAM_x64_v12.0.9.10_en-US.exe /s /f1"F:\GibbsData\GC_SilentInstall.ISS"`

C. If you want to write out a log file

If you want to log results of either the recorded (`/r`) installation or the silent (`/s`) installation, you can use an optional third flag, `/f2"<path>\<logfilename>"`.

For example:

- `GibbsCAM_x64_v12.0.6.8_en-US.exe /r /f1"D:\temp\Auto12068.ISS" /f2"D:\temp\Log12068.txt"`
- `GibbsCAM_x64_v12.0.9.10_en-US.exe /s /f1"F:\GC_SilentInstall.ISS" /f2"tempLogFile.txt"`

Installing Sample Package Files

Because the GibbsCAM system is extensible, there may be times when you install additional files that you have received third parties or that you have downloaded from 3D Systems. In most cases, the sample parts (`*.vnc` files) can reside anywhere, but other files, such as custom MDDs or VMMs, must reside in the appropriate location within the global data folder for GibbsCAM.

The sample package for Custom Drill Cycles provides a good example. A sample set of macros is available to illustrate custom drill cycles for Variable Peck.

These macros, along with the custom MDDs to support them, can be downloaded from the Macros wiki (https://macros.GibbsCAM.com). For example, in the web page for the category **Custom_Drill_Cycles**, you can download the following items.

- Example macros for: Variable-peck drilling by Distance or Percentage; Fagor style variable-peck drilling; Pecking/drilling of Tapered squares; and Peck chamfering.
- MDDs (`*.mdd` files) supporting custom drill cycles for: 3-axis vertical mill, 5-axis vertical mill, and 2-axis horizontal lathe.
- Sample parts (`*.vnc` files) illustrating the use of custom drill cycles.
- A single `*.zip` file containing all the files mentioned above.

Installing a sample package for custom drill cycles is simple. In your global data folder (such as `C:\ProgramData\3D Systems\GibbsCAM\12.<x>.<y>.\`):

1. Under its `Macros\` folder, create new subfolder `CustomDrillCycles\` and move the `Gibbs.*.Generic\` folders into it.
2. Change to its `MDD\` folder and move the sample `*.mdd` files into it.
3. Place the sample part files (`*.vnc`) wherever you like.

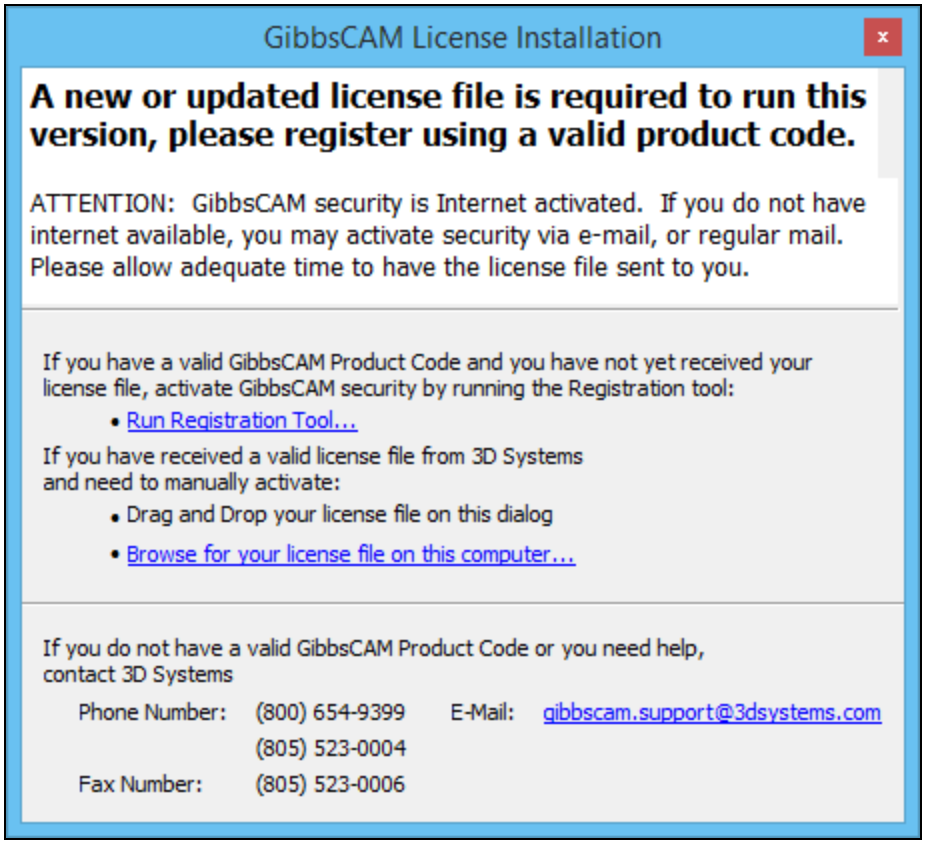
After your `C:\ProgramData\...\Macros\CustomDrillCycles\Gibbs.PeckDistance.Generic\` folder is populated and your `C:\ProgramData\...\MDD\` folder contains the sample MDD referenced by the part, simply open a sample part and look at each of its processes. For example:

- In the 3-axis Mill part, `Mill3a.vnc`, the Holes process dialog's Drill tab offers a pull-down of custom drill cycles under Entry/Exit Cycle when the bottommost option button is selected. To view or adjust parameter values, click User Cycle Data.
- In the Lathe part, `Lathe2a.vnc`, the Holes process dialog offers a pull-down of custom drill cycles under Entry/Exit Cycle when the bottommost option button is selected. To view or adjust parameter values, click the User Cycle Data the button.
- In the 5-Axis part, `Mill5a.vnc`, the Drilling Options tab shows pull-down options when Custom Cycle is selected. To view or adjust parameter values, click the Define Custom Data button.

Registration

Registering GibbsCAM

When a fresh installation of GibbsCAM is first started, it reports that no license file is found. After registration is complete, however, GibbsCAM will continue on to run as usual.



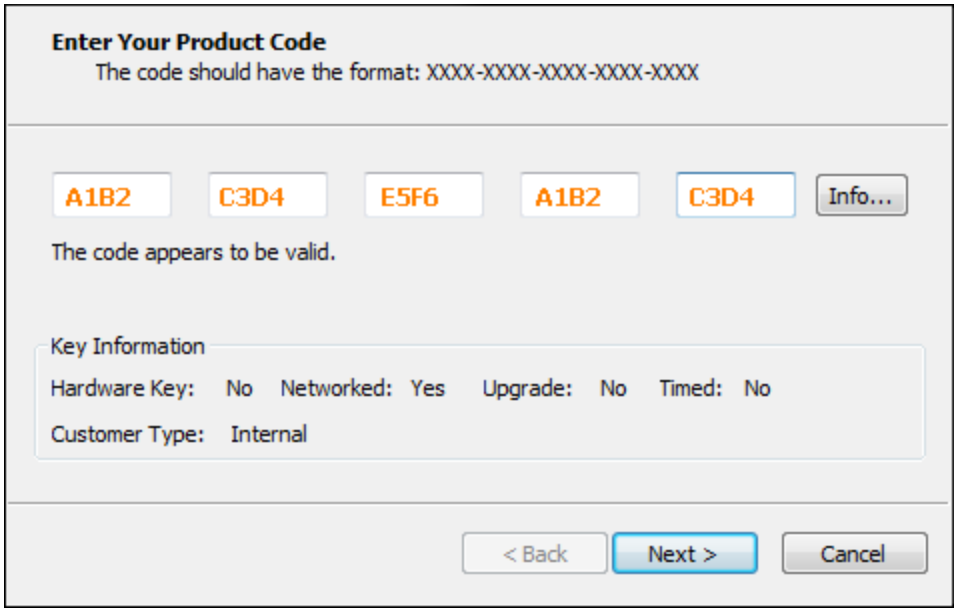
The License Installation or License Update dialog lets you drag a license onto the dialog for application installation, browse the computer for a license file, or run the Registration Tool to obtain a license file through the Gibbs Activation Service.

- If you already have a license file for v11 or earlier, however, you can simply drag and drop it onto this dialog, or click Browse for your license file on this computer... to navigate to it and select it.

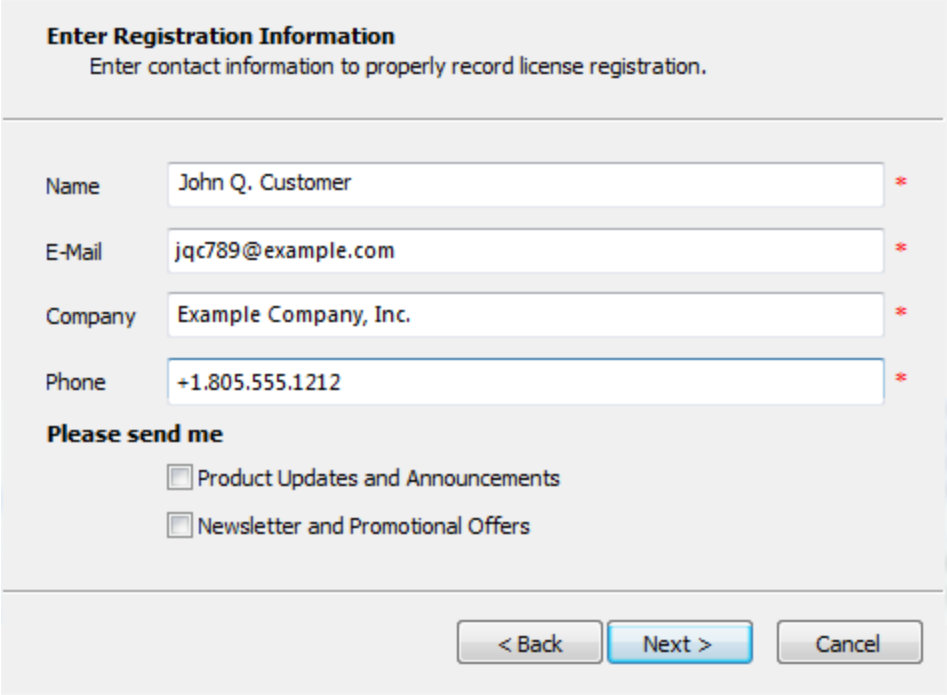
> **Reseller Activation** - If your Reseller will be assisting you with your installation, have your registration files (and hardware keys, if any) ready in advance.

Running the Registration Tool

1. Click the Run Registration Tool... link.
2. Enter your Product Code from your order materials and click Next.



3. Enter your customer information and click Next.

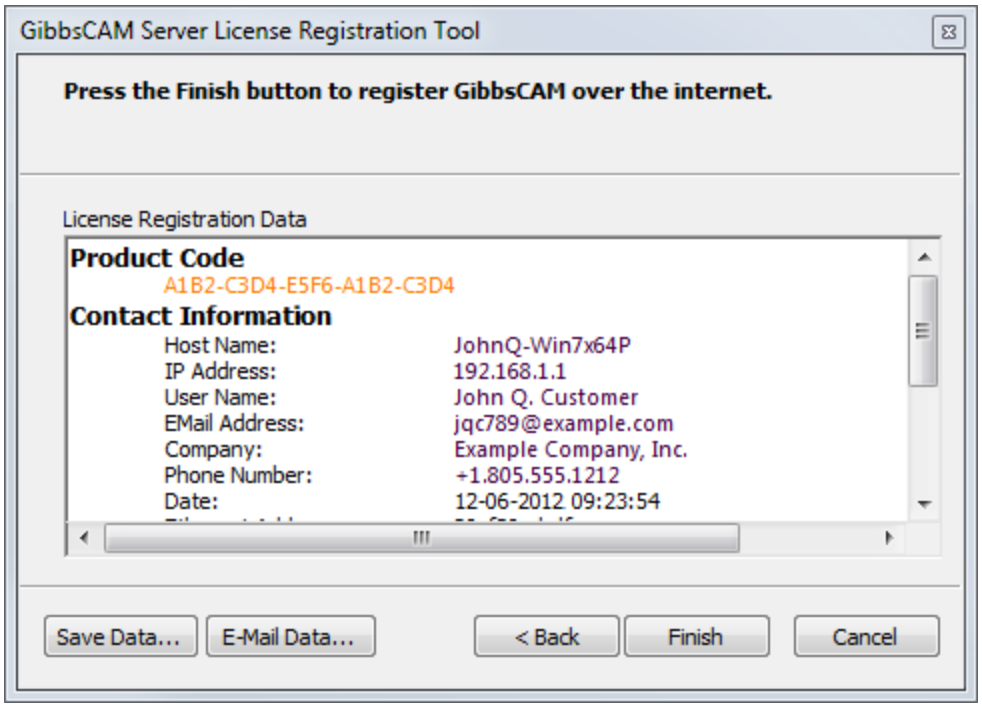


4. Complete your registration using one of the following methods. If you do not have an e-mail account, enter the e-mail address of your reseller.

Registration Type	Purpose
Internet Registration	Register online. This is the quickest, easiest way.
E-Mail Registration	If you are in a secured network environment.
Offline Registration	If you have no Internet access.

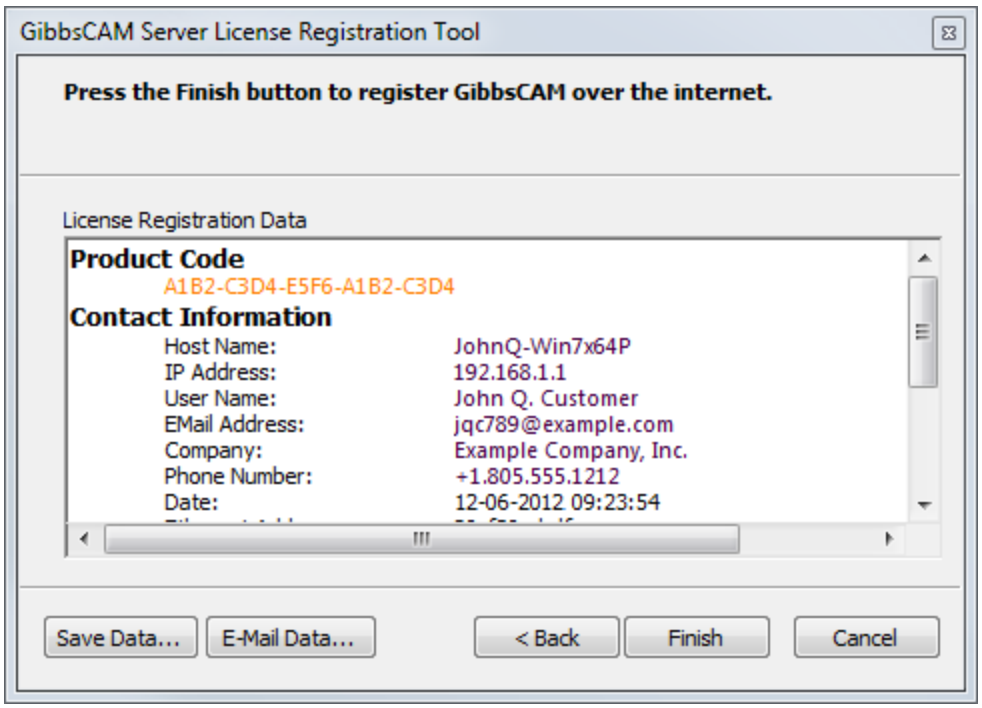
Internet Registration

If the Registration Tool determines that the computer can directly contact the Gibbs Activation Service, the final page of the Registration Tool lets you click Finish to automatically obtain a license file.

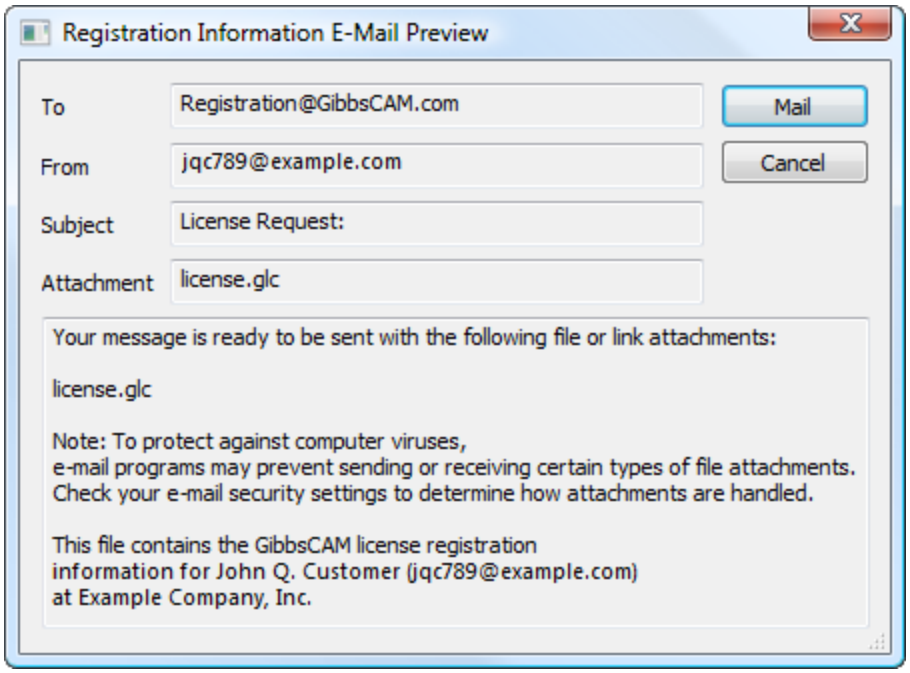


E-Mail Registration

If the Registration Tool determines that the computer cannot directly contact the Gibbs Activation Service but has access to e-mail, the final page of the Registration Tool lets you click Finish to send the license registration data to Gibbs as an e-mail attachment.



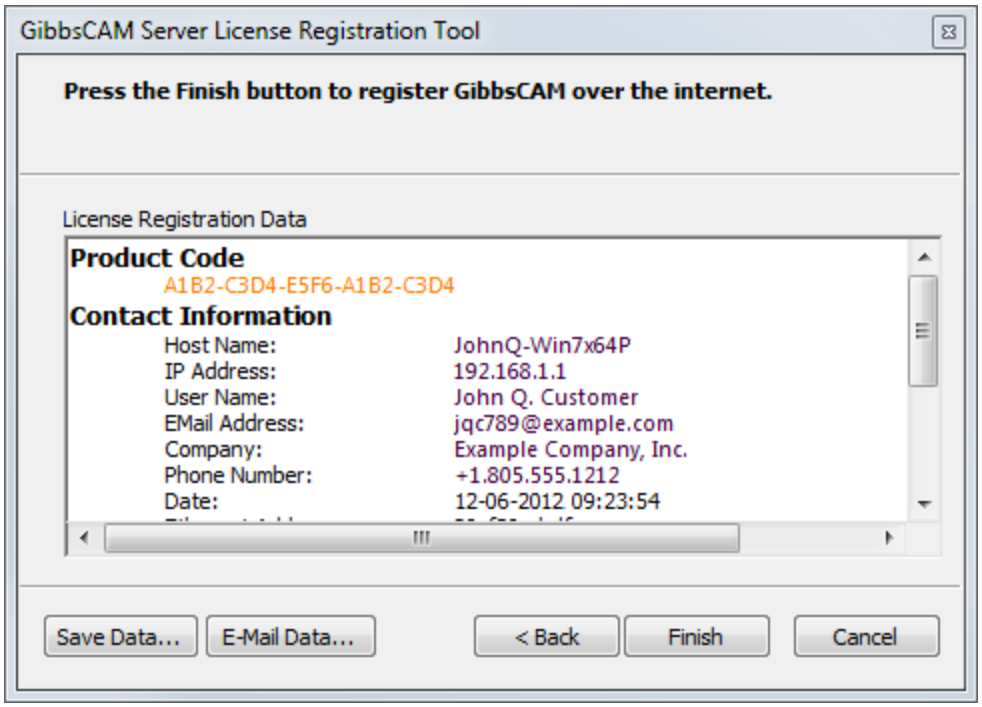
Clicking the Finish button will bring up an e-mail form page using your default e-mail program.



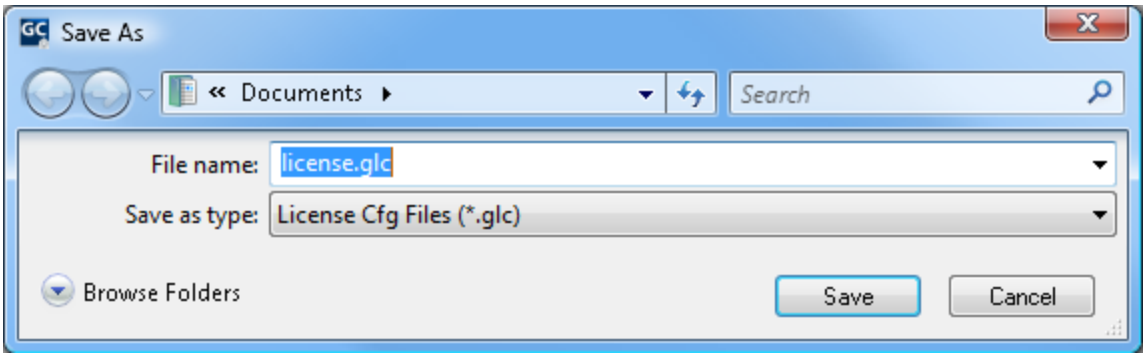
Follow the e-mail program's directions to send the license registration data. 3D Systems GibbsCAM will process your license registration as quickly as possible. When you receive it, see Completing E-Mail or Offline Registration.

Offline Registration

If the Registration tool determines that the computer cannot directly contact the Gibbs Activation Service and lacks access to e-mail, then the Registration Tool will prompt you to click Finish to save license registration data to a file:



When you click Finish, the Save As dialog prompts you to save your license registration data to a file:



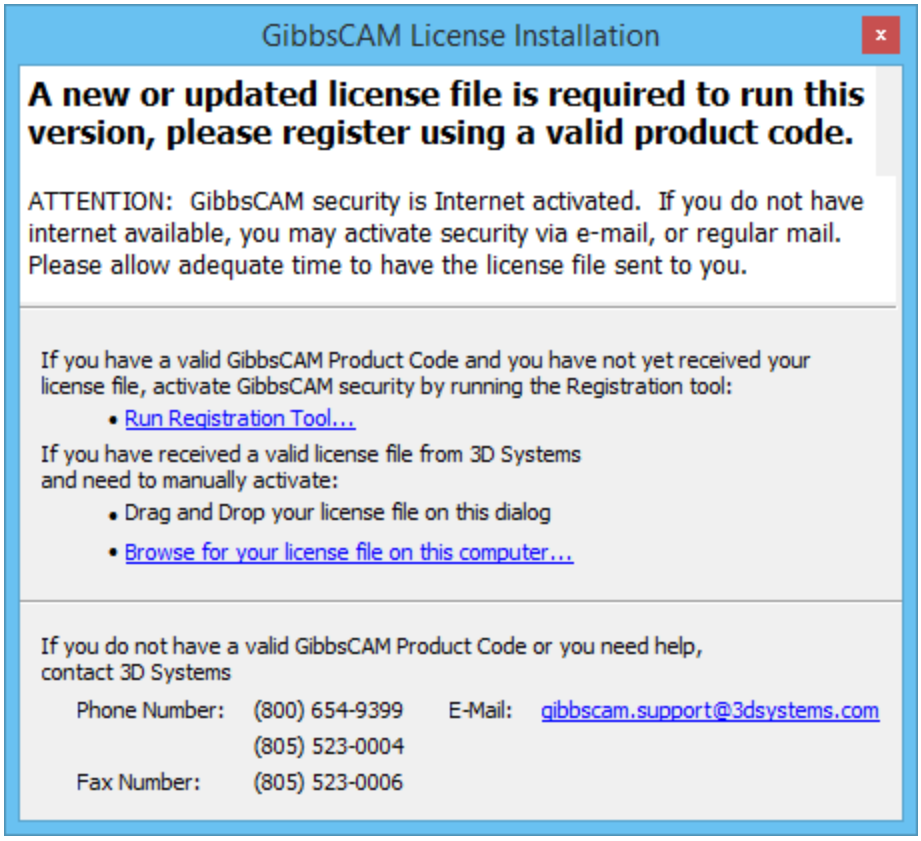
After you save your registration data file, you can send it to 3D Systems GibbsCAM in several ways:

A computer with e-mail access	If you have access to a computer with e-mail access, e-mail the file to GibbsCAM.Registration@GibbsCAM.com.
Your Reseller	Your reseller may be able to assist you in your activation. If your Reseller can assist you, have your registration files and (and hardware keys, if any) ready in advance.
Regular Mail	Copy the registration file to a CD, flash drive, DVD or floppy disk and mail it to:

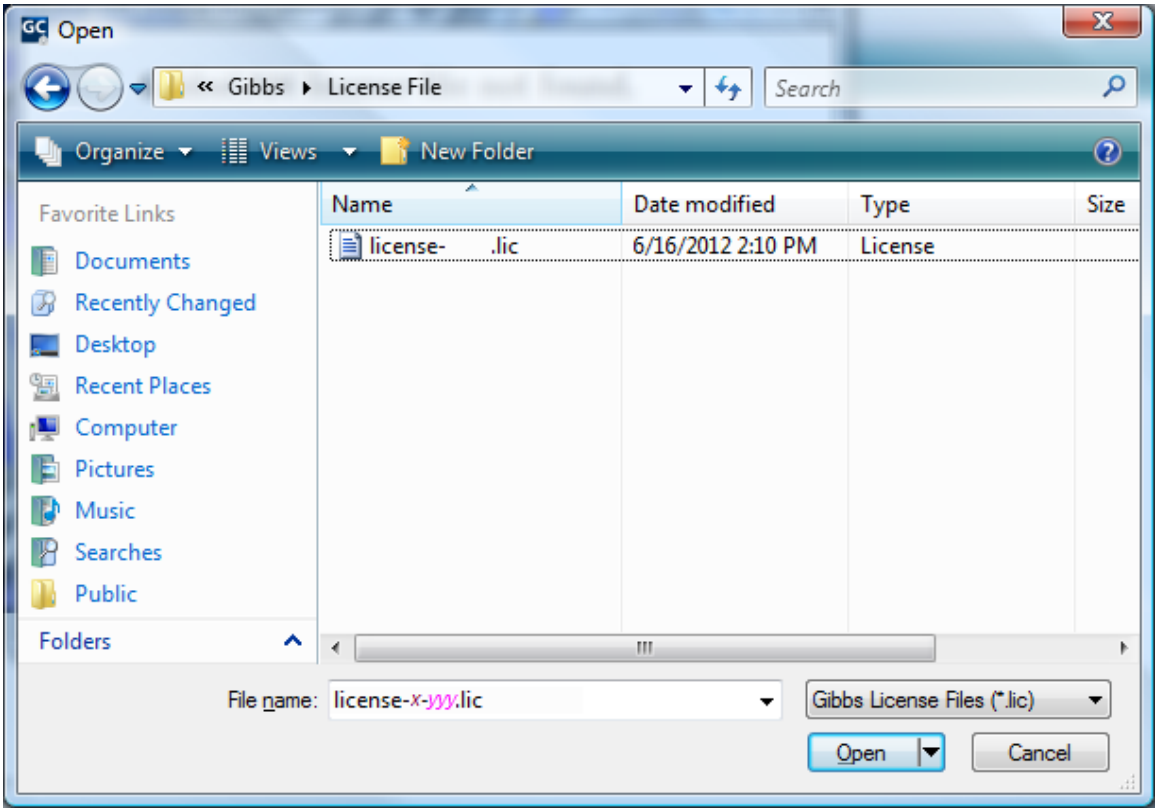
GibbsCAM Support
c/o 3D Systems
323 Science Drive
Moorpark, CA 93021 USA
Note: Please allow adequate time for your license file to be returned to you. Your media will not be returned.

Completing E-Mail or Offline Registration

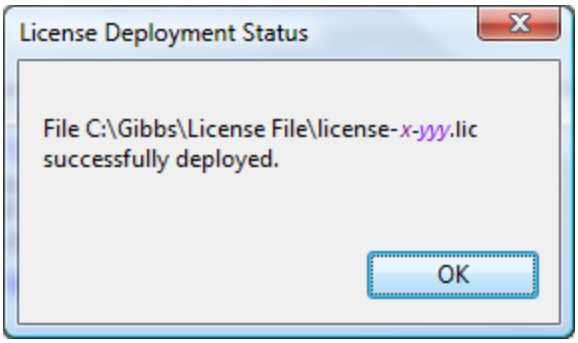
5. After you receive your license file from 3D Systems, save it on your computer and launch GibbsCAM. On first startup, the following dialog appears:



6. You can either drag and drop the license file onto that dialog or click the Browse for your license file on this computer... link, which opens a dialog that lets you navigate to the file and select it:



7. After you locate and open the license file, you should see a message dialog resembling the following:



8. When you click OK, GibbsCAM starts; your installation of GibbsCAM 12 has been authenticated.

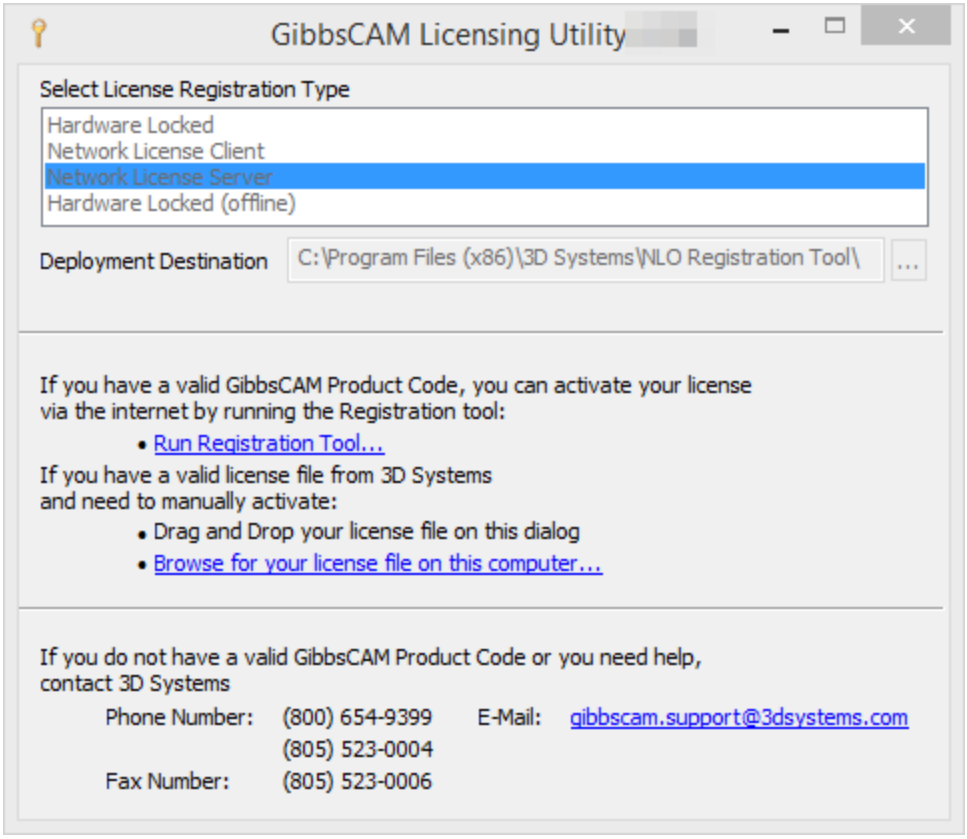
Registration Tools

Two registration utilities are provided:

- `RegistrationTool.exe` — See Standalone Licensing Utility
- `ActivationCheck.exe` — See “Verifying Activation Server Connectivity” on page 35

Standalone Licensing Utility

The Registration Process can also be activated without running GibbsCAM. Look for `Registration Tool` in the `GibbsCAM\` folder in the Windows Start menu. You can also access the standalone registration from the GibbsCAM installation folder. You can do this easily by searching for `RegistrationTool.exe`.



The Licensing Utility allows you to send license registration data and obtain and manage licenses for several different types of GibbsCAM installations:

- The Hardware Locked type is equivalent to the license installation from running GibbsCAM from a non-NLO GibbsCAM installation.
- The Network License Client type is equivalent to the license installation from running GibbsCAM from an NLO GibbsCAM installation.
- The Network License Server type installs the NLO server and license to a folder you specify.
- The Hardware Locked (offline) type installs a non-NLO client license to a folder you specify. This may be useful when pre-generating licenses for computers that may not have Internet access and can only be used with removable hardware key licenses. To generate an offline license, follow these steps:

  a. Specify a deployment destination for the offline license in Licensing Utility

b. Attach the hardware key that you intend to use on the offline computer.

c. Click the Run Registration Tool... link and generate the offline license file following instructions in “Running the Registration Tool” on page 27. This action generates a license file in the specified folder.

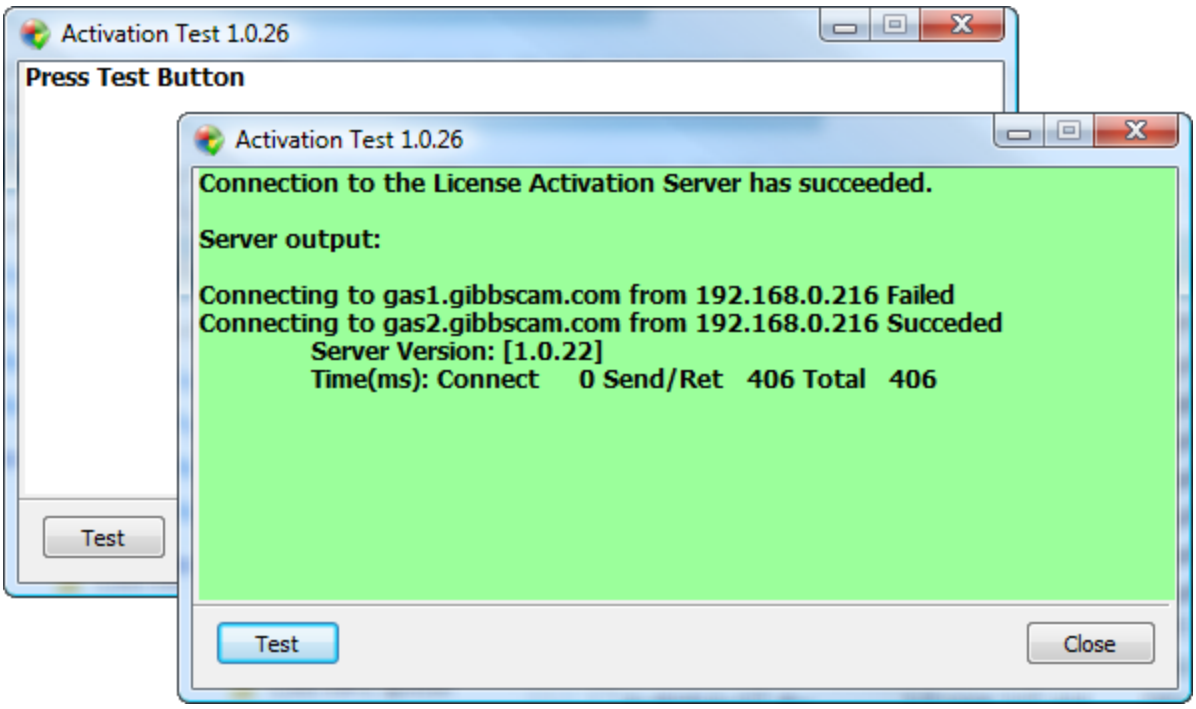
d. Move the generated `license-x.xxx.lic` file to the offline computer.

e. Start GibbsCAM.

f. Drag and drop the license file onto the GibbsCAM License Installation dialog (or use the Browse for your license file on this computer... link).

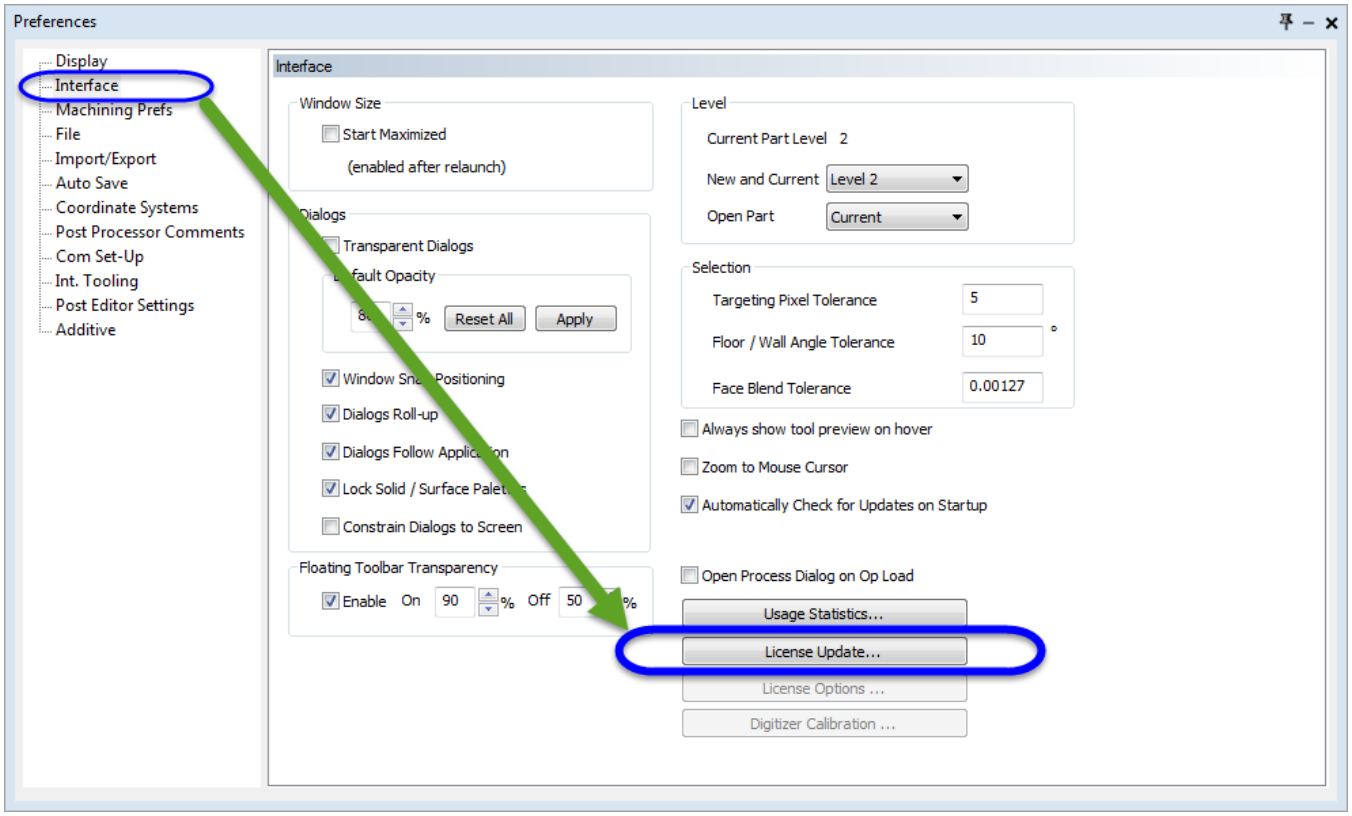
Verifying Activation Server Connectivity

`ActivationCheck.exe` is a simple utility that checks for connectivity with the Gibbs Activation Service. You can find this application in the `Bin\` folder of your GibbsCAM installation folder or, on Window 7 or Vista, by using the Start button's Search feature.



License Updates

If you need to update or change your license file to add options to your license, you can connect to the Gibbs Activation Service from the File > Preferences dialog, Interface tab.



Click the License Update button to open the Update Registration dialog.

To update your Product key and license, follow the steps for “Running the Registration Tool” on page 27.

About Network Licensing

GibbsCAM Network Licensing (NLO) establishes a network license server that maintains a software key for each option purchased from 3D Systems. These software keys (or "licenses") are distributed to nodes across a network to enable the workstations (nodes with installed Gibbs application software) to run the purchased module options.

Network Licensing is an alternative to hardware keys: When a client runs the Gibbs application software, a software key is "checked out" from the license server. There is no limit to the number of GibbsCAM seats installed on the network, only a limit to the number that can be used concurrently with each license server. Each client's license file (`*.lic`) can be created and installed through the Internet or, if the workstation lacks Internet access, by electronic or physical mail.

Important: At this release of GibbsCAM NLO, the license server must run RLM ***10*** or later, and a firewall service must be running when NLO is installed or modified. *Most previous users of NLO will need to upgrade their RLM Server at this release.*

- If you use GibbsCAM NLO and your license server is set up for RLM 9 or earlier, an upgrade is required. Trying to run GibbsCAM application software with an out-of-date RLM service will result in an error message such as "***912 : No server to connect to***". For instructions on uninstalling the old RLM service and upgrading to RLM 10 or later, see "NLO Step 1 - Setting Up The Server" on page 38.
- Trying to install or modify NLO Server with the firewall service in Stopped state results in an error message: "***GibbsCAM NLO Server v2.<x>.<y>.<z> Setup Wizard ended prematurely.***" Therefore, before installing or modifying NLO Server, ensure that the firewall service is started (Services (Local) > Windows Firewall, Status = Started). Then, run the NLO installer; this is an `*.msi` file, typically named `GibbsCAM NLO Server v2.<x>.<y>.<z> - <locale>.msi`. After the installation/modification is complete, you can stop your firewall service if necessary.

If you use NLO on one machine for multiple products: If you have licenses for two or more GibbsCAM products served by a single machine, such as licenses for both GibbsCAM and Compost, then all such license files must have the same start and end dates. If the start dates or end dates mismatch, then one license file might overwrite another.

Overview of Network License Installation

If you already had a previous NLO installation, you will need to install your GibbsCAM NLO license service (GibbsRLMServer) on the same machine as your previous NLO server installation.

Installing the Network License option (NLO) is a two-phase process: First, you set up the server; then, you install the client software on each node. For condensed steps, see below; for details, see "NLO Step 1 - Setting Up The Server" on page 38.

Condensed Steps: To Set Up the Server

Before you begin: If you already have NLO Server running at v1.70.0 or older, stop the service and uninstall it.

1. On the RLM license server machine, with Administrator privileges, run the installer setup file, `GibbsCAM NLO Server*.msi`, to install the Registration Tool and support files.
2. When the Licensing Utility dialog appears, select Network License Server and click the Registration Tool link. Then, in the Server License Registration Tool screens, enter your product code and accept all defaults, starting the updated GibbsRLMServer as a service.

For details, see "NLO Step 1 - Setting Up The Server" on page 38.

Condensed Steps: To Install The Client Software

1. Install the GibbsCAM application software on the client machine. For instructions on installing the software, see "Installing the System Files " on page 19.
2. Ensure that the GibbsRLMServer service is running on the license server machine and that the client can connect to it, and then register GibbsCAM on the client machine.

For details, see " NLO Step 2 - Install the Client Software On Each Node " on page 42.

NLO Step 1 - Setting Up The Server

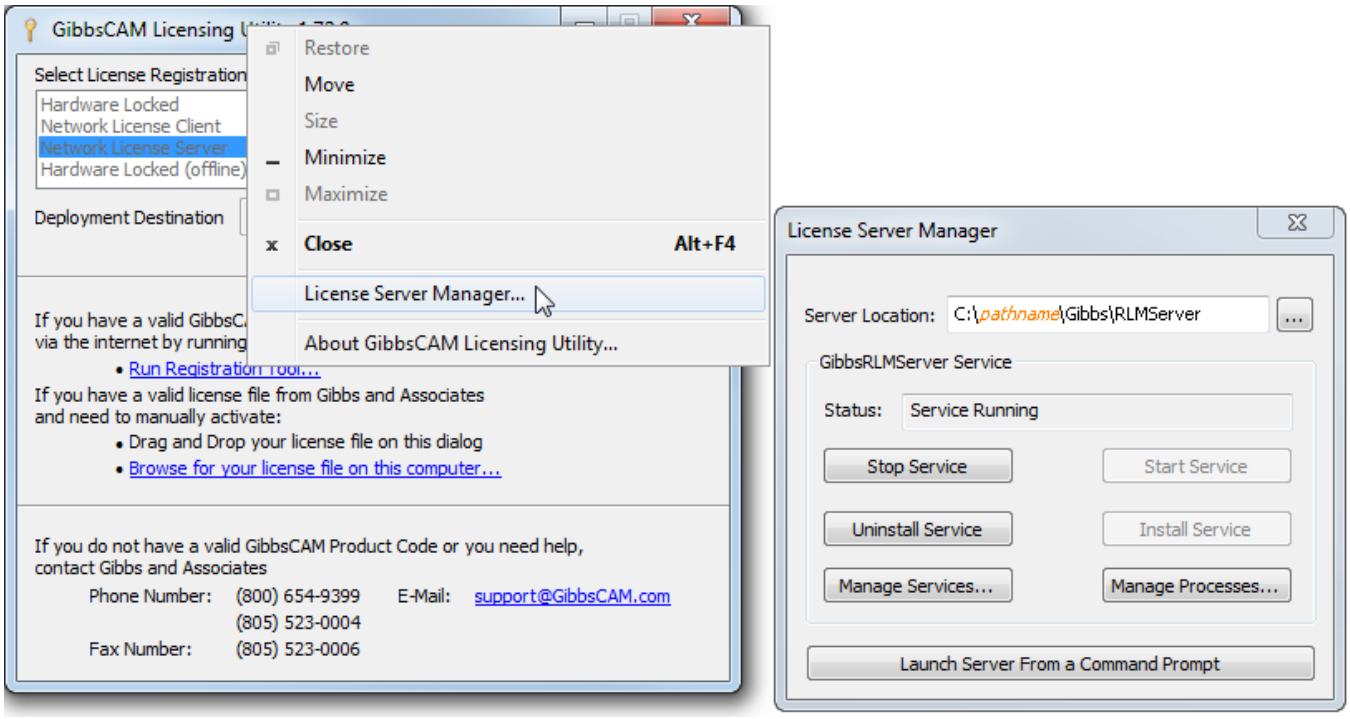
Before you begin: On the RLM license server machine, you must have administrator privileges and the installer setup file `GibbsCAM NLO Server Setup*.msi` must be available. This can be downloaded from https://online.gibbscam.com (the Tools link, under **Software Downloads**) or loaded from the product media in folder `\Content\NLO Registration\`.

Before installing or modifying NLO Server, ensure that the firewall service is started (Services (Local) > Windows Firewall, Status = Started). Then, run the NLO installer. After the installation/modification is complete, you can stop your firewall service if necessary.

If you already have NLO Server running at v1.77.0 or older: Follow these steps to stop the service and uninstall the old version.

1. On the RLM license server machine, Start menu, run Registration Tool for the pre-v1.81 version.

   The **GibbsCAM Licensing Utility v1.*xx*.*y*** dialog opens.
2. In the list of license registration types, choose Network License Server.
3. Right-click the title bar and, on the context menu, choose License Server Manager.



4. In the **License Server Manager** dialog, if the service is installed and running, click Stop Service and then click Uninstall Service to remove the service from the license-server machine. Then close the License Server Manager.

5. Close the **GibbsCAM Licensing Utility v1.*xx*.*y*** dialog.

To Set Up and Start the Server at v1.81 or Later

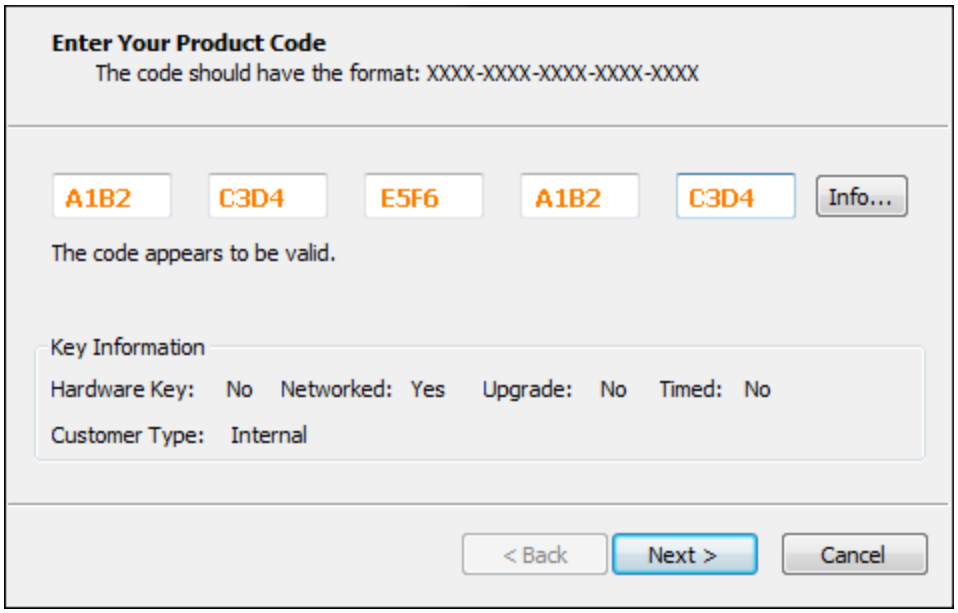
1. On the RLM license server machine, with the Windows Firewall service in Started state, run the installer setup file, `GibbsCAM NLO Server*.msi`.

   - Select the checkbox to accept the license terms and then click Install.
   - If a User Account Control dialog asks for permission to install software, click Yes.

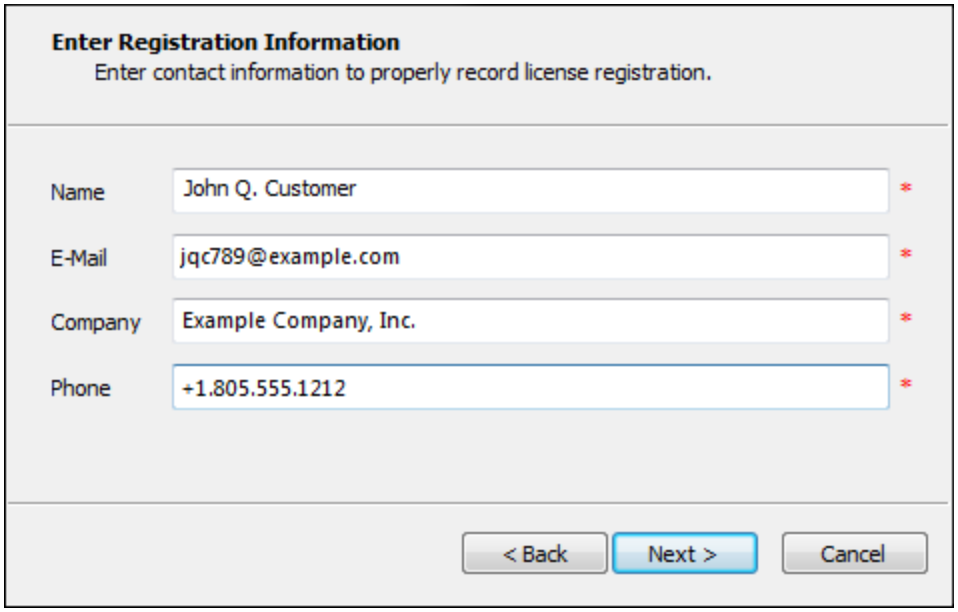
   The **GibbsCAM Licensing Utility v1.*xx*.*y*** dialog opens.

2. Click the Run Registration Tool link to open the **GibbsCAM Server License Registration Tool** dialog, which will prompt you to enter information in several screens.

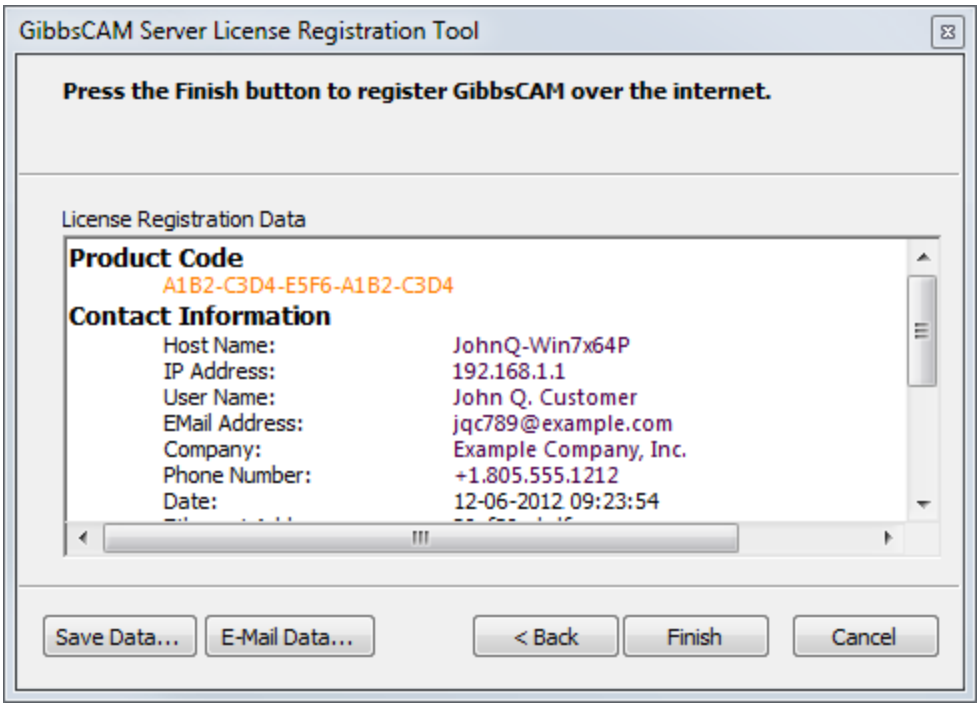
3. In the first screen, enter your Product Code, then optionally click Info to verify the information associated with the product code, and then click Next.



4. In the second screen, enter your registration information and click Next.



5. The final screen allows you to save or e-mail the data, or to go back to make changes. When you are done, click Finish to register your license over the Internet.



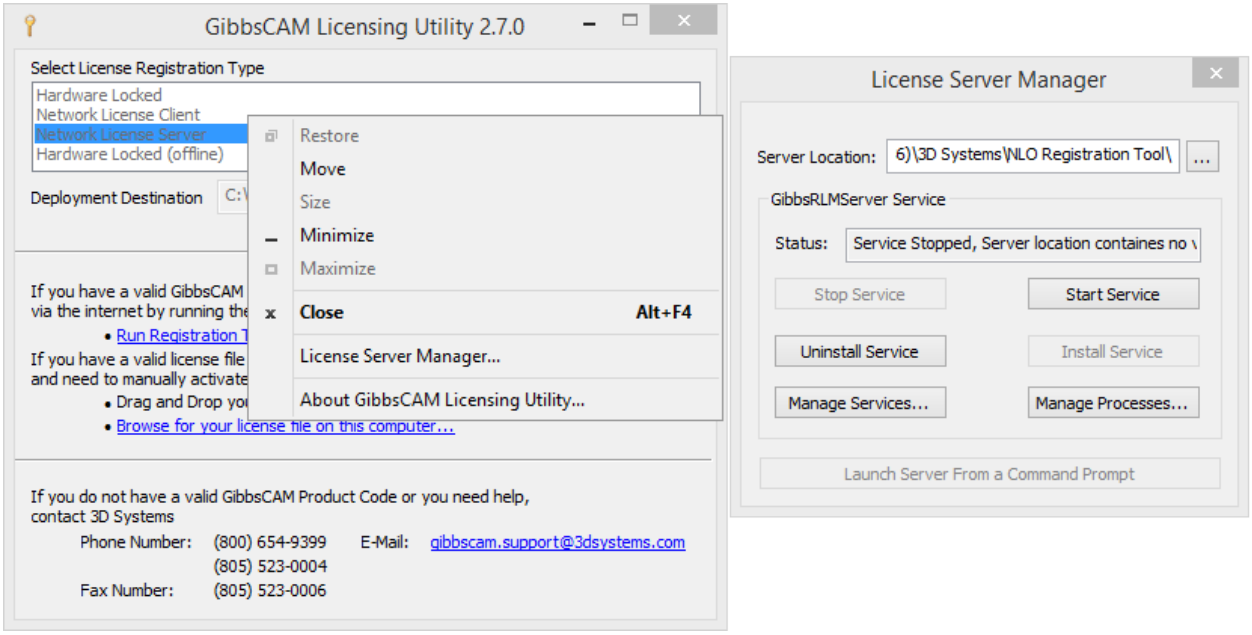
Make note of the machine's Host Name as shown above. It will be helpful in checking the status of the server.

When the activation is complete, a license file, `license-<customer_id>-<server_number>.lic`, is created in your deployment directory.

6. In response to the status message (successfully deployed), click OK.

Troubleshooting the NLO Server

You can use License Server Manager (summoned by right-clicking the title bar of the **GibbsCAM Licensing Utility v2.*xx*.*y*** dialog when it is run as Administrator) to manage services, manage processes, or launch the server from a command prompt. For example:



Launching the server from a Command Prompt provides information on the hostname, the license filename, port numbers, and the ISV executable and options file (`gibbsnet.exe` and `gibbsnet.opt`).

RLM Web Server Interface

The RLM server contains an embedded web server that starts automatically on port 5054 when `rlm` is started. To use the web server, simply point your browser to: `http://`*<ServerHostName>*`:5054` (example: `http://mymachine:5054`) and, in the left column of the web page, select the topmost link: Status.

NLO Step 2 - Install the Client Software On Each Node

Before you begin: Make sure the license server machine is running the GibbsRLMServer service and that the client machine (workstation) has a network connection to it.

1. On the client machine (workstation), install the GibbsCAM software, using the same product code that was used for installing the server. For step-by step-instructions, see “Installing the System Files ” on page 19.

2. Register GibbsCAM for this client workstation.

   You can do this manually at any time by running the Registration Tool. Or, if you launch GibbsCAM, it will display the License Installation dialog to prompt you for the product code.

   Use the same product code that was used for the server. On NLO client machines, you are not be prompted for contact information.

3. After you enter the product code, click Activate Product to complete the license deployment.

The license data will be retrieved from the Gibbs Activation Service and placed in the appropriate Activation Data folder.

4. Repeat the previous steps (installing the GibbsCAM software and registering the product code) for each GibbsCAM client of the license server machine.

Frequently Asked Questions on NLO

- Question: **How can I find out more about RLM server management and tuning?**

  Answer: The latest RLM server, utilities, end-user manual, and performance monitoring tools are available at `http://www.reprisesoftware.com/end_user_bundle.htm`

- Question: **Can I activate if I don't have an Internet connection?**

  Answer: Yes. The Internet activation process simply automates the process of requesting, creating, and installing the license file on the client computer, but there is a procedure for activating without a live Internet connection. It uses the same registration process as the live connection, but instead of sending the registration file (`license.glc`) from the user to the Gibbs Activation Server and sending the license file (`*.lic`) back automatically, this is done manually.

  To do this, when you register, save a registration file (`license.glc`) to your hard disk. Then, either e-mail it to 3D Systems or else write the file to media and mail it. Then 3D Systems will e-mail or mail the license file (`*.lic`) back to the customer. The customer just runs GibbsCAM and drags the license file onto the registration dialog, activating the license.

- Question: **Can the same machine serve licenses for both GibbsCAM and Compost?**

  Answer: Yes, but with a caveat.
  If you use NLO on one machine for multiple products: If you have licenses for two or more GibbsCAM products served by a single machine, such as licenses for both GibbsCAM and Compost, then all such license files must have the same start and end dates. If the start dates or end dates mismatch, then one license file might overwrite another.

Installation and Configuration FAQs on RLM

- Question: **How do I use RLM across a firewall?**

  Answer: If you want to serve licenses across a firewall, generally you will need the license servers to have known port numbers in order to allow your firewall to pass requests on these ports. The RLM server itself is always at a known port number (contained in the license file on the `SERVER` or `HOST` line). Typically, RLM starts up all the ISV servers with dynamic port numbers which are not known before startup time.

  However, it is possible to have RLM assign fixed port numbers to any of the ISV servers. In order to do this, you need to specify the port number for the ISV server on the `ISV` line. The port number is the fourth parameter in the `ISV` line:

  ```
  ISV isvname options-file port-number
  ```

In order to specify the port number, you must also specify an options file for this ISV server.

Once you have specified the port number, instruct your firewall to allow connections to both the port number on the SERVER line (for RLM) and the port numbers on any ISV lines.

- Question: **When starting RLM, I get the message "(RLM) Cannot bind Web Server port <####>, exiting". What is the problem and solution?**

  *Answer:*That error message generally indicates that another copy of RLM is already running and using that port (previously 9000, now **5054**) as its web server port.

  Check your system for other running copies of the RLM server, and if they should not be running, stop them, then re-start the RLM server.

  Another possible problem is that another program is using the port. You can use the netstat command to see if another program is using this port.

- Question: **RLM gives the following error message when attempting to install itself as a service on Vista from an account with administrator privileges: "Error: Access to Service Control Manager denied". What is the problem and solution?**

  Answer: Launch a Command Processor window (using "Run as administrator"), and install RLM from the new command window. "Run as administrator" is an option when you right-click the Windows Command Processor icon on the desktop or in the Start menu.

- Question: **By default, RLM Web Server allows open access to all commands. I need to restrict access to some server functions. How can I do that?**

  Answer: The RLM options file allows control over access to the status, reread, shutdown administration commands as well as control over the editing of options files. Options are provided to allow (INCLUDE or INCLUDEALL) or to disallow (EXCLUDE or EXCLUDEALL) administration command usage. Additionally, options are provided to create groups of users (GROUP) or hosts (HOST_GROUP).

  In addition, the RLM options file allows you to turn off logging of status requests via the NOLOG option.

  The RLM options file is called rlm.opt. It should reside in the directory from which you run the RLM executable, rlm.exe.

  There are five privileges that can be controlled in the RLM options file. Each privilege is specified with the appropriate privilege name.

  RLM privileges controlled by the RLM options file

Privilege	Name to use in RLM options file	Meaning
edit_options	edit_options	Allows editing options files for ISV servers
edit_rlm_options	edit_rlm_options	Allows editing options files for the RLM server

Privilege	Name to use in RLM options file	Meaning
`reread`	`reread`	Allows access to the functions which do reread commands on license servers
`shutdown`	`shutdown`	Allows access to the functions which shut down license servers
`status`	`status`	Allows display of status and debug log information from the license servers

By default, all privileges are granted to all users unless otherwise restricted in the RLM options file.

Note that the RLM web interface does not have access to the username (however, the `rlmutil` utilities do pass the username), so, to be most effective, command restrictions should be done based on hostname or IP addresses. By default, all commands are enabled (unless disabled with the `-x rlmdown` or `-x rlmremove rlm` startup options, in which case RLM options have no effect.).

Legal characters in the RLM options file

In general, all options file fields are white-space delimited, meaning that no data item can contain embedded spaces, tabs, newlines or carriage returns. In addition, the following characters are illegal in data items in the ISV or RLM options (and license) file: “`<`”, “`>`”, “`&`”, single quote (`'` or `‘` or `’`), back-quote (`` ` ``) and double-quote (`"` or `“` or `”`).

Note that everything in the RLM options file is case-insensitive.

Example of an RLM options file

In the following example RLM options file, **status** commands are only allowed from hosts on subnet `172.16.7.*`, no one on the host named `excluded_host` can perform a **reread** command, and only users on IP address `172.16.7.93` can perform a **shutdown**:

```
INCLUDE STATUS INTERNET 172.16.7.*

EXCLUDE REREAD HOST EXCLUDED_HOST

INCLUDE SHUTDOWN 172.16.7.93
```

Maintenance

The following are miscellaneous topics that can be helpful in some circumstances after you have installed GibbsCAM.

- Migrating from Previous Releases
- “Installing Post Packages” on page 48
- “Undoing All Customizations” on page 48

Migrating from Previous Releases

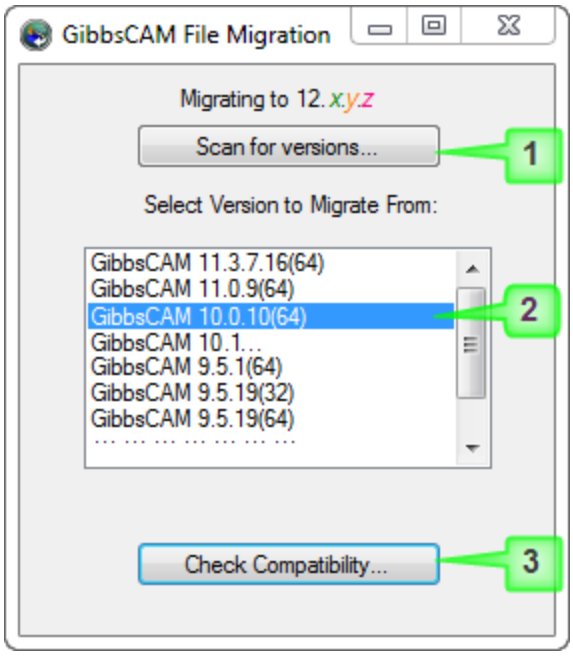
The GibbsCAM Migration Tool lets you detect all previously installed versions of GibbsCAM and copy compatible settings and preferences — UI and display settings, custom MDDs and VMMs, HSM settings, bolt and tap table data, macro configuration file, machine models, and so forth — from a specified previous version to the current release. The previous version is not modified.

For best results, run the Migration Tool before the first time you start a newly installed release of GibbsCAM. This allows old files to be migrated before they are blocked by new files created in the newly installed version.

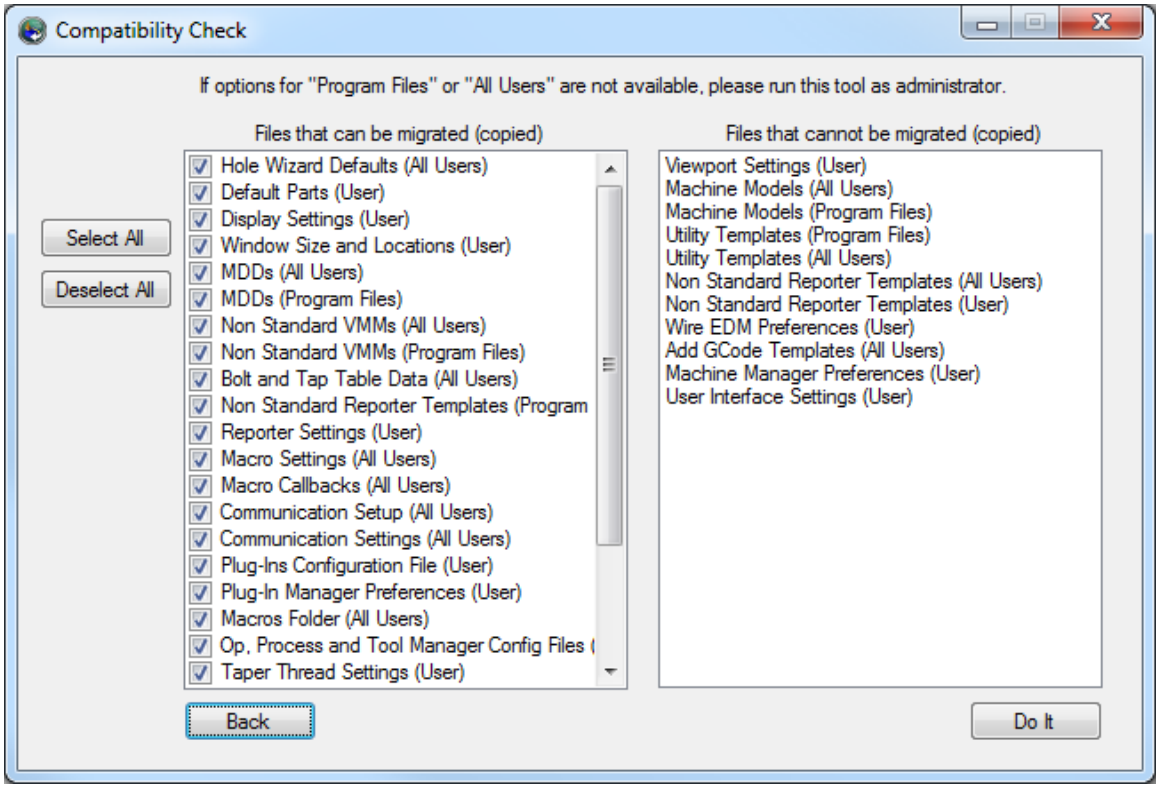
Using the Migration Tool

You can launch the tool from the Start menu: GibbsCAM > Migration Tool v12.*x.y.z*. To run this tool with Administrator privileges (recommended), navigate to its parent folder (default `C:\Program files\3D Systems\...\Bin\`), right-click the filename `GibbsMigrationTool.exe`, and choose context menu option Run as administrator.

1. The first dialog lets you scan your system for installed versions of GibbsCAM, select one from the list, and check it for compatibility.



2. The second dialog shows you the files that can and cannot be copied forward to the current release. Appropriate restrictions are respected if Administrator privileges are lacking.



Note: There is no ability to migrate plug-ins or material databases from previous releases. However, settings for Plug-In Manager can be migrated.

Installing Post Packages

When you receive a post processor package as a `.zip` file from the GibbsCAM Post department, you can install it simply by dragging it onto a running instance of GibbsCAM or using File > Open. This extracts the contents of the package and copies files to the appropriate locations under the `ProgramData\` folder:

- MDDs are extracted to the `MDD\` subfolder of the global data folder — normally `C:\ProgramData\3D Systems\GibbsCAM\<version>\MDD\`
- VMMs are extracted to the `VMM\` subfolder of the global data folder — normally `C:\ProgramData\3D Systems\GibbsCAM\<version>\VMM\`
- Post files are extracted to the `Posts\` subfolder of the global data folder — normally `C:\ProgramData\3D Systems\GibbsCAM\<version>\Posts\`
- Certain other special-purpose files (such as `.txt` files for `GCode Files\` and macro files for `CustomDrillCycles\`) are also extracted to the correct folders.

When a post package is installed in this way, if the target folder already contains `.mdd` or `.vmm` files with identical names, the pre-existing versions are overwritten.

Undoing All Customizations

Sometimes circumstances arise when you want to restore the as-shipped "factory" settings. For example, a particular user might want to remove all user-set preferences, such as customized defaults for interface background or lighting, or customized plug-in settings. Or, more broadly, a site might want to remove all site-customizable items, including the materials database, all custom MDDs and VMMs, and so forth.

Use this method only if you want to undo all customizations. Before wiping out extensive customizations, it is usually advisable to create a backup copy.

- To undo *user* customizations, simply delete/move/rename the **user data** folder: `C:\Users\<username>\AppData\Roaming\3D Systems\GibbsCAM\<version>`.

  Note: In releases prior to Version 11, the grandparent folder was named `Gibbs\` rather than `3D Systems`. For example, to suppress the customizations made by user "ChrisM" on GibbsCAM version 10.0.97, you could move this folder: `C:\Users\ChrisM\AppData\Roaming\Gibbs\GibbsCAM\10.0.97\`

- To undo *site* customizations, delete/move/rename the **global program data** folder: `C:\ProgramData\3D Systems\GibbsCAM\<version>`.

  For example, to undo the site customizations made to GibbsCAM version 12.9.99, you could rename this folder: `C:\ProgramData\3D Systems\GibbsCAM\12.9.99\`

Conventions

GibbsCAM documentation uses two special fonts to represent screen text and `keystrokes or mouse actions`. Other conventions in text and graphics are used to allow quick skimming, to suppress irrelevancy, or to indicate links.

Text

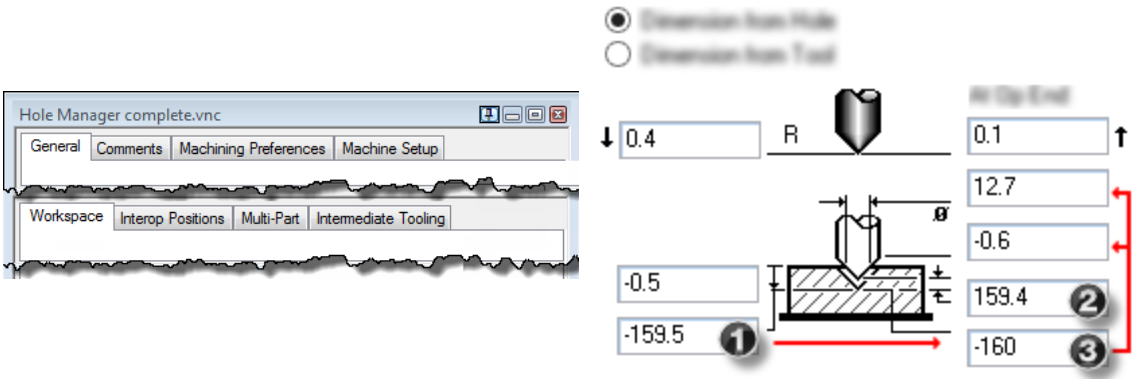
Screen text. Text with this appearance indicates text that appears in GibbsCAM or on your monitor. Typically this is a button or text for a dialog.

`Keystroke/Mouse`. Text with `this appearance` indicates a keystroke or mouse action, such as `Ctrl+C` or `right-click`.

`Code`. Text with `this appearance` indicates computer code, such as lines in a macro or a block of G-code.

Graphics

Some graphics are altered so as to de-emphasize irrelevant information. A "torn" edge signifies an intentional omission. Portions of a graphic might be blurred or dimmed to highlight the item being discussed. For example:



Annotations on a graphic are usually numbered callouts (as seen above), and sometimes include green circles, arrows, or tie-lines to focus attention on a particular portion of the graphic.

Faint green borders that outline areas within a graphic usually signify an image map. In online help or a PDF viewer, you can click a green-bordered area to follow the link.

Links to Online Resources

Link	URL	Action / Description
Go	http://www.GibbsCAM.com	Opens the main website for GibbsCAM.
Go	https://online.gibbscam.com	Opens a restricted website containing materials available for download. Requires a GibbsCAM Online Services account; to set up an account, contact GibbsCAM Support.
Go	https://store.GibbsCAM.com	Opens the website for the GibbsCAM Student Store.
Go	https://macros.GibbsCAM.com	Opens a wiki containing documentation and examples of GibbsCAM macros. Requires a GibbsCAM account.
Go	http://kb01.GibbsCAM.com	Opens a Knowledge Base article, **Contour Operations Using Thread Mill Tools**, that explains in detail the correct way to program Contour processes using Thread Mill tools.
Go	mailto:GibbsCAM.Support@3DSystems.com	Runs your email client to create a new message addressed to the 3D Systems Technical Support department for GibbsCAM.
Go	mailto:GibbsCAM.Registration@3DSystems.com	Runs your email client to create a new message addressed to the 3D Systems Registration department for GibbsCAM.
Go	mailto:GibbsCAM.Sales@3DSystems.com	Runs your email client to create a new message addressed to the 3D Systems Sales department for GibbsCAM.
Go	http://www.autodesk.com/inventor	Opens an external website that provides more information on Autodesk Inventor products.
Go	http://www.celeritive.com	Opens an external website that provides more information on VoluMill Ultra High-Performance Toolpath (UHPT) from Celeritive Technologies.
Go	http://www.predator-software.com	Opens an external website that provides more information on a CNC editor and a virtual CNC viewer from Predator Software, Inc.