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FOSS Notices

Free and Open Source Software (FOSS) notices are located in the product installation folder under ‘doc/foss’ or ‘Documentation/foss’ (e.g., C:LucidShape_2020.12/doc/foss, C:LucidDrive_2021.12/doc/foss, C:Program Files\Synopsys\LucidShapeCAA\R27.2021.06-1\Documentation\foss).
Appendix C  Troubleshooting the LucidShape CAA V5 Based Installation .......... 45

Problems Associating LucidShape CAA with the Appropriate CATIA Installation ........................................ 45
  Choose the CATIA Installation Directory in the Setup Wizard ............................................................. 45
  Manually Create a New CATIA Environment ......................................................................................... 46
Specifying Global Settings for NVIDIA Graphics Card ............................................................................ 47
Troubleshooting the Light Guide Design Module .................................................................................... 48
  Verify That the Light Guide Design Module is Linked with LucidShape CAA .................................. 48
  Set CATIA Option to Preserve Object Naming for the Light Guide Design Module ............................ 48

Glossary ...................................................................................................................................................... 51
Chapter 1 Getting Started

This chapter lists system requirements for the LucidShape family of products and tells you how to contact LucidShape Support.

You can run LucidShape products using either a fixed license or a floating license. A fixed license allows you to run LucidShape only on the computer on which it is installed. A floating license, which is installed on a network server, allows you to run LucidShape on any computer on the same network. The number of users that can use LucidShape concurrently is limited by the licensing software.

Although the examples in this document show and refer to the LucidShape product, the instructions apply to the entire LucidShape family of products, which includes:

- LucidShape
- LucidShape Lite
- LucidDrive
- LucidShape CAA V5 Based product and the separately licensed Design Module, Visualize Module, and Light Guide Design Module

System Requirements

To install LucidShape to run with either a fixed or floating license, you must have:

- A personal computer with any CPU with at least four cores from the last or second-to-last processor generation.

To get maximum performance from multi-threaded simulations, we recommend four or more CPU cores. LucidShape simulations make use of multi-threading, and a high number of cores or threads will enhance ray tracing speed; however, the most beneficial feature to take into consideration is a CPU with a very high single-thread frequency (or single-thread performance).

If Intel Hyper-Threading Technology is available on your computer, enabling it will further increase multi-threaded simulation performance.

- Operating System:
  - LucidShape - Windows 10 64-bit
  - LucidShape Lite - Windows 10 64-bit
  - LucidDrive - Windows 10 64-bit
  - LucidShape CAA V5 Based for CATIA R27, R28, R29, and R30 - Windows 10 64-bit

- Random Access Memory (RAM): 8 GB minimum, 16 GB or more recommended

If you are planning on running any of the following scenarios, 32 GB or more recommended:

- spectral simulations with high sensor resolutions
- simulations using multi-view luminance camera sensors
- simulations with many sensors in the model
- models that contain complex geometry
CHAPTER 1 Getting Started

• GPU:
  – With GPUTrace: Any NVIDIA graphics card (GeForce recommended) with the latest available graphics card driver (with a CUDA compute capability of at least 5.0).
  – Without GPUTrace: LucidShape does not require a special graphics card. If you are installing LucidShape CAA V5 Based, see the Certified Workstations link on the Dassault Systemes Hardware and Software (https://www.3ds.com/support/certified-hardware/) page.
  – LucidDrive: Any NVIDIA graphics card with the latest available graphics card driver (with a CUDA compute capability of at least 5.0). GeForce strongly recommended (there might be performance issues with Quadro cards due to driver problems).

If you are purchasing graphics cards, contact LucidShape Support for the latest recommendations.

• Free disk space as listed to install the LucidShape product:

<table>
<thead>
<tr>
<th>Product</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>LucidShape/LucidShape Lite</td>
<td>1.5 GB</td>
</tr>
<tr>
<td>LucidDrive</td>
<td>2.0 GB</td>
</tr>
<tr>
<td>LucidShape CAA V5 Based</td>
<td>1.5 GB</td>
</tr>
</tbody>
</table>

• Free disk space on the system drive (i.e., the drive on which the operating system is installed) for installing prerequisite software and for processes and temporary files required when running the product: 5 GB. If LucidShape is installed on a drive other than the system drive, that drive should also have at least 5 GB free disk space.

Large models and complex analyses may require significantly more disk space.

• License keys provided by Synopsys OSG via SolvNetPlus SmartKeys or your local LucidShape software distributor.

• If you are using a fixed license or are installing OSG Floating License Manager, a license dongle and a USB2.0 (or higher) Type A port.

• Display:
  – A high-resolution monitor (1280 x 1024 or better) with 16-bit (65536) colors or more
  – An OpenGL compliant graphics card with stable ICD driver support recommended. We recommend that you always use the latest version of the driver for your graphics card.

• If you are installing the LucidShape CAA V5 Based product, you must have a licensed version of a supported CATIA V5 release and the CATIA Mechanical Design 2 Configuration (MD2).

The Design Module, Visualization Module, Light Guide Design Module, and SmartStart Material Library Module for the LucidShape CAA V5 Based product each requires a separate license.

Note: CATIA licensing requirements for the LucidShape CAA Light Guide Design Module are subject to change in future releases. To check for updates to these requirements, contact LucidShape Support.

• If you will be running LucidShape with a floating license, you must also have:
  – TCP/IP network protocol
  – OSG Floating License Manager (a Sentinel RMS license manager that has been customized for Synopsys OSG software), provided by Synopsys OSG via SolvNetPlus.
Before installing LucidShape, your LucidShape or IT Administrator should install and configure the OSG Floating License Manager. See *Installing and Managing the OSG Floating License Manager* on page 15 for instructions.

- A DVD drive, if installing from a DVD

**Contacting LucidShape Support**

If you need help or have questions about how to use LucidShape products that are not answered in the documentation or online help, you can contact the LucidShape Support team or your local distributor.

- The LucidShape Support team is available from 9 a.m. to 5 p.m. CET (UTC + 1).
  
  Telephone +49-5251-29875-00
  
  Email: lucidshape_support@synopsys.com

- For customers working with distributors, please contact your local LucidShape software distributor for support. See the *Synopsys Optical Solutions Group Global Contacts* (https://optics.synopsys.com/support/support-global-contacts.html) page for contact information.
Chapter 2  Installing LucidShape

You can run LucidShape products using either a fixed license or a floating license.

- If you are using a fixed license, you also need a USB license dongle.
- If you are using a floating license, you need the name of your license server.

Before installing LucidShape, your LucidShape or IT Administrator should install and configure the OSG Floating License Manager.

These instructions assume that you have already downloaded LucidShape from the Synopsys SolvNetPlus website or that you ordered and received a LucidShape DVD. If you have not done so, see Using SolvNetPlus to Obtain LucidShape Software and Licenses on page 33.

Note: Except where noted, the instructions and illustrations in this document for the LucidShape product apply to all of the LucidShape products.

Installing LucidShape

1. Log on to your computer as Administrator.
2. Navigate to the folder where the LucidShape setup file is located. If you have a DVD, insert it into the DVD drive and navigate to that drive.
3. Double-click the setup file (e.g., SetupLucidShape_version.exe)

   where version is the version number for the release (e.g., SetupLucidShape_2020.12.exe). For the LucidShape CAA V5 Based product, the file name also includes the CATIA version (e.g., SetupLucidShapeCAA_R27_2021.06-1.exe).

   The Setup window is displayed at the License Agreement screen.

4. Click I Agree to continue.
CHAPTER 2 Installing LucidShape

If you are installing LucidDrive or LucidShape CAA, the Choose Install Location screen is displayed. Skip to step 6.

If you are installing LucidShape or LucidShape Lite, the Choose Components screen is displayed. By default, the LucidShape option is selected.

5. Choose the product(s) you want to install and click Next.

The Choose Install Location screen is displayed.

6. Specify a location.

If an earlier release of the product was installed, the default location will be set to the path used for that release. If you want to install the program in a different folder, click the Browse button to locate and specify that folder.

For most LucidShape products, the default location is \product\Name_version.

For LucidShape CAA, the default location is C:\Program Files\Synopsys\LucidShapeCAA\CATIAversion\LucidShapeCAAversion.

7. Click Next (for LucidShape CAA V5 Based) or click Install (for all other LucidShape products).
If you are installing a LucidShape product other than LucidShape CAA V5 Based, the Setup window shows the progress of the installation. Skip to step 12 on page 8 to finish the installation process.

If you are installing the LucidShape CAA V5 Based product, the Choose CATIA Installation Directory screen is displayed; continue with the following steps.

The Choose CATIA Installation Directory screen allows you to associate the LucidShape CAA product with a specific CATIA installation. If a CATIA installation folder was detected, the path to that folder is displayed in the input field. If CATIA is not installed on the same computer, or if CATIA is managed by a third-party tool that maintains configurations and versions, the input field may be blank, and you may need to perform additional steps to complete your installation. See Troubleshooting the LucidShape CAA V5 Based Installation on page 45 for details.

8. If you need to specify or want to change the CATIA installation folder, edit the path or click the Browse button to navigate to it and select it.

9. Click Next to continue.

The Choose Public Data Location screen is displayed. This allows you to specify a location for installing public data, such as example model files. To allow interactive use of these files, choose a folder for which you have write permission. The default location is C:\Users\Public\Documents\LucidShapeCAA\CATIAversion\LucidShapeCAAversion (e.g., C:\Users\Public\Documents\LucidShapeCAA\R27\2021.06-1).

10. To specify a different folder, edit the path or click the Browse button to navigate to it and select it.
11. Click **Install**.

   The Setup window shows the progress of the installation.

   When the process is complete, Installation Complete is displayed in the Setup window.

12. For LucidShape CAA, this is the final screen in the installation wizard. Click **Close** and skip to step 14. For all other LucidShape products, click **Next** to exit the LucidShape installation wizard.

   The Completing the LucidShape Setup Wizard screen is displayed.

13. Click **Finish**.
The installation is complete.

Note: LucidShape software will not be able to run if it is blocked by Data Loss Prevention software (e.g., DeviceLock) or anti-malware software (e.g., Trend Micro) installed on your computer. Contact your system administrator to ensure that such software has a policy that adds LucidShape software to your allowed software list.

14. Configure your license as described in Configuring LucidShape with a Fixed License on page 9 or Configuring LucidShape with a Floating License on page 12.

15. If you are installing LucidShape CAA, you must perform one more step before you can use this product. See Specifying Global Settings for NVIDIA Graphics Card on page 47 for instructions.

16. If you are installing LucidShape CAA with a license for the Light Guide Design Module, you must perform one more step after you install your license key but before you can use this module. See Set CATIA Option to Preserve Object Naming for the Light Guide Design Module on page 48 for instructions.

17. If you are installing LucidDriveSC, see the LucidDrive Server/Client document (LucidDriveSC.pdf) available in the doc directory of your LucidShapeSC installation directory for additional instructions.

**Configuring LucidShape with a Fixed License**

If you already have a license key for this product, skip to Installing a License Key for a Fixed License on page 10. If you do not yet have a license key, continue with Obtaining the Host ID for a License Dongle on page 9.

**Obtaining the Host ID for a License Dongle**

A license key is designed to work for only one USB dongle, so the license key is associated with a unique value encoded on the dongle called a Host ID. Because of this, you need to know the Host ID for the license dongle before you can retrieve a license key. The Host ID is printed on a label on the USB dongle; if you're unable to read the ID on the label, you can also obtain the Host ID by running a program that reads it from the dongle. In the LucidShape installation, the GetHostID utility is provided for this purpose. Follow these steps to run GetHostID.

1. Insert the USB dongle in an active USB port. A light glows at the end of the dongle when it's inserted correctly in an active USB port.

2. Select the Windows Start menu, expand the LucidShape group and select GetHostID, shown in the following figure.
CHAPTER 2 Installing LucidShape

The GetHostID utility is displayed. In this example, the Host ID for the USB dongle is 400-6'MMMMMMM'. Note that the version number displayed at the top of the GetHostID utility may vary, depending on the product you’re installing.

3. Copy the Dongle Host ID to use when you retrieve your license key on the Synopsys SolvNetPlus website. See Retrieving License Keys on page 39 for instructions.

4. Click Done to close the GetHostID utility.

After you retrieve your license key, continue with Installing a License Key for a Fixed License on page 10.

Installing a License Key for a Fixed License

To install the license key for a LucidShape product, you must have:

• The LucidShape product installed
• A license dongle
• A valid license key. This procedure assumes that you have already obtained a license key from the SolvNetPlus SmartKeys web page. If you have not done so, see Retrieving License Keys on page 39 for instructions.

Follow these steps to set up licensing for the LucidShape product.

1. Insert the license dongle in an active USB port. A light glows at the end of the dongle when it’s inserted correctly in an active USB port.

   The license dongle must remain connected whenever you are running the LucidShape product.

   It may take a few minutes for your system to recognize the dongle.

2. Start the LucidShape product. To do this, you can double-click the shortcut icon on the desktop or select the Windows Start button and navigate to the product name, as shown in the following example.
The License Check Failed dialog box is displayed, indicating that a valid license key file was not found.

3. Make sure the **Fixed** option is selected and then click the **Install Fixed License** button.
   
   The Fixed License Installer is displayed.

4. Click the **Browse** button.

5. In the Open dialog box, navigate to the license key file, select it, and click **Open**.
   
   The Open dialog box is closed, and the path to the license key file is shown in the Fixed License Installer.
CHAPTER 2 Installing LucidShape

6. Click the **Install** button.
   
   The license key is installed, and the **Success** dialog box is displayed.

7. Click **OK**.

8. Click **OK** on the License Check Failed dialog box.

9. Start the LucidShape product again.
   
   You can now start working with LucidShape.

**Configuring LucidShape with a Floating License**

If you are using a floating license, you need to provide the name of the server hosting the OSG Floating License Manager. Your LucidShape or IT Administrator should have provided you with the name of the server hosting the OSG Floating License Manager.

If you are installing LucidShape CAA, you may also need to enable specific modules as described in *Optional: Specifying Module Licenses to Activate (LucidShape CAA Only)* on page 13.

If you need to install the OSG Floating License Manager, see *Installing and Managing the OSG Floating License Manager* on page 15.

**Enabling the Floating License**

To enable the floating license to work for your LucidShape installation, you need to specify the name of your license server in a LucidShape initialization file, as described in these steps.

1. Start LucidShape.
   
   The License Check Failed dialog box is displayed.
2. Click the **Floating** option at the bottom of the dialog box.

3. Delete the text *no-net*, enter the name of your license server, and click **OK**.

   The server name is copied to the LucidLicensing.ini file.

4. Restart LucidShape as prompted.

5. Optional: If you have licenses for multiple modules, you can specify which module licenses are activated when you start LucidShape CAA. See **Optional: Specifying Module Licenses to Activate (LucidShape CAA Only)** on page 13 for details.

**Optional: Specifying Module Licenses to Activate (LucidShape CAA Only)**

For LucidShape CAA, if you have a license for more than one module, you can specify which of the licenses you want to activate when you start LucidShape CAA. The following steps explain how to do this.

**Before You Begin:** You must have enabled your floating license and restarted the product as explained in *Enabling the Floating License* on page 12.
CHAPTER 2 Installing LucidShape

1. Select the menu **Help > Setup License**.

   The LucidShape CAA License Setup dialog box is displayed, shown in the following figure.

2. Select the modules that you want to activate or deactivate on startup.

   Options that are turned **on** (checked) are activated on startup, and options that are **off** (unchecked) are deactivated on startup.

3. If you would like display the LucidShape CAA License Setup dialog box each time you start the product so that you can see or specify which module licenses are active when you start LucidShape CAA, click the check box to **show floating license setup on startup**.

4. Click **OK** to accept the changes and close the dialog box.

   You can now start working with LucidShape.
Chapter 3  Installing and Managing the OSG Floating License Manager

If you are using floating licenses, you need to install and maintain an OSG Floating License Manager. The floating license capability is supported by the OSG Floating License Manager, which is a Sentinel RMS license manager that has been customized for Synopsys OSG software. If you install other Synopsys OSG software products, they will share the same license management software, and their license keys will be written to the same license key file. The applications cannot share licenses; they share only the license server software.

Installing a floating license requires system-administration-level training and should be performed by someone who is familiar with your network structure. To perform this installation, you must be logged on as administrator.

The steps for installing OSG Floating License Manager to run with a floating license are:

1. Selecting a License Server on page 15
2. Downloading and Installing the OSG Floating License Manager on page 16
3. Installing a License Key for a Floating License on page 23
4. Optional: Administering Floating Licenses on page 25

Selecting a License Server

Before installing any software, you must identify the computer that will act as the license server. This must be a computer connected to a network that can grant access to one or more client machines.

For any one product, it is not possible to have two sets of license keys (locked to different dongles) on the same floating license server. Each set of license keys is composed of a set of exclusive module licenses; because of this, if you install license keys for a product and then add a second set of license keys for that product, the second set of license keys will override the first set.

If you want to use a second dongle, you need to setup a second license server. In principle it is possible to combine license keys on one dongle, this depends among other on the modules and the respective expiration date. Please contact your LucidShape representative at lucidshape_support@synopsys.com for more information.

Note: The OSG Floating License Manager communicates via port 5093. If you will be running LucidShape across different subnets, you will have to configure your routers or firewalls to allow two-way communication across this port.
CHAPTER 3 Installing and Managing the OSG Floating License Manager

Downloading and Installing the OSG Floating License Manager

You must have the OSG Floating License Manager, which is provided on the SolvNetPlus website on the same Downloads page as the product software. (See Using SolvNetPlus to Obtain LucidShape Software and Licenses on page 33 for details.) Follow these steps to install the OSG Floating License Manager on the license server.

**Note:** If you have a different version of the Sentinel RMS software, you must first uninstall the older version, as described in step 2.

1. Log on to the license server with administrator privileges.
2. If any version of the OSG Floating License Manager or the Sentinel RMS License Manager software is installed on the license server computer, you must uninstall it using the following sub-steps. If no prior version is installed, skip to step 3.
   a. Open the Control Panel and select Programs and Features.
   b. If the list includes both the OSG Floating License Manager Admin Tools and the Sentinel RMS License Manager, shown in the following figure, you must uninstall both of these.
   c. Select the program to uninstall and then click Uninstall/Change.
   d. Follow the instructions on screen.
3. Navigate to the folder where the setup file is located.
4. Double-click the setup file FloatingLM.exe.

The Welcome screen for the OSG Floating Manager Admin Tools wizard is displayed.
CHAPTER 3  Installing and Managing the OSG Floating License Manager

5. Click **Next**.
   The License Agreement screen for the OSG Floating License Manager Admin Tools is displayed.

6. Click the **I Accept** option and click **Next** to continue.
   The Ready to Install screen is displayed.

7. Click **Install**.
   The progress screen is displayed while the software is installed.
8. Accept the default values for all questions.
   The Welcome screen for the Sentinel RMS License Manager is displayed.

9. Click Next.
   The License Agreement screen for the Sentinel RMS License Manager wizard is displayed.
10. Click the **I Accept** option and then click **Next** to continue.

   The Customer Information dialog box is displayed.

11. Click **Next** to accept the defaults and continue.

   The Destination Folder screen is displayed.

12. Click **Next** to accept the default and continue.

   The Setup Type screen is displayed.
13. Click Next to accept Complete (recommended) and continue.

The System Firewall Settings screen is displayed.

14. Leave the option turned on (checked) and click Next.

This setting allows the Floating License Manager to add inbound rules. If you change this setting, LucidShape will not be able to obtain the license needed to run.

The Ready to Install screen is displayed.
15. Click **Install**.

   The progress screen is displayed while the software is installed.

   When the installation is finished, the Completed screen for the Sentinel License Manager is displayed.

16. Click **Finish**.

   The wizard finishes installing the OSG Floating License Manager Admin Tools, and then the Completed screen is displayed.
17. Click **Finish**.

   The installation is complete.

18. Reboot your computer if prompted to do so.

   If you already have a license key for this product, skip to *Installing a License Key for a Floating License* on page 23. If you do not yet have a license key, continue with *Obtaining the Host ID for a License Dongle* on page 22.

**Obtaining the Host ID for a License Dongle**

A license key is designed to work for only one USB dongle, so the license key is associated with a unique value encoded on the dongle called a **Host ID**. Because of this, you need to know the Host ID for the license dongle before you can request a license key. The Host ID is printed on a label on the USB dongle; if you’re unable to read the ID on the label, you can also obtain the Host ID by running a program that reads it from the dongle. The GetHostID utility is provided with the OSG Floating License Manager for this purpose. Follow these steps to run GetHostID.

1. Insert the USB dongle in an active USB port on the license server. A light glows at the end of the dongle when it’s inserted correctly inserted in an active USB port.

2. Select the Windows Start menu, expand the OSG Floating License Manager group, and select **GetHostID**, shown in the following figure.

![GetHostID utility](image)

The GetHostID utility is displayed.
In this example, the Host ID for the USB dongle is 400-************.

3. Copy the Dongle Host ID to retrieve your license key on the Synopsys SolvNetPlus website. See Retrieving License Keys on page 39 for instructions.

4. Click **Done** to close the GetHostID utility.

After you retrieve your license key, go to Installing a License Key for a Floating License on page 23.

### Installing a License Key for a Floating License

After you install the license server software and retrieve a license key, you need to install the license key on the license server before client machines can successfully run LucidShape. The Floating License Installer is provided for this purpose.

This procedure assumes that you have already obtained a valid license file from the SolvNetPlus SmartKeys web page. If you have not done so, see Retrieving License Keys on page 39 for instructions.

**Note:** For any one product, it is not possible to have two sets of license keys (locked to different dongles) on the same floating license server. Each set of license keys is composed of a set of exclusive module licenses; because of this, if you install license keys for a product and then add a second set of license keys for that product, the second set of license keys will override the first set.

If you want to use a second dongle, you need to setup a second license server. In principle it is possible to combine license keys on one dongle, this depends among other on the modules and the respective expiration date. Please contact your LucidShape representative at lucidshape_support@synopsys.com for more information.
CHAPTER 3 Installing and Managing the OSG Floating License Manager

Follow these steps to install your license key.

1. Make sure that the license dongle is inserted in an active USB port on the license server. A light glows at the end of the dongle when it’s inserted correctly in an active USB port.
   
   It may take a few minutes for your system to recognize the dongle.

2. Click the Windows Start button on the taskbar, and navigate to OSG Floating License Manager. Right-click Floating License Installer and select Run as Administrator.
   
   The Floating License Installer is displayed, as shown in the following figure.

3. Click the Browse button.

4. In the Open dialog box, navigate to the license key file, select it, and click Open.
   
   The Open dialog box is closed, and the path to the license key file is shown in the Floating License Installer.

5. Click the Install button.
   
   The license key is installed, and the Success dialog box is displayed.
6. To close the Floating License Installer, click the X in the top right corner.

Continue with Administering Floating Licenses on page 25.

Administering Floating Licenses

In general, there is nothing that you need to do to administer the floating licenses. As long as the floating license server machine is operational, connected to the network, and is running the Sentinel service, licenses are available to clients.

Monitoring License Use

It is possible for all available licenses to be in use, which would prevent additional clients from running LucidShape. In such cases, a system administrator can use the Sentinel Administrator Utility (WlmAdmin) to determine to whom the module licenses have been allocated.

Note: To use the Administrator Utility utility, you must be the person who started the license server, or you must have administrator privileges.

1. To start the utility, click the Windows Start menu and select Programs > OSG Floating License Manager > Administrator Utility.

2. Expand the list of modules below the license server hostname.

The details presented in the dialog box indicate which client machine and username have checked out the licenses. The example below shows that from the license server machine INSPIRON AMD, a LucidShape license is checked out to a user named JDoe, who is using a client machine named JDoe-z400_1.
You can also use the Administrator Utility utility to obtain other licensing activity information, such as license servers detected, details on active licenses, etc. For more information about how to use the Administrator Utility utility, see the Sentinel System Administrator's Guide. After the Sentinel software is installed, this manual is available by selecting the Windows Start menu and selecting Programs > OSG Floating License Manager > System Administrator's Guide.

**Note:** Not all functions described in the Sentinel System Administrator’s Guide are supported by LucidShape.

### Improving Access to LucidShape Licenses with the Sentinel License Manager

By default, LucidShape licenses are available to anyone on your server on a first-come, first-served basis. Therefore, you can use LucidShape immediately without using the OSG Floating License Manager. However, if you want to control access to these licenses based on work priorities, you can use the Sentinel Administrator Utility to reserve copies for or deny access to specific users.

Before using the Administrator Utility, consider how you want to organize your groups, keeping in mind the following points:

- Anyone on your server can use a license that has not been explicitly reserved.
- After you create a group, you can specify the status of individual members as *Included* (access allowed) or *Excluded* (access denied).
- You can exclude all members of a group from using licenses (called license tokens) by specifying 0 licenses for that group.
For example:

- **Organize by department:**
  
  If you have departments in your organization, enter each department as a separate group, assign the appropriate number of license tokens to each group, and designate each group member as Included or Excluded. You can change this designation for members as needed, according to work priorities.

- **Organize by priority:**
  
  Create a group for preferred users and another group for everyone else. In the preferred user group, designate all members as Included and assign to them as many licenses as you can allow. For the second group, you enter everyone else in the company, assign the remaining license tokens, and designate which people are Included and which are Excluded. You can change the Included and Excluded designations as the work load changes.

When you are ready to implement this arrangement, you can use the Administration Utility provided with the OSG License Manager to create a reservation file, as described in the following steps.

1. On the license manager server, start the license manager Administration Utility from the Windows Start button:

   **Start > All Programs > OSG Floating License Manager > Administrator Utility**

   The WlmAdmin dialog box is displayed.

2. From the menu at the top of the WlmAdmin window, select **Edit > Reservation File**.

   The Wlgrmgr dialog box is displayed.

3. To set up a new members group, select **File > New**.

4. Follow these steps to select a feature.

   a. Select **Feature > Add**

      The Add License Reservation Wizard is displayed.

   b. Click **Next** to continue.

      The Feature Version Capacity dialog box is displayed.

   c. Enter the appropriate Feature Name.
You must enter feature names as they appear in the WlmAdmin dialog box, shown in the following example.

d. For the Feature Version, enter ORA (upper case).

e. Click Next.

The Group dialog box is displayed.

5. To establish a user group, follow these steps.
   a. Enter a name that identifies the user group for which you want to allow or deny access.

b. In the Tokens field, enter the number of licenses to reserve for that group.

c. Click Next.

The Members dialog box is displayed.

6. To add members to the group, follow these steps.

Note: You can add members who will be allowed access, as well as members who will be denied access.
CHAPTER 3 Installing and Managing the OSG Floating License Manager

a. Click the Add button.

![Add button](image)

The Member dialog box is displayed.

b. Keep the User option selected, shown in the following figure, and enter the member’s name in the Name of the Member field. You can define members only by user name and not by Machine.

![Member dialog box](image)

c. Click Included for members who are allowed access or Excluded for members who are denied access.

d. Click OK on the Member window and repeat the process to add each user in the group.

e. Click Finish on the Members window to apply the changes and close the window.

7. Repeat the process of selecting a feature, establishing a group, and adding members for each group (steps 4, 5, and 6, above).

8. Select File > Save As and navigate the directory where the license manager is installed.

   By default, the license manager is installed in C:\Program Files (x86)\Common Files\SafeNet Sentinel\Sentinel RMS License Manager\WinNT.

   The file lsreserv is created and saved at this location. The license manager references this file to determine which users have access to each feature.

9. Restart the Sentinel RMS License Manager, as described in the following steps.

   a. Click the Windows Start button and select Control Panel.

   b. Click Administrative Tools.

   c. Double-click Services.
d. In the Services dialog box, locate and right-click the **Sentinel RMS License Manager** and select the **Restart** option on the pop-up menu.

**Logging Floating License Usage**

Floating license usage is automatically recorded in the file `usage.log`. The following example shows how information is formatted in this file.

As shown in the highlighted portions, the entries include:

1. day, date, and time stamp
2. the product or module
3. a code that indicates whether the license was issued (0), denied (1), or released (2)
4. the number of floating licenses in use after the current release or request.
5. elapsed time the license was in use (in seconds). This value is 0 until the license is released.
6. the user ID
7. the host name
8. the version number for the floating license manager

By default, the `usage.log` file is located in the folder `C:\Windows\SYSWOW64`. You can change the location and name of the file, if desired, as described in the following steps.

1. Select the **Windows Start menu** and select **Control Panel > System**.
2. In the top left corner, select **Advanced system settings**.
3. In the System Properties dialog box, select the Advanced tab and click **Environment Variables**.
4. In the Environmental Variables dialog box, select LSERVOPTS and click Edit.

By default, the value for LSERVOPTS is

```
-l usage.log -z 20m -f error.log
```

5. In the Edit System Variable dialog box, change the path and/or file name by replacing the string `usage.log` with the desired path and file name. In the following example, the new path for the file is `C:\temp\usage.log`. 
6. Restart the license manager in the services list, as described in the following steps.
   The change takes effect after the license manager is restarted.
   a. Select the Windows Start menu and select Control Panel > Administrative Tools.
   b. Double-click Services.
   c. In the Services dialog box, locate and select the Sentinel RMS License Manager.
   d. Click Restart the service option.

For additional information about the usage log, see the Sentinel System Administrator’s Guide. After the license manager software is installed, this manual is available by selecting the Windows Start menu and selecting Programs > OSG Floating License Manager > System Administrator’s Guide.
Appendix A  Using SolvNetPlus to Obtain LucidShape Software and Licenses

Software and license keys for the LucidShape family of products are available for download from the Synopsys SolvNetPlus website. This appendix describes how to use the website to download these software products and the license keys required to use them.

Note: For customers working with distributors, please contact your local LucidShape software distributor to obtain your software and license. See the Synopsys Optical Solutions Group Global Contacts (https://optics.synopsys.com/support/support-global-contacts.html) page for contact information.

Although the examples in this document show and refer to the LucidShape product, the instructions apply to the entire LucidShape family of products, which includes:

- LucidShape
- LucidShape Lite
- LucidDrive
- LucidShape CAA V5 Based

Special terms used in these instructions are explained in the Glossary on page 51.

The process is described in the following procedures.

1. Signing Up for a SolvNetPlus Account on page 34
2. Downloading LucidShape Software from SolvNetPlus on page 35
   or
   Ordering Media (CDs/DVDs) on page 37
3. Installing LucidShape on page 39
4. Retrieving License Keys on page 39
APPENDIX A. Using SolvNetPlus to Obtain LucidShape Software and Licenses

Signing Up for a SolvNetPlus Account

Before you can download LucidShape software and license keys, you must sign up for a Synopsys SolvNetPlus account. If you already have a SolvNetPlus account, you can skip to *Downloading LucidShape Software from SolvNetPlus* on page 35.

1. Go to [https://solvnetplus.synopsys.com](https://solvnetplus.synopsys.com) and click **REGISTER - CREATE ACCOUNT**.

2. Follow the instructions for SolvNetPlus Self Registration.

   SolvNetPlus will send a verification code to the email address you specified. You must retrieve the code and enter it on the SolvNetPlus site to complete your registration.

   During the registration process, you also need to enter your company’s Site ID. If you do not know your company’s Site ID, please contact solvnetplusfeedback@synopsys.com to request it. Be sure to include your company name and address in the email request.
APPENDIX A Using SolvNetPlus to Obtain LucidShape Software and Licenses

**Downloading LucidShape Software from SolvNetPlus**

Follow these steps to download any of the software products in the LucidShape family of products. If you unable to download software, you can order a CD or DVD instead. See *Ordering Media (CDs/DVDs)* on page 37 for instructions.

1. Go to [https://solvnetplus.synopsys.com](https://solvnetplus.synopsys.com) and enter your User Name and Password to sign in.
2. Click Downloads.

All Synopsys products currently licensed at your company will be listed.

3. Select the product you want to download.

4. Select the version you would like to download.
APPENDIX A Using SolvNetPlus to Obtain LucidShape Software and Licenses

The Download Details page is displayed, shown in the following figure.

5. Under Release Alerts, click the Sign up link to display Release Alerts options that allow you to subscribe to Release Notification emails from SolvNetPlus. These emails let you know when a new version of LucidShape is available for download.

a. Click the product name for which you would like to receive notifications or click ALL to receive notifications for all products in the list.

b. Click the Add button.

c. Click the Include patch notifications check box. This allows you to receive notifications of LucidShape service releases.

d. Click the Update button.

You are returned to the Download Details page.

6. On the Download Details page, click Download Here.
7. On the Notice page, click **Agree and Sign In** to continue.

8. From the list of available files, click the name of the file and then use your browser to open or save the file.

The following figure shows a list of files for LucidShape version 2019.09.

- **checksum_info.txt** is a file used for internal purposes.
- **FloatingLM.exe** is for floating license customers. Only the system administrator who will set up a floating license server needs to download this file. See *Installing and Managing the OSG Floating License Manager* on page 15 for installation instructions.
- **README_LucidShape_2019.09.txt** provides a summary of key features in the release.
- **SetupLucidShape_2019.09.exe** is the installation file for LucidShape.

**Ordering Media (CDs/DVDs)**

If you unable to download software and would like to order media (CD or DVD) instead, you can do this directly on the Synopsys SolvNetPlus website. Follow these steps to order media.

1. Go to [https://solvnetplus.synopsys.com](https://solvnetplus.synopsys.com) and enter your User Name and Password to sign in.
2. Click **Downloads**.
3. Click the **MEDIACENTER** link.
APPENDIX A Using SolvNetPlus to Obtain LucidShape Software and Licenses

4. On the Media Center page, select the product (e.g., LucidShape, LucidDrive, etc.) and click the Add button.

5. Complete the Shipping Address information and click Continue.

6. Review the shipping request, shown in the following figure, and click Place Order.
Installing LucidShape

Instructions for installing LucidShape products and license keys are provided in the following chapters:

- *Getting Started* on page 1 - lists LucidShape system requirements and tells you how to contact LucidShape Support.
- *Installing LucidShape* on page 5 - Install LucidShape on a client system and configure the license.
- *Installing and Managing the OSG Floating License Manager* on page 15 - If you are using a floating license, you install the license dongle and license key on a network server. You also install the OSG Floating License Manager on the network server to manage the licenses.

After you install the LucidShape product, continue with *Obtaining the Host ID for a License Dongle* on page 39.

Obtaining the Host ID for a License Dongle

A license key is designed to work for only one USB dongle, so the license key is associated with a unique value encoded on the dongle called a *Host ID*. Because of this, you need to know the Host ID for the license dongle before you can retrieve a license key. The Host ID is printed on a label on the USB dongle; if you’re unable to read the ID on the label, you can also obtain the Host ID by running a program that reads it from the dongle; the GetHostID utility is provided for this purpose. See the following steps to run the GetHostID utility.

- If you’re installing a fixed license: *Obtaining the Host ID for a License Dongle* on page 9
- If you’re installing a floating license: *Obtaining the Host ID for a License Dongle* on page 22

After you obtain the Host ID, continue with *Retrieving License Keys* on page 39.

Retrieving License Keys

A license key is a file containing licensing information for your specific USB dongle. You can obtain license keys using the SmartKeys web page on the Synopsys SolvNetPlus website. Follow these steps to obtain your license keys.

1. On the SolvNetPlus home page, click **Downloads** and then click the SmartKeys tab.

2. On the SolvNetPlus SmartKeys Home page, click the **Key Retrieval** link.
The SmartKeys Key Retrieval page is displayed.
You can retrieve a license key for a single USB dongle, or you can retrieve license keys for all
Host IDs at your company.

3. To obtain a license key for a single USB dongle, enter the Host ID of your LucidShape USB
dongle in the Host ID (Optional) field. If you do not know the Host ID value for your USB dongle,
see Obtaining the Host ID for a License Dongle on page 39.
To obtain license keys for all products and all Host IDs at your company, leave the Host ID
(Optional) field blank and go on to step 4.

4. Click Retrieve Key, shown in the following figure.

Your LucidShape license key will be delivered as a text file attached to an email from the
SmartKeys system. If you did not enter a Host ID in step 3, you will receive a separate email with
a single license key attached for each Host ID at your company. The email will include the Host ID for which the license key is valid.

5. Save the license key to a convenient location on your computer. You need to access this file to activate LucidShape.

6. See one of the following procedures for instructions on installing the license key to activate your LucidShape product.

   – Installing a License Key for a Fixed License on page 10
   – Installing a License Key for a Floating License on page 23
APPENDIX A Using SolvNetPlus to Obtain LucidShape Software and Licenses
Appendix B  Troubleshooting the Floating License Installation

If a security problem occurs when you use a LucidShape floating license, a dialog box displays an error message. Below are a few common security errors with their causes and resolutions. If you are unable to correct the problem, contact a LucidShape representative at lucidshape_support@synopsys.com.

Problems Installing the License Key Using the Floating License Installer

**Problem:** Invalid locking code. Check dongle.

**Cause:** This could indicate any of the following:
- the license dongle has not been inserted in the USB port
- the USB port is not active
- the Dongle ID in the license file does not match the ID of the inserted Dongle
- the dongle is not valid

**Solution:** Restart the Sentinel RMS License Manager service. To do this, select Start > Control Panel, click Administrative Tools and then double-click Services. Locate and right-click Sentinel in the dialog box, and select the Restart option on the pop-up menu. Then, insert a valid license dongle in an active USB port (a light glows at the end of the dongle when it’s inserted correctly in an active USB port) and repeat the steps for installing the license key. (See Installing a License Key for a Floating License on page 23 for instructions).

**Problem:** Sentinel: Error [19]: Failed to add license code ...

**Cause:** This general error message indicates that the license key was not applied successfully in the license manager. This can occur if the file containing the license keys has been corrupted or if license keys that have already been successfully entered are entered a second time.

**Solution:** Verify that the license key file contains license keys for the version of LucidShape being installed, and not for an earlier version; the version number is listed in the comments of the license key file. Also, verify that the license key file has not become corrupted, which could occur if the license key file has been edited (i.e., lines containing license keys are changed or become line wrapped incorrectly).
Problems Starting LucidShape

Problem: Error #18b - No valid license code for version xxx found.
Cause: Valid license keys have not been entered for this version of LucidShape.
Solution: See Installing a License Key for a Fixed License on page 10 for instructions on installing license keys.

Problem: Error #0xC800100D - License code for LucidShape version xxx has expired.
Cause: The license keys for LucidShape have expired, or the PC date is before the start date of the license.
Solution: Verify that the date on the computer is correct. Install the license keys for this version of LucidShape on the license server machine according to the instructions in Installing a License Key for a Floating License on page 23. If new license keys are needed, contact your local distributor or a LucidShape representative at lucidshape_support@synopsys.com.

Problem: Error #8001008 - License manager is not responding. Verify license manager host is available and license manager process is running.
Cause: The Floating License Manager program has been disabled.
Solution: Restart the license manager program. To do this, select Start > Control Panel, click Administrative Tools and then double-click Services. Locate and right-click Sentinel in the dialog box, and select the Restart option on the pop-up menu.
Cause: The license manager machine is unavailable.
Solution: Verify that the license manager machine is available on the network.
Cause: The name of the license server machine has not been correctly specified.
Solution: In order for LucidShape to use a floating license, you must specify the name of the license server machine in an initialization file on the client machine (i.e., the machine on which LucidShape is installed). For instructions on specifying the license server machine to enable your floating license, see Administering Floating Licenses on page 25.
Appendix C Troubleshooting the LucidShape CAA V5 Based Installation

See the following topics for troubleshooting information if you have a problem with LucidShape CAA or the Light Guide Design Module.

- Problems Associating LucidShape CAA with the Appropriate CATIA Installation on page 45
- Specifying Global Settings for NVIDIA Graphics Card on page 47
- Troubleshooting the Light Guide Design Module on page 48

Problems Associating LucidShape CAA with the Appropriate CATIA Installation

You may run into configuration issues when you install LucidShape CAA V5 Based installations if CATIA is not installed on the same computer or if CATIA is managed by a third-party tool that maintains configurations and versions. The following steps are recommended if you encounter problems associating your LucidShape CAA installation with the appropriate CATIA installation.

- Choose the CATIA Installation Directory in the Setup Wizard on page 45
- Manually Create a New CATIA Environment on page 46

Choose the CATIA Installation Directory in the Setup Wizard

During the installation process, you are prompted to choose the installation folder with which to associate the LucidShape CAA product. If a CATIA installation folder was detected, the path to that folder is displayed in the input field; however, if CATIA is not installed on the same computer, or if CATIA is managed by a third-party tool that maintains configurations and versions, the input field may be blank.

Edit the path or click the Browse button to navigate to the appropriate directory and select it; then, complete the installation instructions. If LucidShape CAA is not correctly associated with CATIA, see Manually Create a New CATIA Environment on page 46.
APPENDIX C Troubleshooting the LucidShape CAA V5 Based Installation

Manually Create a New CATIA Environment

If LucidShape CAA is not correctly associated with the CATIA after using the LucidShape Setup wizard, you may need contact the CATIA administrator in your IT department to manually add LucidShape CAA to a different environment, as described in the following steps.

1. To open the CATIA Environment Editor, click the Windows Start button and select CATIA > Environment Editor [version].

2. In the Environment Editor, select Environment > New.

3. In the New Environment dialog box, append the LucidShape CAA installation path to the Install Path and press OK.

If these steps do not resolve the issue, contact LucidShape CAA support at lucidshape_support@synopsys.com.
Specifying Global Settings for NVIDIA Graphics Card

If you are using an NVIDIA graphics card, it is essential to set the Global settings as described in the following steps. These settings are required by the CATIA V5 environment in order to run LucidShape CAA V5 Based software.

1. Right-click on your desktop and select NVIDIA Control Panel.

2. Select 3D Settings > Manage 3D Settings on the left under Select a Task, shown in the following figure.

3. On the Global Settings tab, set the Global presets to Dassault Systemes - V5 and set the Preferred graphics processor to High-performance NVIDIA processor, as shown in the following figure.

   If you have only one graphics processor available, the Preferred graphics processor option is not displayed.

4. Click Apply
Troubleshooting the Light Guide Design Module

See the following topics if you have a problem running the Light Guide Design Module.

- **Verify That the Light Guide Design Module is Linked with LucidShape CAA** on page 48
- **Set CATIA Option to Preserve Object Naming for the Light Guide Design Module** on page 48

**Verify That the Light Guide Design Module is Linked with LucidShape CAA**

In some situations, the LucidShape CAA V5 Based product appears to have installed successfully, but you may not be able to use the Light Guide Design Module; for example, you may be able to start the Light Guide Design Module but not be able to create a spline curve to start the design process. This may indicate that the Light Guide Design Module is not linked properly with LucidShape CAA. To fix this, run the file SetupEnvironment.bat located in the LucidShape CAA installation folder (e.g., C:\Program Files\Synopsys\LucidShapeCAA\R27\2021.06-1).

If this does not fix the problem, you may not have adequate privileges to automatically perform all the steps needed to properly enable licensing. (Administrator privileges can vary, depending on the configuration for your Windows operating system.) To work around this problem, you can manually run one of the license tools as administrator, as described in the following steps.

2. In Windows Explorer, navigate to the LucidShape CAA V5 Based installation directory on your hard drive and open the sub-folder LicenseTools.
3. Right-click the file lsinit.exe and select **Run as administrator** on the shortcut menu.

If the problem is not resolved, contact LucidShape CAA support at lucidshape_support@synopsys.com.

**Set CATIA Option to Preserve Object Naming for the Light Guide Design Module**

Depending on the CATIA Options settings, CATIA may rename objects created by the Light Guide Design Module to avoid having duplicate names in the Specification Tree. When this happens, the Light Guide Design Module can no longer identify those objects or continue to perform operations. To circumvent this problem, set the CATIA renaming option as described in the following steps.

1. Select the CATIA menu **Tools > Options**.
2. Expand the Infrastructure heading in the Options tree on the left and select **Part Infrastructure**.
3. Select the **Display** tab.
4. Under the heading Checking Operation When Renaming, make sure that **No name check** is selected, as shown in the following figure.
5. Click OK.

6. Restart LucidShape CAA for the change to take effect.

**Note:** The Light Guide Designer automatically checks the No Name Check option and displays the following warning if it has not been activated.
### Glossary

**Host ID**
A hexadecimal value encoded on the USB dongle. The Synopsys SmartKeys site and delivery email reference the Host ID value when license keys are requested and delivered.

**License Key**
A file containing the encoded license information needed to run LucidShape products for a specific USB dongle.

**Site ID**
A unique number used to identify a specific company. Every company that uses LucidShape products and other Synopsys software has a unique site ID.

**SmartKeys**
The SolvNetPlus page where you submit license key requests.

**SolvNetPlus**
The Synopsys customer portal ([https://solvenetplus.synopsys.com](https://solvenetplus.synopsys.com)). This is where you go to download LucidShape product software as well as license keys.