Installation Guide

GeoCue 2020

22 December 2020

GeoCue Group, Inc

9668 Madison Blvd.

Suite 202

Madison, AL 35758

1-256-461-8289

www.geocue.com

Microsoft CERTIFIED Partner | ISV/Software Solutions

NOTICES

The material in GeoCue Group, Inc. documents is protected by United States Copyright laws.

You may make as many copies of this material for use internal to your company as you desire. Please do not distribute this material outside of your company without first discussing with us.

Trademarks, Service Marks

- *Windows, Microsoft SQL Server,* and *.NET* are trademarks of Microsoft Corporation.
- NIIRS10, GeoCue and CuePac are trademarks of GeoCue Group, Inc.

Getting Help

We are sure that you will experience different problems with GeoCue that range from installation issues to defects that made it through our testing undetected. We hope that you will immediately contact us with any problems or questions, and have the patience to work with us through a successful GeoCue deployment.

Please contact us via phone or email for assistance with or comments about GeoCue.

Email:

support@geocue.com

Phone:

+1-256-461-8289

Please ask for GeoCue Support to get connected with someone who can assist you. There is usually someone in the office between the hours of 0700 and 1800 CT, USA on weekdays.

Fax (always on):

+1-256-461-8249

About this Document

Welcome to the *GeoCue Installation Guide*. This guide will discuss the details of GeoCue installations and updates, licensing, and registration. For a typical installation using the simplified installation process, please refer to the *GeoCue Quick Install Guide.* For a typical update of an existing GeoCue installation using the simplified installation process, please refer to the *GeoCue Update Guide.*

For information on using GeoCue, please refer to the *GeoCue User Guide* or the specific CuePac User Guides.

Copyright 2020

Contents

1 Introduction 1-1
2 System Requirements 2-1
3 Updating GeoCue Server from a Previous Installation 3-1
4 Installing GeoCue Server (Fresh Install) 4-1
4.1 Pre-Configuring the Machine for GeoCue Server 4-1
4.1.1 Configuring Warehouse and Common Folders 4-1
4.1.2 Configuring a GeoCue Service User 4-6
4.1.3 Installing a version of SQL 4-7
4.1.3.1 Installing SQL Server Express 4-7
4.1.3.2 Configure Users in SQL 4-8
4.1.3.2.1 Configure XP_cmdshell in SQL 4-9
4.1.4 Installing Microsoft .NET 4-10
4.2 Installing GeoCue Server Software 4-11
5 Installing GeoCue Client and CuePacs 5-1
5.1 Configuring GeoCue Client 5-5
6 Configuring and Adding Users to GeoCue 6-1
7 Appendix A: Security 7-1
8 Appendix B: Standard GeoCue Installation IT Requirements 8-1
9 Appendix C: Ascertaining the GeoCue Server Name 9-1
10 Appendix D: GeoCue License Installation and ELA Information 10-1
10.1 License Installation 10-1
10.2 GeoCue Enterprise License Agreement (ELA) 10-1

Copyright 2020

11 Appendix E: Troubleshooting 11-1
11.1 Error received when updating the GeoCue Database 11-1
11.2 Warehouse error received when updating the GeoCue Database 11-1
11.3 Error received when connecting to the GeoCue Common Files Folder 11-1
11.4 Error received when connecting to the GeoCue Warehouse Folder 11-2
11.5 Windows Firewall Issues 11-2
11.6 Database error received when attempting to install the GeoCue Server 11-3
11.7 Database Manager Coordinate System Configuration Error received 11-4

Copyright 2020

Figures

Figure 1 - Remove Other Versions 3-1
Figure 2 - Install/Update .NET 3-2
Figure 3 - First installation product 3-2
Figure 4 - Install Selected Products 3-2
Figure 5 - Set Service Login 3-3
Figure 6 - Set Service Login 3-3
Figure 7 - Generic Windows Error 1001 3-4
Figure 8 - Coordinate Systems 3-4
Figure 9 - Found Database Upgrade Instruction 3-4
Figure 10 - Database Manager Connection Error 3-5
Figure 11 - GeoCue Database Manager on initial install couldn't connect to SQL 3-5
Figure 12 - Database Server\Instance 3-6
Figure 13 - Update Database Required 3-6
Figure 14 - Update to Database Successful 3-6
Figure 15 - GeoCue Administrative Login 3-7
Figure 24 - Folder Name 4-1
Figure 25 – Windows 10 - Share Location 4-2
Figure 27 – Windows 10 - Sharing Permissions 4-2
Figure 29 – Windows 10 - Security Permissions 4-3
Figure 31 - Folder Name 4-4
Figure 32 - Share Location 4-4
Figure 33 - Sharing Permissions 4-4
Figure 34 - Security Permissions 4-5

Copyright 2020

Figure 39 - Installation Type....4-7
Figure 40 - Features....4-7
Figure 41 - Instance Name....4-8
Figure 42 - SQL Administrators....4-8
Figure 43 - Install/Update .NET....4-10
Figure 44 - First installation product....4-11
Figure 45 - Install Selected Products....4-11
Figure 46 - Set Service Login....4-12
Figure 47 - Set Service Login....4-12
Figure 48 - Generic Windows Error 1001....4-13
Figure 49 - Use MSDE Prompt....4-13
Figure 50 - Database Manager Connection Error....4-14
Figure 51 - GeoCue Database Manager on initial install couldn't connect to SQL....4-14
Figure 52 - Database Server\Instance....4-15
Figure 53 - Install GeoCue Database....4-15
Figure 54 - Common Folder....4-16
Figure 55 - Coordinate Systems....4-17
Figure 56 - Update Database Required....4-17
Figure 57 - Update Database Successful....4-17
Figure 58 - Adding a Warehouse Location....4-18
Figure 67 - Remove Other Versions....5-1
Figure 68 - Install/Update .NET....5-2
Figure 69 - Install Client....5-2
Figure 70 - Prompt to Enter the GeoCue Server Name....5-2
Figure 71 - Set Service Login....5-3
Figure 72 - Set Service Login....5-3

Copyright 2020

Figure 73 - Generic Windows Error 1001 5-4
Figure 74 - CuePac Installation 5-4
Figure 75 - Remote Cache Location 5-5
Figure 76 - Temp Folder Location 5-5
Figure 77 - GeoCue User Manager 6-1
Figure 78 - Add new user 6-2
Figure 79 - Server Name Properties 9-1
Figure 80 - Licensing Information Database Manager (Database tab) 10-1
Figure 81 - ELA License Information Database Manager (Licensing tab) 10-1
Figure 82 – ELA License Information 10-2
Figure 83 - Update Database Error 11-1
Figure 84 - Warehouse Error during Update 11-1
Figure 85 - Windows Firewall Example 11-3
Figure 86 - Error Connecting to Existing Database Configuration 11-3
Figure 87 - Coordinate System Configuration Error 11-4

Copyright 2020

1 Introduction

This document covers the installation, registration and licensing for the GeoCue family of products. The document has been divided into sections applicable for new installations, or for upgrading from an existing GeoCue installation. Please be sure to reference the appropriate section. For further information please contact GeoCue Support, support@geocue.com, or by phone, +1-256-461-8289.

Respectfully Yours,

The GeoCue Support Team

GeoCue Group, Inc.

support.geocue.com

support@geocue.com

Copyright 2020

2 System Requirements

Please note the following system requirements:

- A dual core processor is recommended with at least 8 GB RAM, 16 GB RAM recommended. A minimum of 10 GB free disk space on the local drive. Additional disk space for data storage either locally or on an external drive is also recommended.
- All GeoCue applications require a minimum operating system of Windows 10 Professional. Applications will also run on Windows Server 2016 and 2019. The GeoCue Server application does NOT require a server-based operating system. GeoCue does not support 32-bit operating systems.
- GeoCue Server is optimized for Microsoft SQL Server. GeoCue will run with Microsoft SQL Server 2012 through 2019. Recommended SQL Server 2017.
    - The sqlcmd Utility must be installed if using a preinstalled SQL Server.
    - The Express version of SQL may be used in place of having a full version of SQL.
    - In the event that SQL has not been installed on the machine included with the install of GeoCue is SQL Server Express 2017, including the sqlcmd Utility. SQL Server Express has a restriction on the maximum database size of 10 GB. Since we do not store LIDAR or raster data in the database, the size limitation is not a short term consideration.
    - It is recommended to have installed SQL Server Management Studio, which is installed by default when installing SQL using the GeoCue Master Setup.
- Microsoft .NET Framework version 4.6.1. Note the .NET installation files are included with the GeoCue installation media and can be installed while you are installing GeoCue.
- An administrative user account. When installing and configuring GeoCue, you must be logged in with local (machine) administrative privileges to perform the necessary installations. It is not necessary that you have domain administrative privileges.

Copyright 2020

3 Updating GeoCue Server from a Previous Installation

Note: If performing an update to a typical system refer to the *GeoCue Update Guide* for simplified instructions using the installation wizard.

Having completed the pre-configurations the next step is to install the GeoCue Server software on your system using MasterSetup.

1. Close all instances of GeoCue Client and ensure that there are no processes instantiated from GeoCue that are still in operation.
2. Make a back-up copy of your current GeoCue Database. This includes all of the *.MDF and *.LDF files (ie GeoCue_Data.MDF and GeoCue_Data.LDF).
3. On the machine hosting your current GeoCue Server, run the MasterSetup executable from the GeoCue installation folder on a local drive of the server.

On all current Windows OS be sure to right-click and "Run as Administrator". If UAC controls are turned on, when prompted, allow MasterSetup.EXE to make changes to your computer.

4. If not using the Quick Installer, select "Show Advanced Options".
5. Select the **Remove Other Versions** button, if enabled, to remove all components of the older version of GeoCue.

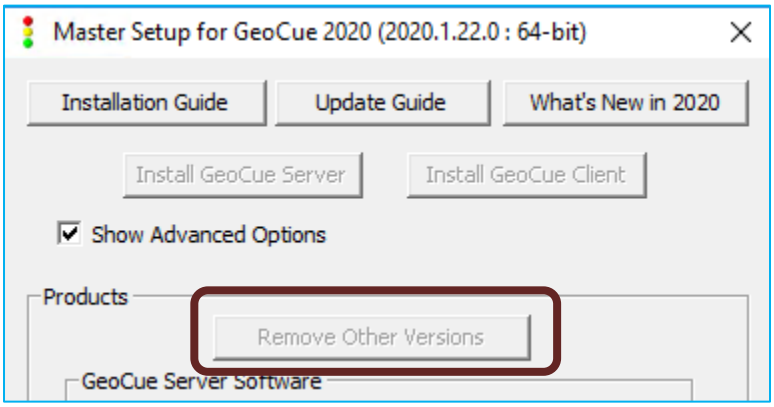


Figure 1 - Remove Other Versions

a. If necessary, the programs can also be removed by going to Start Menu → Control Panel → Add/Remove Programs. Make sure that the Coordinate Systems are also completely removed.

It is imperative that MasterSetup be run on each machine.

Copyright 2020

6. Return to the Master Setup. If necessary, install the .NET Framework by selecting the **Install/Update .NET** button.
   a. GeoCue requires that Microsoft.NET Framework 4.6.1 be installed on both the server and workstation machines.
   b. If .NET is not installed, you will be informed of this fact by subsequent setups and you can return to this step. Follow the hints of the installation wizard and complete the installation of .NET.

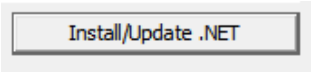


Figure 2 - Install/Update .NET

7. Install the GeoCue Server by selecting the "Core*" checkbox found in the GeoCue Server Software section. Check the box and select "Install Selected Products" when it becomes enabled.

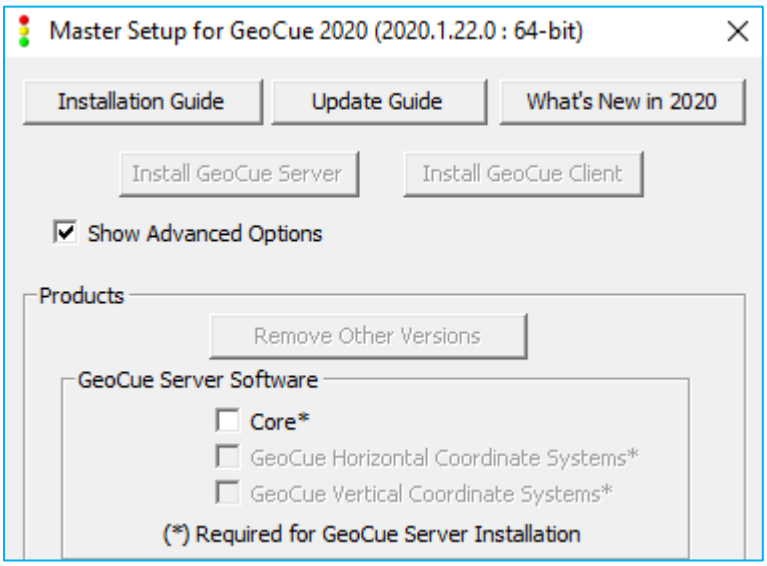


Figure 3 - First installation product

Figure 4 - Install Selected Products

Copyright 2020

8. Near the end of the Core installation, a dialog box will appear prompting the installer to enter a username/password combination. The GeoCue Server software runs as an NT Service. For the software to properly administer the Warehouses, the service must be running under an account that is a local administrator on the server machine and that has domain level access to read/write from the Warehouse locations. This is the same user that was set-up during the configuration of GeoCue User. Enter the username/password in the following form:

    a. Example for a constellation running without a domain (substitute 'machinename' with the current machine name):

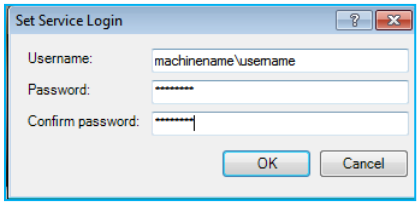


Figure 5 - Set Service Login

    b. Example for a constellation running under a domain (substitute 'DOMAIN' with the current domain name):

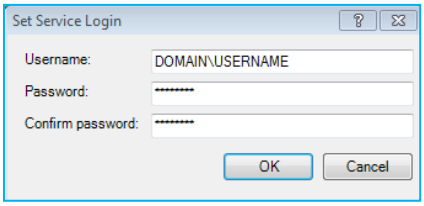


Figure 6 - Set Service Login

If you receive a generic Windows Error 1001 message it indicates that one of two things might be occurring:

1) The Username was not entered correctly, as described above, or is not a valid user on the domain/machine and Windows was unable to authenticate the username that was entered. The installation will be rolled back and you will need to restart from the MasterSetup.
2) There is a space in the path to the MasterSetup.EXE. The installation will be rolled back and you will need to restart from the MasterSetup after moving the GeoCue installer to a location where there are no spaces in the address.
    a. For instance: "C:\GeoCue Installation" would cause this error to occur, whereas "C:\GeoCue_Installation" would install correctly.

Copyright 2020

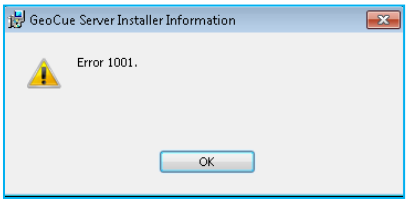


Figure 7 - Generic Windows Error 1001

9. You will now be prompted to update the Coordinate Systems. Return to the Master Setup dialog. Select GeoCue Coordinate Systems and Install Selected Products. This can take up to fifteen minutes to install as it is must copy several GB worth of data to the *GeoCue Common* folder.

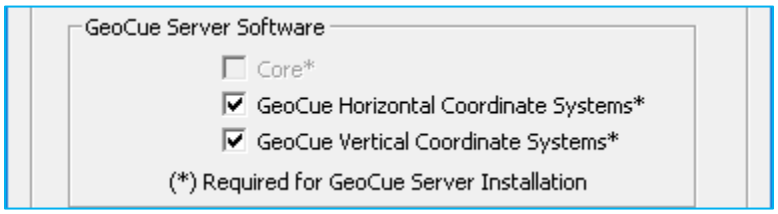


Figure 8 - Coordinate Systems

10. After the Coordinate Systems installation completes, the following dialog will be displayed instructing that the next step is to update the existing database via the 'Database Manager'. Select "OK" and after a brief delay Database Manager will appear. Or return to GeoCue Database Manager via the start menu (Start Menu → GeoCue → GeoCue Server → Database Manager).

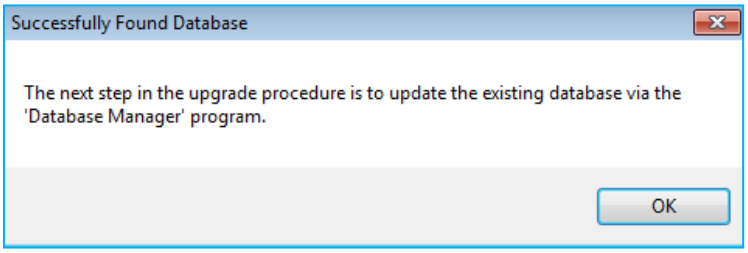


Figure 9 - Found Database Upgrade Instruction

a. If GeoCue Server Database Manager does not start and you receive the error "Unable to establish connection to the master database" the error indicates that the GeoCue Server Database Manager was unable to communicate with your SQL server.

Copyright 2020

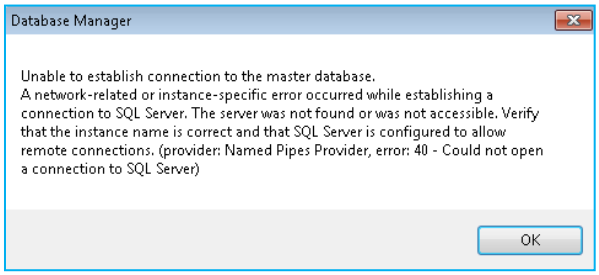


Figure 10 - Database Manager Connection Error

This error may occur because:

i. SQL server service is not running. In which case, go to manage computer and start the SQL Server service. Then re-open GeoCue Server Database Manager.

ii. SQL server may be installed with a named instance or may be installed on another machine than this installation. In both cases selecting "OK" on the error message will start up GeoCue Server Database Manager looking like the figure below:

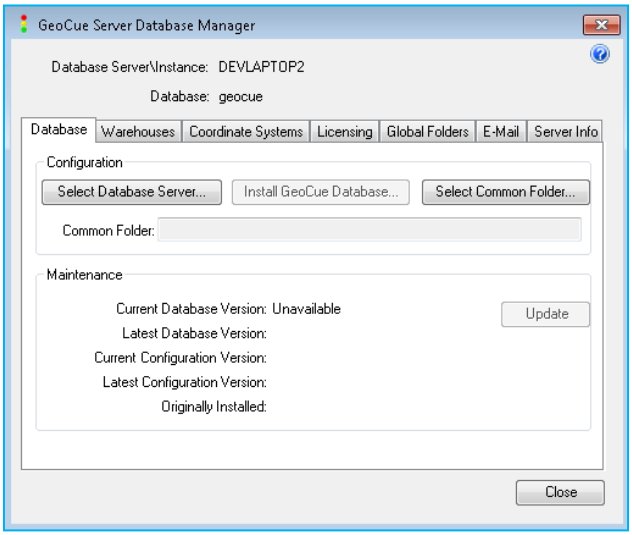


Figure 11 - GeoCue Database Manager on initial install couldn't connect to SQL

iii. Select Database Server to enter the correct Database Server\Instance. Selecting the Database Server\Instance is only necessary for computers running Full or Express versions of SQL. Select the desired SQL Server instance by clicking the **Select Database Instance** button. Key-in the desired server/instance name and select OK.

A default instance will be entered as only the machine name, i.e. "MACHINE" vs. a named instance which will need to be entered as "MACHINE\INSTANCE".

Copyright 2020

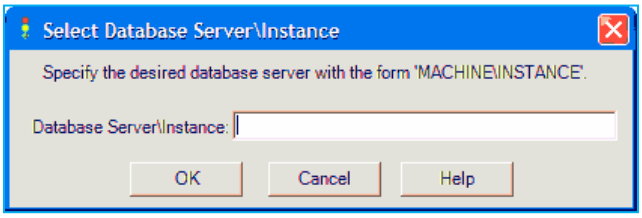


Figure 12 - Database Server\Instance

11. When the GeoCue Server Database Manager starts, click the Update button to bring the previous database up to the current schema.

Figure 13 - Update Database Required

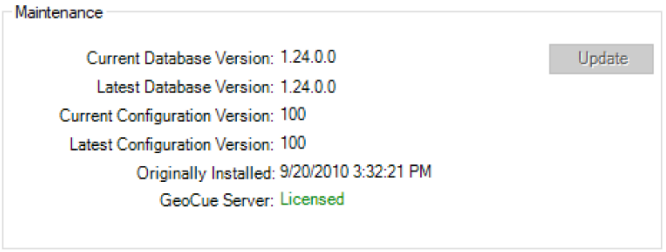
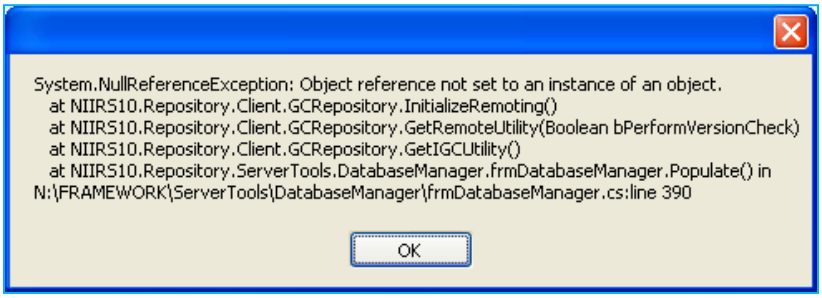


Figure 14 - Update to Database Successful

Please note that if the "Originally Installed" date does not show after the update has completed then Database Manager has not successfully connected with the server. This must be rectified before moving on with the rest of the installation.

If you receive the following error after attempting to perform the database update, click the "Update" button a second time and the update should succeed.



Copyright 2020

a. If an Error message about the warehouse appears please see Warehouse error received when updating the GeoCue Database.

12. After updating the database, the application will attempt to connect to the database. You will be prompted to enter the GeoCue Admin login.

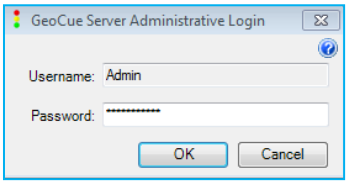


Figure 15 - GeoCue Administrative Login

The password for the "Admin" login is "geocueadmin".

13. In GeoCue Server Database Manager go to the Licensing tab and install the new GeoCue 2020 licenses: License Installation. If you have not received your licenses yet, please request them by contacting support@geocue.com with your GeoCue Server name and code as found on the licensing tab. Please copy and paste the code into the e-mail instead of sending an image.
14. Close Database Manager and select finish on the GeoCue Server installer to complete the update of the GeoCue Server.
15. The next step is to install the Client and any necessary CuePacs on the workstations.

Copyright 2020

4 Installing GeoCue Server (Fresh Install)

4.1 Pre-Configuring the Machine for GeoCue Server

Choose the machine that will host the GeoCue Server application. This machine must be accessible from all client machines.

4.1.1 Configuring Warehouse and Common Folders

GeoCue requires two main folders, Common and Warehouse. The following instructions are designed to configure needed permissions and security on these folders.

1. Decide on a storage location for the initial GeoCue Server **Warehouse**.

   The GeoCue Server Warehouse is the shared location where GeoCue Server will create the physical project data. The warehouse should have 10+ GB of free space. It is permissible to have more than one warehouse.

2. **Share** the base directory that will serve as the root for the Warehouse folders with **Read/Write** permissions for all GeoCue users. In this example, we decided to host our GeoCue Warehouse on our C drive in a folder called "GeoCue". We created a directory at the root level (top level) of this drive and named the directory "Warehouse" (You can use any name you desire).

   a. Right-click the directory entry in Windows Explorer and select *Properties*. This will invoke a dialog similar to the one shown below:

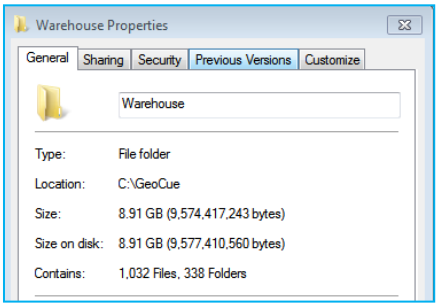


Figure 16 - Folder Name

   b. Select the Sharing Tab and then Share

Copyright 2020

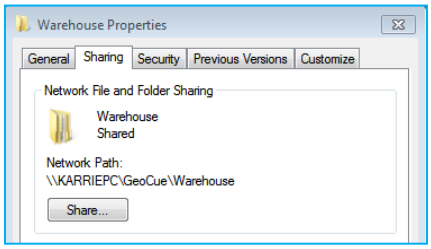


Figure 17 – Windows 10 - Share Location

c. Select the Permissions for users who can access the share. In this case make sure **"Everyone" or all GeoCue Users** has full Read/Write permissions and then select Share.

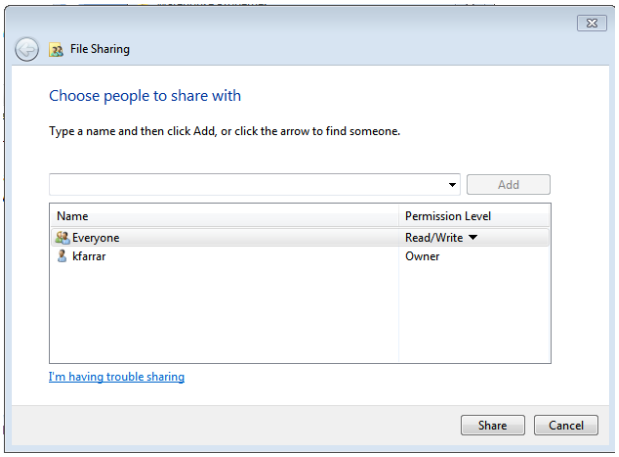


Figure 18 – Windows 10 - Sharing Permissions

d. Select the Security Tab. Under Group or user names select **"Everyone" or all GeoCue Users** and then select **Full Control**.
    i. Select Edit to change permissions.

Copyright 2020

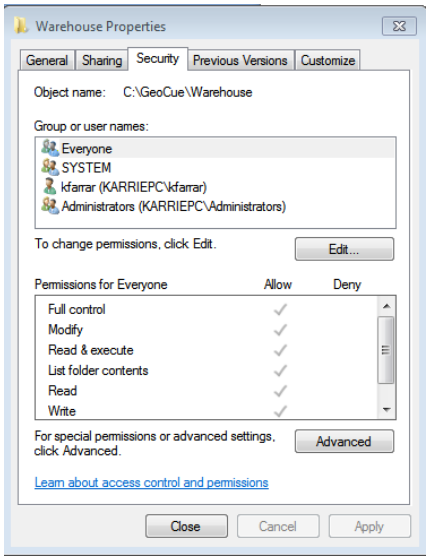


Figure 19 – Windows 10 - Security Permissions

Add an entry for "Everyone" if it does not already appear in the *Group or user names:* list in the top section of the dialog. Now select *Everyone* in the top pane and check Full Control in the bottom pane. Press ***OK*** to accept your input and dismiss the dialog

Note – If you would like to restrict access to specific users, you can add individual users and set their permissions to Full Control. Alternatively, you can have someone with Domain Administrator privileges create a GeoCue group and then use this for setting permissions.

3. Decide on a storage location for the GeoCue Server **Common** folder.

The GeoCue Common Folder is the location where GeoCue will place files that can be accessed by all clients. This folder must be shared and have full read/write permissions for all GeoCue users. This folder must also have a minimum of 5 GB free space.

Copyright 2020

4. **Share** the base directory that will serve as the root for the Common folder with **Read/Write** permissions for all users.

    a. Right-click on the main root location and select properties

    b. Under the General Tab select a Name for the Folder (or leave the name as is)

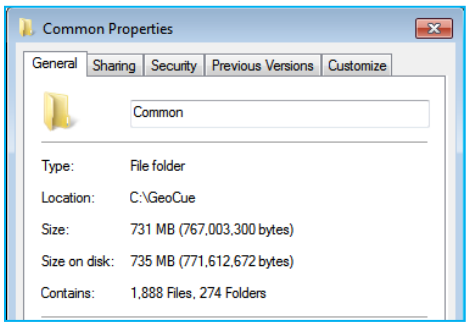


Figure 20 - Folder Name

    c. Select the Sharing Tab and then Share

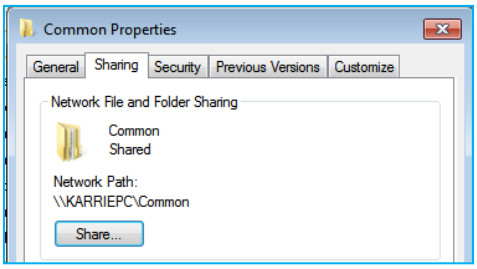


Figure 21 - Share Location

    d. Select the Permissions for users who can access the share. In this case make sure **"Everyone" or all GeoCue Users** has full Read/Write permissions and then select Share.

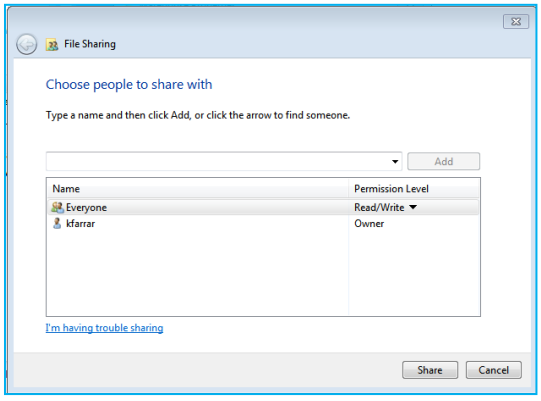


Figure 22 - Sharing Permissions

Copyright 2020

e. Select the Security Tab. Under Group or user names select **"Everyone" or all GeoCue Users** and then select **Full Control**.
    i. Select Edit to change permissions.

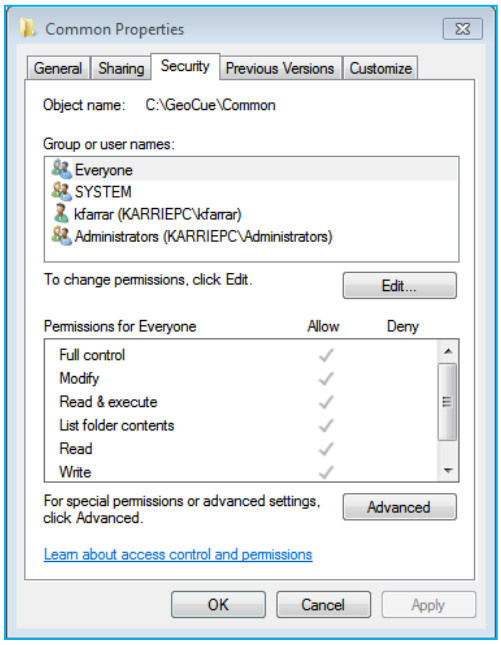


Figure 23 - Security Permissions

Copyright 2020

4.1.2 Configuring a GeoCue Service User

Near the end of the GeoCue Server, Client and Federator installations, a dialog box will appear prompting you to enter a **username/password** combination. The Software runs as an NT Service. For the software to properly administer the Warehouses, the service must be running under an account that has permission to log into the server machine and that has domain level access to read/write from the Warehouse locations. This user is commonly referred to as the GeoCue Service User. The GeoCue Service User is the user on behalf of whom all database updates are performed so it is important that this user also be configured as a SQL administrator for the GeoCue and Federator databases. It is recommended to set-up a unique user that has the necessary permissions before starting the installation process.

When installing on a domain network this usually entails creating a GeoCue Service User in the active directory and then making that user an administrator on the server and client machines.

When installing on a workgroup network this usually entails creating a GeoCue Service User on the server and then making an identical user on each client machine using the same password. The GeoCue Service User can then be made an administrator on the server and client machines.

Copyright 2020

4.1.3 Installing a version of SQL

Before proceeding with the installation of GeoCue Server or GeoCue Federator it is necessary to have an installation of SQL in which to host the GeoCue database and the GeoCue Federator database, if applicable. GeoCue Server is optimized for Microsoft SQL Server. GeoCue will run with Microsoft SQL Server 2012 through SQL Server 2019.

> Note: The Express version of SQL may be used in place of having a full version of SQL, but, careful attention must be paid to the allowable database size limits.

1. In the event that SQL has not been installed on the machine included with the install of GeoCue is Microsoft SQL Express 2017.
2. It is **recommended** to install SQL Server Management Studio on the SQL Server.

4.1.3.1 Installing SQL Server Express

1. Download a copy of SQL Server Express (64-bit) from Microsoft: http://www.microsoft.com/express/database/
   a. Make sure to download the option that has Database w/Tools as that contains the SQL Management Studio.
2. Double click on the Installation executable for SQL Express.
3. In the SQL Server Installation Center select **New installation or add features to an existing installation.**
4. Under Installation Type Choose New Installation.

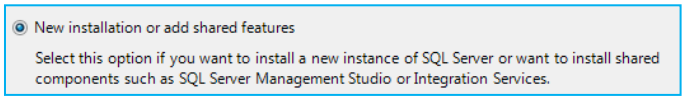


Figure 24 - Installation Type

5. Accept the Microsoft Software License Terms
6. Make sure under Instance Features that Database Engine Server and SQL Server Replication are both checked.

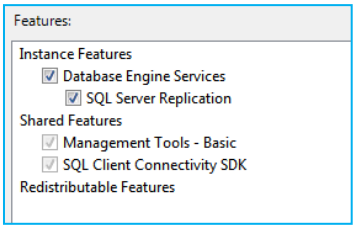


Figure 25 - Features

7. If desired, though not necessary, give the instance a name.

Copyright 2020

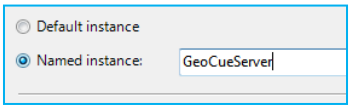


Figure 26 - Instance Name

A default instance will be entered as only the machine name, i.e. “MACHINE” vs. a named instance which will need to be entered as “MACHINE\INSTANCE”.

8. Select the account name that the SQL services will run under.
9. Specify the SQL Server Administrator. The user needs to have Administrative permissions on the machine. With respect to GeoCue, please make sure to add the user who most likely will be installing GeoCue Updates.

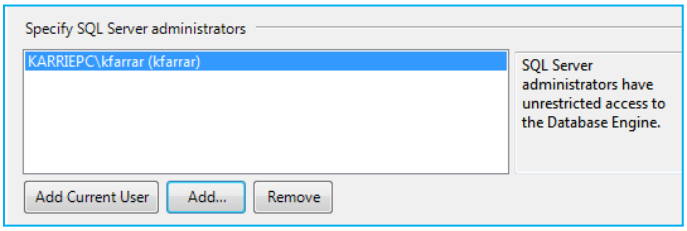


Figure 27 - SQL Administrators

10. Finish Installation of the instance.
11. SQL Express is now installed and needs to have the “XP_cmdshell” and Users configured.

4.1.3.2 Configure Users in SQL

The GeoCue Service User and the GeoCue Federator Service User, if applicable, need to be configured as users in SQL, either the Full or Express version.

1. Open MS SQL Server Management Studio and login as a SA (SQL Administrator) or another privileged user.
2. In Object Explorer select Security → Logins
3. Right-click on Logins → New Login
4. Specify the GeoCue Service User name and select Windows Authentication
5. On the right-hand side under **Select a Page** select **Server Roles**
6. The GeoCue Service User needs to be made either a SYSADMIN or a SERVERADMIN
    a. This is required to run GeoCue Server Updates using XP_cmdshell
7. Select OK to add the user to SQL

Copyright 2020

4.1.3.2.1 Configure XP_cmdshell in SQL

Newer versions of SQL, both the Full and Express, do not have the "sqlcmd Utility" installed by default. The GeoCue database update process utilizes this feature so it needs to be installed and enabled before a database update can be run successfully.

1. Install "sqlcmd Utility" from https://docs.microsoft.com/en-us/sql/tools/sqlcmd-utility?view=sql-server-ver15
2. Open Query Browser or MS SQL Server Management Studio and log in as SA or another privileged user. Open a new query.

   Run sp_configure

3. Then scroll all the way to the bottom, if xp_cmdshell is there, then skip these 2 steps, otherwise run
   sp_configure show_advanced_options, 1
   reconfigure with override

4. Now run the following commands exec

   sp_configure xp_cmdshell, 1

   reconfigure with override

5. Now you can use xp_cmdshell in all your scripts
6. SQL is now installed. The next step is to install the correct version of Microsoft .NET.

Copyright 2020

4.1.4 Installing Microsoft .NET

The GeoCue software is based on the .NET architecture. This architecture must be installed on a machine before any GeoCue product may be installed. To facilitate this process the MasterSetup incorporates a .NET Install/Update.

1. Run the MasterSetup.exe executable from the GeoCue installation folder on your local drive.

On all current Windows OS be sure to right-click and "Run as Administrator". If UAC controls are turned on, when prompted, allow MasterSetup.EXE to make changes to your computer.

2. Install the .NET Framework if necessary by selecting the **Install/Update .NET** button.
   c. GeoCue requires that Microsoft.NET Framework 4.6.1 be installed on both the server and workstation machines.
   d. If .NET is not installed, you will be informed of this fact by subsequent setups and you can return to this step. Follow the hints of the installation wizard and complete the installation of .NET.

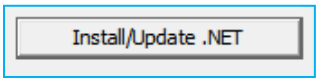


Figure 28 - Install/Update .NET

3. Once the .NET Framework is installed the next step is to Install the GeoCue Server.

Copyright 2020

4.2 Installing GeoCue Server Software

Once all the pre-configuration has been completed the next step is to install the GeoCue Server software onto your system using MasterSetup and the Show Advanced Options selected. For simplified installation of a typical GeoCue installation please refer to the *GeoCue Quick Install Guide*. Note: This GeoCue Server machine must be accessible from all client machines.

If updating an existing GeoCue Database please refer to the *UpdateGuide***,** which is also accessible from the top of the MasterSetup dialog, for simplified instructions.

1. Run the MasterSetup.exe executable from the GeoCue installation folder on your local drive.

   On all current Windows OS be sure to right-click and "Run as Administrator". If UAC controls are turned on, when prompted, allow MasterSetup.EXE to make changes to your computer.

2. Return to the Master Setup. If necessary, install the .NET Framework. Refer to the Installing Microsoft .NET section for more information.
3. Install the GeoCue Server by selecting the "Core*" checkbox found in the GeoCue Server Software section. Then select "Install Selected Products" when it becomes enabled.

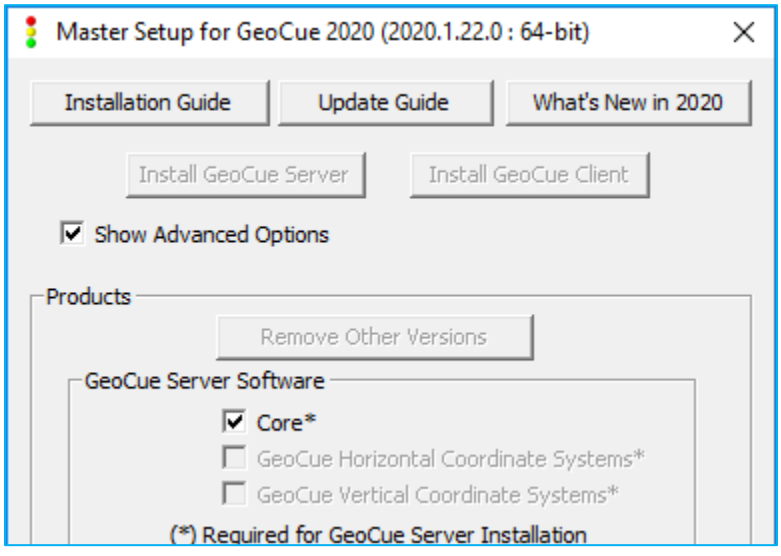


Figure 29 - First installation product

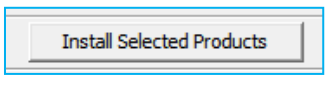


Figure 30 - Install Selected Products

Copyright 2020

4. Near the end of the Core installation, a dialog box will appear prompting the installer to enter a username/password combination. The GeoCue Server software runs as an NT Service. For the software to properly administer the Warehouses, the service must be running under an account that is a local administrator on the server machine and that has domain level access to read/write from the Warehouse locations. This is the same user that was set-up during the configuration of GeoCue User. Enter the username/password in the following form:
   a. Example for a constellation running without a domain (substitute 'machinename' with the current machine name):

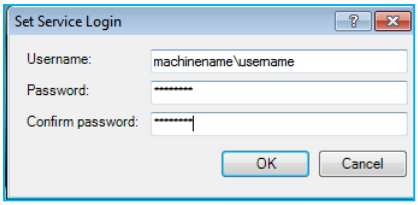


Figure 31 - Set Service Login

   b. Example for a constellation running under a domain (substitute 'DOMAIN' with the current domain name):

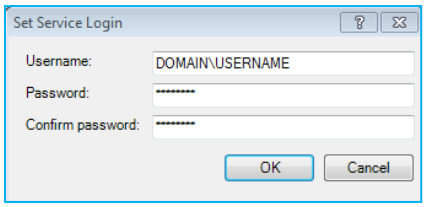


Figure 32 - Set Service Login

If you receive a generic Windows Error 1001 message it indicates that one of two things might be occurring:

3) The Username was not entered correctly, as described above, or is not a valid user on the domain/machine and Windows was unable to authenticate the username that was entered. The installation will be rolled back and you will need to restart from the MasterSetup.
4) There is a space in the path to the MasterSetup.EXE. The installation will be rolled back and you will need to restart from the MasterSetup after moving the GeoCue installer to a location where there are no spaces in the address.
   a. For instance: "C:\GeoCue Installation" would cause this error to occur, whereas "C:\GeoCue_Installation" would install correctly.

Copyright 2020

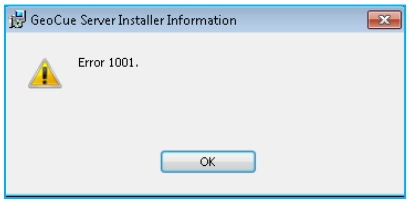


Figure 33 - Generic Windows Error 1001

5. After setting the service user, the next step is to install the GeoCue Database and you will be prompted to run GeoCue with an instance of MSDE.

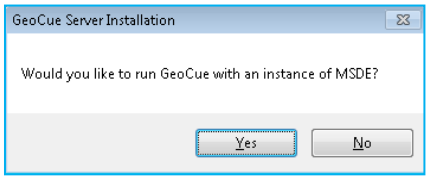


Figure 34 - Use MSDE Prompt

Select "Yes" only if you wish to install Microsoft personal database (MSDE with a 2GB database size limitation) and do not have a SQL server in which to install the GeoCue database. (GeoCue **recommends** that production installations running GeoCue Departmental Server have the database installed in SQL Express or a fully licensed version of SQL).

Select "No" only if you already have an instance of SQL or SQL Express installed somewhere and wish to use that to host your GeoCue database.

Note: One of MSDE, Microsoft SQL Express or SQL must be installed before continuing.

Copyright 2020

a. **If you selected "No" to the MSDE prompt:**

i. GeoCue Server Database Manager will start up and attempt to contact an instance of SQL on the same machine as this installation is taking place. If the SQL server to host the GeoCue database is located on another machine you will get an "Unable to establish connection to the master database". This error indicates that the GeoCue Server Database Manager was unable to communicate with your SQL server and most likely the SQL server or instance was not entered correctly.

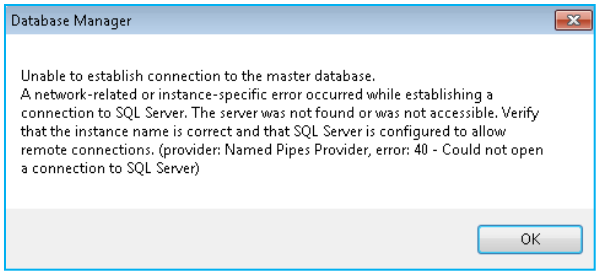


Figure 35 - Database Manager Connection Error

ii. Selecting "OK" on the error message will start up GeoCue Server Database Manager.

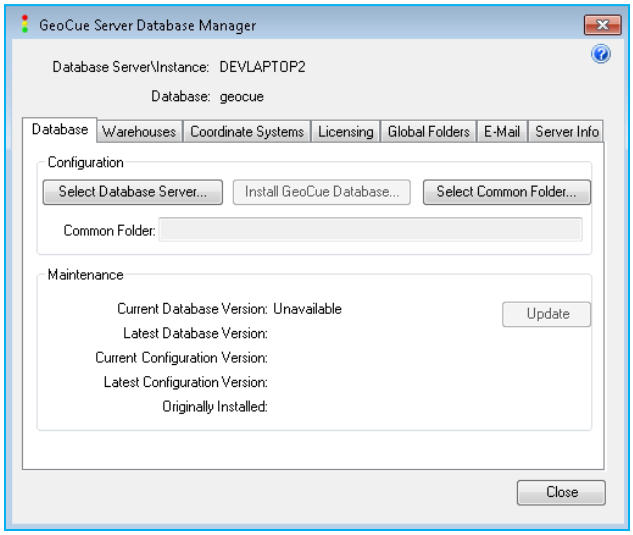


Figure 36 - GeoCue Database Manager on initial install couldn't connect to SQL

Copyright 2020

iii. Select Database Server to enter the correct Database Server\Instance. Selecting the Database Server\Instance is only necessary for computers running Full or Express versions of SQL. Select the desired SQL Server instance by clicking the **Select Database Instance** button. Key-in the desired server/instance name and select OK.

A default instance will be entered as only the machine name, i.e. "MACHINE" vs. a named instance which will need to be entered as "MACHINE\INSTANCE".

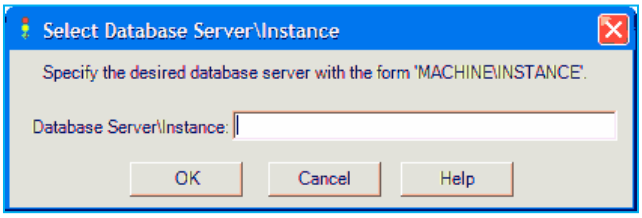


Figure 37 - Database Server\Instance

6. Click the **Install GeoCue Database** button and navigate to the location where you would like the physical database files to reside.

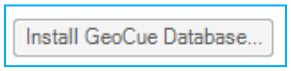


Figure 38 - Install GeoCue Database

7. After installing the database, the application will attempt to connect to the database. You will need the GeoCue Admin login when prompted.

The password for the "Admin" login is "geocueadmin".

Copyright 2020

8. Before continuing onward, the GeoCue Server Service needs to be made the Database Owner of the GeoCue database within SQL if running the Express or Full version.
    a. Open MS SQL Server Management Studio and login as an SA or another privileged SQL user.
    b. In Object Explorer select Databases → GeoCue → Security → Users
    c. Right-click on Users → New User
    d. Specify User Name and browse for the GeoCue Service User Login added during SQL configuration.
    e. Under **Database Role Membership** check the option for db_owner
    f. Click OK
9. Specify the Common folder location. Click the **Select Common Folder** button and pick the shared folder you configured earlier when pre-configuring your server, for example C:\GeoCue\Common.

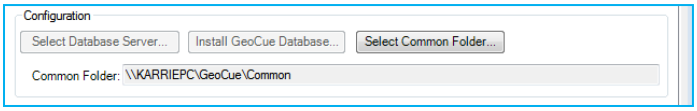


Figure 39 - Common Folder

NOTE: If you receive an error when attempting to connect to the GeoCue Common Files folder, check for the following conditions:

i. The folder is not shared (note – even though you can browse to the folder, this does not confirm that the folder is shared. Use the procedures previously described in the Preparing the GeoCue Server section of this guide).

ii. You have not set the permissions on the folder to Full Control for "Everyone" or all GeoCue Users. Note that to set permissions you must make modification from both the *Permissions* button on the ***Sharing*** tab of the file properties dialog and the ***Security*** tab. See the section on setting up the GeoCue Server for detailed procedures.

10. Return to the Master Setup dialog. Select GeoCue Coordinate Systems and Install Selected Products. This can take up to fifteen minutes to install.

Copyright 2020

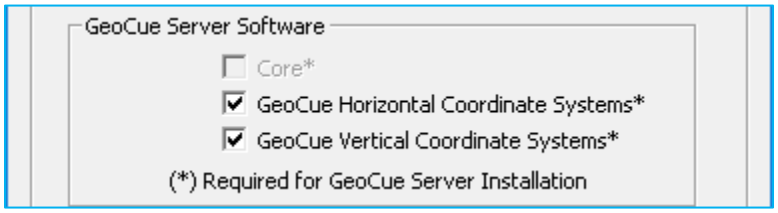


Figure 40 - Coordinate Systems

11. After the Coordinate Systems installation completes return to GeoCue Database Manager (Start Menu → GeoCue → GeoCue Server → Database Manager). Select "Update" to update the database to the current schema.

Figure 41 - Update Database Required

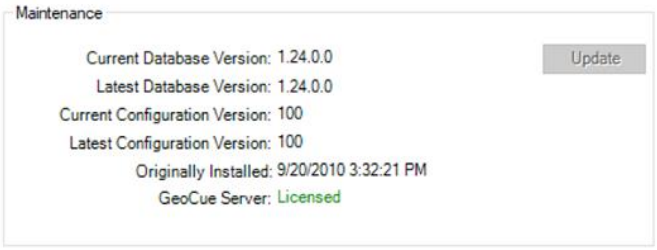


Figure 42 - Update Database Successful

a. Please note that if the "Originally Installed" date does not show then Database Manager has not successfully connected with the server. This must be rectified before moving on with the rest of the installation.

12. Select the **Warehouses** tab of the Database Manager and click the **Add…** button and browse for the desired folder.

Copyright 2020

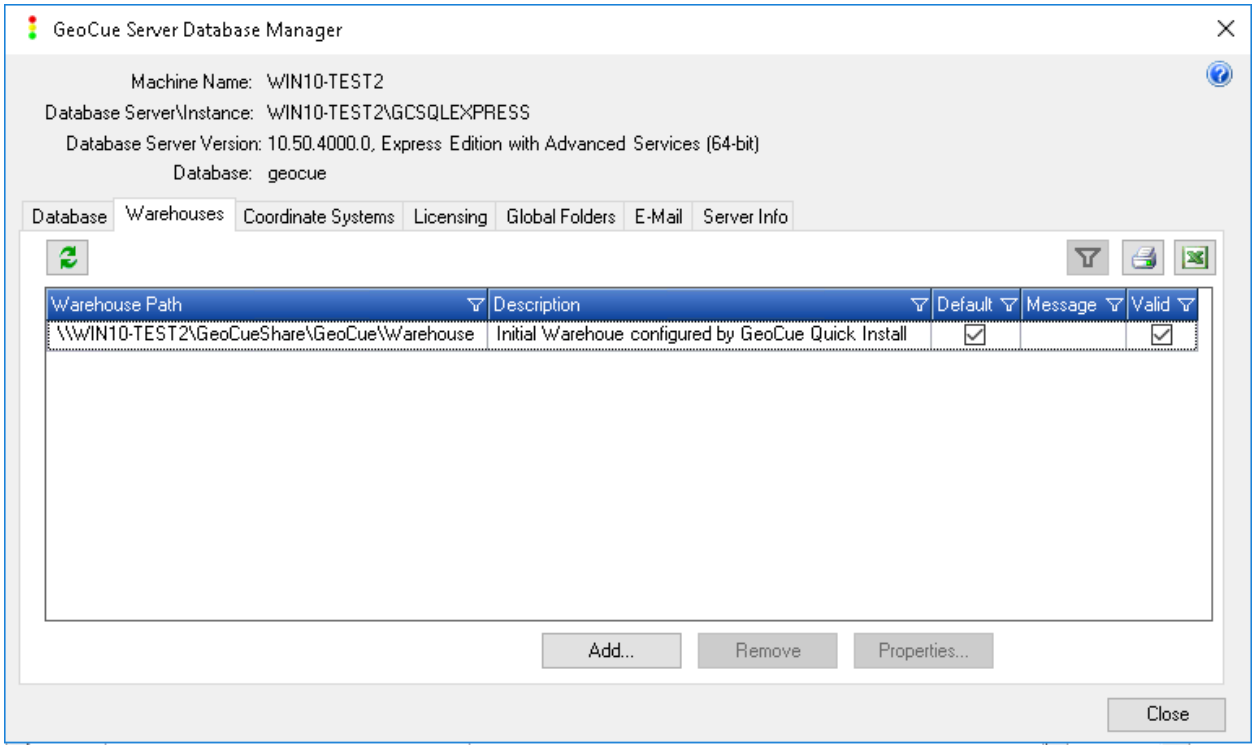


Figure 43 - Adding a Warehouse Location

a. **NOTE:** If you receive an error when attempting to connect to the GeoCue Warehouse folder, check for the following conditions:

   i. The folder is not shared (note – even though you can browse to the folder, this does not confirm that the folder is shared. Use the procedures previously described in the Preparing the GeoCue Server section of this guide).

   ii. You have not set the permissions on the Warehouse to Full Control for Access for "Everyone" or all GeoCue Users. Note that to set permissions you must make modifications to both the Permissions button on the Sharing tab of the file properties dialog and the Security tab. See the section on setting up the GeoCue Server for detailed procedures.

13. In GeoCue Server Database Manager go to the Licensing tab and install the new GeoCue 2020 licenses: License Installation. If you have not received your licenses yet, please request them by contacting support@geocue.com with your GeoCue Server name and code as found on the licensing tab.
14. This completes the installation of the GeoCue Server. The next step is to install the Client and any necessary CuePacs on the workstations.

Copyright 2020

5 Installing GeoCue Client and CuePacs

Once the GeoCue Server, and optionally the GeoCue Federator Server, is installed the next steps are to install the Client and CuePac software.

1. On each machine that you desire to install the GeoCue Client and/or CuePacs, run the MasterSetup.exe executable from the GeoCue installation folder on a local drive of the client machine.

   On all current Windows OS be sure to right-click and "Run as Administrator". If UAC controls are turned on, when prompted, allow MasterSetup.EXE to make changes to your computer.

2. If installing GeoCue Client and CuePacs on a machine which is not the GeoCue Server, but where GeoCue products have been previously installed, select the **Remove Other Versions** button, if enabled, to remove all components of the older version of GeoCue.

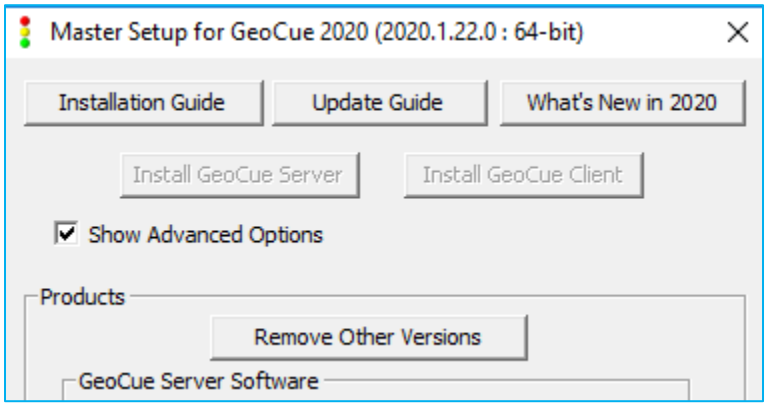


Figure 44 - Remove Other Versions

   b. If necessary, the programs can also be removed by going to Start Menu → Control Panel → Add/Remove Programs. Make sure that the Coordinate Systems are completely removed.

It is imperative that MasterSetup be run on each machine.

Copyright 2020

3. Return to the Master Setup. If necessary, install the .NET Framework by selecting the **Install/Update .NET** button.
    a. GeoCue requires that Microsoft.NET Framework 4.6.1 be installed on both the server and workstation machines.
    b. If .NET is not installed, you will be informed of this fact by subsequent setups and you can return to this step. Follow the hints of the installation wizard and complete the installation of .NET.

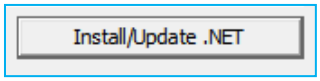


Figure 45 - Install/Update .NET

4. Under GeoCue Client select the box for GeoCue to install the client software. Then select "Install Selected Products" when it becomes enabled.

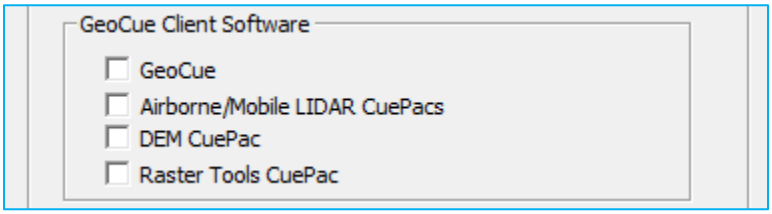


Figure 46 - Install Client

5. When prompted to enter the name of the GeoCue Server machine enter the name of the machine upon which you installed the GeoCue Server software. Please refer to Appendix C: Ascertaining the GeoCue Server name if you unsure of how to find it.

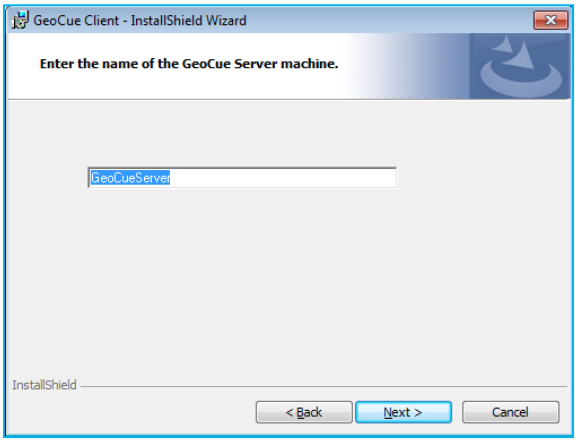


Figure 47 - Prompt to Enter the GeoCue Server Name

Copyright 2020

6. Near the end of the Client installation, a dialog box will appear prompting the installer to enter a username/password combination. The GeoCue software runs as an NT Service. In order for the software to run properly, the service must be running under a local administrator account on the machine and that has domain level access to read/write from the Warehouse locations. This is the same user that was set-up during the configuration of GeoCue User. Enter the username/password in the following form:
    a. Example for a constellation running without a domain (substitute 'machinename' with the current machine name):

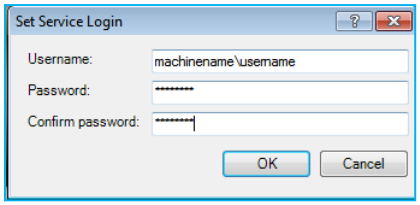


Figure 48 - Set Service Login

    b. Example for a constellation running under a domain (substitute 'DOMAIN' with the current domain name):

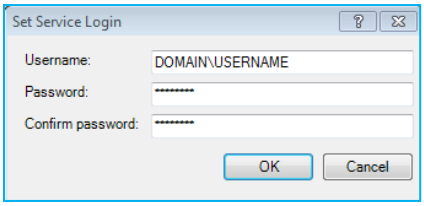


Figure 49 - Set Service Login

If you receive a generic Windows Error 1001 message it indicates that one of two things might be occurring:

1) The Username was not entered correctly, as described above, or is not a valid user on the domain/machine and Windows was unable to authenticate the username that was entered. The installation will be rolled back, and you will need to restart from the MasterSetup.
2) There is a space in the path to the MasterSetup.EXE. The installation will be rolled back, and you will need to restart from the MasterSetup after moving the GeoCue installer to a location where there are no spaces in the address.
    a. For instance: "C:\GeoCue Installation" would cause this error to occur, whereas "C:\GeoCue_Installation" would install correctly.

Copyright 2020

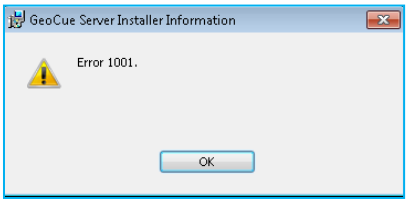


Figure 50 - Generic Windows Error 1001

7. After installation of the Client is complete return to the MasterSetup and install the CuePacs by selecting the applicable checkboxes for your products and then select "Install Selected Products" when it becomes enabled. For most users, this will be the "Airborne/Mobile LIDAR CuePacs" and the "DEM CuePac"

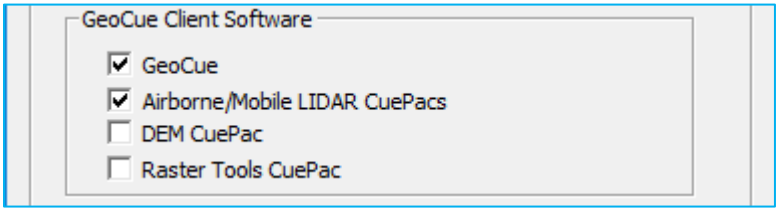
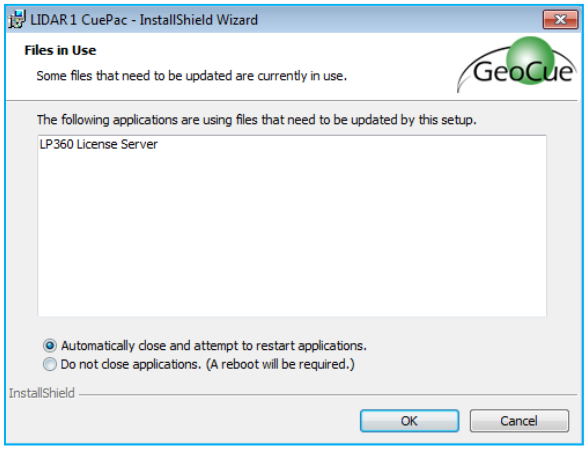


Figure 51 - CuePac Installation

8. When installing Airborne/Mobile LIDAR CuePacs on a machine that is hosting an LP360 License Server and LP360 needs to be updated to the latest version, a "Files in use" prompt will appear. Choose **Automatically Close and Attempt to Restart applications** to avoid needing to reboot the machine at the completion of the installation.



9. This completes the installation of the GeoCue Client and CuePacs. Close the MasterSetup dialog.
10. The next step is to Configure the GeoCue Client.

Copyright 2020

5.1 Configuring GeoCue Client

The Client will only need to be configured if it wasn't previously configured on the machine.

1. Go to Start Menu → GeoCue → GeoCue Client → Configure Client

   On current Windows operating systems with UAC controls turned on you will need to allow DBSelector.EXE to make changes to your system.

2. Configure Server, Client and Unix Client Ports only if they were changed on the server.
3. Set up a Remote Cache Folder.
   a. This folder needs to be a **UNC path on the local client machine** that is shared with Full Permissions for "Everyone" or all GeoCue Users.
   b. This folder should be located on a drive with sufficient space for local processing.

   The Remote Cache Folder is a specified location on the client to which data will be written when performing either a manual cache operation, or when caching during remote dispatch and distributed processing operations.

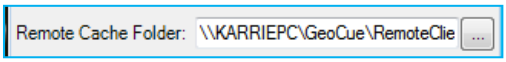


Figure 52 - Remote Cache Location

4. Set up a GeoCue Temp Folder.
   a. This step is only necessary if the windows temp location is on a small drive, but is recommended to make it easier to locate GeoCue temp files for debugging or data management purposes.
   b. Assigning a standard Temp folder can be useful as it will keep all GeoCue temp files in one location regardless of the user.
   c. This folder does not need to be a UNC path but will need to have read/write permissions assigned to it.

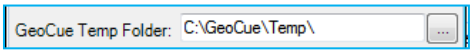


Figure 53 - Temp Folder Location

5. Click Set and Close the dialog.

Copyright 2020

6 Configuring and Adding Users to GeoCue

Each user that uses the GeoCue Client needs to be added through the User Database.

1. On the GeoCue Server, go to Start Menu → GeoCue → User Manager.
2. This will start the GeoCue User Manager.

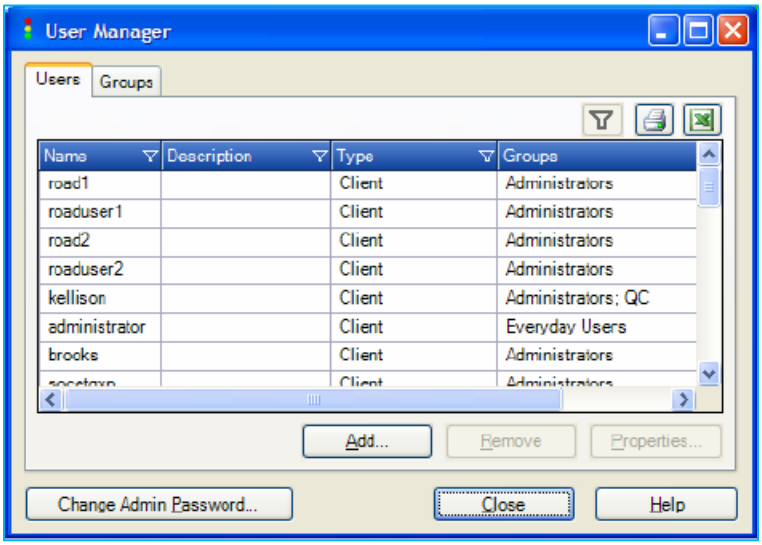


Figure 54 - GeoCue User Manager

3. The first time the interface is opened you may need to input a user name and password if the user logged into the machine is not a GeoCue administrator. The GeoCue Admin login can be used.

> The password for the "Admin" login is "geocueadmin".

4. Select the **Add Button** to individually add additional users.

Copyright 2020

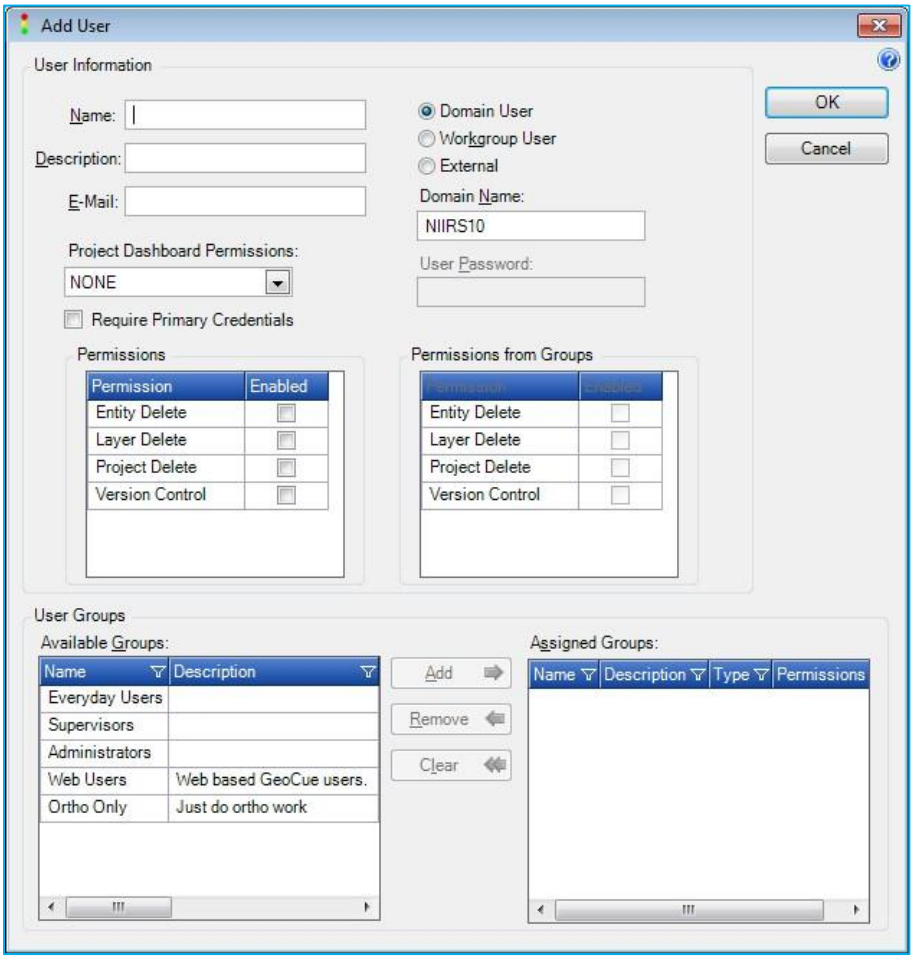


Figure 55 - Add new user

5. Input the user name (the same name as the login for the network or machine).
6. Select the Type. In general, this is either going to be Domain (network) or Workgroup (machine). External is for web users.
7. If using Project Dashboard, and this is an external user set the appropriate Project Dashboard Permissions. Deprecated, so no longer applicable.
8. Under Available Groups select the appropriate group to assign to each user and then Add.
9. If different permissions than granted by the group are desired for a user, make the appropriate modifications by selecting or deselecting the appropriate checkboxes for Entity Delete, Layer Delete, Project Delete and Version Control.
10. Select OK on the dialog to add the user to GeoCue.

Copyright 2020

7 Appendix A: Security

GeoCue relies on the security systems built into Windows and does not implement any of its own security measures.

GeoCue maintains a user list of logins authorized to use GeoCue, but it does not store passwords or any other information about the user. It relies on the Windows authentication system. If a user can log into a machine with a certain username, we assume they were authorized to do so.

GeoCue communicates from machine to machine using Microsoft .NET Framework API's via TCP/IP. GeoCue thus honors any and all Windows security policies in place that control network communications.

There are no components of GeoCue that rely on, or attempt outside network access.

Copyright 2020

8 Appendix B: Standard GeoCue Installation IT Requirements

FDCC (Federal Desktop Core Configuration) is the standard for security settings on machines at federal government installations. If this standard is in place, we will need to have the following setup changes made to facilitate the GeoCue installation. These configuration changes also apply if you are running any internal firewall between machines on your local network, including Windows Firewall. The main purpose of these configuration changes is to ensure the proper ports are open for client/server communication and to allow key executables as expectations to the firewall:

GeoCue Server:

- Open port 8000
- Open port 8004 (only if running LINUX dispatch clients)

GeoCue Client:

- Open port 8002
- Add the following applications to the Windows Firewall exception list:
    - %programfiles%\GeoCue\GeoCue Client\DPMSProcessing.exe
    - %programfiles%\GeoCue \GeoCue Client\DumpCommonFolder.exe
    - %programfiles%\GeoCue \GeoCue Client\GCRemote.exe
    - %programfiles%\GeoCue \GeoCue Client\GeoCue.exe
    - %programfiles%\GeoCue \LIDAR 1 CuePac\ProcessLASWorkingBoundary.exe

Copyright 2020

9 Appendix C: Ascertaining the GeoCue Server Name

All machines in a GeoCue constellation refer to the GeoCue server by the machine name of the workstation/server on which you have installed the GeoCue Server component. Ascertain this name by right-clicking the My Computer icon (which will be either on the desktop or available from the Start menu). Select the *Properties* option from the right-click menu. Select the ***Computer Name*** tab on this dialog. The *Full Computer Name* is in the format:

Computer Name.Domain Name

The GeoCue Server name is the Computer Name portion of the Full Name. In the example dialog shown below, the GeoCue Server name would be

LEW_DEV_PC

(Note that the computer name is the same as the UNC name for the computer that you would use when connecting to a file share). Note this name as the GeoCue Server Name and have it available for the installation of other GeoCue components.

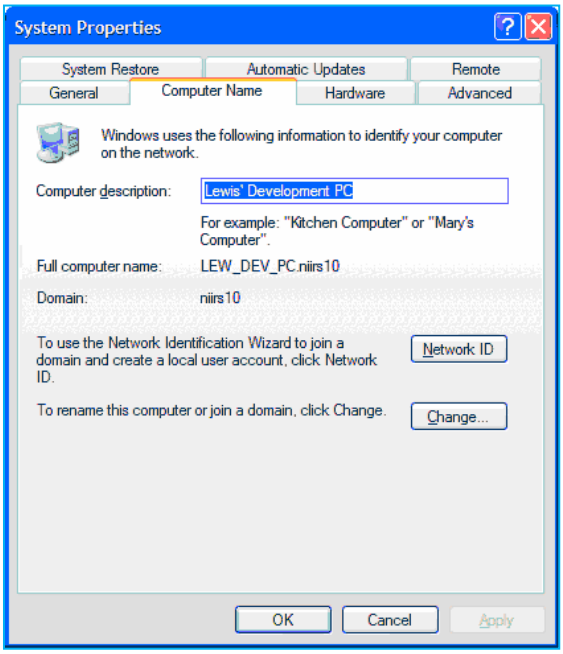


Figure 56 - Server Name Properties

Copyright 2020

10 Appendix D: GeoCue License Installation and ELA Information

10.1 License Installation

To install GeoCue licenses follow these steps. If you do not have your GeoCue 2020 licenses please request them by submitting your GeoCue server code, as found on the Licensing tab of GeoCue Server Database Manager, to support@geocue.com.

1. Open Database Manager (Start Menu → GeoCue → GeoCue Server)
2. Select the licensing tab
3. Remove all current licenses
4. Click **Import Licenses**
5. Browse to the location of the GeoCue License file provided by support (*.GCL) and click **Open**
6. Verify that all licenses are showing green checkmark's indicating that the license is valid

10.2 GeoCue Enterprise License Agreement (ELA)

A GeoCue Enterprise License Agreement (ELA) allows organizations to license GeoCue for their entire company/organization for a term of three years for a fixed annual fee. Customers under a GeoCue ELA have unlimited access to GeoCue software products for the duration of the contract by providing a license pool of generalized "license tokens" that can be used to license any GeoCue product on-the-fly, in real time. An ELA is a cost-effective method for organizations wanting to deploy an enterprise-wide workflow management system using any, or all, of GeoCue's core products, including desktop, server and web-based products, with predictable cost structure and flexible scalability.

GeoCue allows a user to directly see information concerning License usage when running under an ELA.

Figure 57 - Licensing Information Database Manager (Database tab)

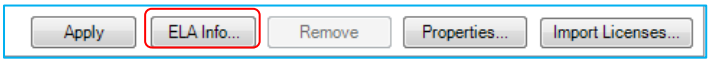


Figure 58 - ELA License Information Database Manager (Licensing tab)

Copyright 2020

ELA License information is stored in a coded log file on the GeoCue Server machine. The usage information is automatically reported to GeoCue on a weekly basis when the server is connected to the internet, or a user can send the usage information directly to GeoCue. If the server is not connected to the internet then the usage logs must be sent to GeoCue on a regular basis.

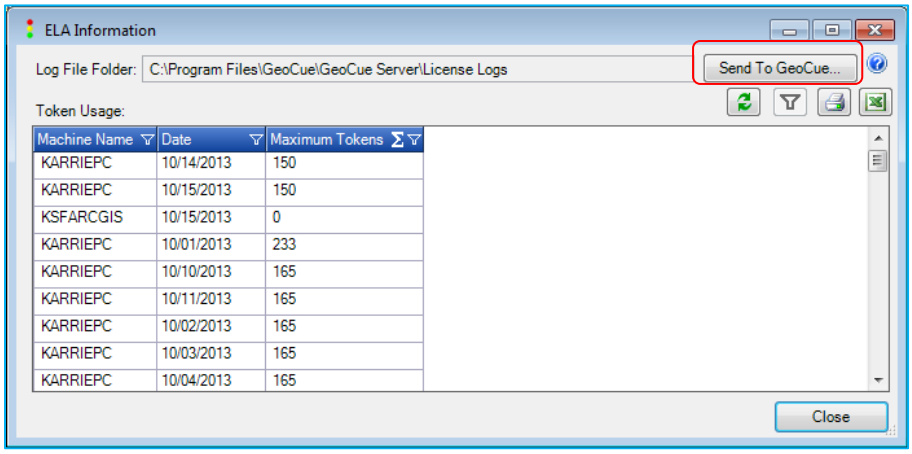


Figure 59 – ELA License Information

Copyright 2020

11 Appendix E: Troubleshooting

11.1 Error received when updating the GeoCue Database

If you receive the following error after attempting to perform the database update, click the "Update" button a second time and the update should succeed.

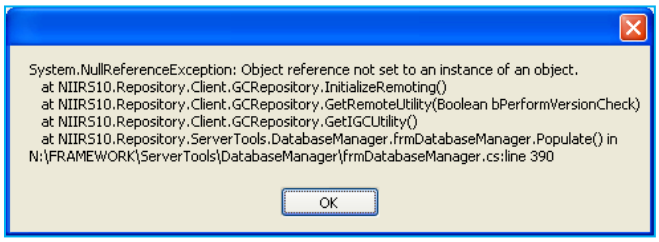


Figure 60 - Update Database Error

11.2 Warehouse error received when updating the GeoCue Database

If you receive an error after attempting to perform the database update, it means that one of the warehouses listed within Database Manager is no longer valid or is not currently accessible. Please review the warehouse tab in Database Manager to determine which warehouse is no longer valid. The warehouse can either be removed if it is no longer being used or configured with a valid UNC path.

Figure 61 - Warehouse Error during Update

11.3 Error received when connecting to the GeoCue Common Files Folder

If you receive an error when attempting to connect to the GeoCue Common Files folder, you probably have one or more of the following conditions:

1. The folder is not shared (note – even though you can browse to the folder, this does not confirm that the folder is shared. Use the procedures previously described in the Configuring the GeoCue Server section of this guide).
2. You have not set the permissions on the folder to Full Control for "Everyone" or all GeoCue Users.

Note that to set permissions you must make modification from both the *Permissions*

Copyright 2020

button on the ***Sharing*** tab of the file properties dialog and the ***Security*** tab. See the section on Configuring the GeoCue Server for detailed procedures.

11.4 Error received when connecting to the GeoCue Warehouse Folder

If you receive an error when attempting to connect to the GeoCue Common Files folder, you probably have one or more of the following conditions:

1. The folder is not shared (note – even though you can browse to the folder, this does not confirm that the folder is shared. Use the procedures previously described in the Configuring the GeoCue Server section of this guide).
2. You have not set the permissions on the folder to Full Control for Full Control for "Everyone" or all GeoCue Users

   Note that to set permissions you must make modification from both the *Permissions* button on the ***Sharing*** tab of the file properties dialog and the ***Security*** tab. See the section on Configuring the GeoCue Server for detailed procedures.

11.5 Windows Firewall Issues

GeoCue installer attempts to configure Windows Firewall during installation process.

If the installer fails to configure Windows Firewall or you are running a different firewall software on the system where GeoCue Server is installed, GeoCue Clients on your internal network may not be able to connect to GeoCue Server. If this happens, you may do one of the following:

1. Disable the Firewall (not recommended).
2. OR unblock GeoCueServer.EXE (recommended).

GeoCueServer.EXE and RepHostGUI.exe may be unblocked by opening Windows Firewall (available on Control Panel) and selecting the "Exceptions" tab as shown below:

Copyright 2020

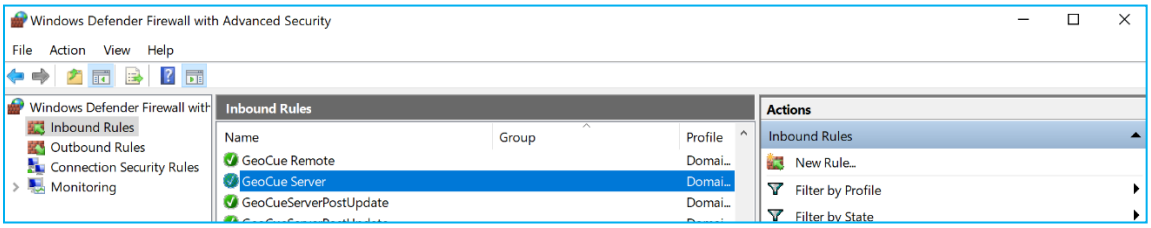


Figure 62 - Windows Firewall Example

Add both GeoCue Server and RepHostGUI executables to the list of programs by selecting New Rule -> Program, then browsing for GeoCueServer.EXE and RepHostGUI.exe (located in the GeoCue Server installation folder, typically "C:\Program Files\GeoCue\GeoCue Server"), for both inbound and outbound rules

11.6 Database error received when attempting to install the GeoCue Server

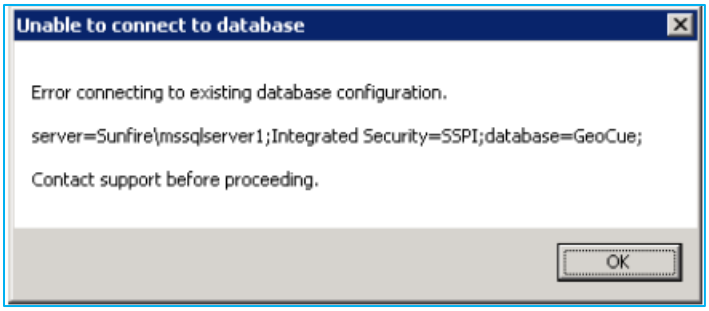


Figure 63 - Error Connecting to Existing Database Configuration

This is a SQL error that can often occur when the login fails. In this instance SQL is attempting to configure the database using a different login that does not have access. Generally, the login that it's trying to use is in the form of 'domain\machine_name$'. An error message along the lines of "Login failed for user 'domain\machine_name$'. Reason: Token-based server access validation failed with an infrastructure error" can be located in the SQL logs.

There are two options to fix this error.

1. Add the user in question to SQL
2. Using the original login that installed SQL recreate the GeoCue Service Logins within SQL

Either option should cause the error message to stop occurring.

Copyright 2020

11.7 Database Manager Coordinate System Configuration Error received

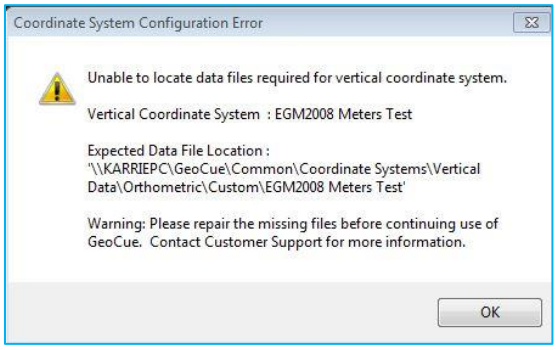


Figure 64 - Coordinate System Configuration Error

Upon opening Database Manager, an error message appears stating, “Unable to located data files required for vertical coordinate system”. Verify that the coordinate system listed in the error message exists in the specified location. If the files are missing and you are unsure about how to correct the issue, please contact support@geocue.com for assistance.

Copyright 2020

For further information about the GeoCue workflow management product, training, or support, please contact GeoCue Group Support, support@geocue.com, or by phone, +1-256-461-8289.

Respectfully Yours,
The GeoCue Support Team
GeoCue Group, Inc.
support.geocue.com
support@geocue.com
GeoCueLab

Copyright 2020