

Geoteric 2023.2 AI Servers Install Guide

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1. Introduction

Geoteric has the option for including Geoteric AI Horizons and Geoteric AI Faults when purchased with the appropriate licenses.

Geoteric AI Horizons and Geoteric AI Faults are CPU and GPU intense processes therefore it is recommended that these new processes are hosted on a separate server machine.

Please see the “Geoteric 2023_2 AI Server Detailed Installation Guide” for the detailed information required for your specific hardware configuration. For example, whether installing onto one machine or running the AI servers on a separate machine or whether installing only Geoteric AI Faults or only Geoteric AI Horizons, or whether both are installed.

2. Prior to Installation

Whilst the Geoteric AI Server installation should take care of all items listed below, it is recommended to check.

Uninstall earlier versions of Geoteric AI Faults and the Geoteric Process Manager:

1. Geoteric Process Manager (included with installations from Geoteric 2022.2.1 onwards and it must be removed)
2. Geoteric AI Faults Server for Geoteric 2022.x
3. Geoteric 2022.x or earlier versions

It is highly recommended that you remove all related environmental variables associated with Geoteric AI Faults and the Geoteric Process Manager before installing Geoteric 2023.2.

- These include GEOTERIC_PROCESS_MANAGER_URL, and GEOTERIC_PROCESS_MANAGER_PORT

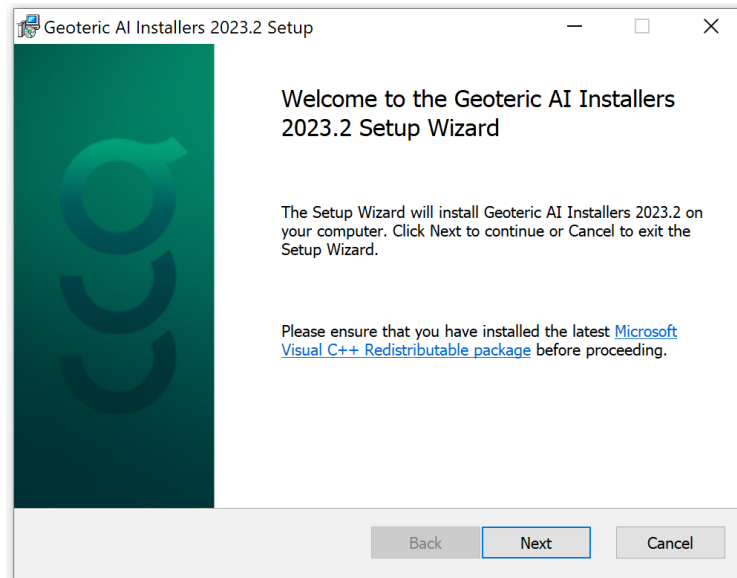
3. Install Geoteric Desktop

Please see the “Geoteric 2023_2 Classic Installation Guide” and install Geoteric 2023.2 prior to installation of the AI servers.

4. Install Geoteric AI Servers

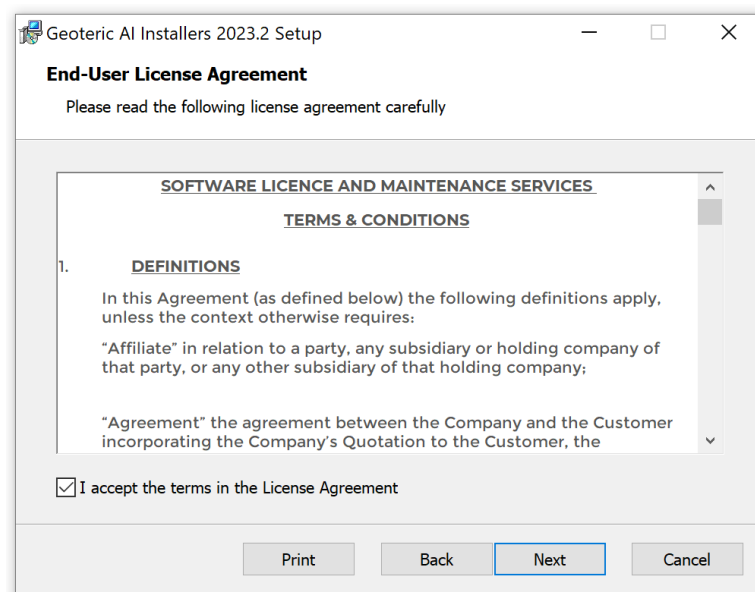
Download the Windows Geoteric AI Installer and unzip it.

Double click the Geoteric-ai-installer-2023.2.msi to begin the installation wizard.

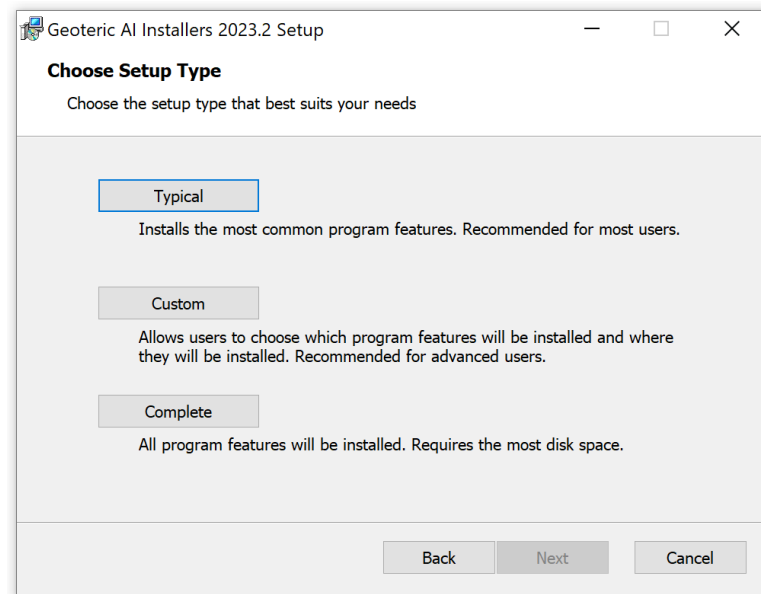


Note that administrator privileges will be required to install.

Click "Next" for the License Agreement.

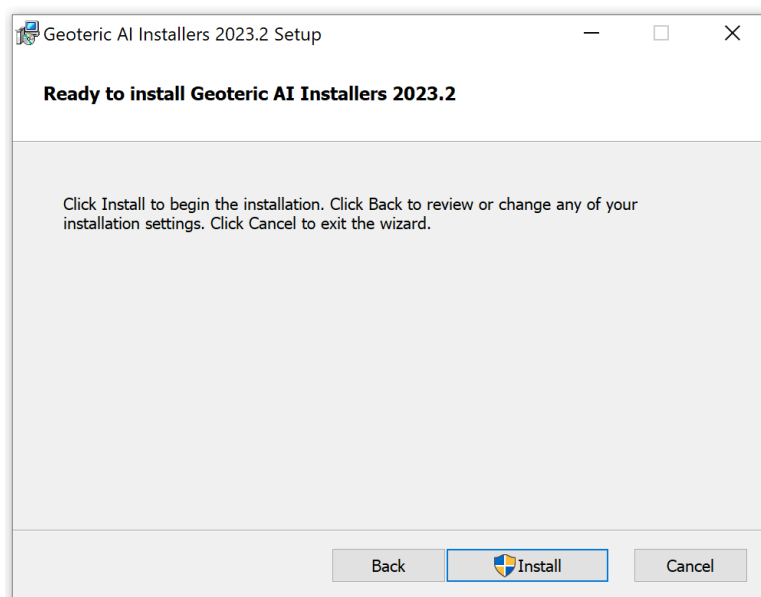


Click the box "I accept the terms in the License Agreement" to agree to the license terms.

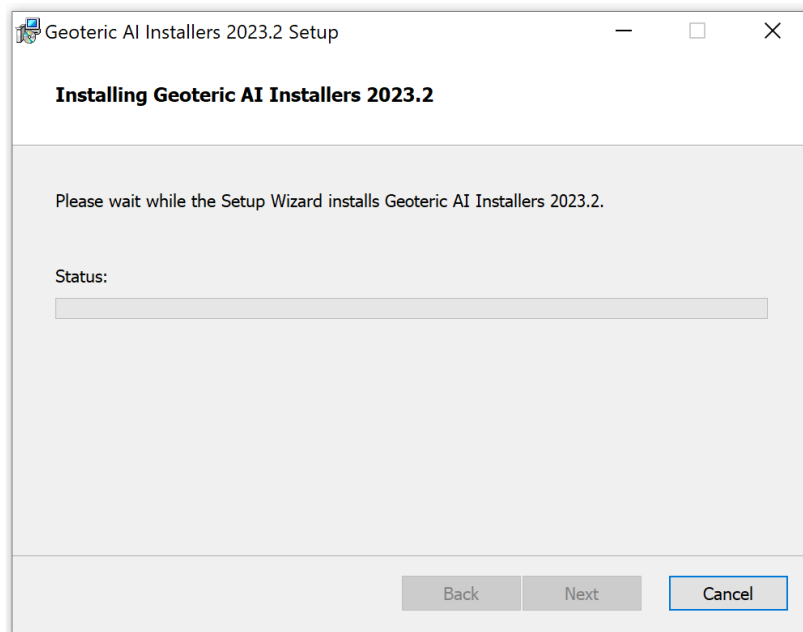


Select either Typical, Custom or Complete to install.

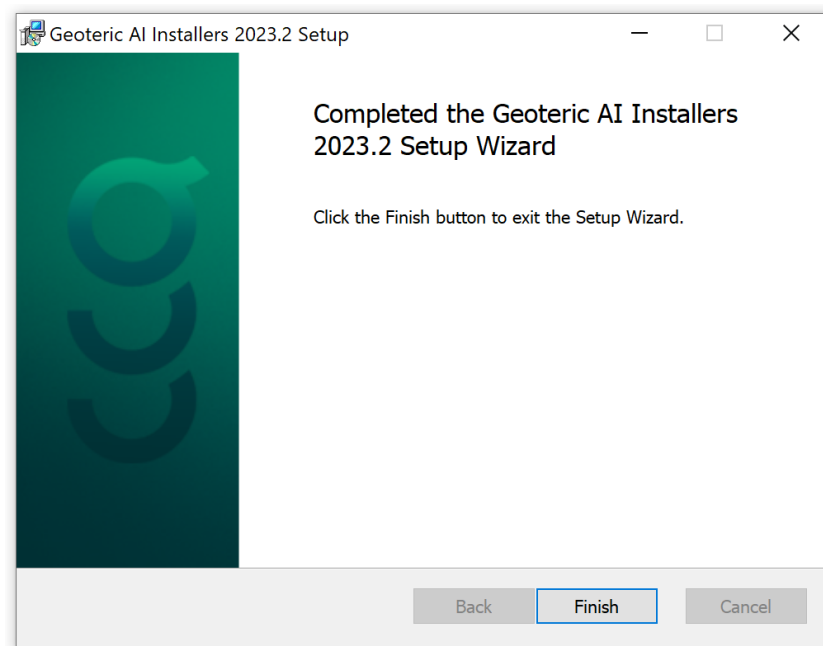
Note that for the current release, there is no difference between the Typical and Complete options for installation. Both will install all components.



Select Install to begin the installation.



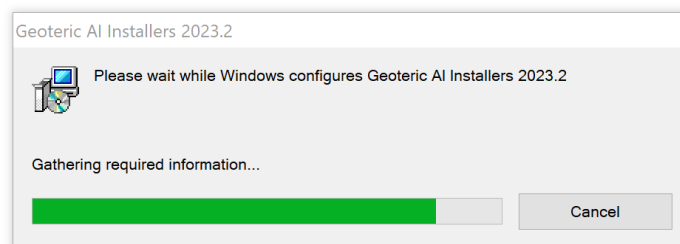
You will see the progress of the installation as files are copied.



Click "Finish" to complete the installation.

5. Uninstall

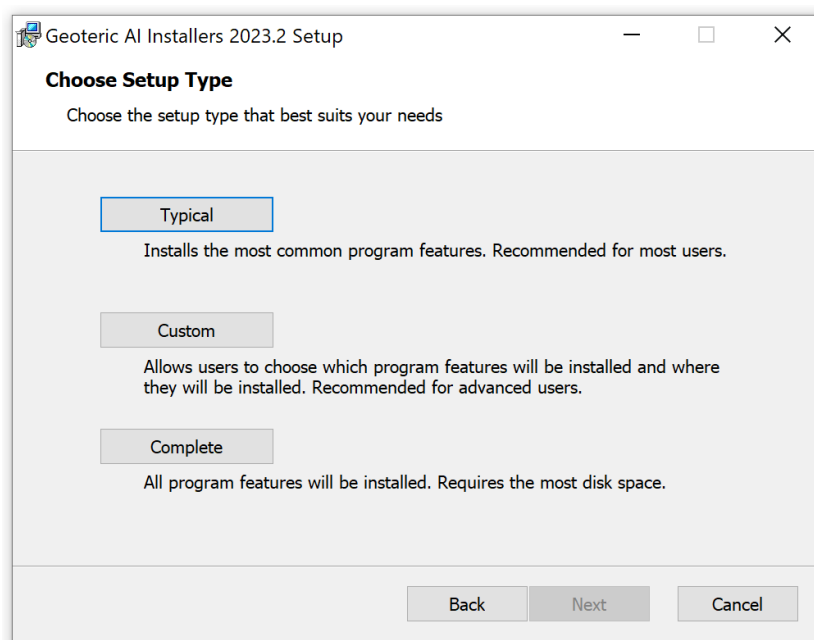
To uninstall, go into the Control Panel > Programs and Features and select "Geoteric AI Installers 2023.2", and then uninstall it from the program list.



Geoteric AI Servers will be uninstalled after the progress bar completes.

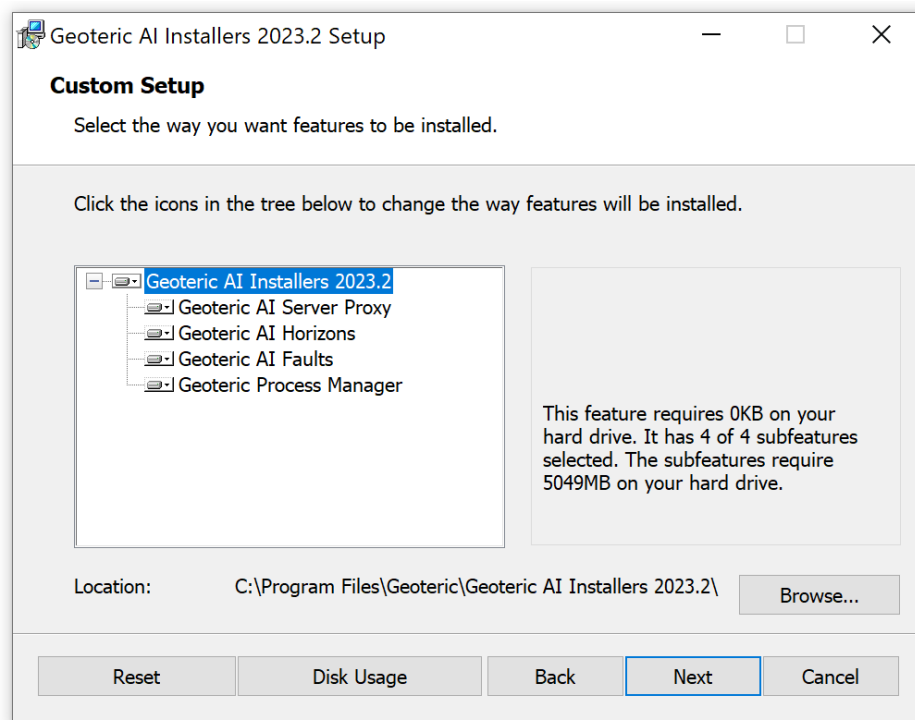
6. Custom Installations

Choose the Custom installation when you only wish to install one or the other of either Geoteric AI Faults or Geoteric AI Horizons or you want to install Geoteric AI Faults locally.



On the following screen you can select the relevant items for installation depending on your local or remote server situation.

Please see the "Geoteric 2023_2 AI Server Detailed Installation Guide" for the detailed information required for your specific hardware configuration.



Options:

- On a remote machine, Geoteric AI Horizons will require the Geoteric AI Server Proxy
- On a remote machine, Geoteric AI Faults will require the Geoteric AI Server Proxy and the Process Manager
- On a remote machine, both Geoteric AI Faults and Geoteric AI Horizons installed together will require the Geoteric AI Server Proxy and the Process Manager
- On a local machine Geoteric AI Faults will require the Process Manager (although the Geoteric Process Manager can be installed on a separate remote machine)
- It is not recommended to install Geoteric AI Horizons onto a local machine.

7. Geoteric AI Faults - Local or Remote

In previous versions, Geoteric AI Faults was installed and ran on the same machine as Geoteric Desktop. This requires an advanced GPU because Geoteric AI Faults is a very GPU intensive operation.

Since Geoteric 2023.1, Geoteric AI Faults has the option to run:

- **Geoteric AI Faults - Local** (as was the case with previous versions of Geoteric) or

- **Geoteric AI Faults - Remote** in a shared server configuration

With Geoteric 2023.2, moving Geoteric AI Faults processing to a remote machine has some benefits including:

- Freeing up hardware resources on the Geoteric Desktop workstation allowing Geoteric Desktop to use these resources for other processing and 3D visualisation
- Removing the need for expensive Graphics cards in every Geoteric Desktop workstation - this expensive resource can now be made available to multiple users from a single server

Please see the “Geoteric 2023_2 AI Server Detailed Installation Guide” for the detailed installation information required for your specific hardware configuration. It is also recommended to contact the Geoteric Customer Support team, who will be happy to walk-through the installation with you.

8. Environmental Variables

One environmental variable parameter must be set manually. This must be set to the IP address or hostname and port of the remote machine.

GEOTERIC_AI_PROXY_URL = hostname:port or host_ip:port

If an additional and different remote machine is used for Geoteric AI Faults then this environment variable must be set to the IP address of the AI Faults remote machine.

GEOTERIC_AI_FAULTS_PROXY_URL = hostname:port or host_ip:port

There are a number of environment variables which are created automatically during the installation for the Geoteric AI Servers, as listed below.

FFALTD_LICENSE_FILE

GEOTERIC_AI_FAULTS_INSTALL_DIR

GEOTERIC_AI_FAULTS_LOCAL_URL

GEOTERIC_AI_FAULTS_PORT

GEOTERIC_PROCESS_MANAGER_URL

GEOTERIC_PROCESS_MANAGER_DB_PATH

GEOTERIC_AI_PROXY_PORT

GEOTERIC_AI_HORIZONS_SERVER_PORT

If you encounter any issues, please check that you have the relevant variables set to the correct parameter on the local and remote machines.

9. Verification and Diagnostics

To verify that the installation has been successful, from a web browser, running on any machine on the same network as Geoteric Server (for example your Geoteric Desktop workstation), type in the following URL, substituting your Geoteric Server name where you see <Server> below:

`http://Server:5000/diagnostics`

An example of the diagnostics page is shown below.

Geoteric AI Proxy Diagnostics

This page contains diagnostics information about the Geoteric AI Proxy.

If you can view this page then the Geoteric AI Proxy is running and is accessible.

Current User

The Geoteric AI Proxy Service is running as NT AUTHORITY\LOCAL SERVICE

This user can start the Geoteric AI services as another user.

AI Services

Service Name	Executable Path	Port	Is Running?	User Name
AI Faults	C:\Program Files\Geoteric\Geoteric AI Faults\Geoteric_AI_Server.exe	7625	False	
AI Horizons	C:\Program Files\Geoteric\Geoteric AI Horizons\horizon-extraction-matlab-service.exe	10000	False	

Licensing

The value of environment variable `FFALTO_LICENSE_FILE` is `"C:\Users\Geoteric\Documents\Geoteric 2023\Documents"`

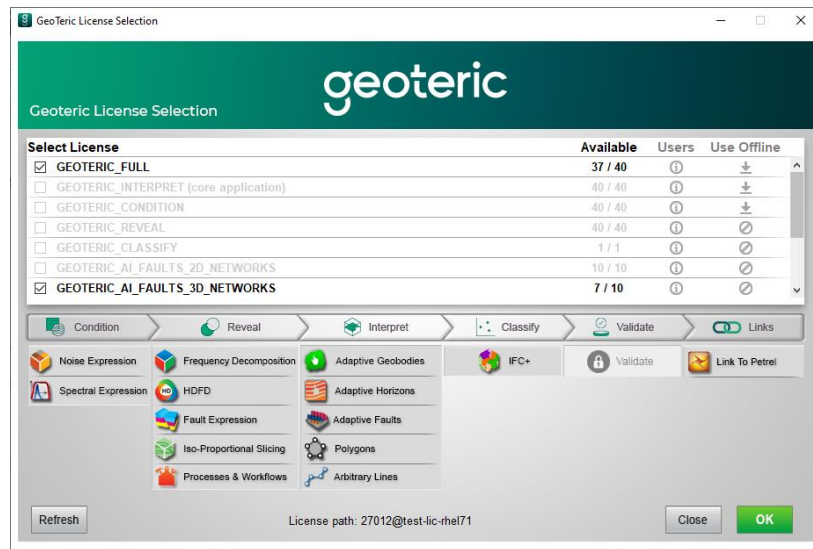
Environment Variables

Name	Value
<code>FFALOGGING</code>	<code>TRACE</code>

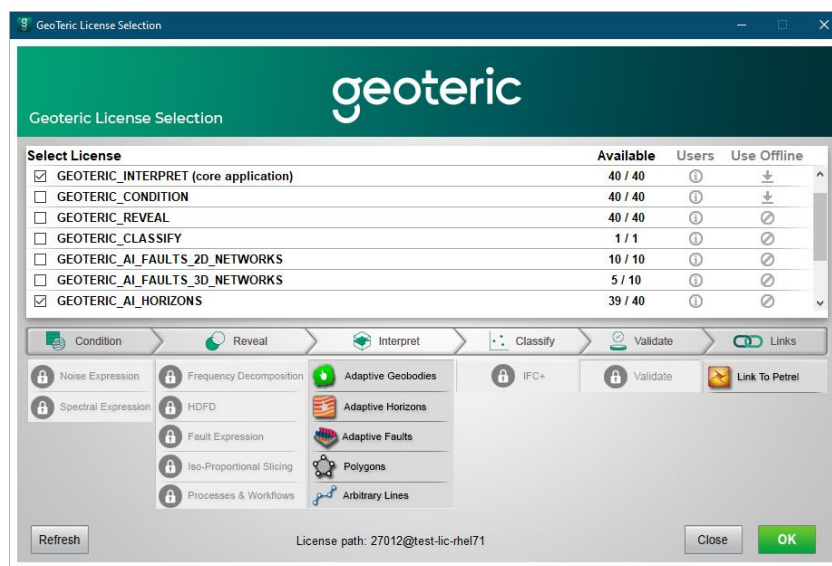
10. License Selection

Once Geoteric AI Servers have been installed, start Geoteric Desktop on your local workstation.

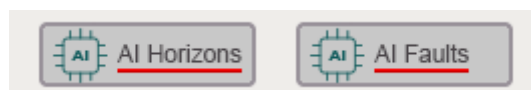
Select the `GEOTERIC_AI_FAULTS_3D_NETWORKS` (or `GEOTERIC_AI_FAULTS_2D_NETWORKS`) license on start-up for the Geoteric AI Faults functionality.



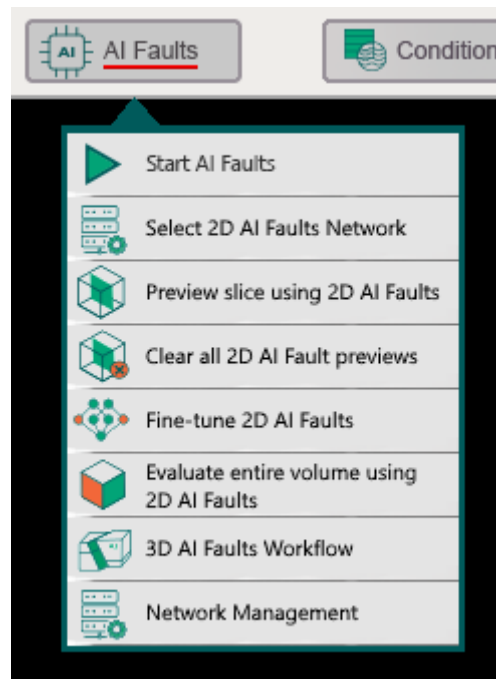
Select the GEOTERIC_AI_HORIZONS license on start-up for the Geoteric AI Horizons functionality.



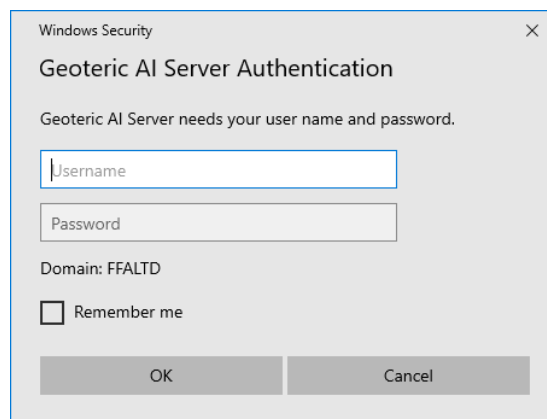
On the main Geoteric 3D viewer, you should now see two new menus for Geoteric AI Faults and Geoteric AI Horizons.



In the AI Faults menu, select Start AI Faults.



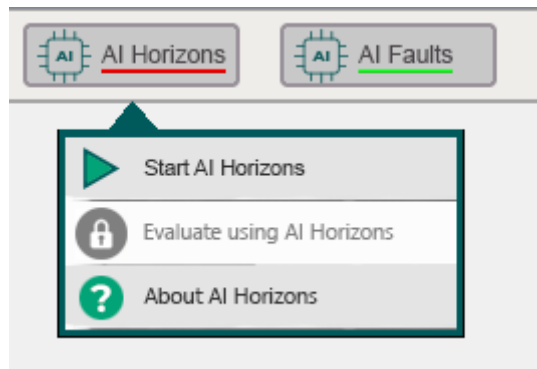
You will be prompted to log in to the Geoteric AI Faults server. It is essential that the user account used to start Geoteric AI Faults has sufficient permissions to write to the project files on the Geoteric Desktop workstation.



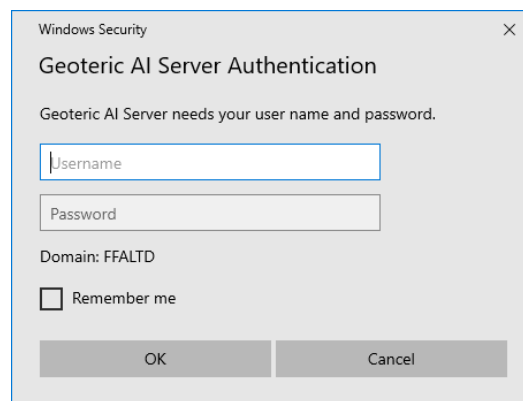
After a short delay, the AI Faults menu will switch to a green indicator showing that the connection has been successful, and Geoteric AI Faults is ready to receive requests.



In the AI Horizons menu, select Start AI Horizons.



You will be prompted to log in to the AI Horizons server. It is essential that the user account used to start AI Horizons has sufficient permissions to write to the project files on the Geoteric Desktop workstation.



After a short delay, the AI Horizons menu will switch to a green indicator showing that the connection has been successful, and Geoteric AI Horizons is ready to receive requests.



11. Opening a Project – Universal Naming Convention (UNC) Project Path Directory

UNC is Universal Naming Convention

FQDN is the Fully Qualified Domain Name

IP is the Internet Protocol

For the AI Horizons to link correctly to the server, the project must be opened using UNC project path directory.

UNC is Universal Naming Convention paths, which are used to access network resources. It is a standard for identifying servers, printers and other resources in a network. They have the following format:

- A server or host name, which is prefaced by \\
- The path (disk and directories) within the computer is separated with a single slash or backslash.
- The server name can be a NetBIOS machine name or an IP/FQDN address.
- Examples:
 - [\\myMachine\MyProjects\Project1](#)
 - [\\ipaddress\SharedProjects\Project1](#)

If you attempt to run Geoteric AI Horizons or Geoteric AI Faults using a project referenced by a local path (C:\MyProjects\Project for example) the request will be refused and a message will ask you to use UNC paths.