# Geoteric 2023.2 Al 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 Al 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.

	SOFTWARE LICENCE AND MAINTENANCE SERVICES	^
	TERMS & CONDITIONS	
1.	DEFINITIONS	
	In this Agreement (as defined below) the following definitions apply, unless the context otherwise requires:	
	"Affiliate" in relation to a party, any subsidiary or holding company of that party, or any other subsidiary of that holding company;	
	"Agreement" the agreement between the Company and the Customer incorporating the Company's Quotation to the Customer, the	~

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

Geoteric Al Installers	2023.2 Setup		-		×
Choose Setup Type					
Choose the setup type	e that best suits yo	our needs			
Typical	Ĩ				
Installs the	most common pro	ogram features. Reco	mmended for ma	o <mark>st use</mark> rs.	
Custom					
Allows user they will be	to choose which installed. Recomm	program features wi nended for advanced	ll be installed and users.	d where	
Complete					
All program	features will be in	nstalled. Requires the	most disk space	0	
		Back	Next	Canc	el

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.

🕼 Geoteric Al Installers 2023.2 Setup	-		×
Ready to install Geoteric AI Installers 2023.2			
Click Install to begin the installation. Click Back to review or ch installation settings. Click Cancel to exit the wizard.	ange any of yo	bur	
Back	Install	Cano	cel

Select Install to begin the installation.

🕼 Geoteric Al Installers 2023.2 Setup	-		×
Installing Geoteric AI Installers 2023.2			
Please wait while the Setup Wizard installs Geoteric AI Installers 202	23.2.		
Status:			
Back	lext	Cano	cel

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 Al Faults or Geoteric Al Horizons or you want to install Geoteric Al Faults locally.

🕼 Geoteric Al Installers 2023.2 Setup	—		×
Choose Setup Type			
Choose the setup type that best suits your needs			
Typical Installs the most common program features. Recommend	ded for mos	t users.	
Custom Allows users to choose which program features will be in	stalled and	where	
they will be installed. Recommended for advanced users.			
All program features will be installed. Requires the most	disk space.		
Back	lext	Cance	el

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 Al Server Detailed Installation Guide" for the detailed information required for your specific hardware configuration.

Geoteric Al Installer	s 2023 2 Setup		_		×
W deoteric Armstaller	3 2023.2 Setup				~
Custom Setup					
Select the way you	want features to be installe	ed.			
Click the icons in th	e tree below to change the Installers 2023.2 c AI Server Proxy	e way features wil	l be installed.		
- Geoteri	c AI Faults				
Geoteri	c Process Manager	This featu hard drive selected 5049MB o	ire requires 0K e. It has 4 of 4 The subfeature n your hard dr	B on your subfeature es require ive.	s
Location: C	C:\Program Files\Geoteric\G	Geoteric AI Installe	ers 2023.2\	Browse.	
Reset	Disk Usage	Back	Next	Cance	el

Options:

- On a remote machine, Geoteric Al Horizons will require the Geoteric Al Server Proxy
- On a remote machine, Geoteric Al Faults will require the Geoteric Al 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 Al Horizons onto a local machine.

## 7. Geoteric Al 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 Al Faults Local (as was the case with previous versions of Geoteric) or
- Geoteric Al 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 F This page contains diagnos If you can view this page th Current User The Geoteric Al Proxy Service is This user can start the Geoteric J	Secteric Al Proxy Diagnostics his page contains diagnostics information about the Geoteric Al Proxy. you can view this page then the Geoteric Al Proxy is running and is accessible. Current User he Geoteric Al Proxy Service is running as NT AUTHORITYLOCAL SERVICE. With user can start the Geoteric Al envices as another user.					
AI Services						
Service Name	Executable Path	Port	Is Running?	User Name		
Al Faults	C/Program Files/Geoteric/Geoteric Al Faults/Geoteric, Al Server.exe	7625	False			
Al Horizons	C/Program Files/Seoteric/Seoteric Al Horizon/thorizon-extraction-matlab-service.exe	10000	False			
Licensing The value of environment variab	Licensing he value of environment variable FRALD_LISENSE_FILE is					
Environment Va	nvironment Variables					
Name	Value					
FFAC0061%6	trace					

## **10. License Selection**

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Once Geoteric Al 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.

Geoteric License Selection			
Select License	Available	Users L	Jse Offline
GEOTERIC_FULL	37 / 40	(j)	*
GEOTERIC_INTERPRET (core application)	40 / 40	í	*
GEOTERIC_CONDITION	40 / 40	(j)	<u>+</u>
GEOTERIC_REVEAL	40 / 40	í	Ø
GEOTERIC_CLASSIFY	17.1	(j)	Ø
GEOTERIC_AI_FAULTS_2D_NETWORKS	10 / 10	í	Ø
GEOTERIC_AI_FAULTS_3D_NETWORKS	7 / 10	(j)	Ø
Condition > 🚱 Reveal > 😵 Interpret > 🗠 Cla	assify 🔪 👱 Valida	te 🔪 (	D Links
🂫 Noise Expression 📦 Frequency Decomposition 🚺 Adaptive Geobodies 🛛 😚 IF	FC+ 🚯 Valida	te 🔁	Link To Petrel
Adaptive Horizons			
Sault Expression 👋 Adaptive Faults			
Iso-Proportional Slicing Polygons			
~ ~			

Select the GEOTERIC\_AI\_HORIZONS license on start-up for the Geoteric AI Horizons functionality.

Geoteric License	Selection	geote	ric				
Select License				Available	Users	Use Offline	
	PRET (core application)			40 / 40	(j)	<u>+</u>	
	ITION			40 / 40	<b>(i)</b>	+	1
	AL			40 / 40	í	Ø	
GEOTERIC_CLAS	SIFY			1/1	(j)	Ø	
GEOTERIC_AI_FA	ULTS_2D_NETWORKS			10 / 10	í	Ø	
GEOTERIC_AI_FA	ULTS_3D_NETWORKS			5/10	i	Ø	
GEOTERIC_AI_HO	RIZONS		· Classify	39 / 40	()		
Noise Expression	Frequency Decomposition	Adaptive Geobodies	IFC+	Validat	e [2	Link To Petrel	
G Spectral Expression	HDFD	Adaptive Horizons					
	Fault Expression	Adaptive Faults					
	B Iso-Proportional Slicing	Polygons					

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.

Windows Security	×				
Geoteric Al Server Auth	nentication				
Geoteric Al Server needs your us	er name and password.				
Username					
Password					
Domain: FFALTD					
Remember me					
OK	Cancel				

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.

Windows Security	×
Geoteric Al Server Auth	entication
Geoteric Al Server needs your us	er name and password.
Username	
Password	
Domain: FFALTD	
Remember me	
ОК	Cancel

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:
  - <u>\\myMachine\MyProjects\Project1</u>
  - <u>\\ipaddress\SharedProjects\Project1</u>

If you attempt to run Geoteric Al Horizons or Geoteric Al 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.

## 12. Silent Installation

If the installer is to be installed silently with a custom installation option, open a command prompt and navigate to the location of the AI installer. The following command will install everything in the AI installer. Remove any item/s that are not required by deleting from the ADDLOCAL components.

msiexec /i geoteric-ai-installer-2023.2.msi ADDLOCAL=ProxyFeature,AIHorizonsFeature,AIFaultsFeature,ProcessManagerFeature

For example, if the Proxy and the AI Horizons are not required locally delete the ProxyFeature and the AI HorizonsFeature from the list.