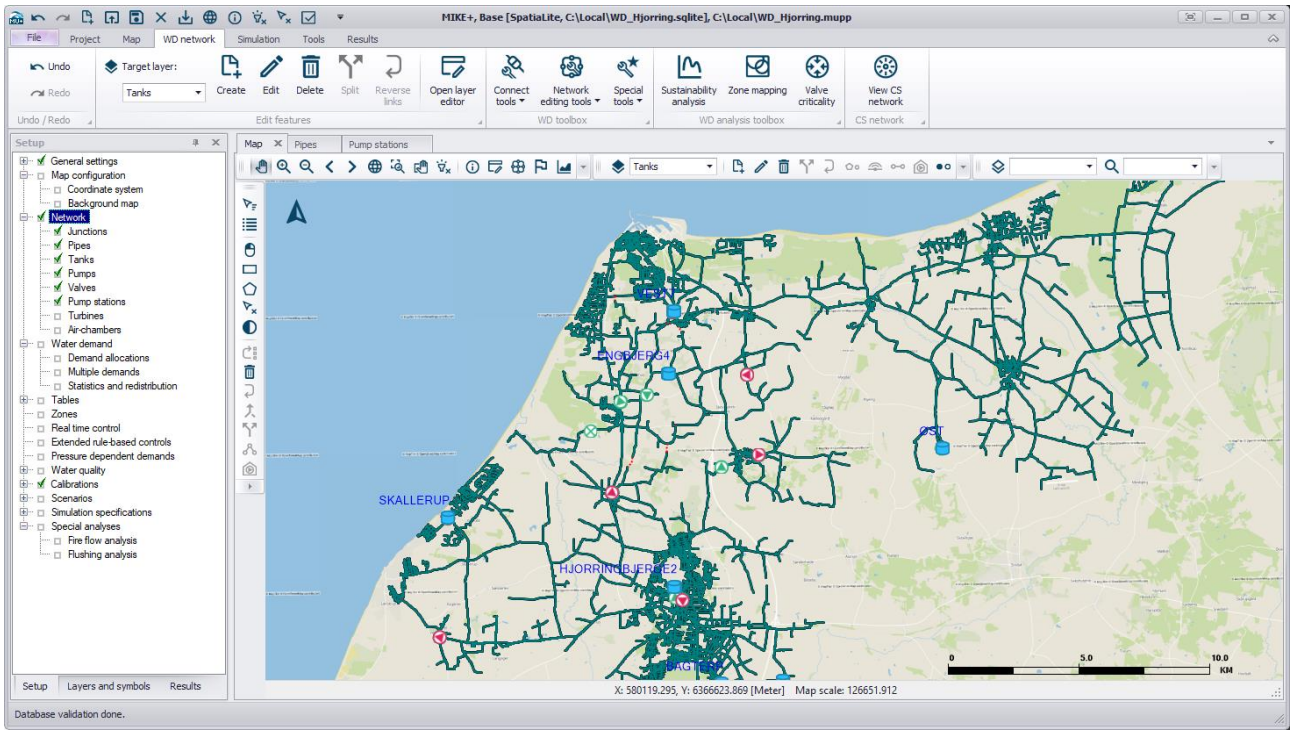

MIKE+

Installation Guide

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1 Introduction

This installation guide covers the installation of MIKE+ and required 3rd party software.

MIKE+ can be deployed in different ways using local SQLite database or a PostgreSQL database server – ranging from a personal installation to a corporate installation.

For PostgreSQL, you have these two options:

1. Personal installation, which allows users to work in a network-independent mode on their desktop. This requires the installation of a database on the local computer.

2. Corporate installation, which allows for an office to have multiple installations (clients) all working against a central database server.

Furthermore, ArcGIS Pro may optionally be also installed, when purchased as part of MIKE+ ArcGIS.

2 Installation Prerequisites

MIKE+ depends on several prerequisites as listed below:

1. If you want to use a local SQLite database, SQLite database with a SpatiaLite extension is required. It is included in the MIKE+ installer and will be installed automatically with MIKE+.

2. If you want to use a PostgreSQL database, a PostgreSQL database server with the PostGIS spatial database extension is required. The installers of PostgreSQL and PostGIS are included in a separate “Prerequisites” sub-folder of the MIKE+ installation. MIKE+ supports the following versions of the two products: PostgreSQL 14.2 and PostGIS 3.2.0. Combinations of later versions may also work, but have not been tested.

3. The DHI License Management application. It may need to be downloaded separately from the MIKE+ installer depending on the type of DHI license you plan to use. Refer to chapter 4 for more information.

4. .NET framework 4.7.2, or .NET framework 4.8 when also installing ArcGIS Pro 2.9.

3 MIKE+ Installation/Upgrade

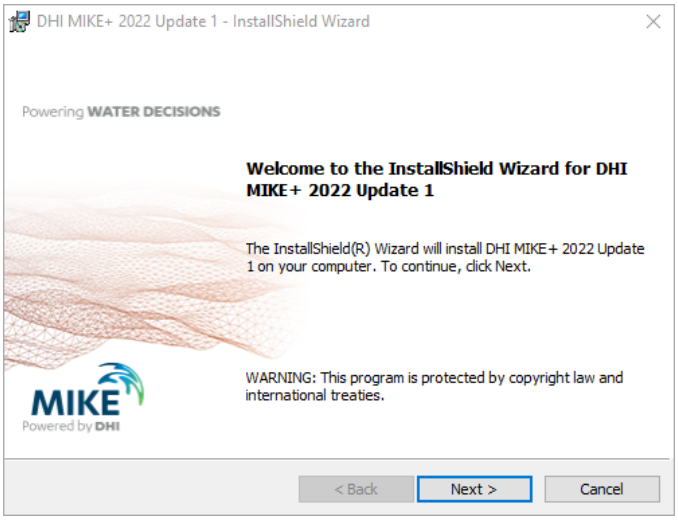
The installation process consists of four parts.

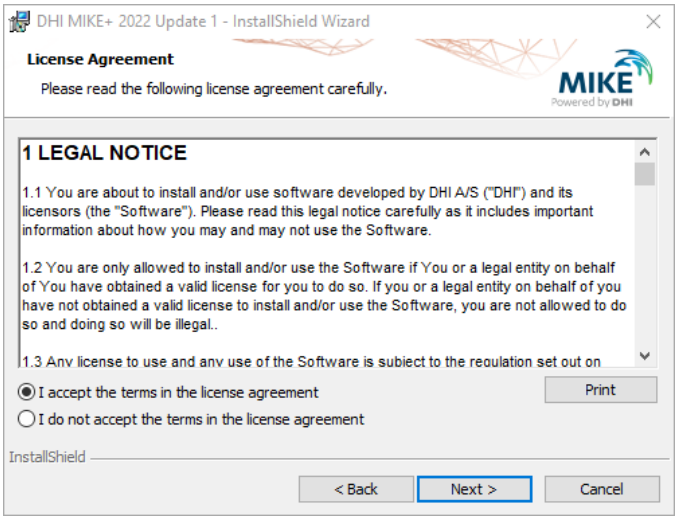
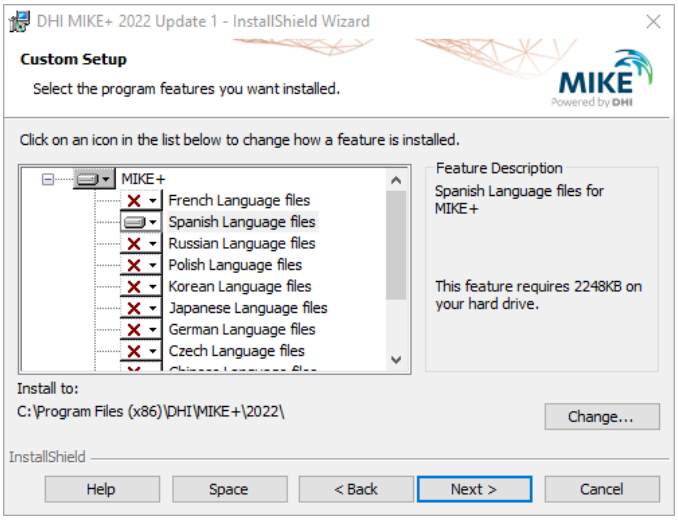
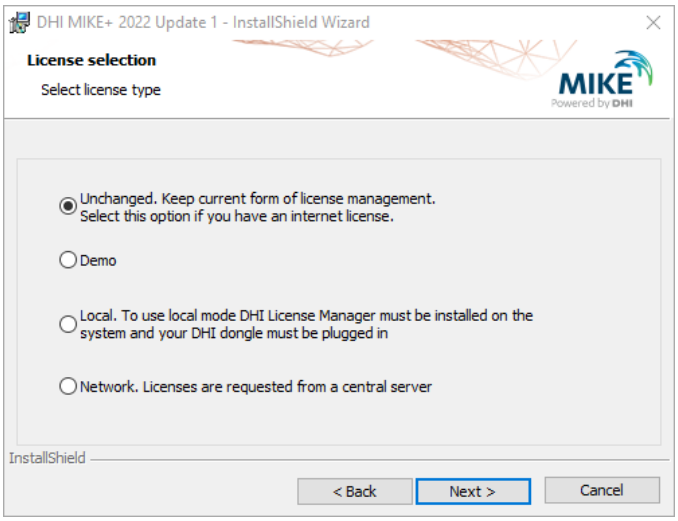
1. Installation of MIKE+.
2. Optional installation of DHI License Management.
3. Optional installation of PostgreSQL and PostGIS.
4. Optional installation of ArcGIS Pro.

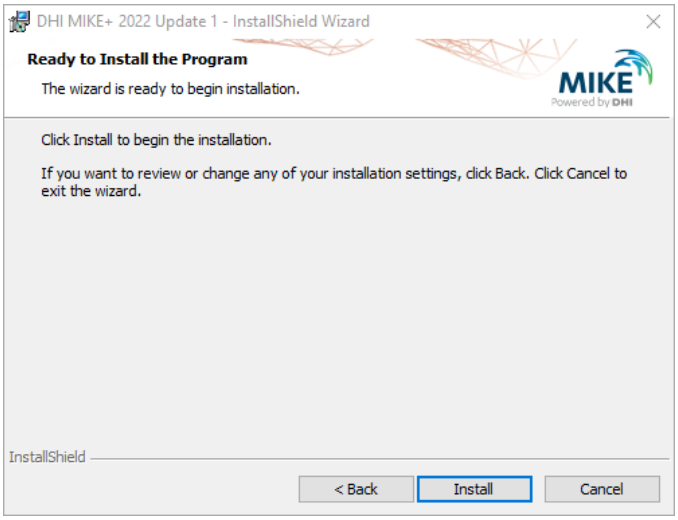
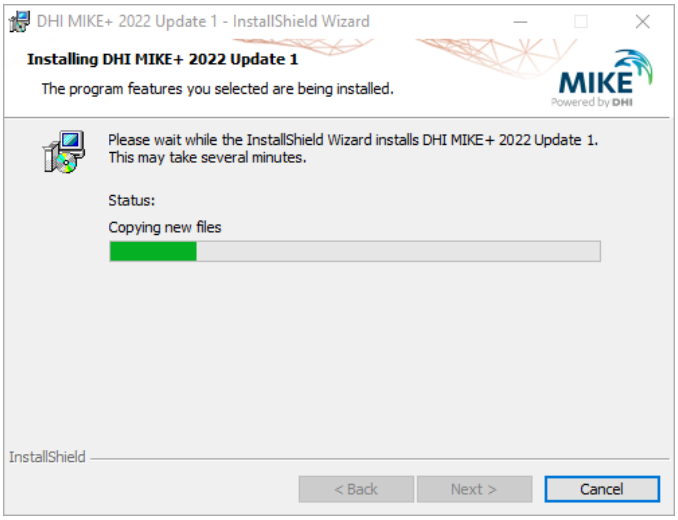
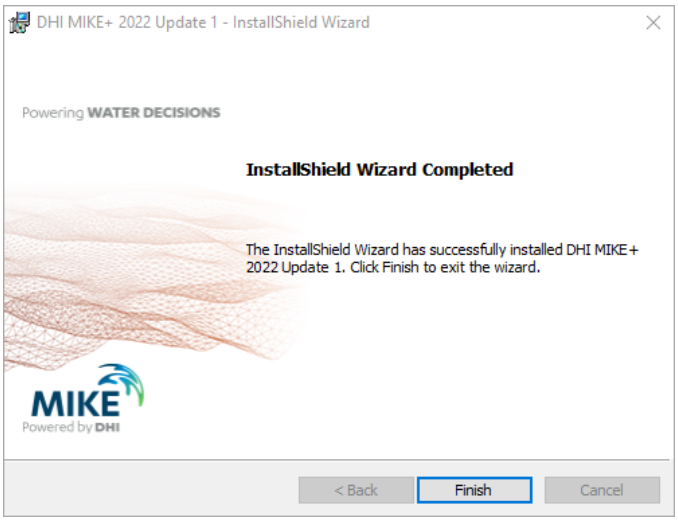
Installation of MIKE+ software is simple and requires no user interactions beyond accepting the license conditions, specifying the installation folder and languages that should be installed besides English, and includes installation of the personal database SQLite with a SpatiaLite extension.

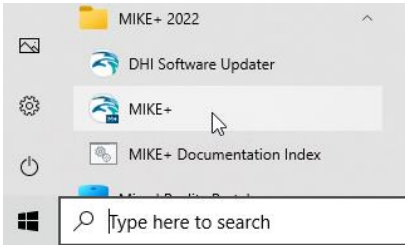
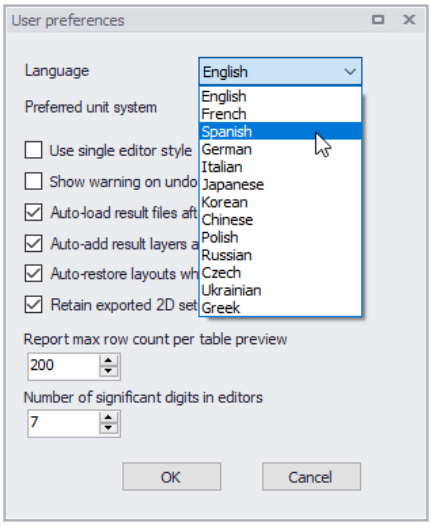
The following table explains how to install MIKE+.

If you need to install or update the DHI License Management, follow the steps described in chapter 4. If you need to install or update the version of PostgreSQL and PostGIS, follow the steps described in APPENDIX A. If you need to install ArcGIS Pro, follow the steps described in APPENDIX D.

Installation step	Screen
Run the *setup.exe* program file from the installation media/download folder, in the 'MIKE+' folder. **Click** Next	

Installation step	Screen
Accept the license agreement **Click** Next	
Select the languages you want to install on the computer (besides English) **Click** Next	
Select the license type. This may be modified after the installation if required. **Click** Next	

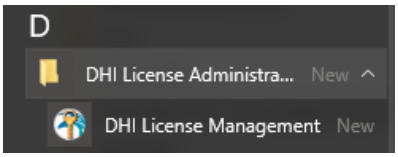
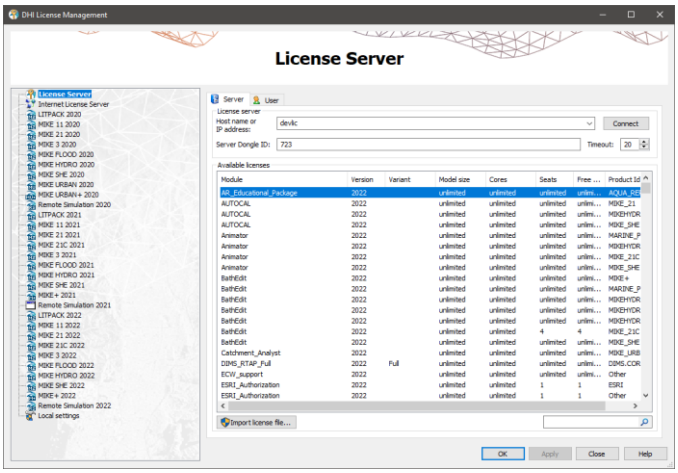
Installation step	Screen
Click Install	
Wait	
Click Finish	

Installation step	Screen
If you have installed another language than English, **Open MIKE+** to finish the language configuration.	
Go to the File menu, and select **User preferences**. Select the desired language, and close MIKE+.	

4 DHI License Management

The DHI license is handled through the DHI License Management software, which can be found under DHI License Administration in the Start Menu.

Important information: If you plan to use a local DHI license bound to a dongle, you must install the DHI License Manager before following the steps below. The installer for the DHI License Manager must be downloaded separately from the MIKE+ installer. This additional installation is however not required for an Internet license. For a network license installation, the DHI License Manager is required only on the server, but not on the client computers.

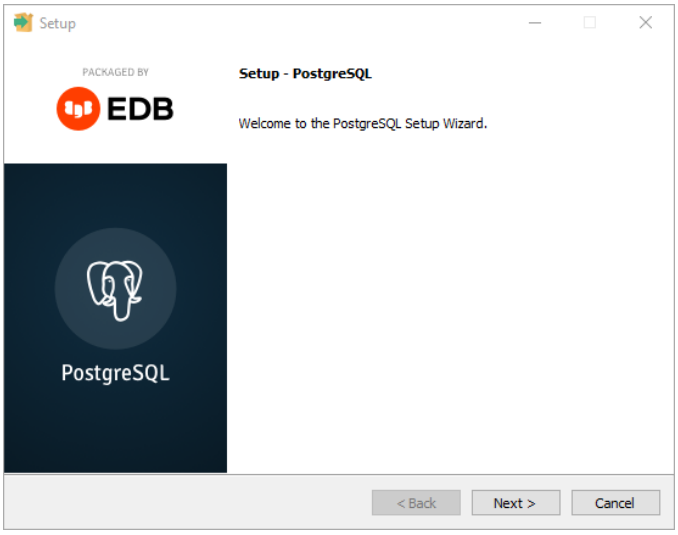
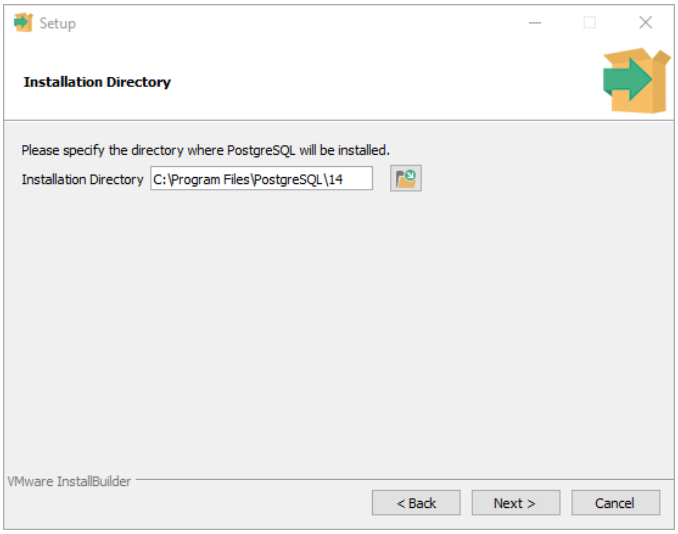
Installation step	Screen
Open the DHI License Management program in the start menu as **Administrator**	
Three license types are available: • Internet License (no dongle) • Server License, with license and dongle on a network server • Server license, with license and dongle on local PC Choose a license server installation if you have a license bound to a dongle, or Internet license otherwise. Refer to the documentation found with the **Help** button for more information.	

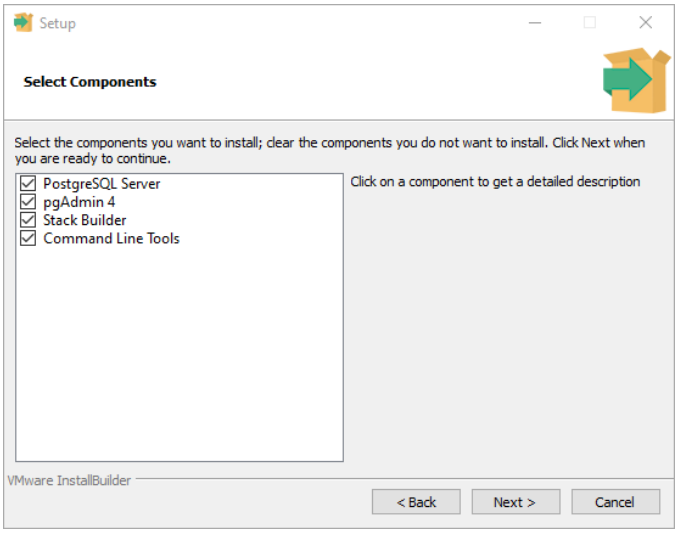
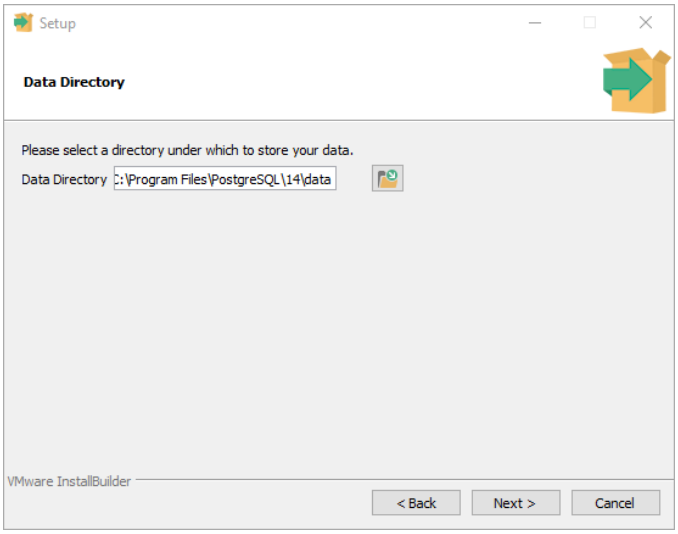
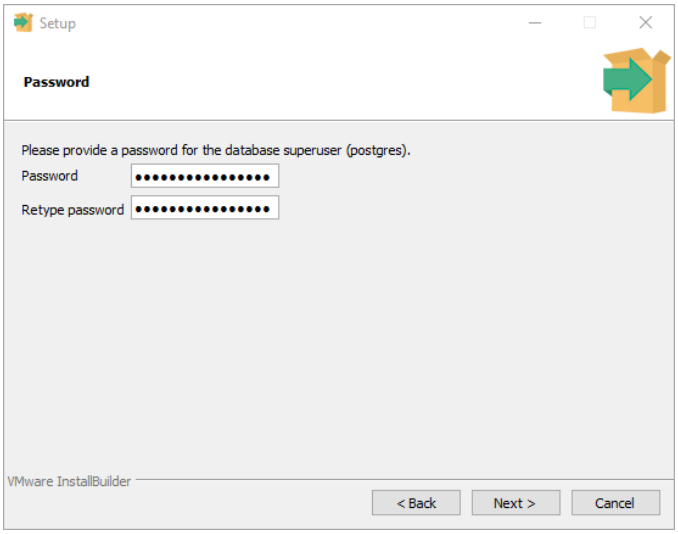
APPENDIX A: Install PostgreSQL and PostGIS

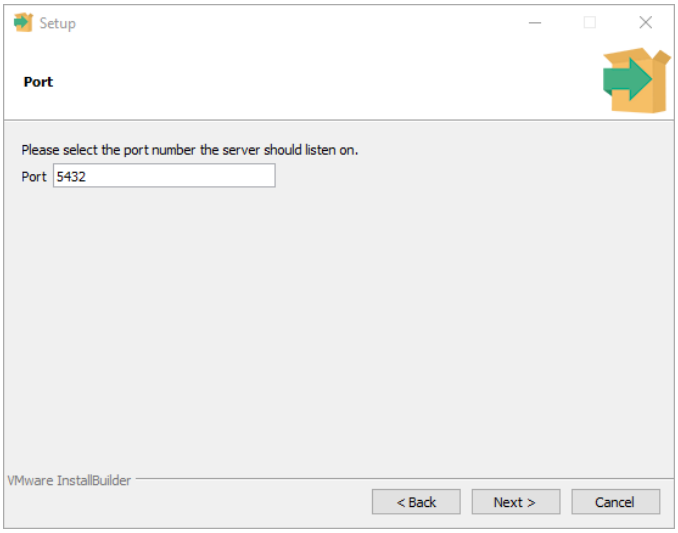
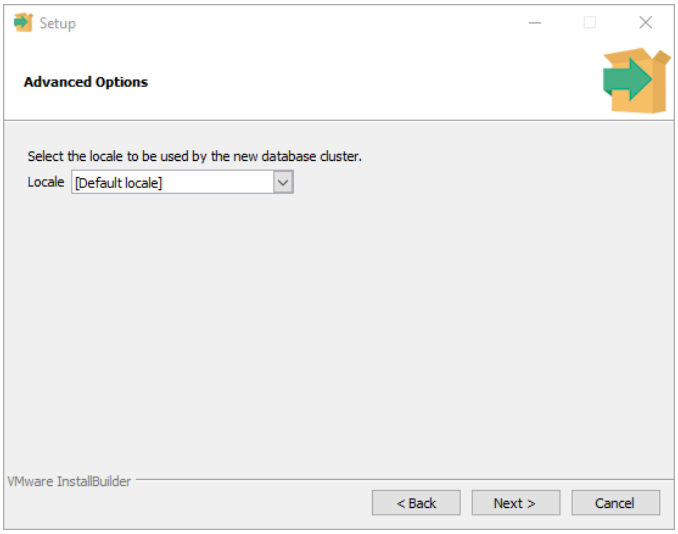
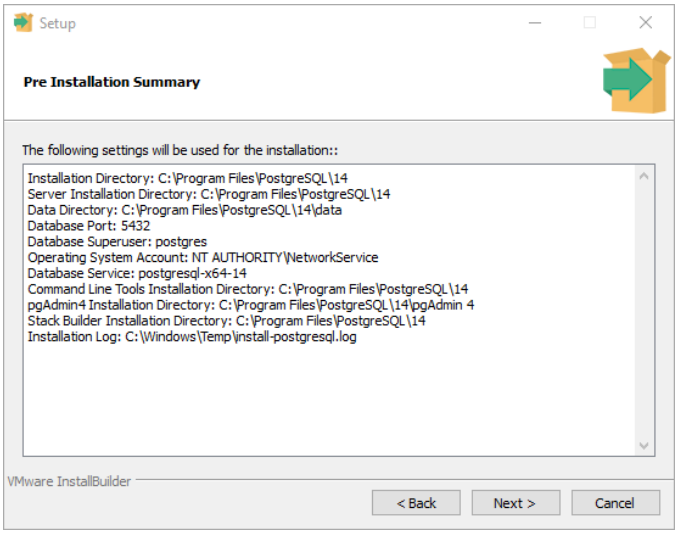
As mentioned in Chapter 2, it is possible to use a PostgreSQL database.

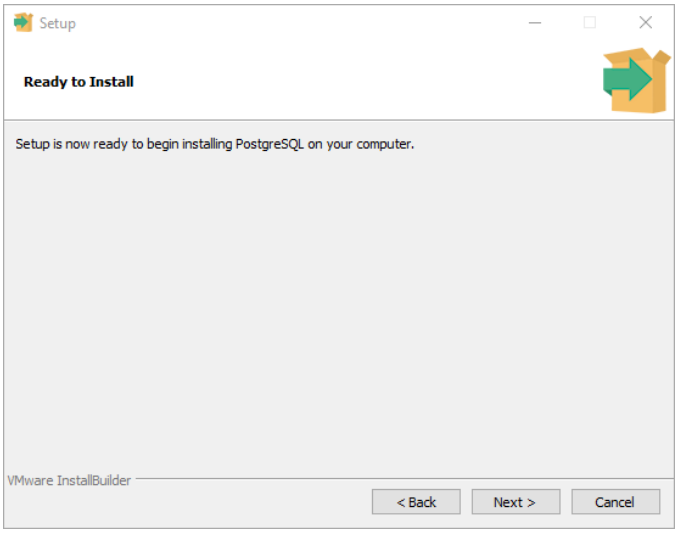
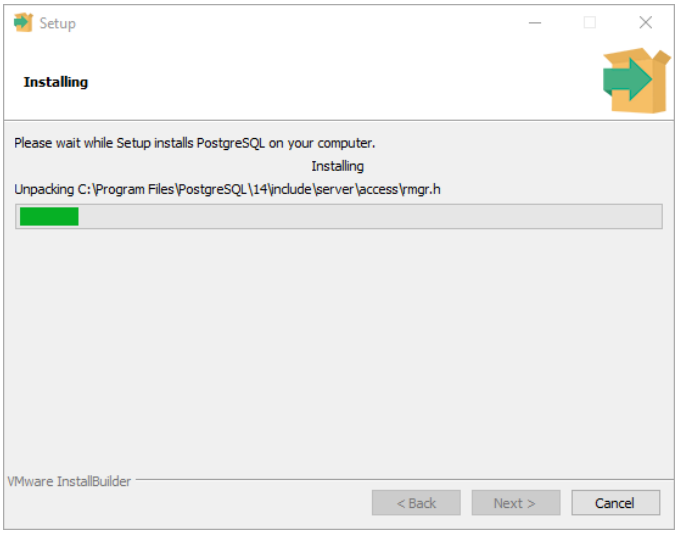
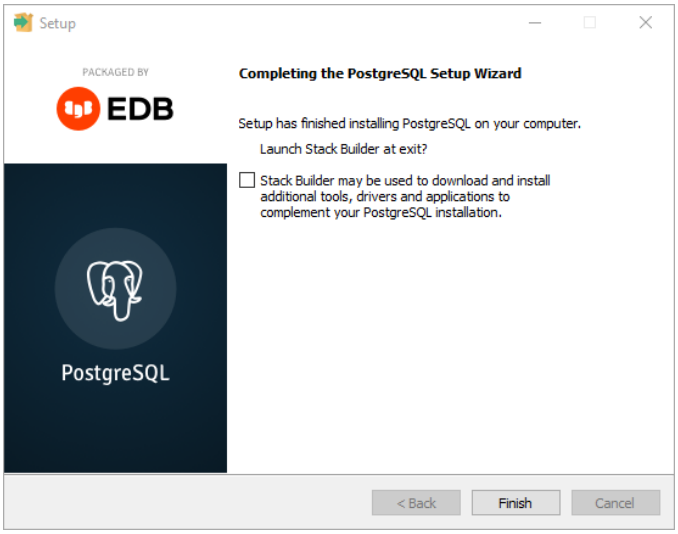
PostgreSQL Installation

The following table explains how to install a PostgreSQL database. The postgresql-xx.x-x-windows-x64.exe installer is located in the “Prerequisites” sub-folder of the MIKE+ installation.

Installation step	Screen
Run the database installation program e.g. postgresql-xx.x-x-windows-x64.exe	
Start of installation **Click** Next	
Accept the default installation folder **Click** Next	

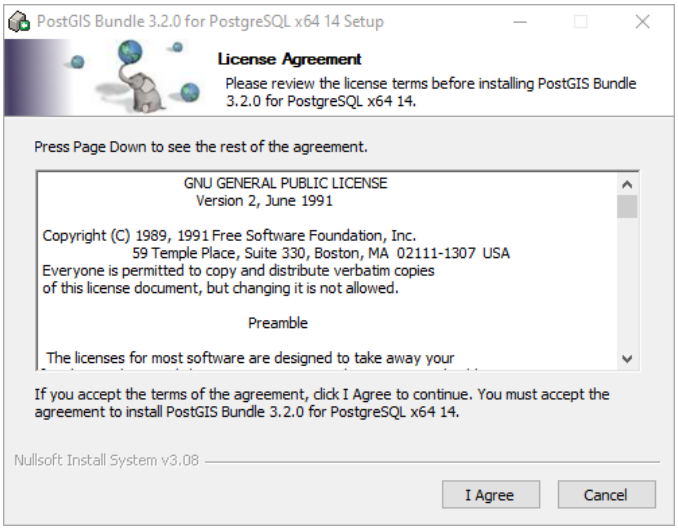
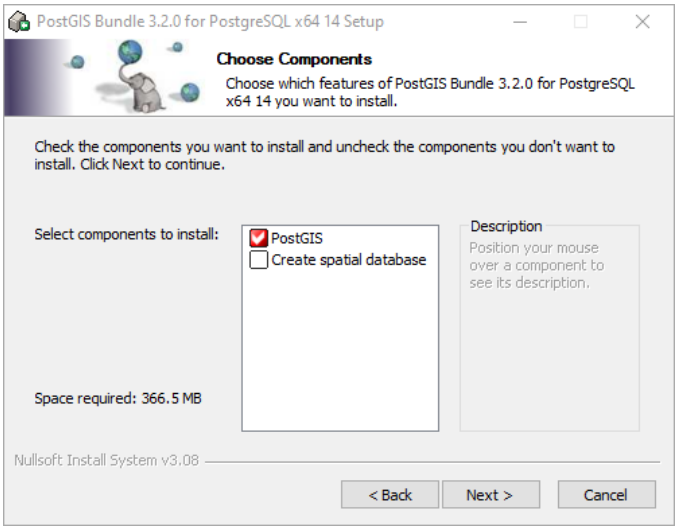
Installation step	Screen
Accept the default selected components. **Click** Next	
Accept the default data folder. **Click** Next	
Type in a password for the postgres user (the administrator for the database server). **Click** Next	

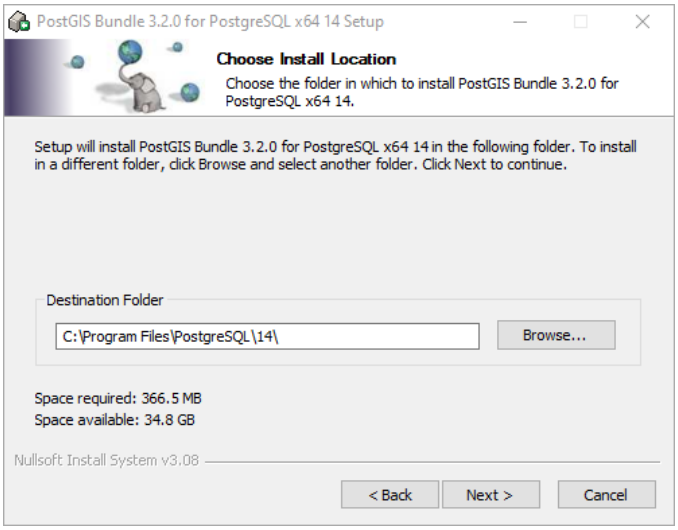
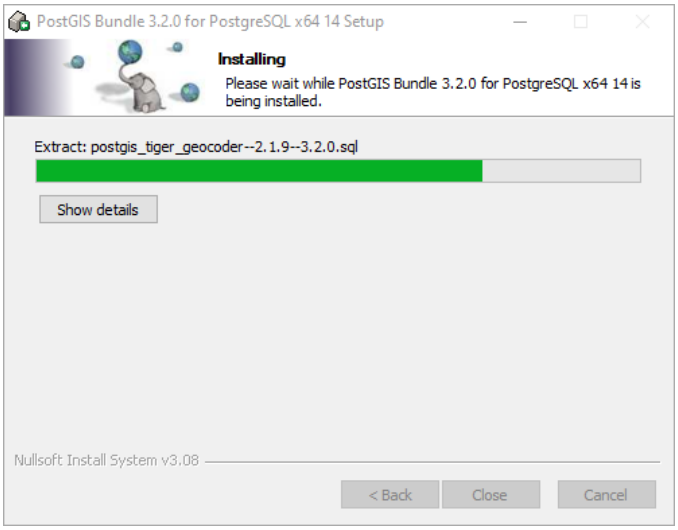
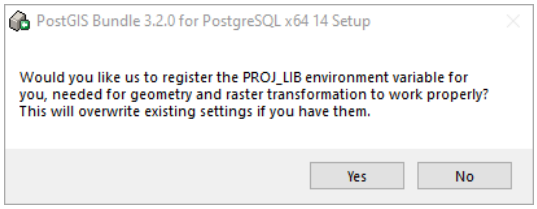
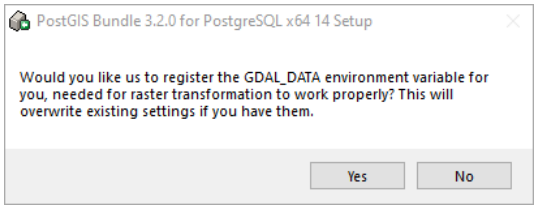
Installation step	Screen
Accept the default port number (5432) **Click** Next	
Leave the "Locale" as “Default Locale” **Click** Next	
Verify the installation summary. **Click** Next	

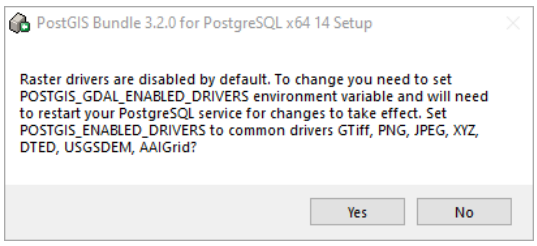
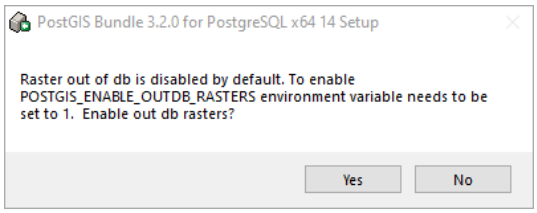
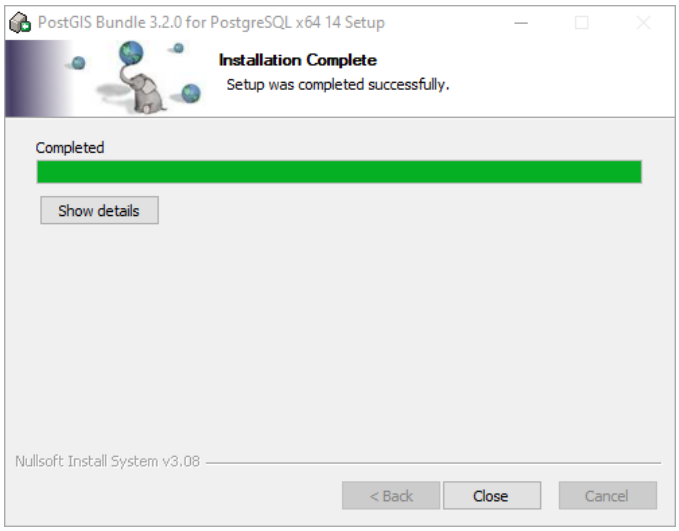
Installation step	Screen
Click Next	
Installing	
The database server installation has finished **Click** off the “Launch Stack Builder at exit?” option and then **click** Finish	

PostGIS Installation

The following table explains how to install PostGIS database extension. The postgis-bundle-pg14x64-setup-x.x.x-x.exe installer is located in the “Prerequisites” sub-folder of the MIKE+ installation.

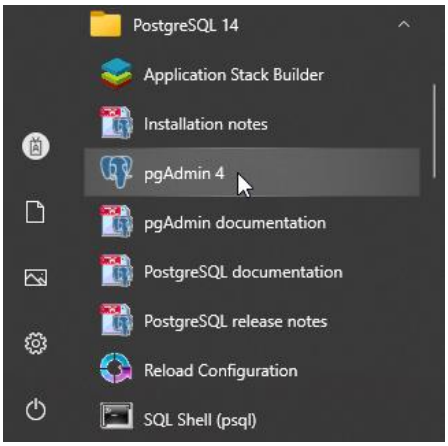
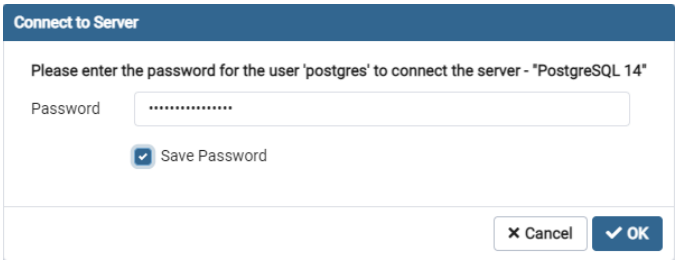
Installation step	Screen
Run the PostGIS installation program (e.g. postgis-bundle-pg14x64-setup-x.x.x-x.exe)	
Start of installation **Click** I Agree	
Leave “Create spatial database” unchecked. **Click** Next	

Installation step	Screen
Accept the default folder. **Click** Next	
Installing	
Click Yes to register the PROJ_LIB and GDAL_DATA environment variables	 

Installation step	Screen
Click Yes	
Click Yes	
The installation has finished **Click** Close	

APPENDIX B: Advanced PostgreSQL Database management tool

The PostgreSQL database password provided during installation can be stored in the database for easy access in the future. It is an optional configuration.

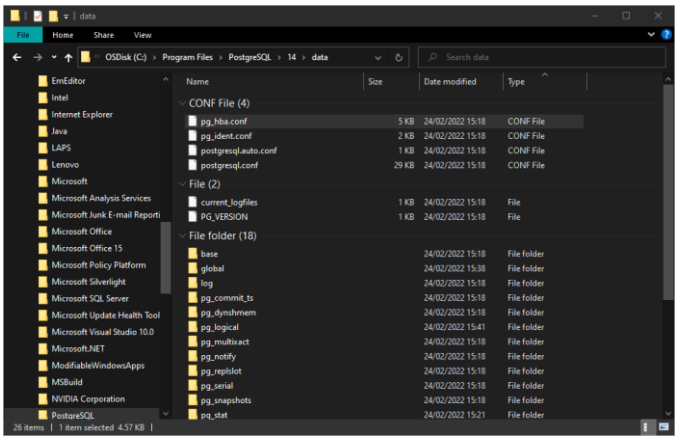
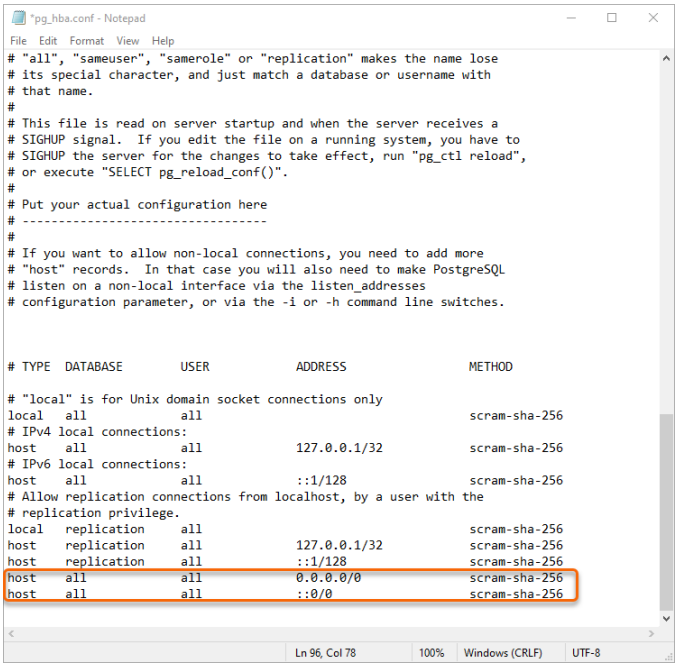
Installation step	Screen
Start the `pgAdmin 4` database administration tool from the Windows Start menu	
In the left panel, expand the list of servers	
It will request a password to connect to the database. If this window doesn't show up, **right click** the database server and select "Connect Server" **Provide** the password for the `postgres` user and tick on the "Save Password" option **Click** OK	

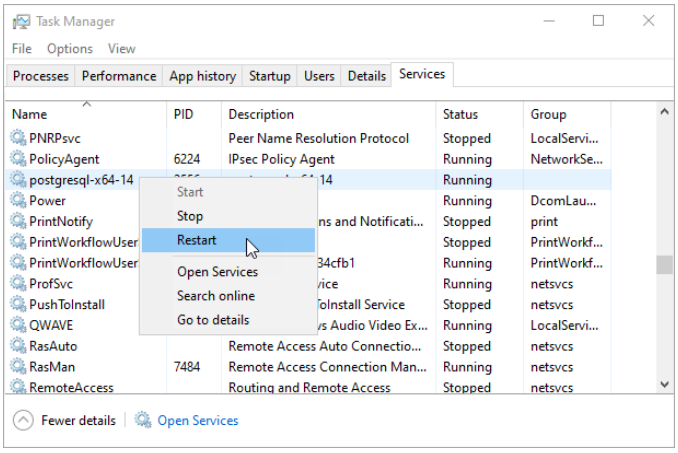
APPENDIX C: Configuring the PostgreSQL Database Server for remote access

IMPORTANT: This is only needed if the database server shall accept connection from remote computers.

The section describes how to configure the PostgreSQL database server for running in corporate mode.

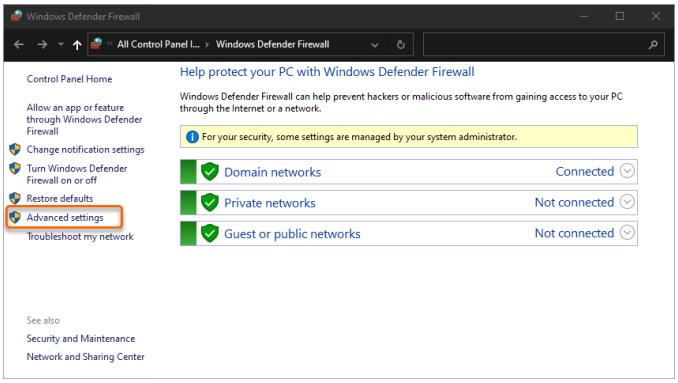
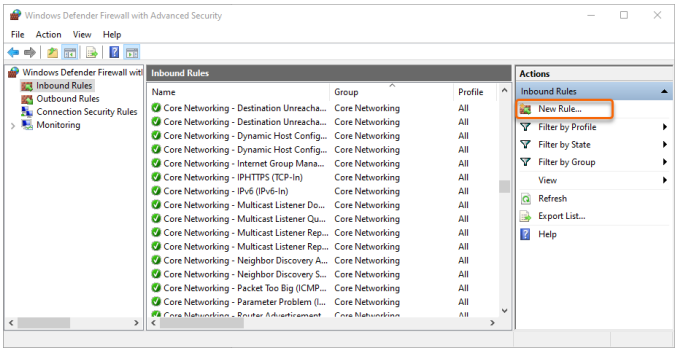
Start by enabling password save as shown in APPENDIX B.

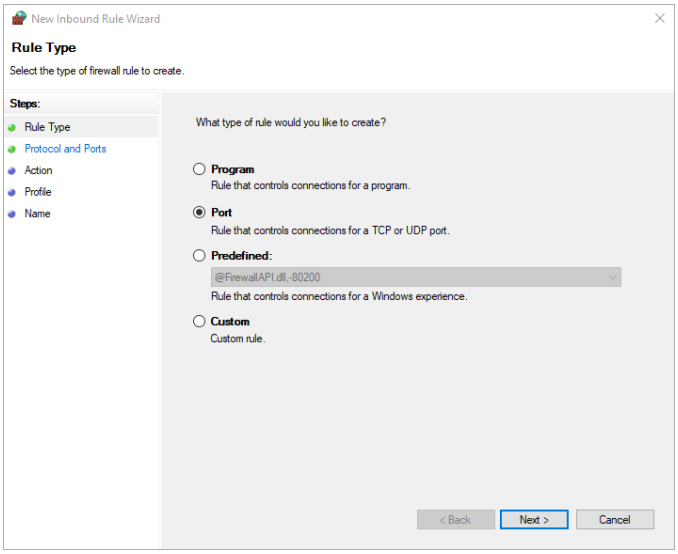
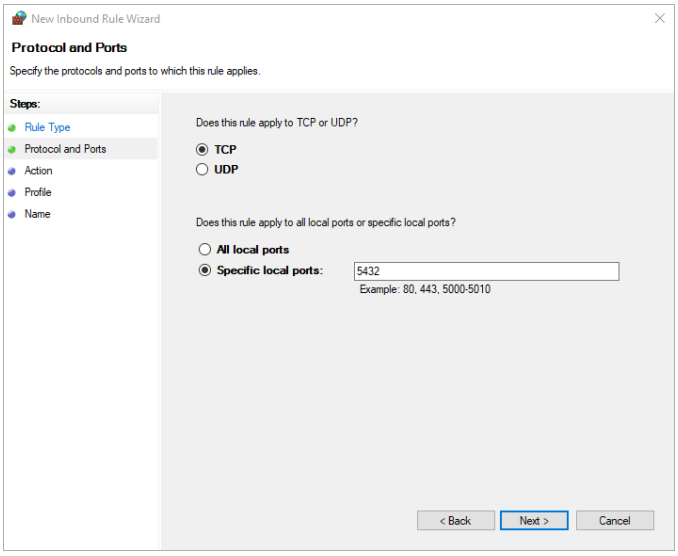
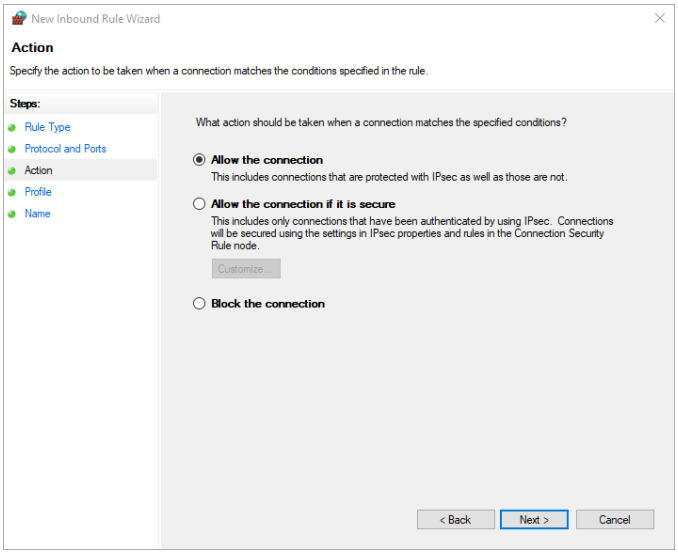
Installation step	Screen
Locate the pg_hba.conf file in the data folder (**C:\Program Files\PostgreSQL\14\data**) and open it in an editor e.g. Notepad	
Insert new line(s) to open up for all non-local connections to database as shown on the right Open for IPv4: **host all all 0.0.0.0/0 scram-sha-256** Open for IPv6: **host all all ::0/0 scram-sha-256** **Adjust spaces!** **Save** the configuration.	

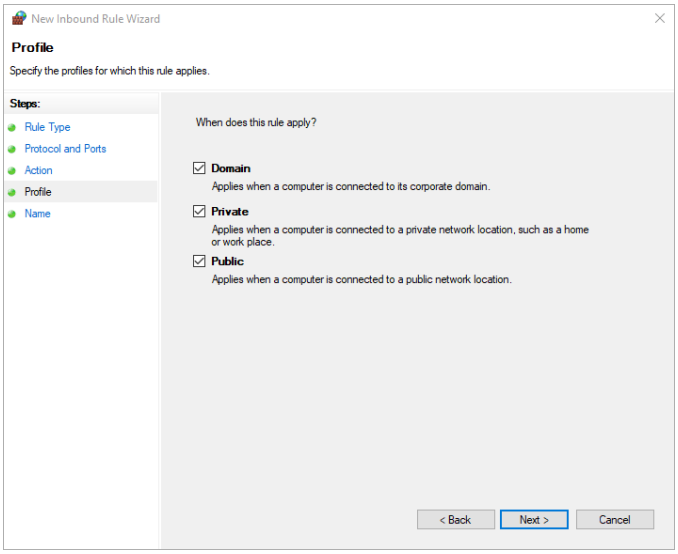
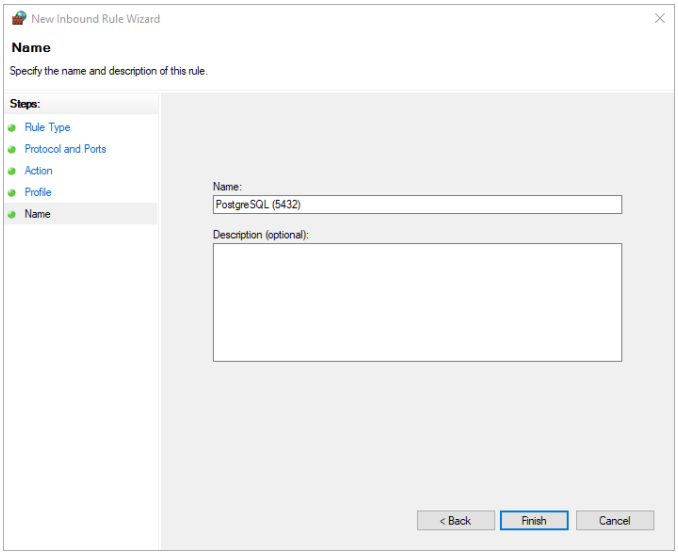
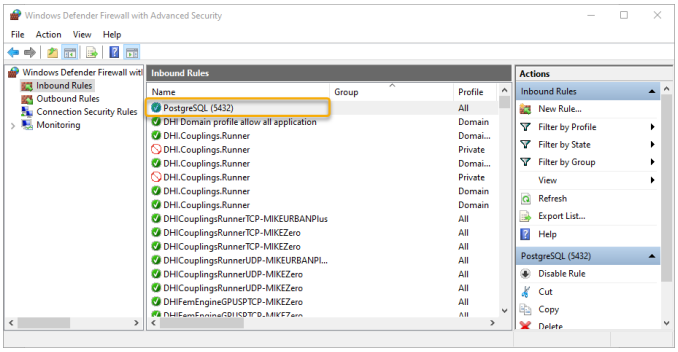
Installation step	Screen
Open the Task Manager **Restart** the PostgreSQL services to apply the update.	

Configuring the Windows Firewall for remote access to PostgreSQL

The section describes how to configure the Windows firewall for PostgreSQL running in enterprise mode.

Installation step	Screen
Open the Firewall applet in the Windows Control Panel **Click** Advanced Settings	
Select Inbound Rules **Click** New Rule in the Actions panel to the right	

Installation step	Screen
Select Port **Click** Next	
Select TCP, Specific local ports and **enter** 5432 (or the port number specified when installing PostgreSQL) **Click** Next	
Select Allow the connection **Click** Next	

Installation step	Screen
Click on for all profiles **Click** Next	
Specify a rule name – e.g. “PostgreSQL (5432)” – and a description **Click** Finish	
The new rule is now added to the list of Inbound rules	

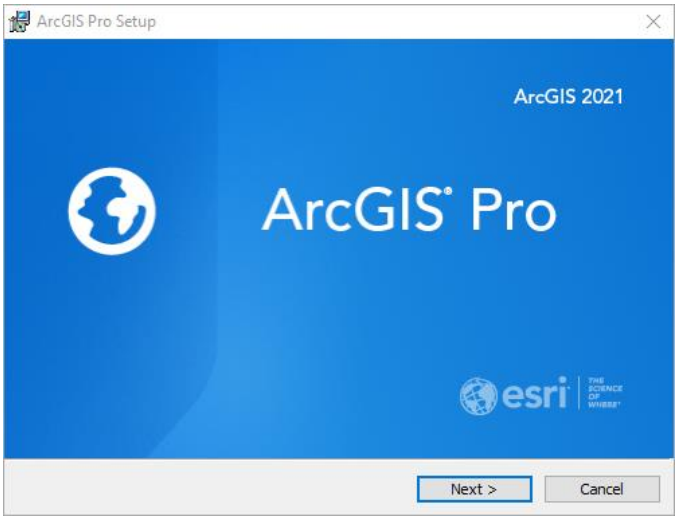
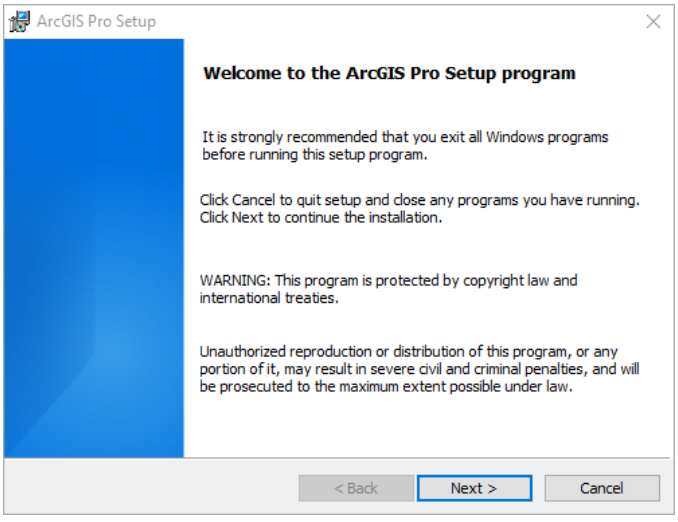
APPENDIX D: Install ArcGIS Pro

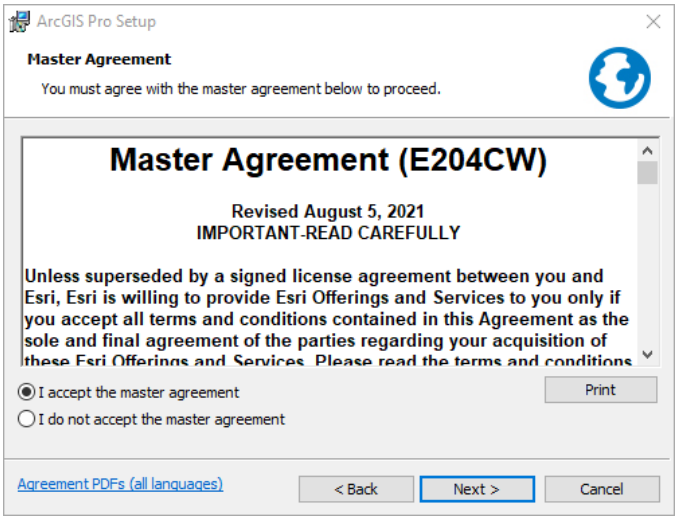
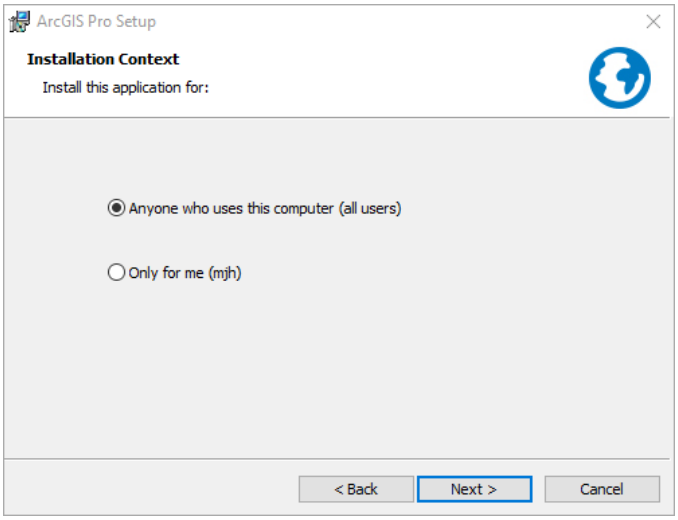
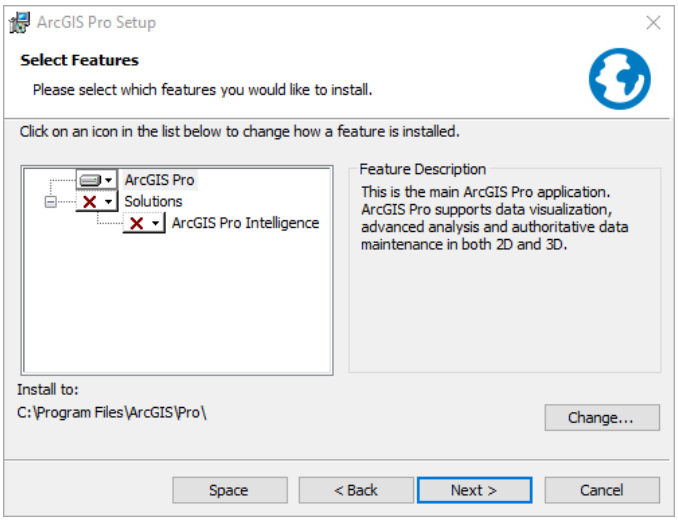
The ArcGIS Pro installation is carried out in two stages:

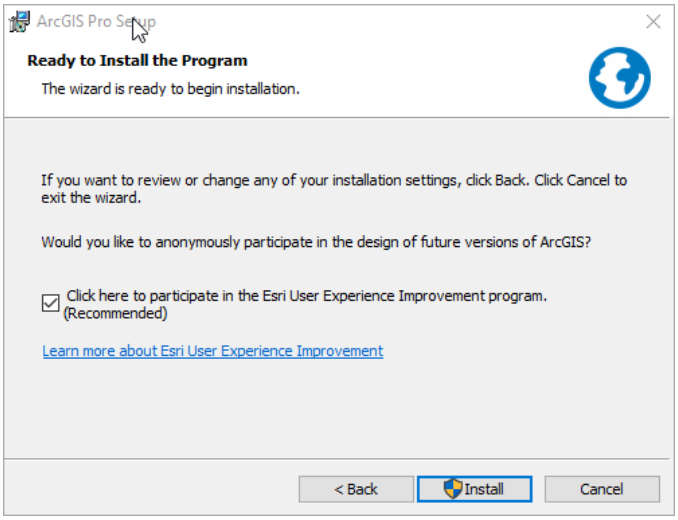
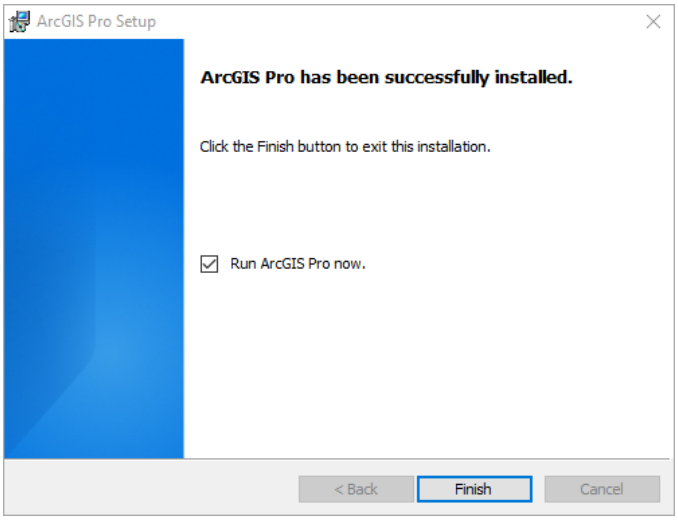
1. Installation of ArcGIS Pro.
2. Authorization of the license as named user (preferred option, applicable to single use as well as concurrent use licenses), or Concurrent license using EFL code or local license.

ArcGIS Pro Installation

The following table explains how to install ArcGIS Pro. The ArcGISPro.msi installer is located in the “Prerequisites” sub-folder of the MIKE+ installation.

Installation step	Screen
Run the *ArcGISPro.msi* program file from the installation media/download folder, in the ‘ArcGIS Pro’ folder. **Click** Next	
Click Next	

Installation step	Screen
Select I accept the master agreement **Click** Next	
Select Anyone who uses this computer (all users) **Click** Next	
Click Next	

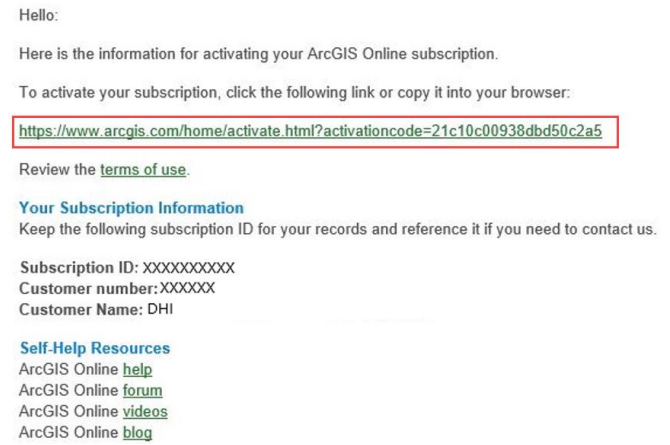
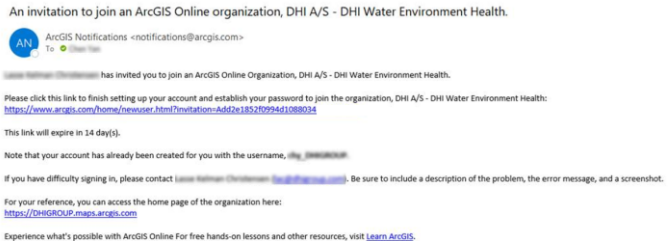
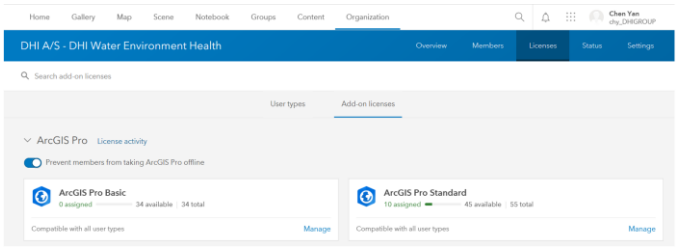
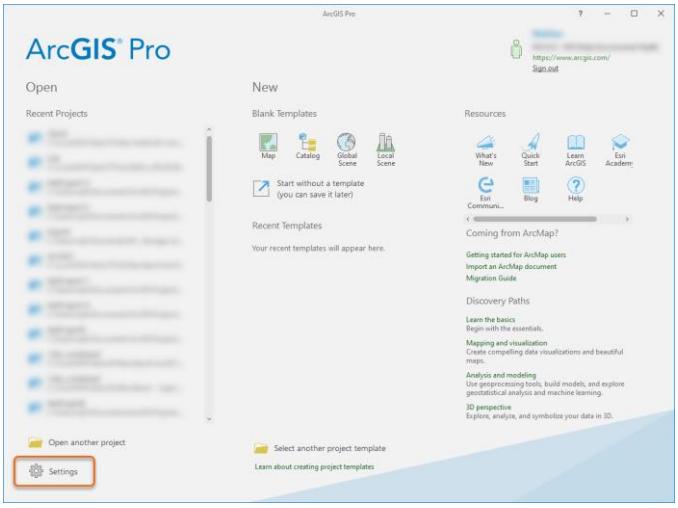
Installation step	Screen
Click Install	
Click Finish	

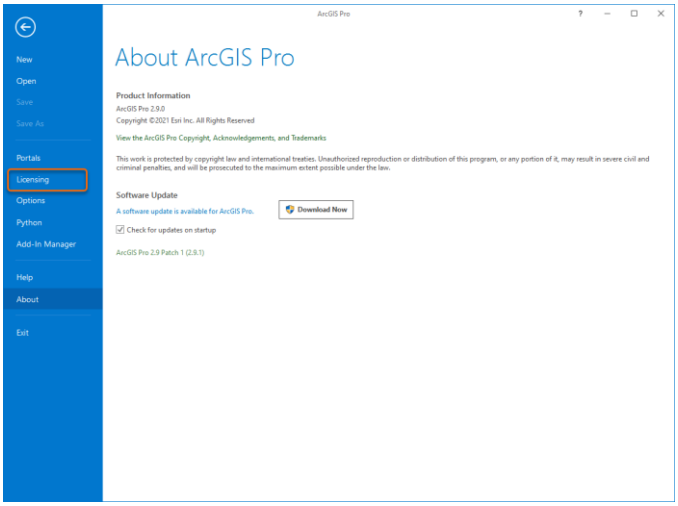
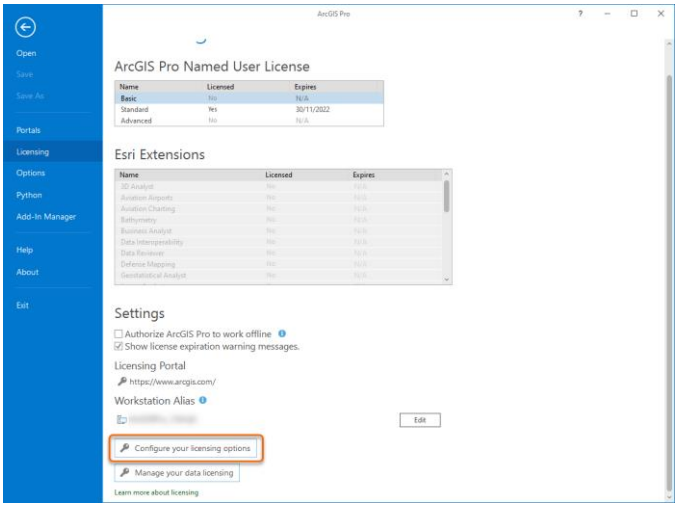
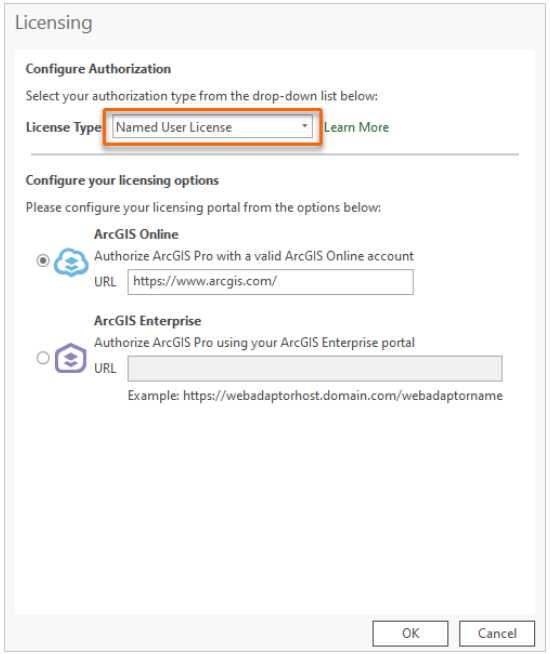
Authorization with a named user license

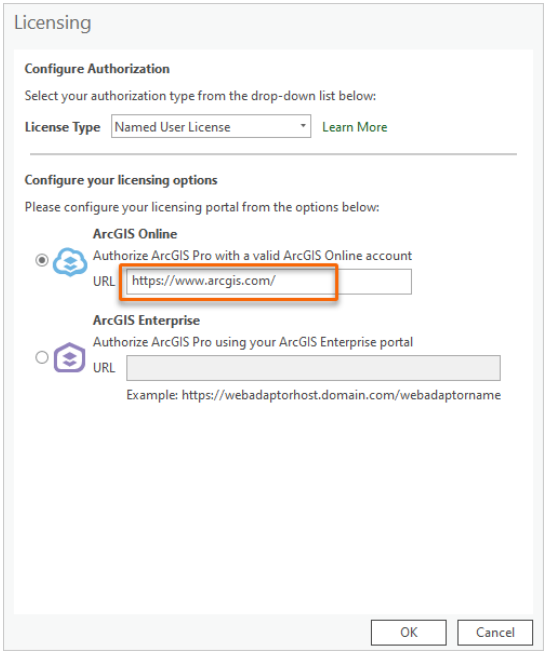
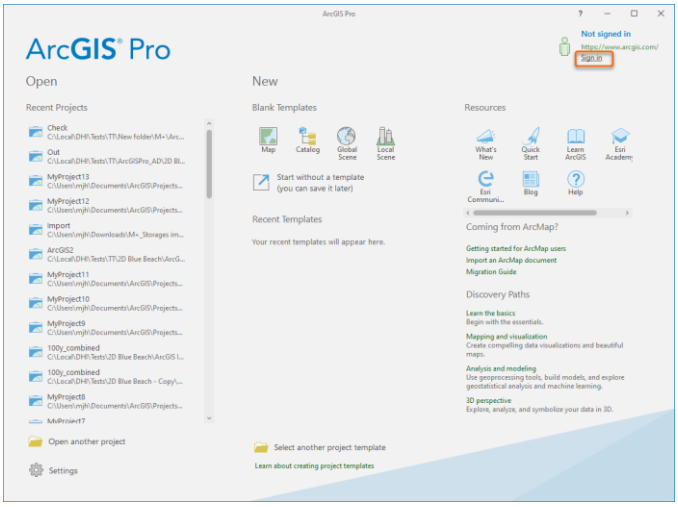
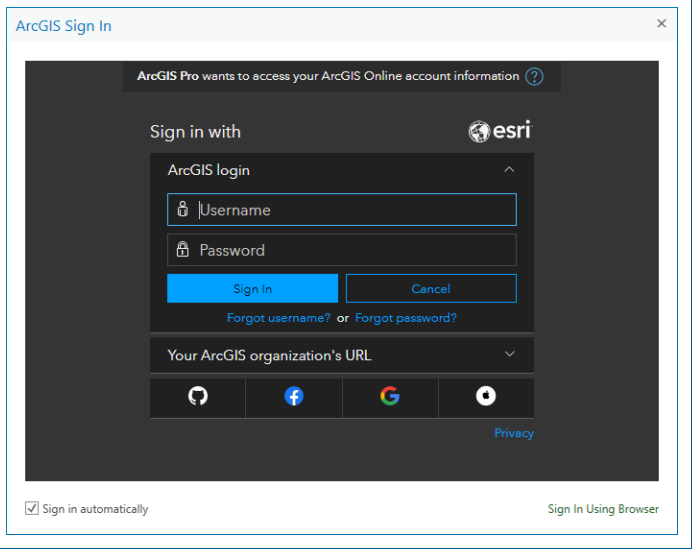
The named license (single use as well as concurrent use) provides an easy procedure for authorization and no physical license server is needed. If you have a named user license of ArcGIS Pro software, please follow these instructions to authorize the product.

To authorize a named user license, you must have received an activation e-mail. The first user in your organization activating the link will be assigned as ‘company admin’. The activation link will lead the user to create an online portal where ArcGIS Pro licensing, adding / removing users and sharing projects / maps based on the cloud solution can be done.

To proceed with the authorization, make sure you have the activation e-mail ready and you are connected to the Internet.

Installation step	Screen
Click on the activation link and follow the indications to create the Online portal for your organization To explore the functionality of ArcGIS online, click on 'Self-Help Resources'	
The first user clicking on the activation mail will be assigned as company admin automatically. The company admin then invites members to join the online portal as well as assigning ArcGIS Pro license. The invitation letter to new member must be activated within 14 days.	
To assign ArcGIS Pro license to existing members, click on the tab 'License' \ 'Manage'. You can follow the video for demonstration basics on ArcGIS online from here.	
Activate your named user license on the local installation of ArcGIS Pro: Start ArcGIS Pro **Click** Settings	

Installation step	Screen
Click Licensing	
Click Configure your licensing options	
Select the license type 'Named User License'	

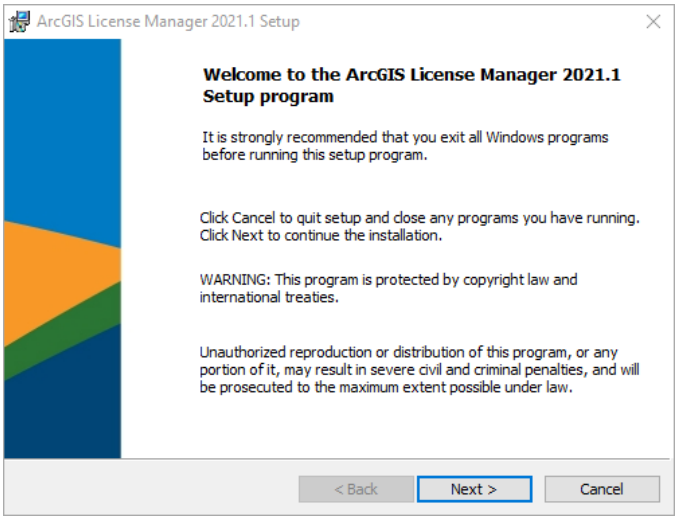
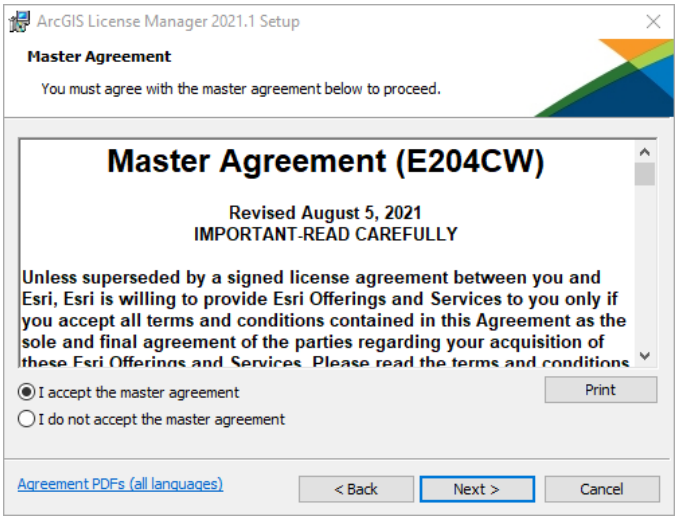
Installation step	Screen
Select the license portal ArcGIS Online, with URL https://www.arcgis.com/ **Click** OK	
Go back to the start page **Click** Sign in	
Enter your login and password **Click** Sign in	

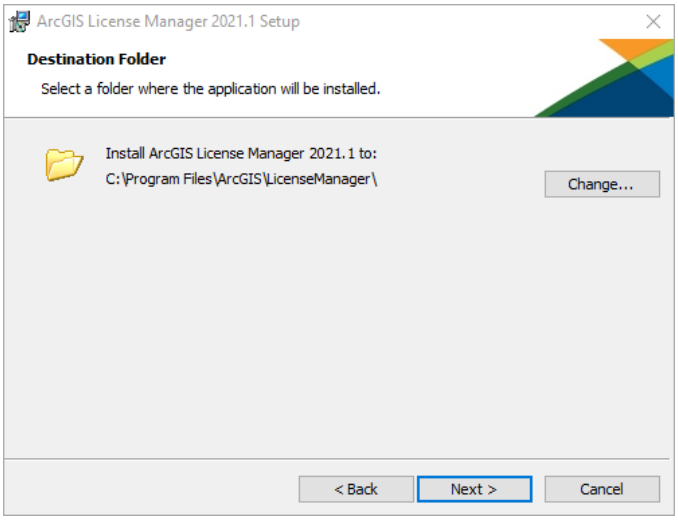
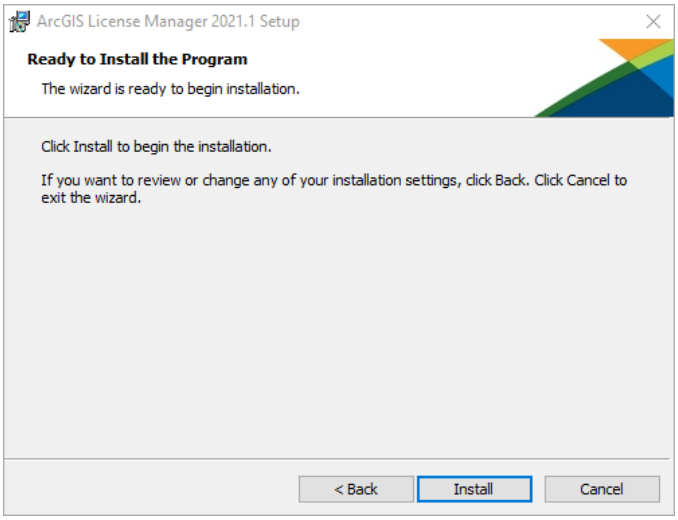
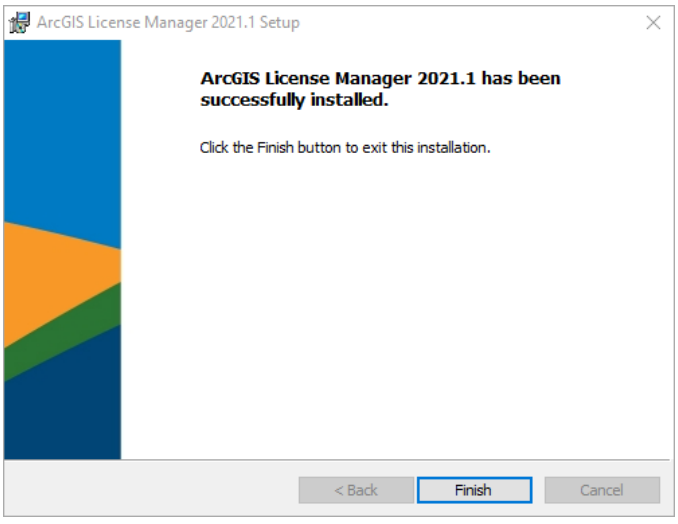
Authorization with a network license server and EFL code

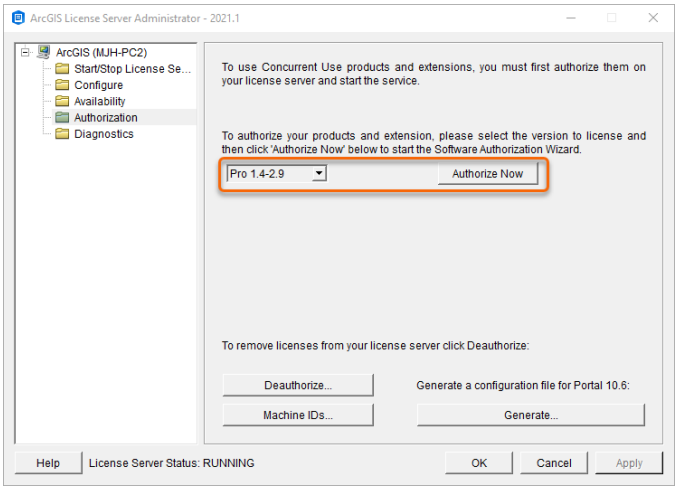
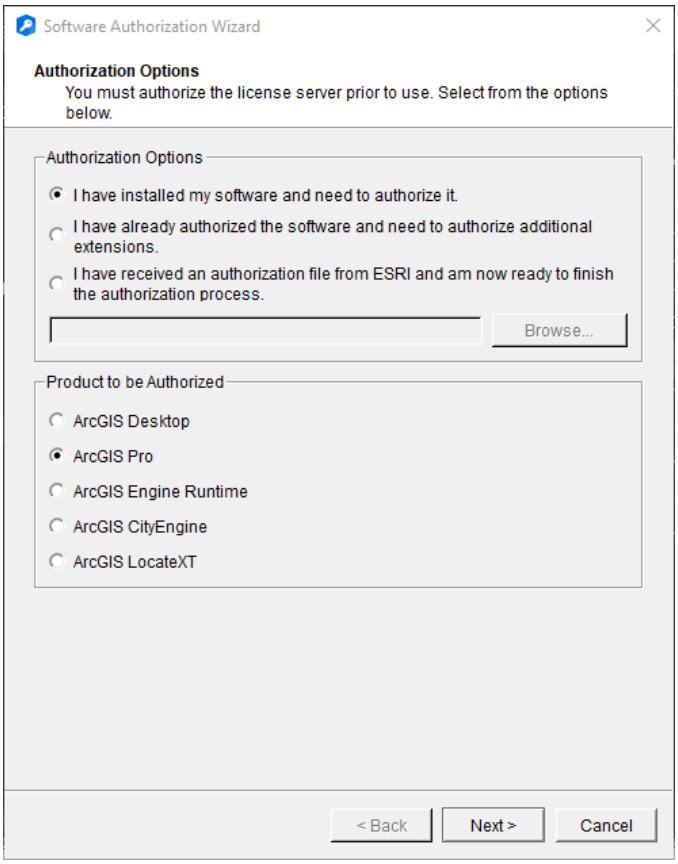
You have received a network license of ArcGIS Pro software with an ELF code (Concurrent use license, with format EFLXXXXXXXXX). Please follow these instructions to authorize the product.

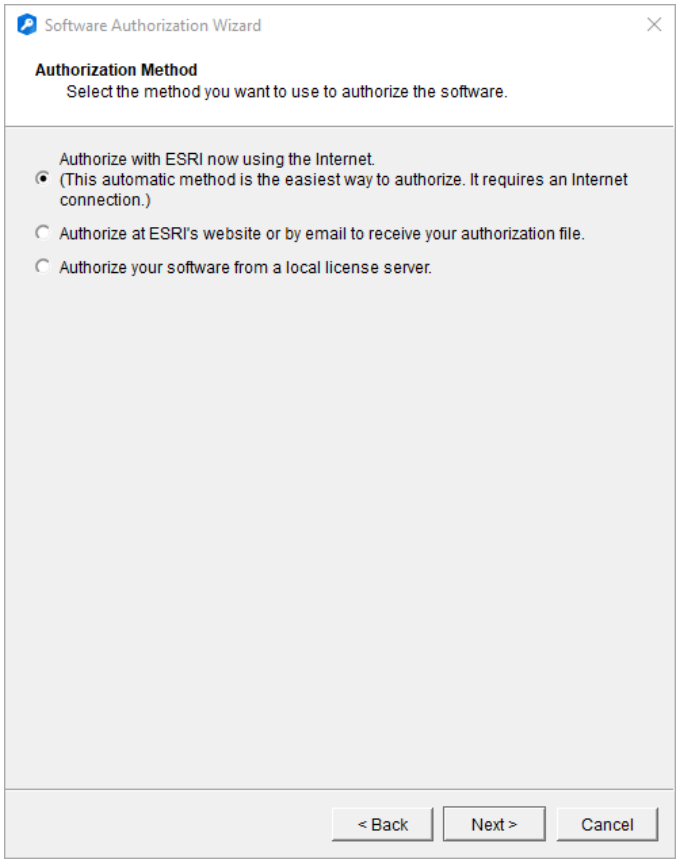
The ArcGIS License Manager in version 2021.1 or higher must be installed in order to make the licenses available. If you wish to use the software on your local PC without making it available in a network, you can install the license manager on the local PC. If you wish to use a setup where you use a local installation of ArcGIS Pro and acquire its license from a license server, you can install it on a server in your local network.

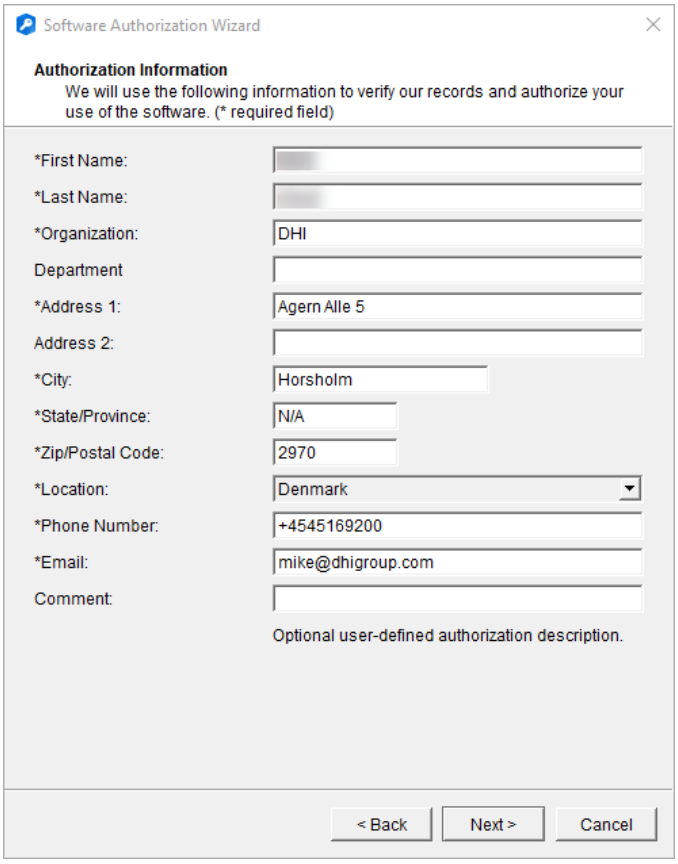
The corresponding installer is located in the “Prerequisites” sub-folder of the MIKE+ installation, under the folder ArcGIS License Manager 20XX.X. If you already have an older version installed, please install the newer version, then the older version will be overwritten. Detailed info can be found here: https://pro.arcgis.com/en/pro-app/get-started/authorize-arcgis-pro-with-concurrent-use-licenses.htm

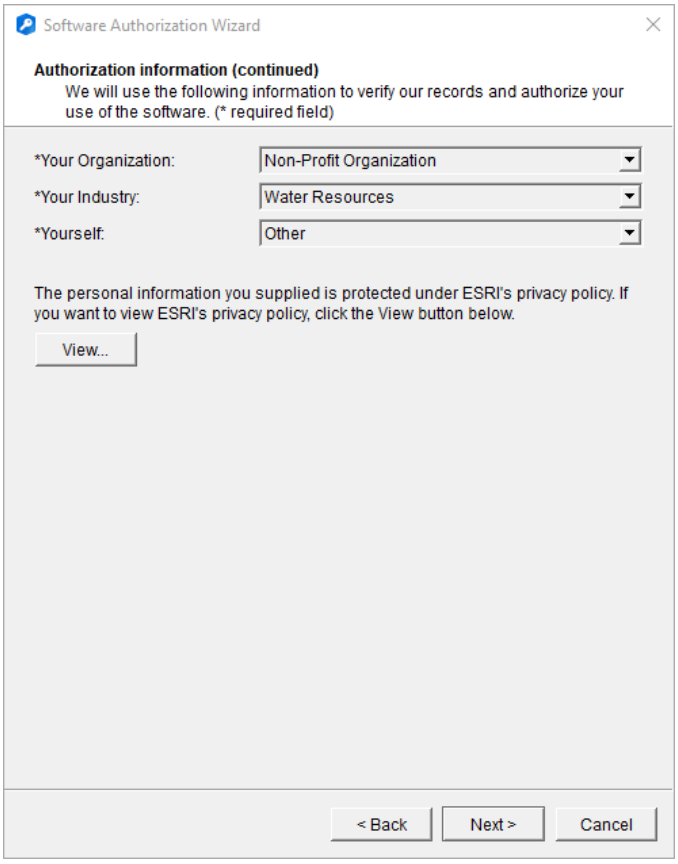
Installation step	Screen
Run the *Setup.exe* program file from the installation media/download folder, in the ‘ArcGIS License Manager 20XX.X’ folder. **Click** Next	
Select I accept the master agreement **Click** Next	

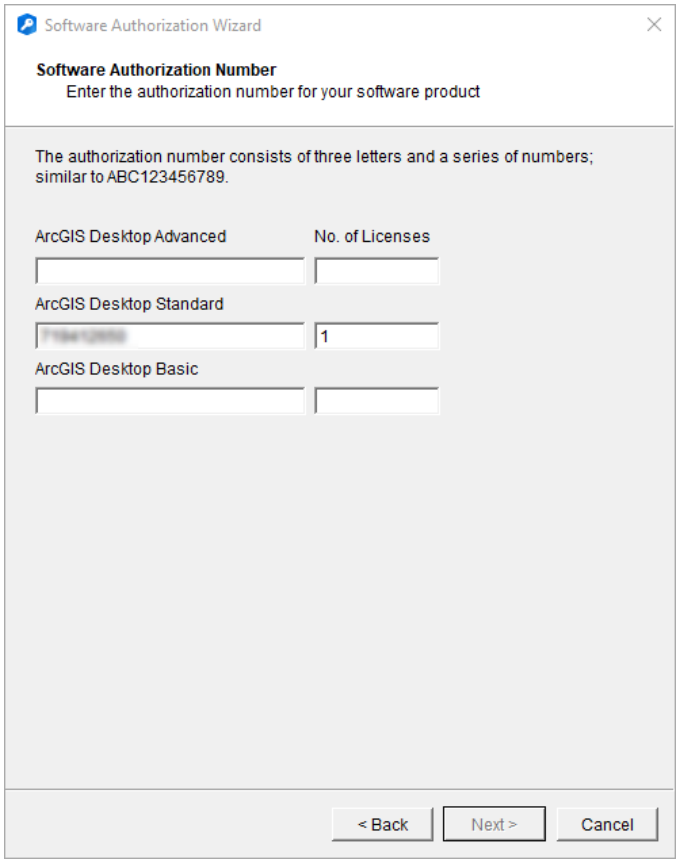
Installation step	Screen
Click Next	
Click Install The process may take several minutes	
Click Finish	

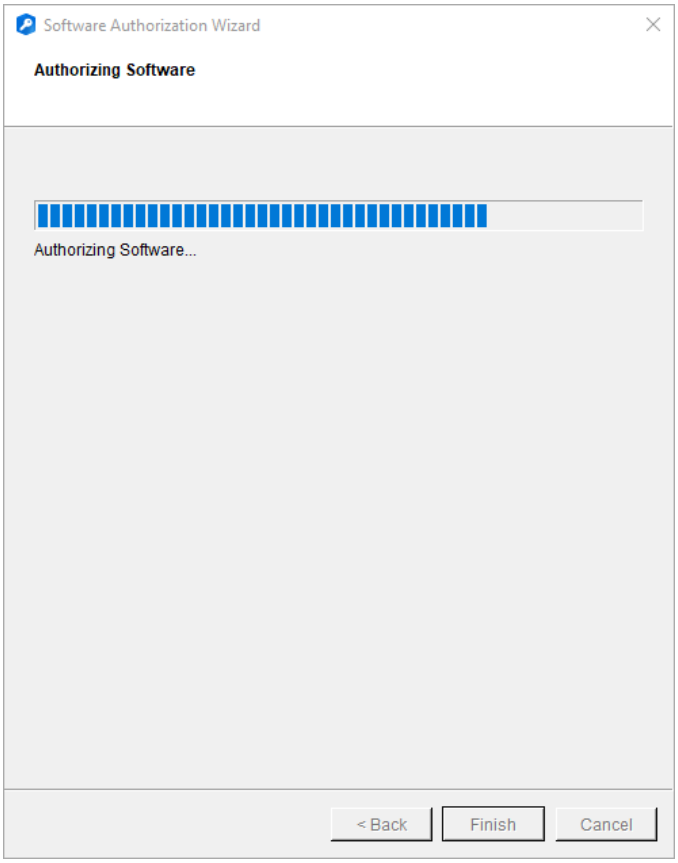
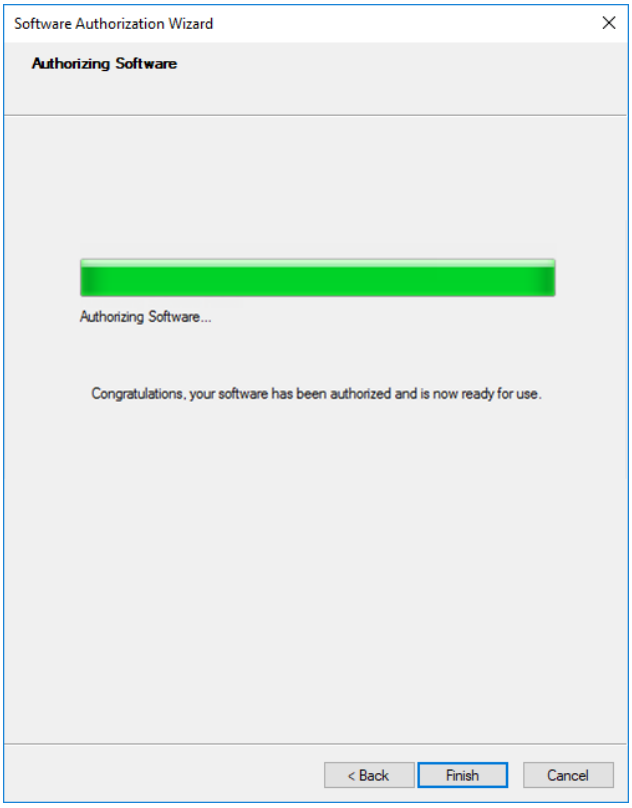
Installation step	Screen
Select the version: Pro X.X-X.X **Click** Authorize now	
Select 'I have installed my software and need to authorize it' **Select** the product ArcGIS Pro **Click** Next	

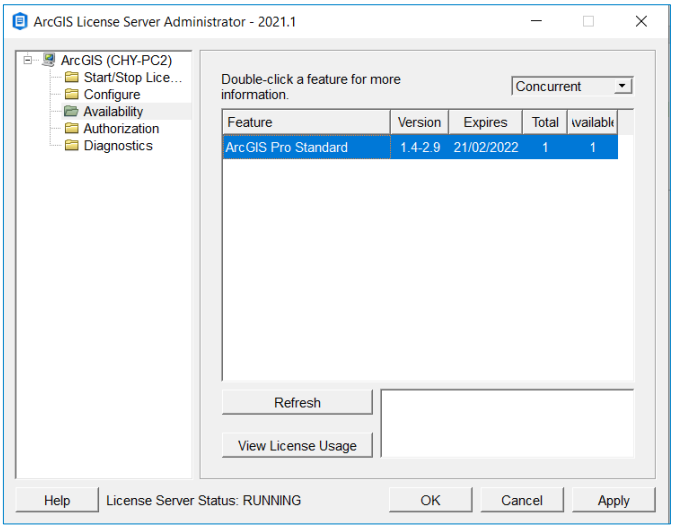
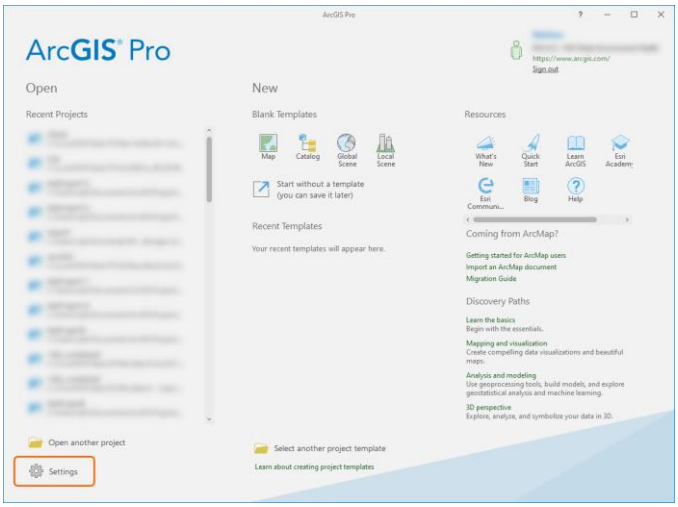
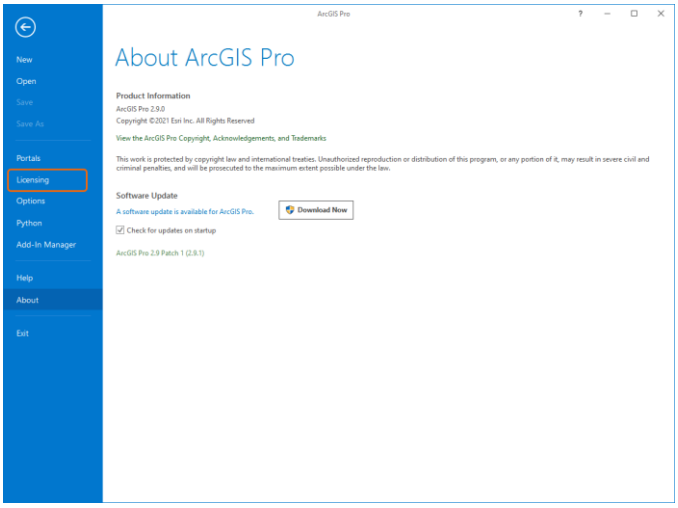
Installation step	Screen
Select this option **Click** Next	

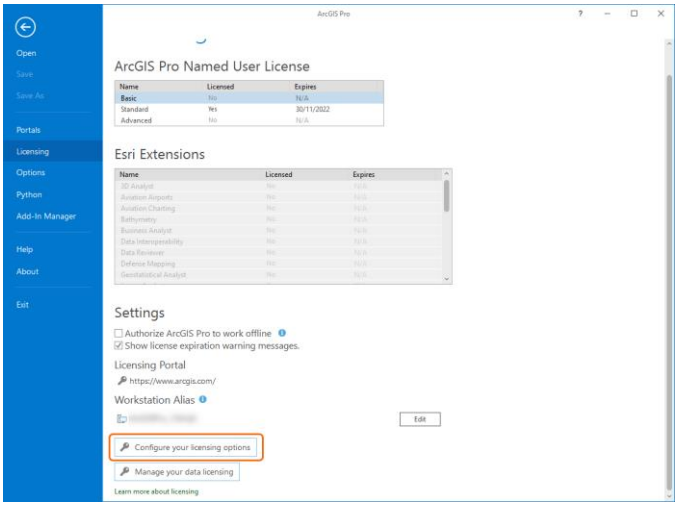
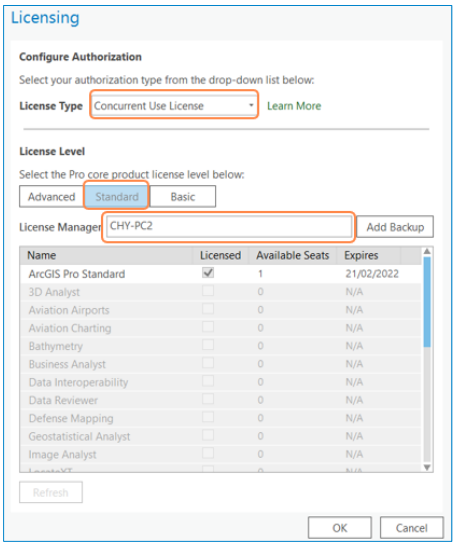
Installation step	Screen
Fill in the necessary information **Click** Next	

Installation step	Screen
Fill in the necessary information **Click** Next	

Installation step	Screen
Fill in your ArcGIS Authorization code starting with EFL and select the number of seats you would like to authorize (1 seat per purchased license) If you have already authorized some seats earlier, they cannot be authorized again unless you have de-authorized them **Click** Next	

Installation step	Screen
The authorization process may take a couple of minutes	
Click Finish	

Installation step	Screen
Select Availability from the menu, and you will see which licenses you have available **Click** OK	
Start ArcGIS Pro from the computer where you wish to run MIKE+ and configure ArcGIS Pro license **Click** Settings	
Click Licensing	

Installation step	Screen
Click Configure your licensing options	
Select the appropriate settings and specify the license manager's hostname / IP address / Port **Click** OK