

ADVANCE WORKSHOP INSTALLATION

INSTALLATION PROCEDURE



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Introduction

This guide documents the installation process of Advance Workshop on a new server. It can be used to perform new installations where everything is set up.

It can also be used for hardware migrations where a new server is set up with the application and then the database is transferred over.

Parts of this guide can also be used to guide version upgrade process, where a database backup is created, new version deployed and then the database is upgraded to the newer version.

Summary Checklist

Step	Required Action	Notes
1	VPN	Client IT department to provide connection details
2	Remote Desktop	Client IT department to provide connection details
3	SQL Server	Setup files needed, available from Microsoft. Client IT department to provide product key
4	SQL Server Management Studio	Setup files needed, available from Microsoft.
5	Graitec License Manager	Download from here. License key to be issued by Graitec.
6	Prerequisites	Software dependencies and prerequisites list provided by Graitec.
7	Advance Workshop Application	Provided by Graitec
8	Advance Workshop Database	Provided by Graitec. In case of a migration, a backup of the existing database will be used.
9	Creation of users	The default "Administrator" user account will be created by Graitec.

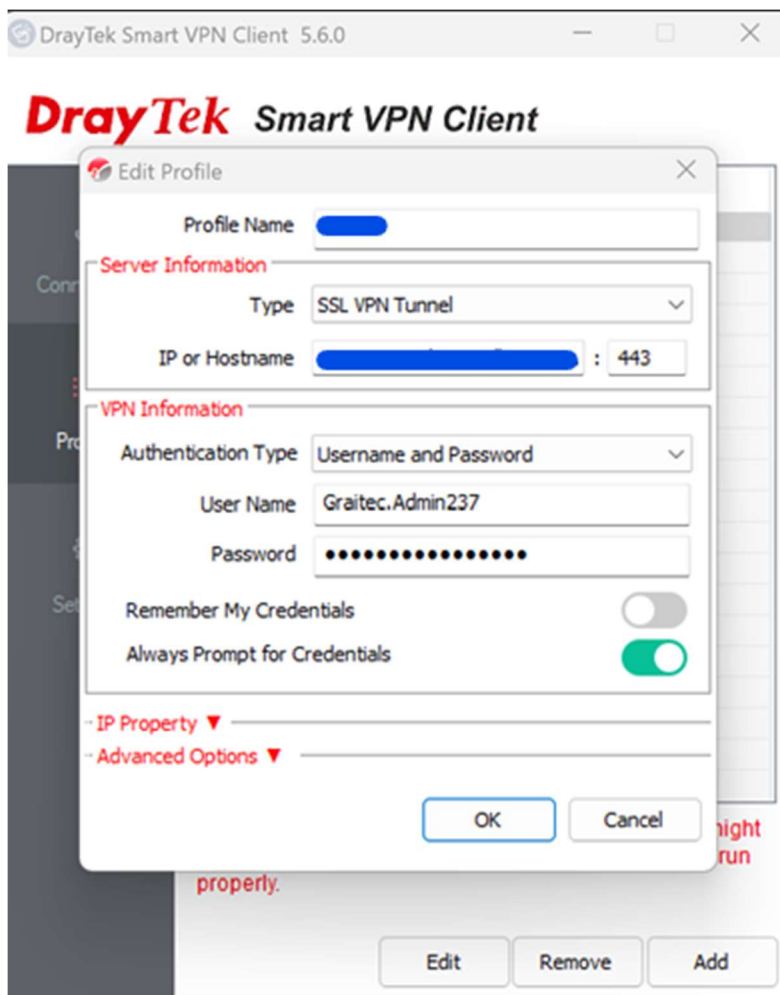
		Other user profiles will be created by the Customer's IT department.
--	--	--

Accessing the Server

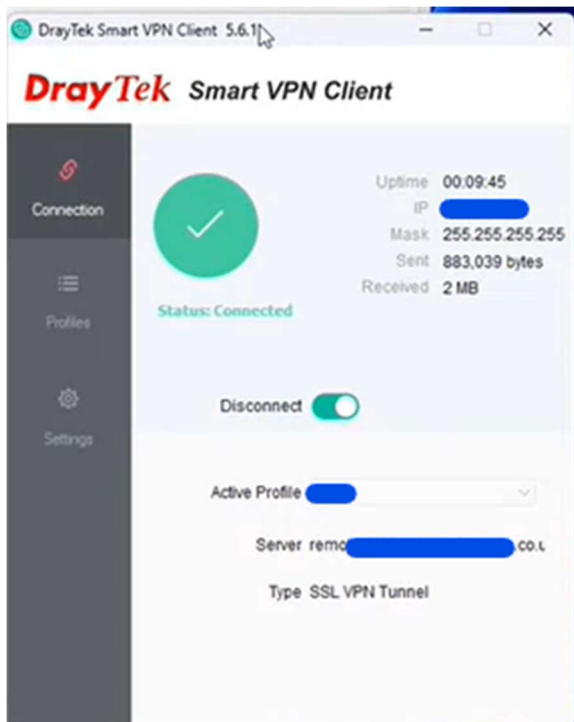
Configure Client VPN

Some clients may require VPN (Virtual Private Network) to be used when accessing their network.

In this example, the Customer's IT department have specified the VPN client and provided login details to be used. There are many VPN clients, and they all have similar interfaces allowing for the same functionality.

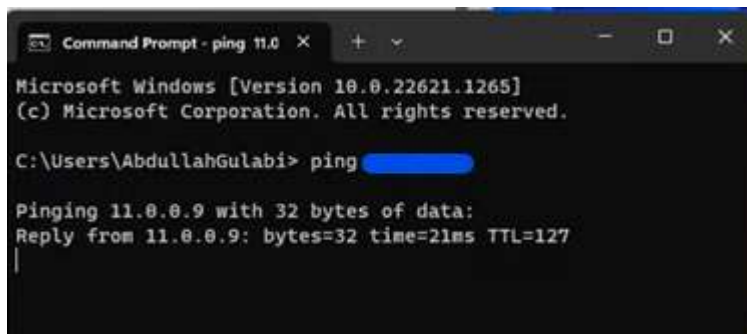


The VPN client provides confirmation once the connection is established.



This means we now have access to the Customer's private network through the internet. Since we are now virtually on the same network with the customer's server, we can test and see if we can ping the server.

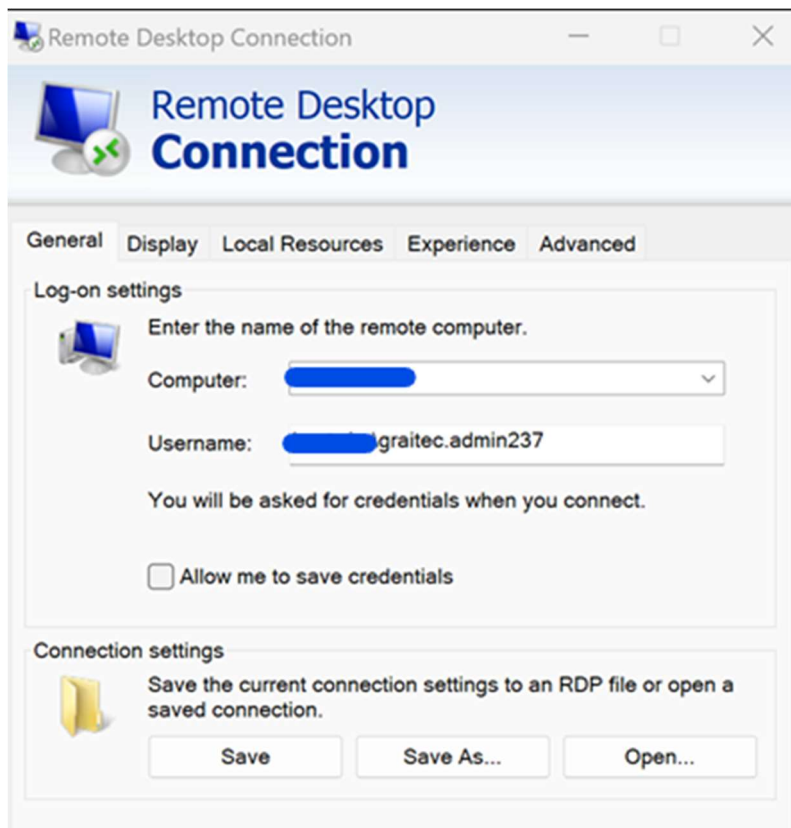
Launch the command prompt "cmd" and type in the command "ping" and the IP address of the server.



Screenshot above shows us we are indeed getting a response from the server, confirming our presence on the same private network as the server.

Establish Remote Connection to Client Server

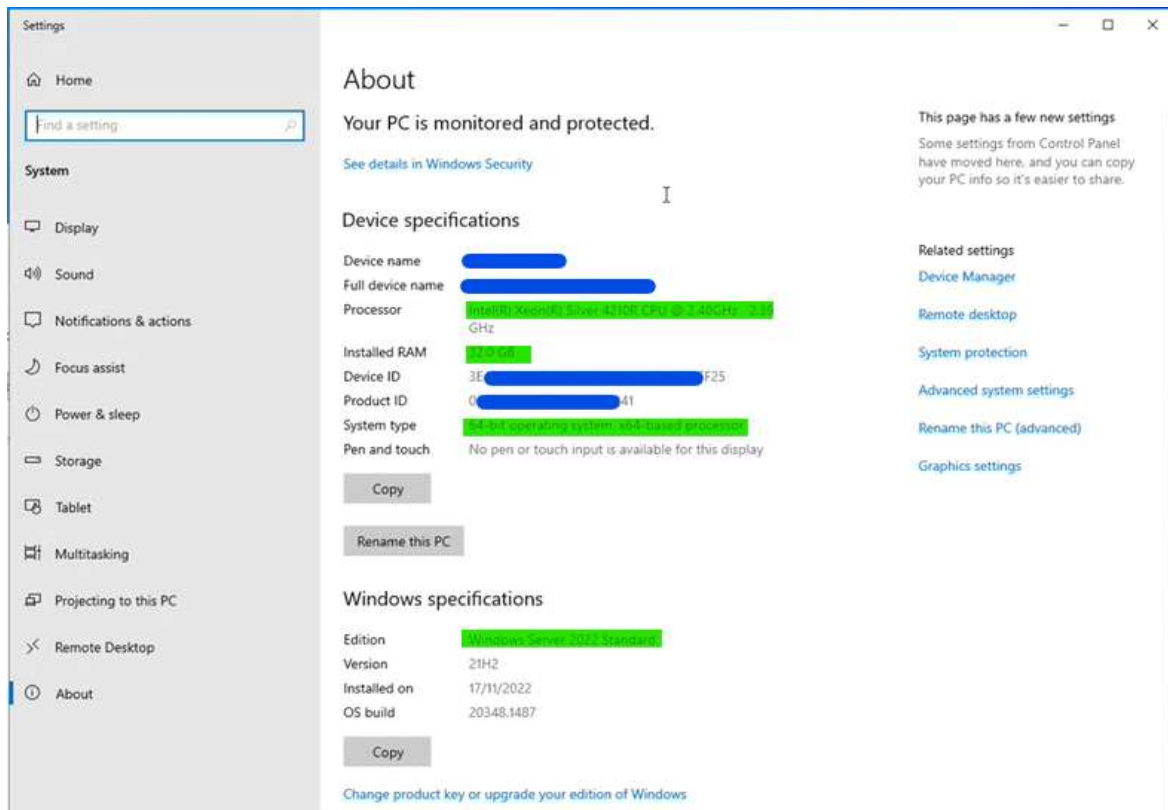
Remote Desktop Connection details onto the Customer's server provided by the Customer's IT department.



Verify (Hardware) Resource Requirements

Verify if the client server meets the hardware resource requirements for running Advance Workshop.

These requirements can be found on Graitec website => [aw-system-requirement-v2-en-1.pdf \(graitec.com\)](http://www.graitec.com/aw-system-requirement-v2-en-1.pdf)



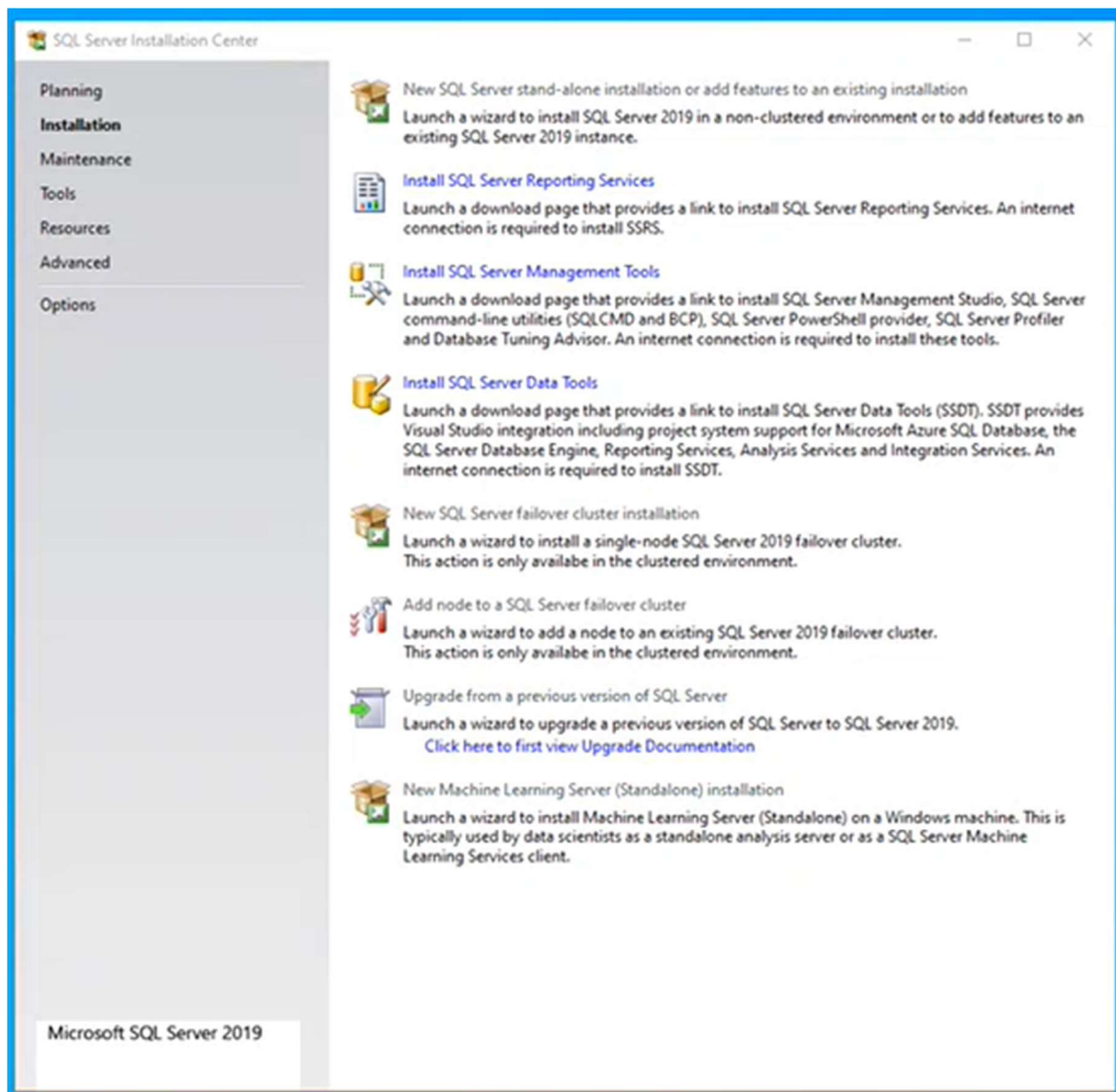
Once hardware requirement has been verified, we can now proceed to the installation, starting with the SQL Server installation.

Install SQL Server

Several versions of SQL Server can be used. This guide will cover SQL Server 2019 and SQL Server Express.

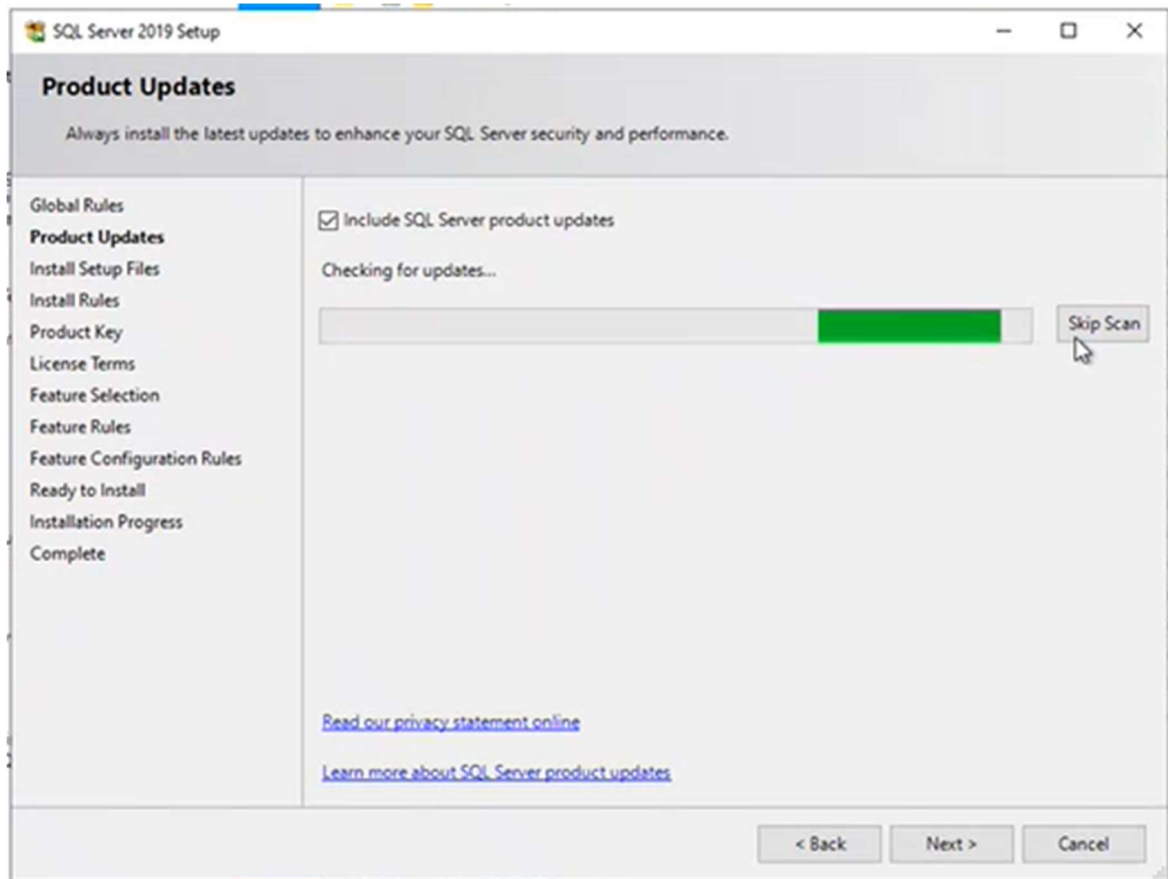
Installation with SQL Server 2019 Standard

In the SQL Server Installation Centre window, initiate a new installation with the first option “New SQL Server stand-alone installation...”

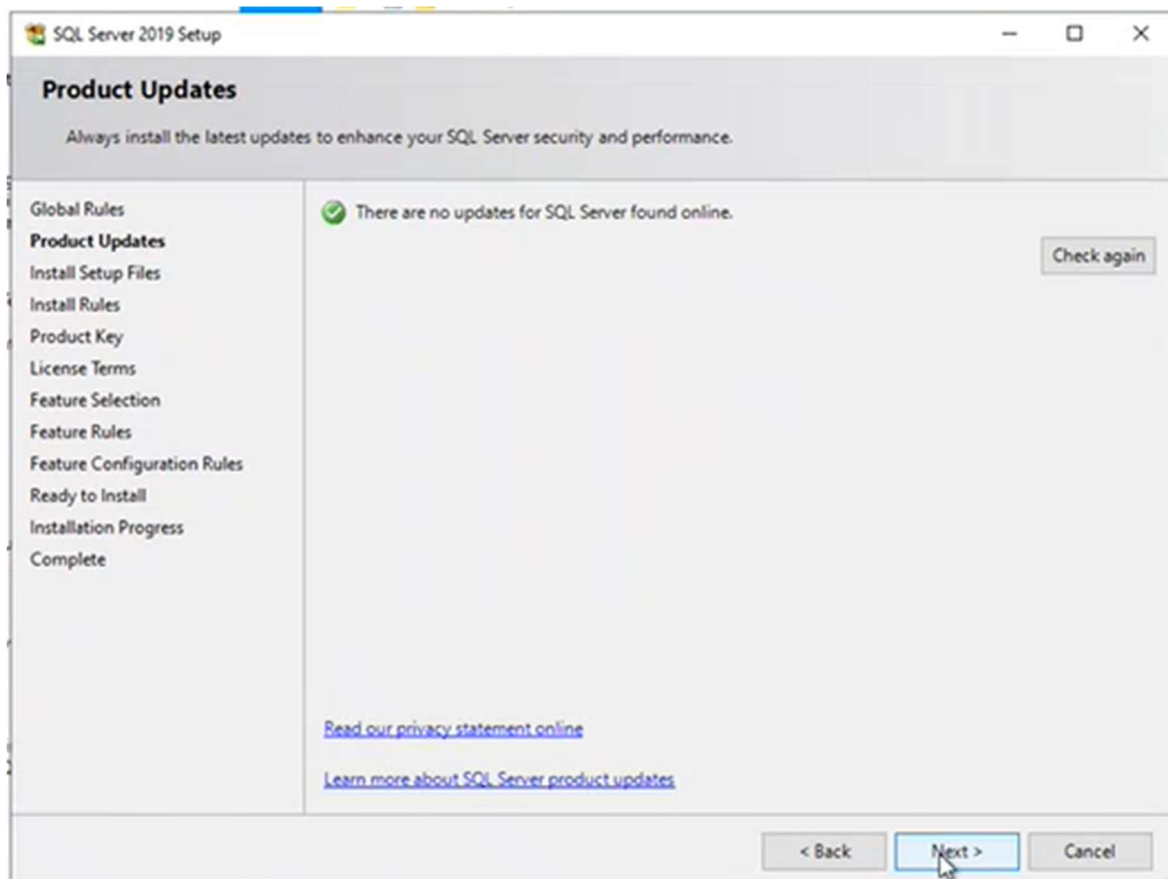


Product Updates

Installer will first check for any applicable updates.

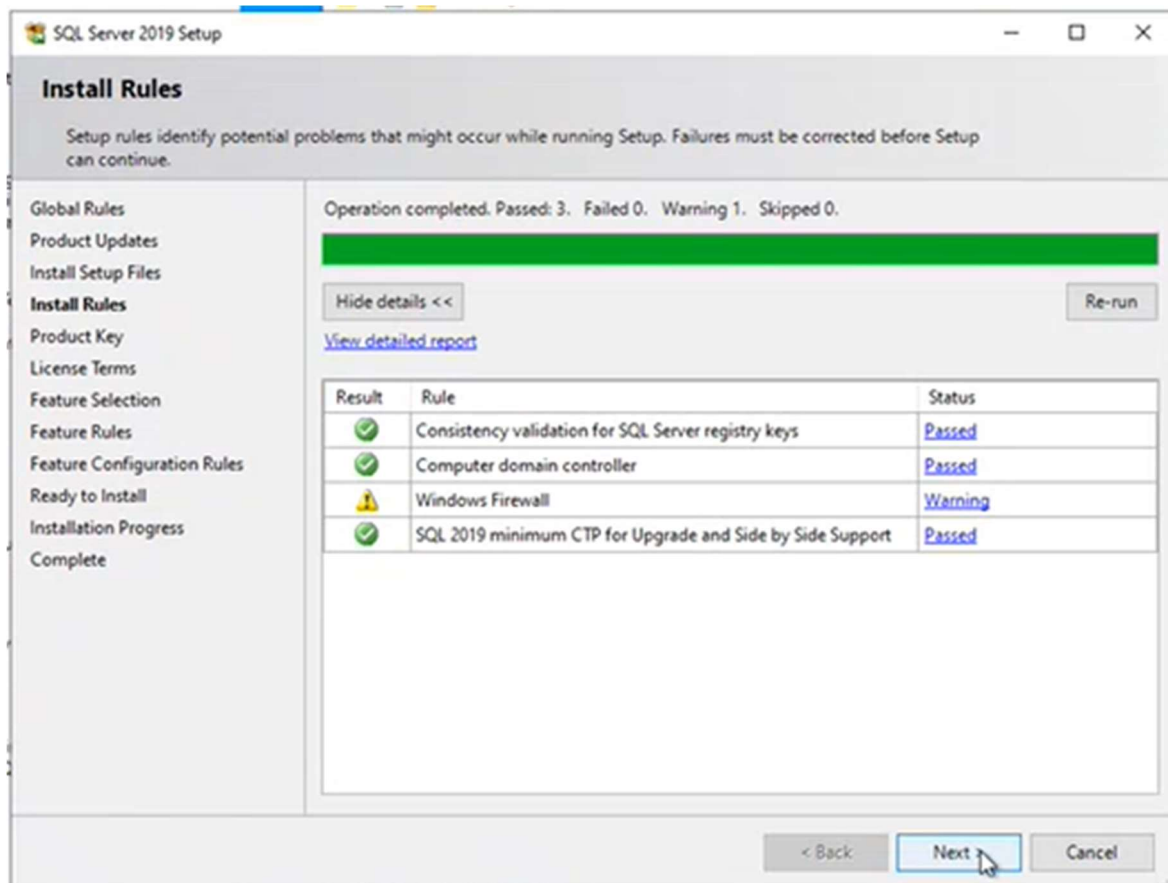


A confirmation message will appear once the check for updates is complete.



Proceed to the next step in the installation.

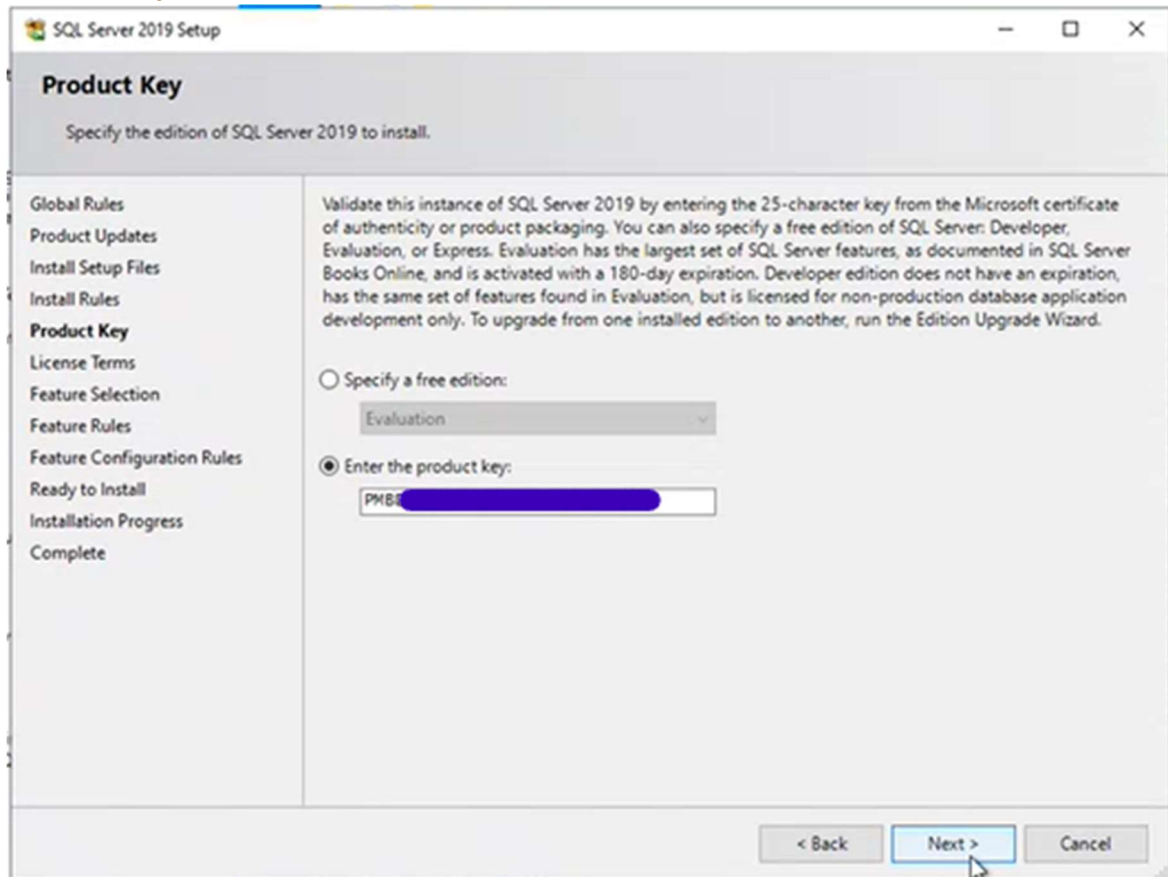
Install Rules



Firewall warning can be ignored at this stage, firewall configuration can be done at a later stage if required.

In this example, same server will be running both the SQL Server and the Advance Workshop application, eliminating any need for network transmission, therefore no need for firewall configuration.

Product Key

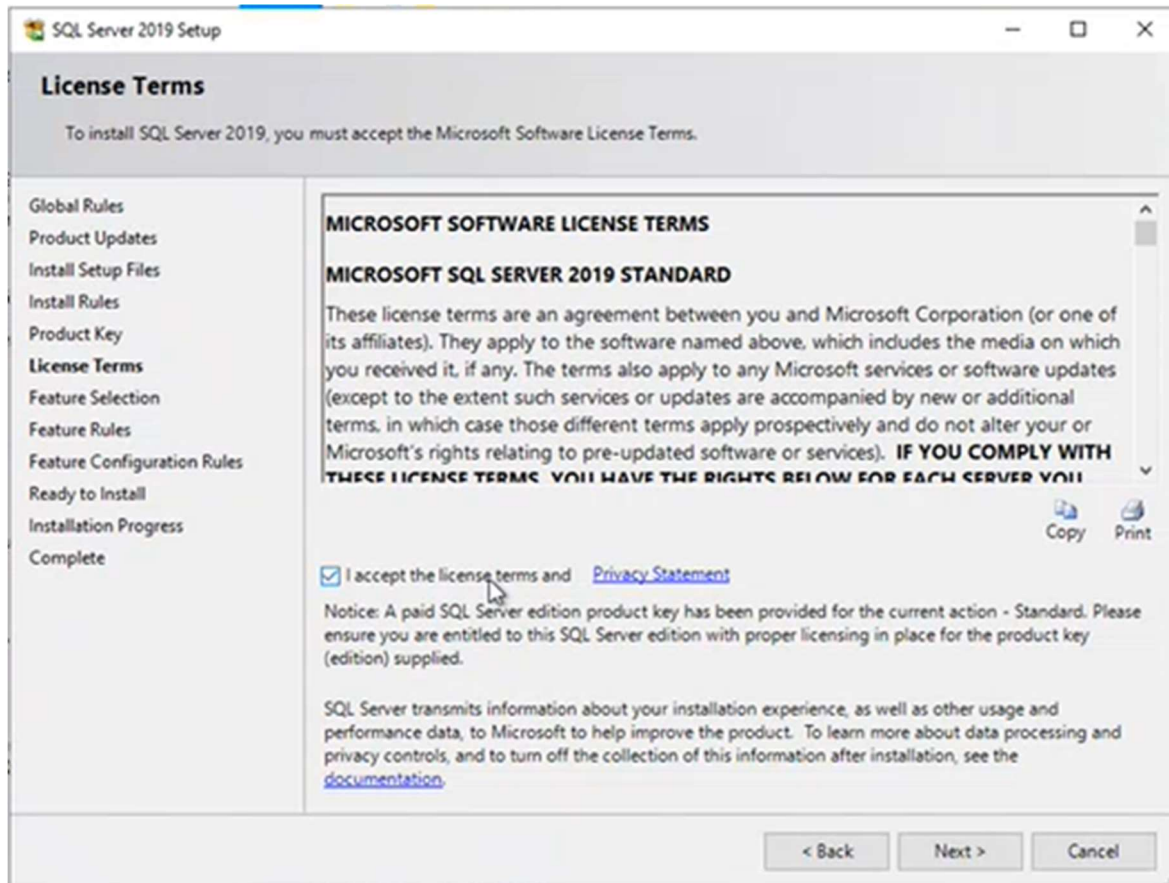


Enter product key and proceed to the next step in the installation.

SQL Server product key is the customer's responsibility, and their IT department will have provided this product key.

This is usually made available by the client's IT team as a text file on the server.

License Terms



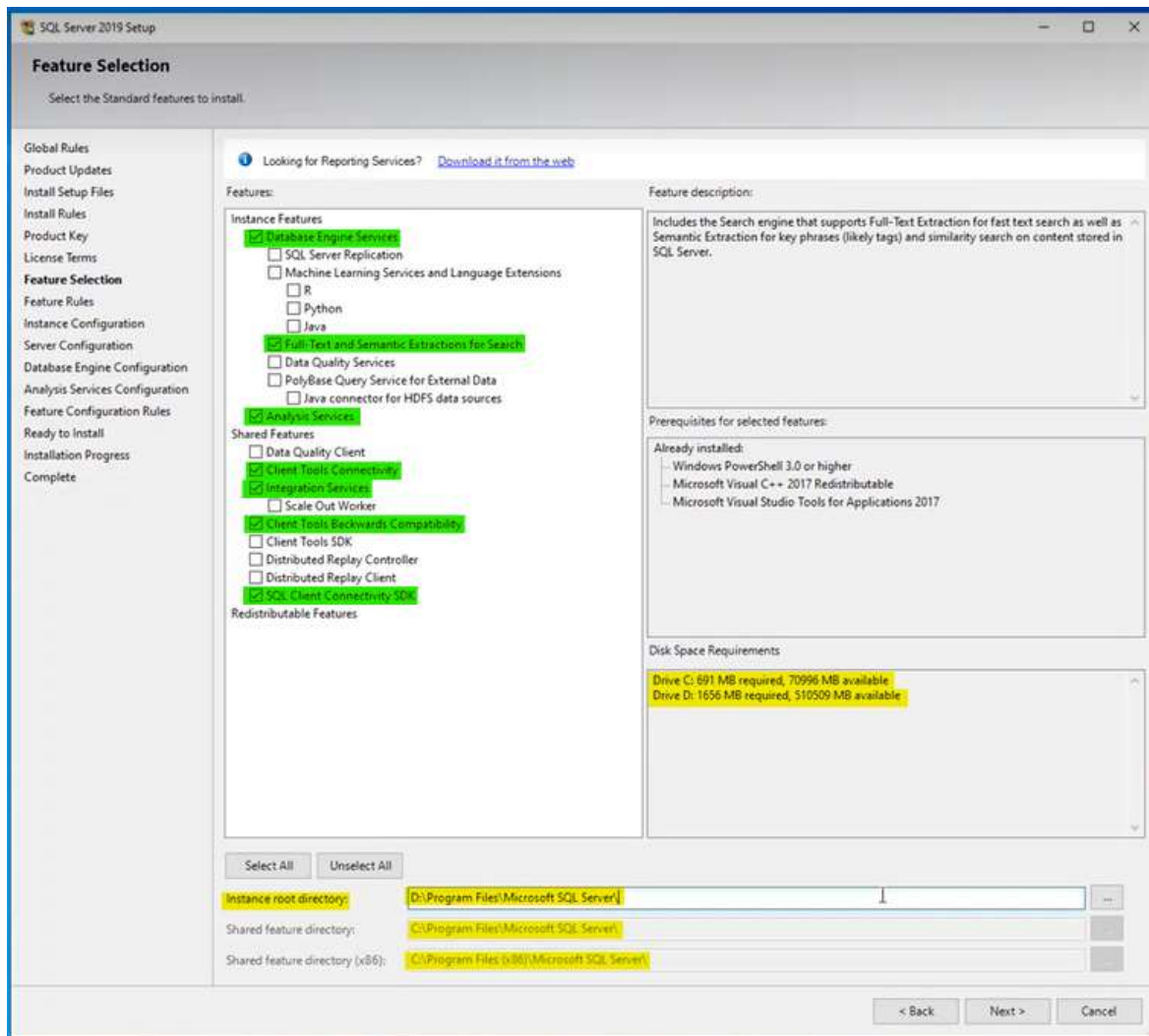
Accept the license terms and proceed to the next step of the installation.

Feature Selection

At this step of the installation, features to be installed are selected.

Highlighted in **green** and marked for installation are the following features:

- Database Engine Services
 - Full-text and semantic extractions for search
- Analysis Services
- Client Tools Connectivity
- Integration Services
- Client Tools Backwards Compatibility
- SQL Client Connectivity SDK

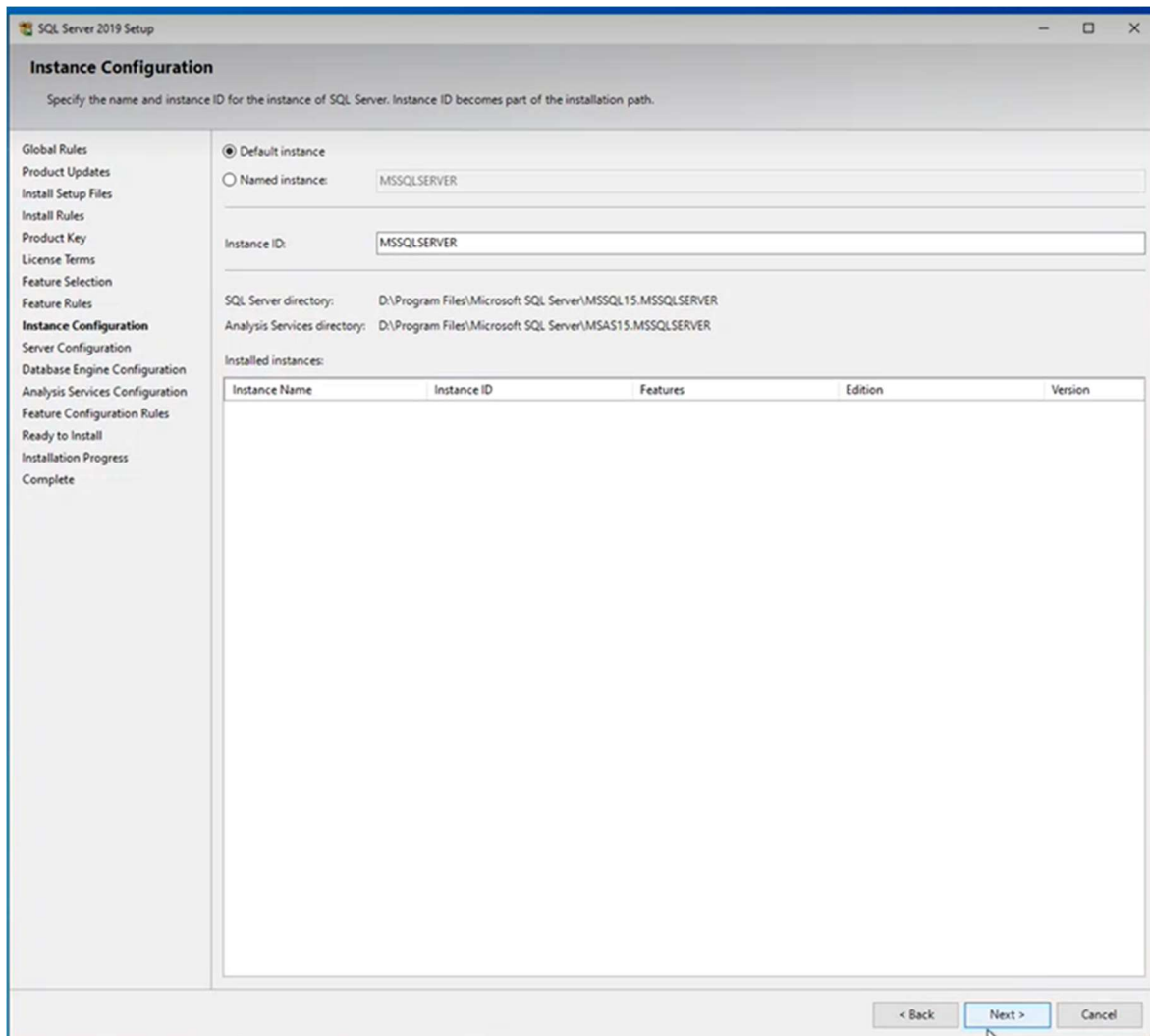


Pay attention to the “**Instance Root Directory**” to define the installation path.

Highlighted text also shows disk space requirements.

Instance Configuration

Instance ID and name of the SQL Server are defined on this step.

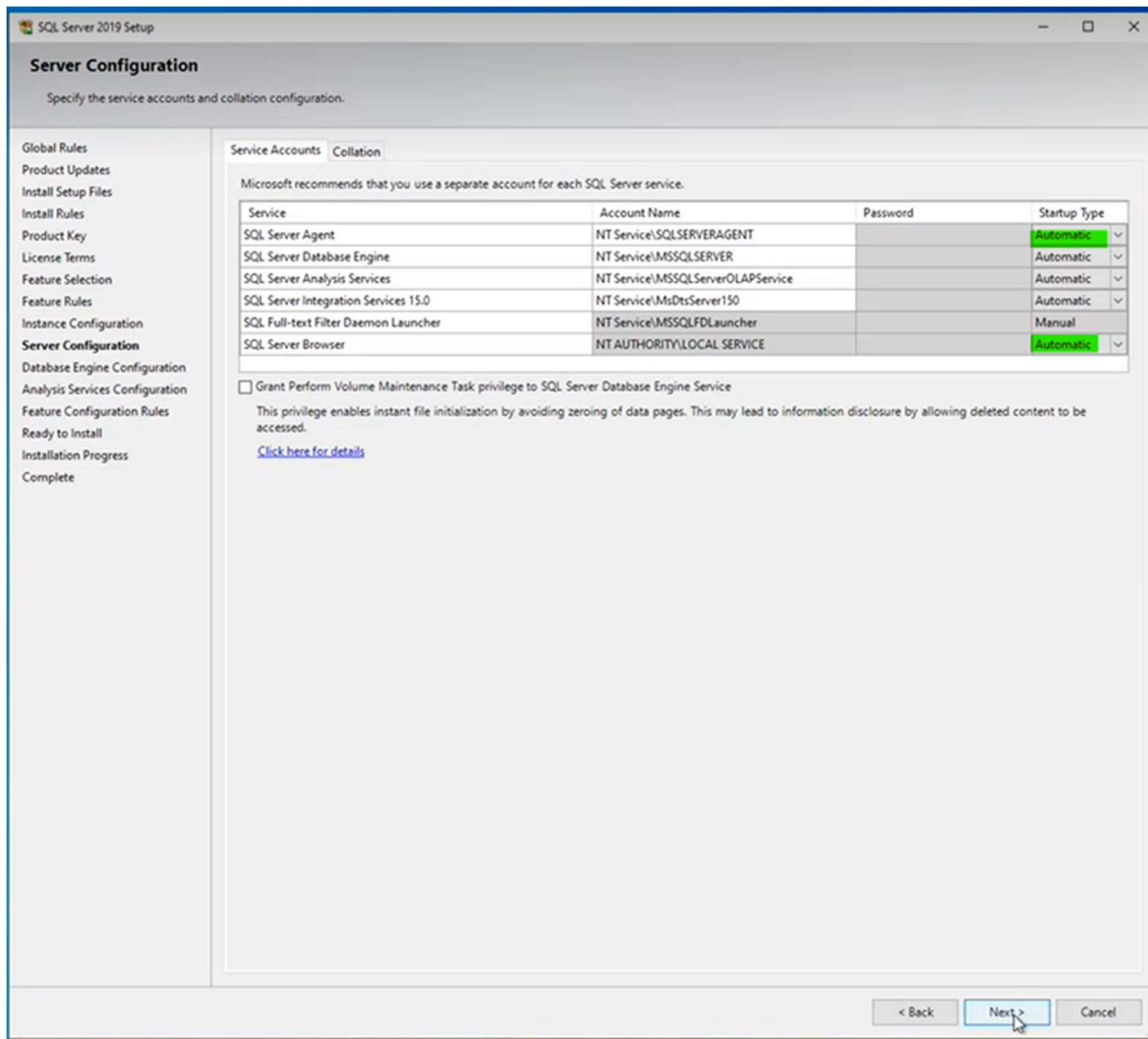


Proceed with the Default Instance and Instance ID.

Note the SQL Server Directory is as specified in the previous step.

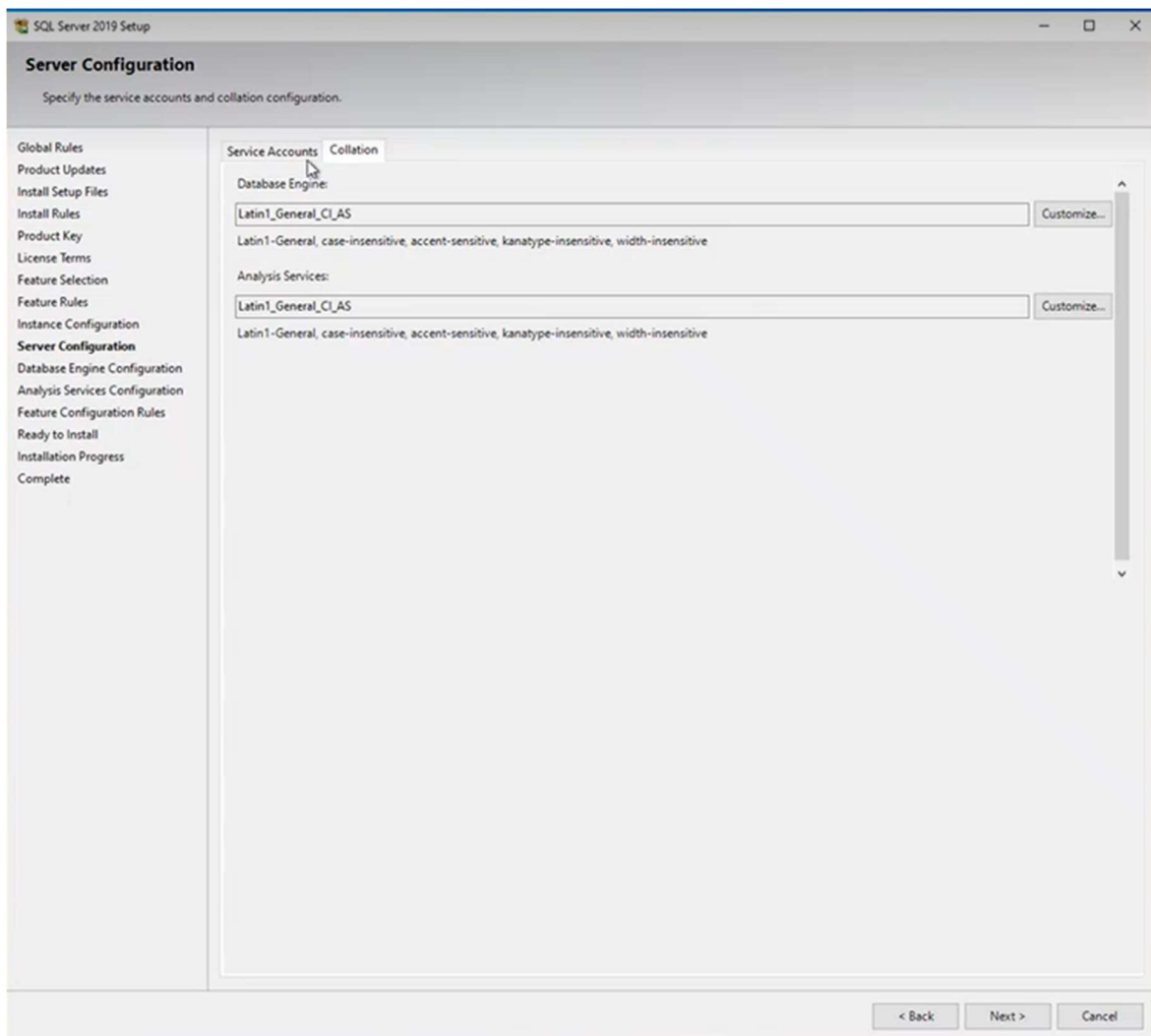
Server Configuration

SQL Server Agent and SQL Server Browser both set to Automatic



Collation Tab

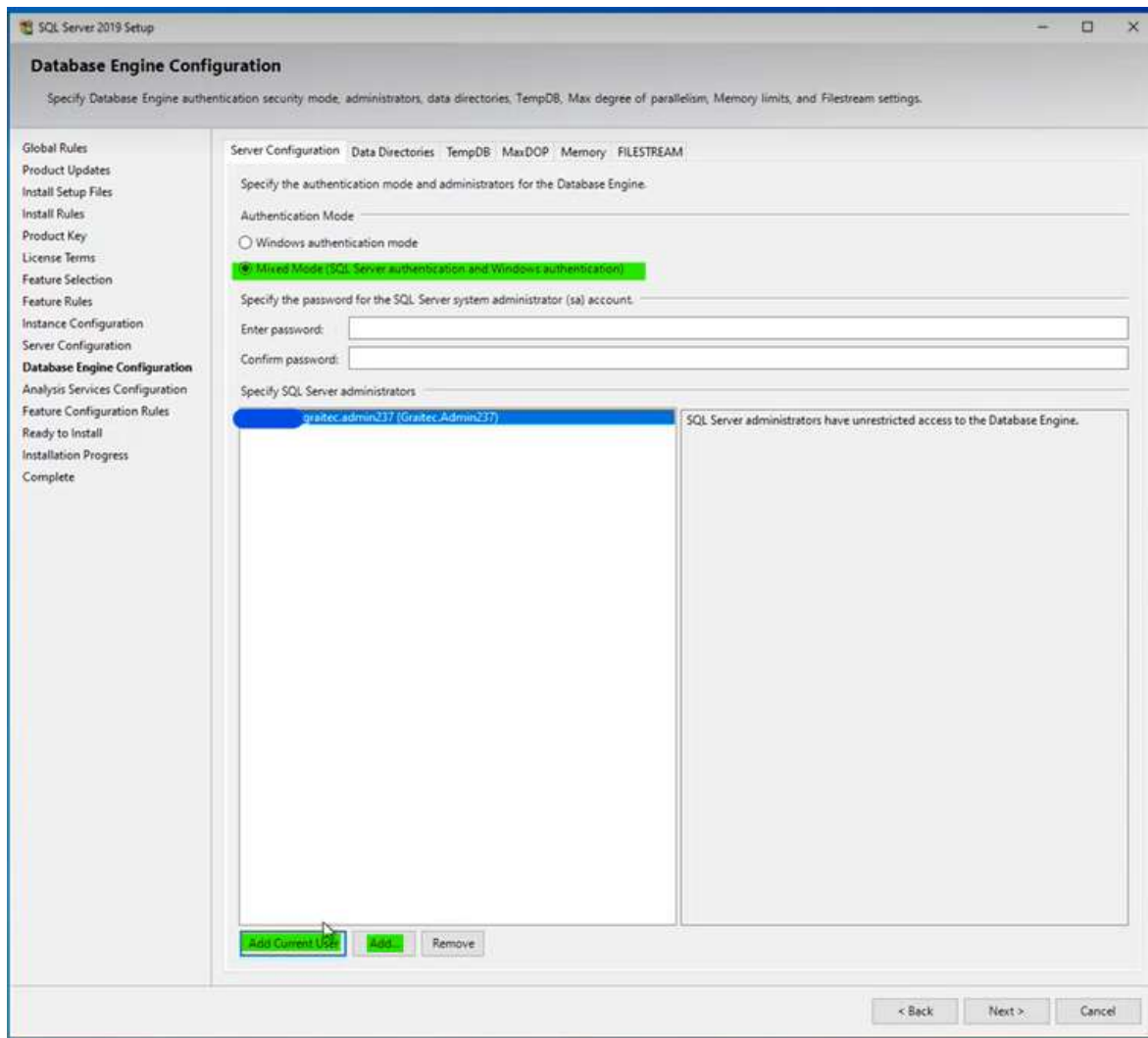
On the collation tab, database engine and analysis services collation configuration can be left with defaults.



Database Engine Configuration

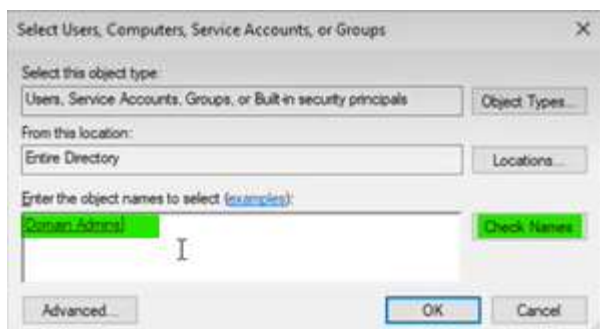
Server Configuration Tab

Authentication mode to be set to “Mixed Mode (SQL Server authentication and Windows authentication)”.



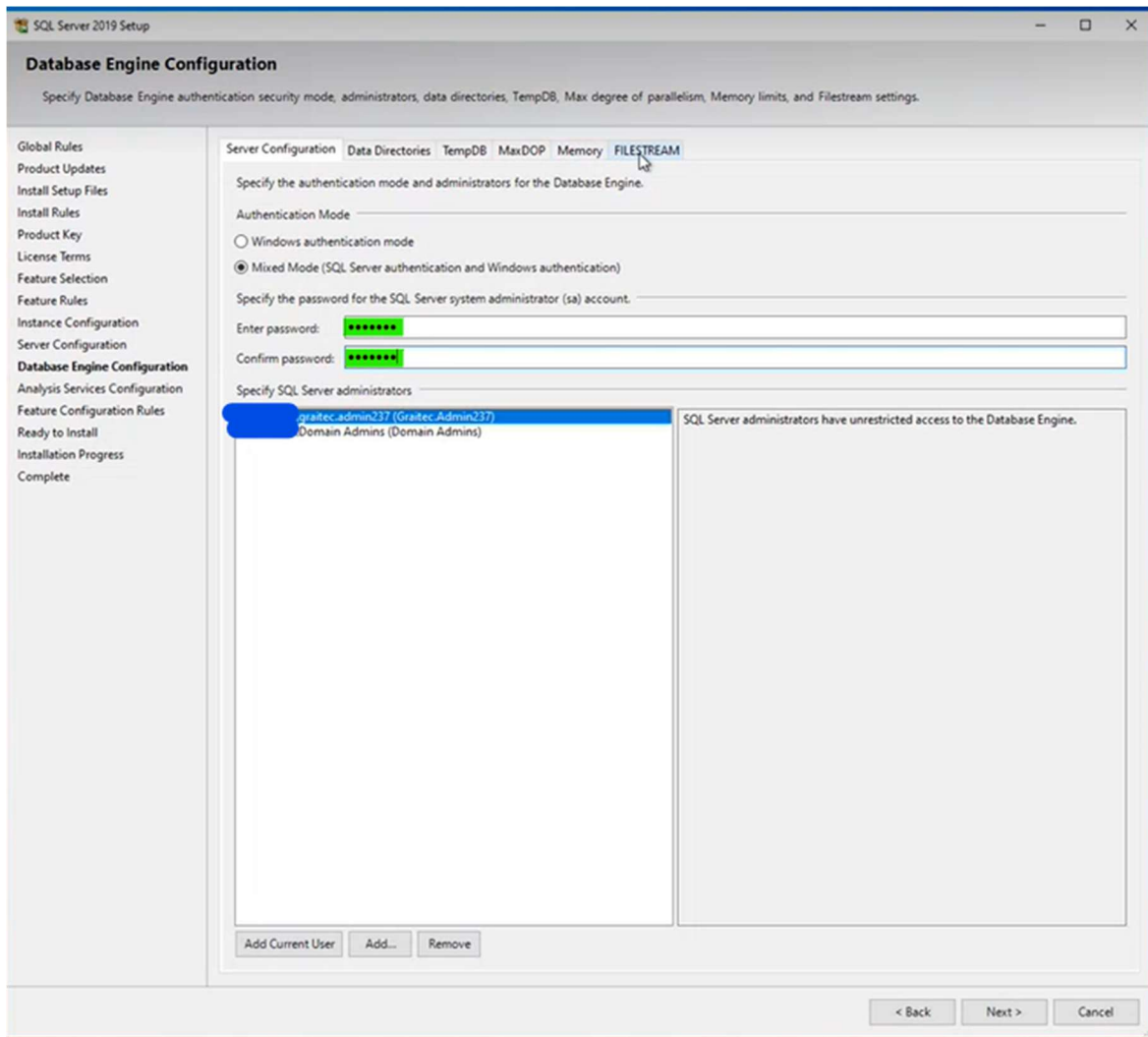
Click on “Add Current User” to add the current windows user as a SQL Server Administrator.

Then Click “Add” to add new users...



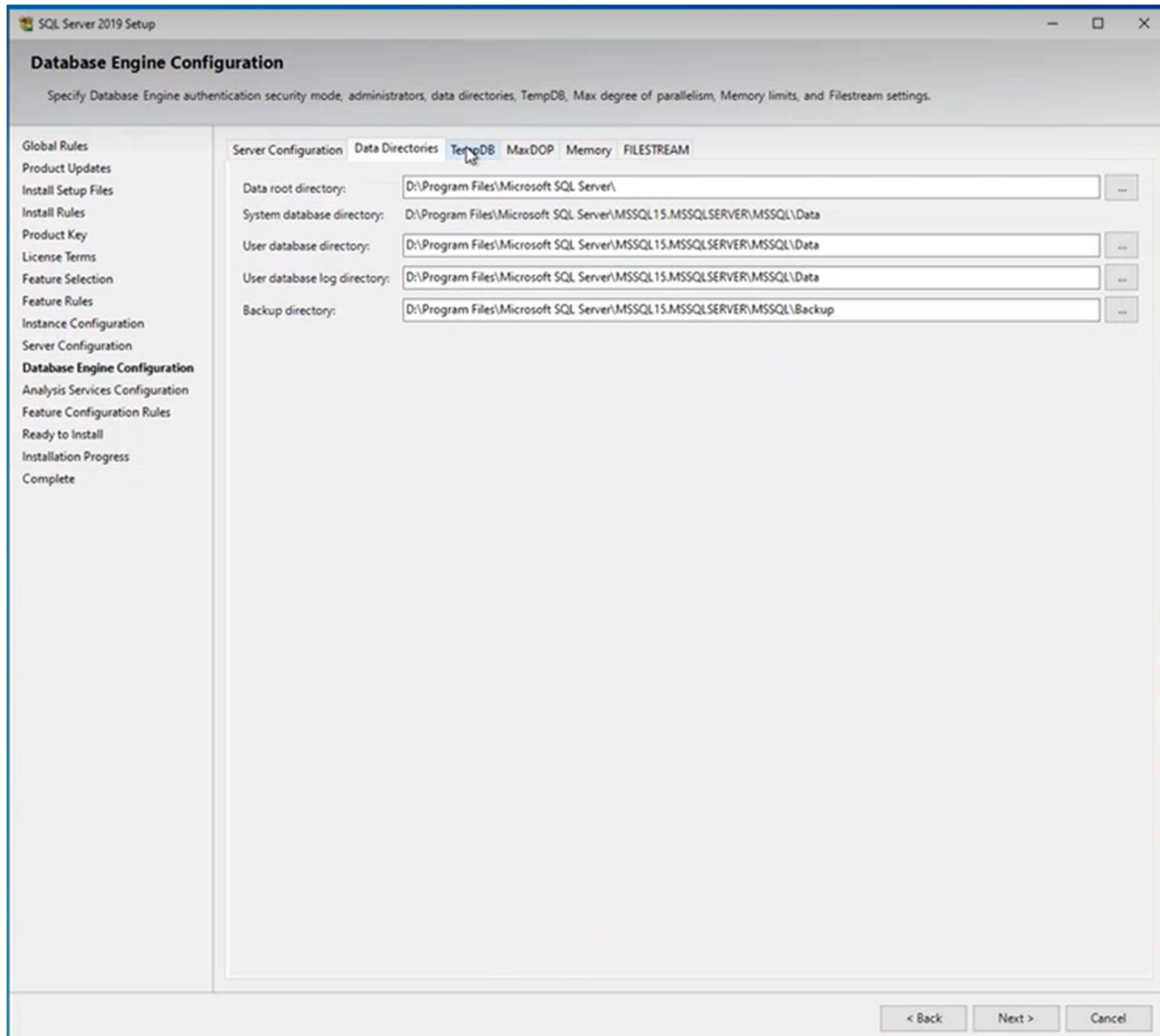
Type in “domain admins” and click on “Check Names” to add them. Click OK.

This will then add “domain admins” onto the list.



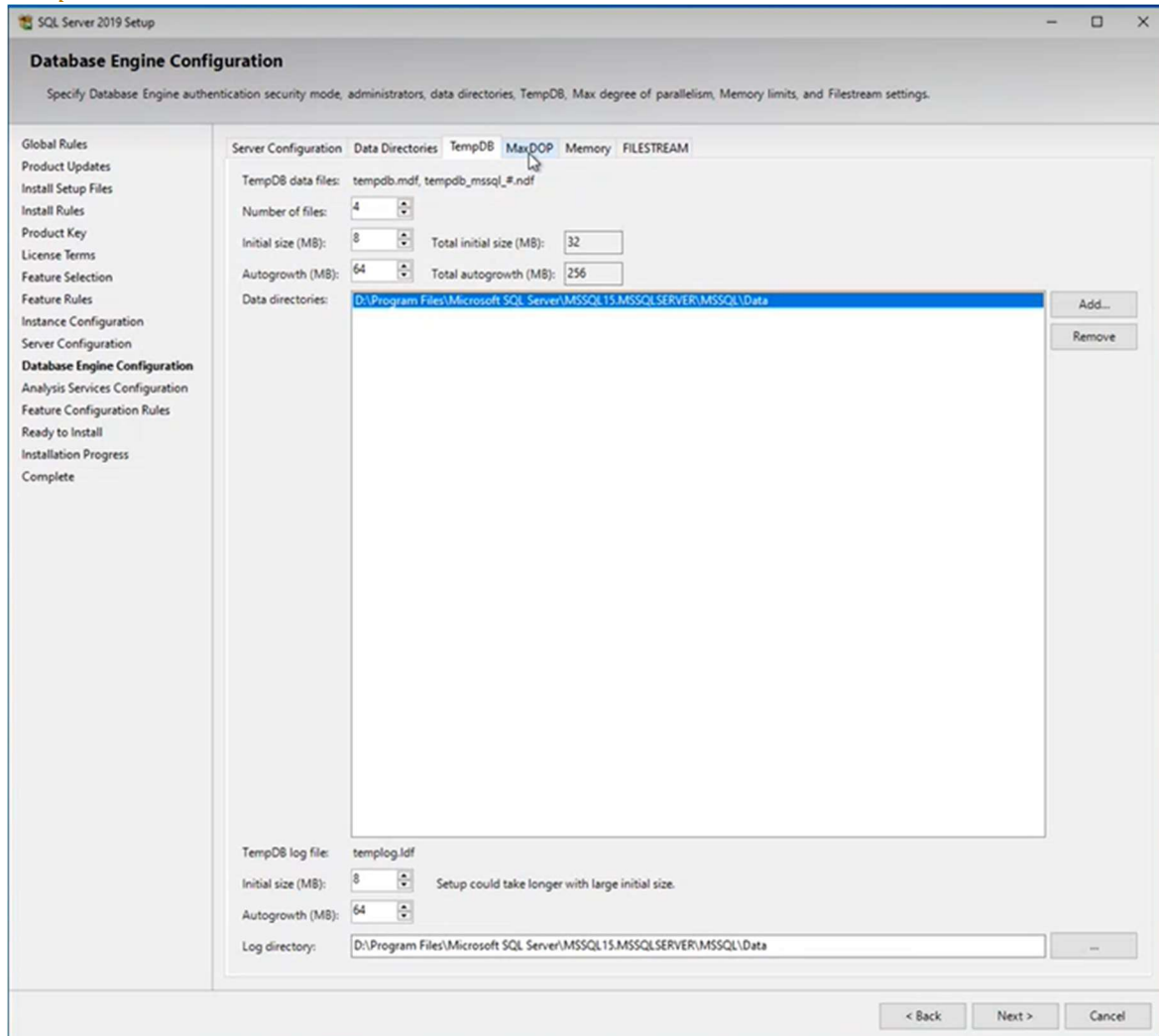
Specify the SQL Server system administrator (sa) account password.

Data Directories Tab



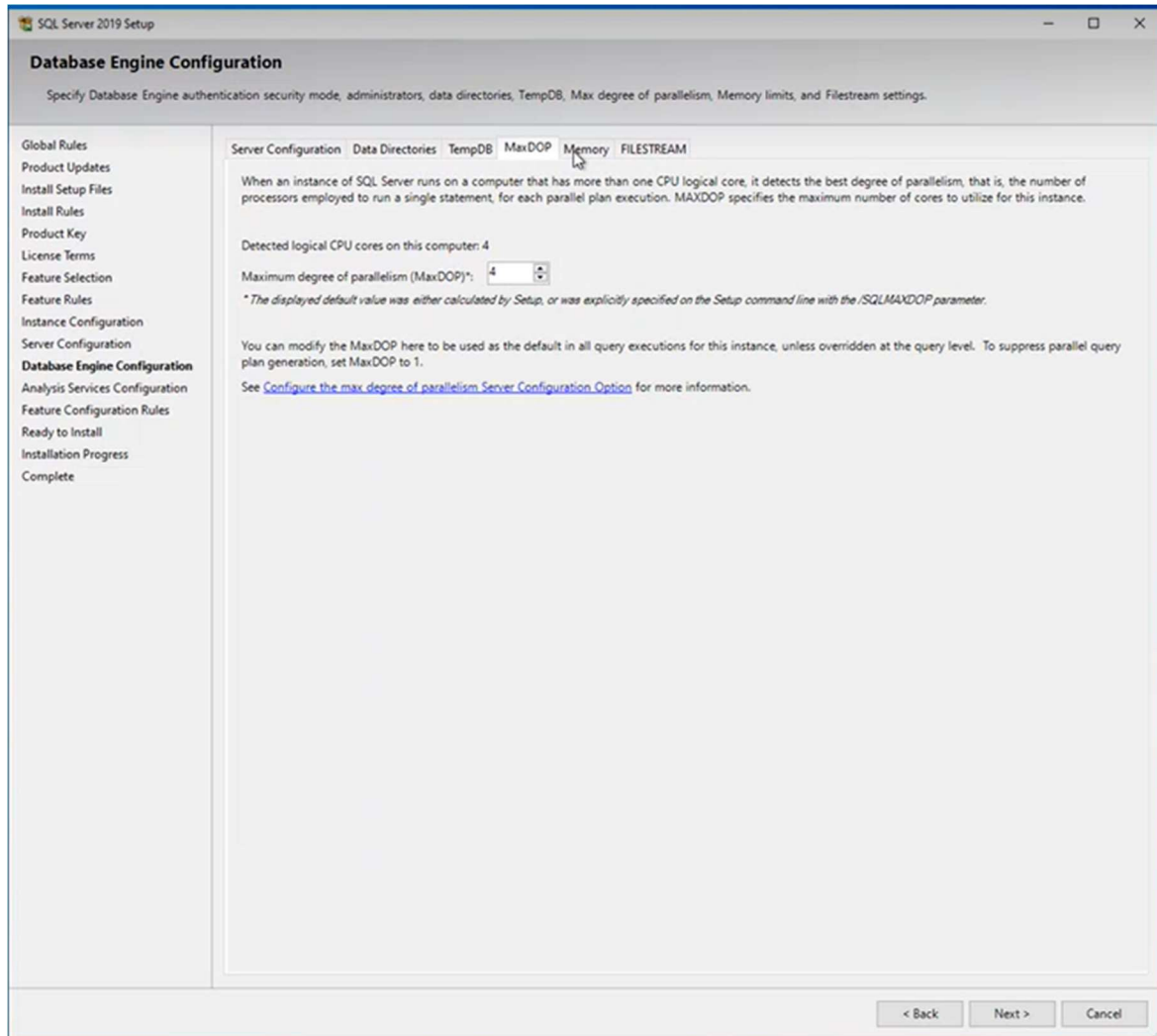
Path for directories can be seen here. These are derived from the paths specified in the earlier stages.

TempDB Tab



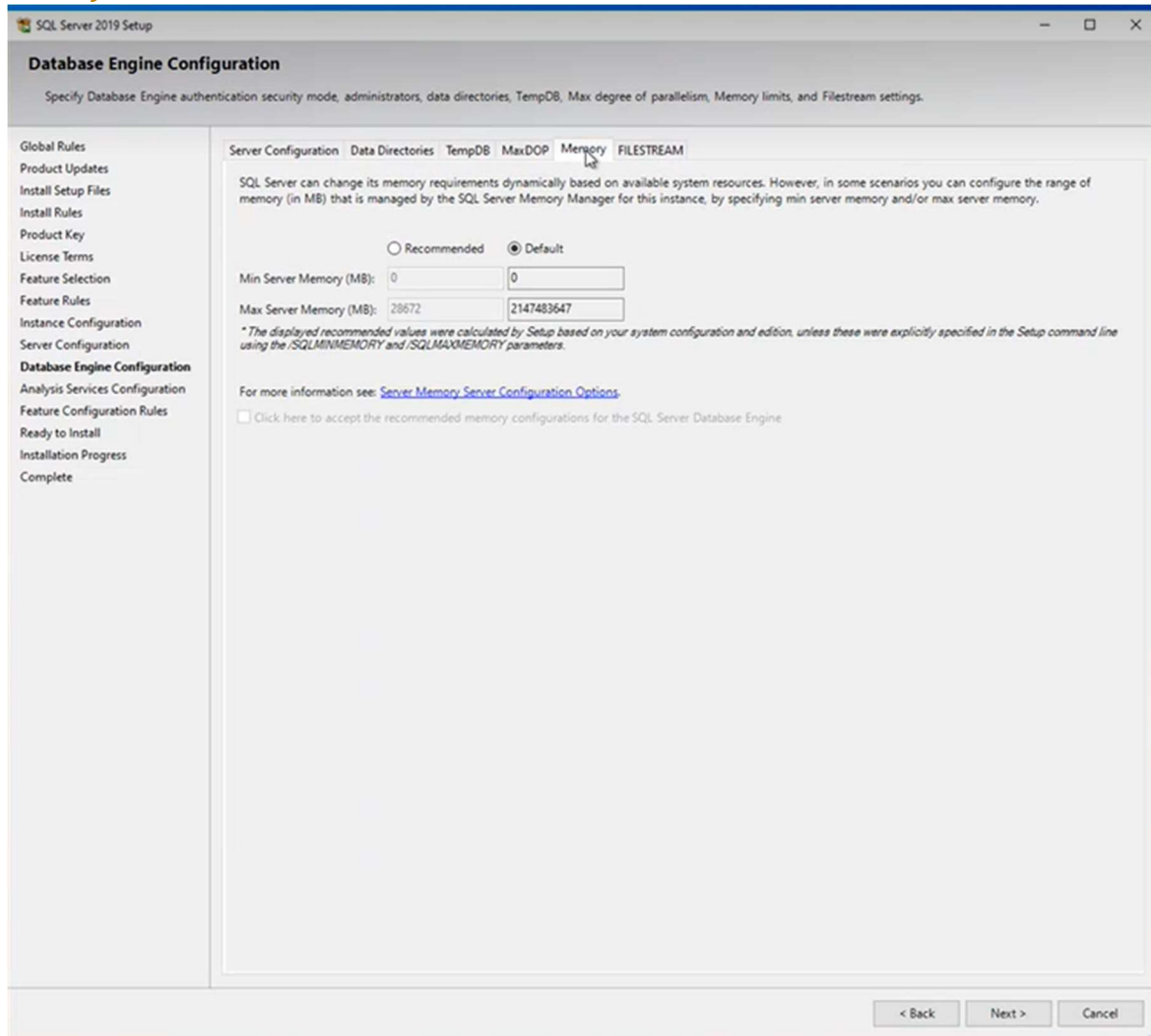
Log directory path can be seen to match previous definitions.

MaxDOP Tab



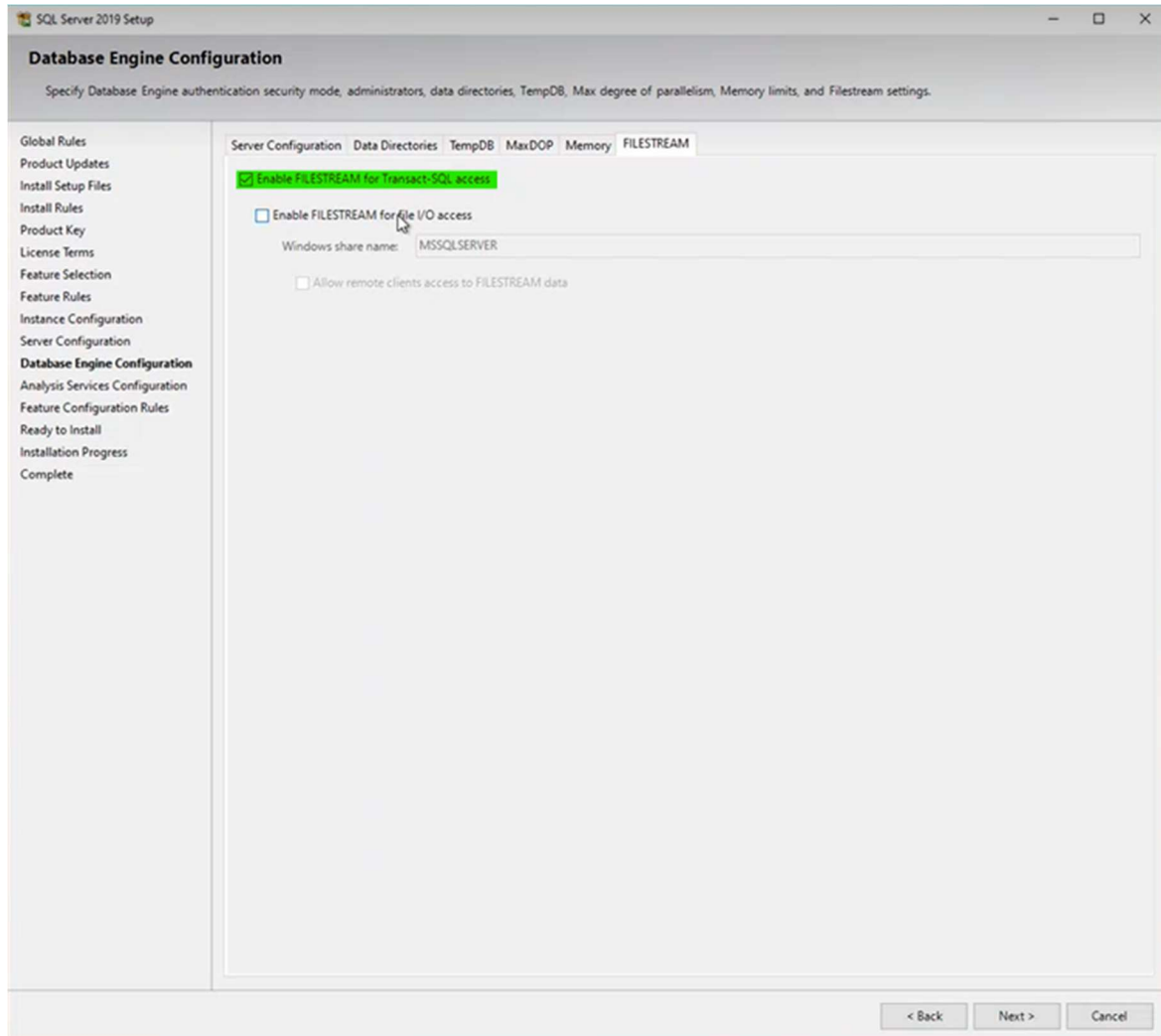
This tab can be left with default values.

Memory Tab



This tab can be left with the default settings.

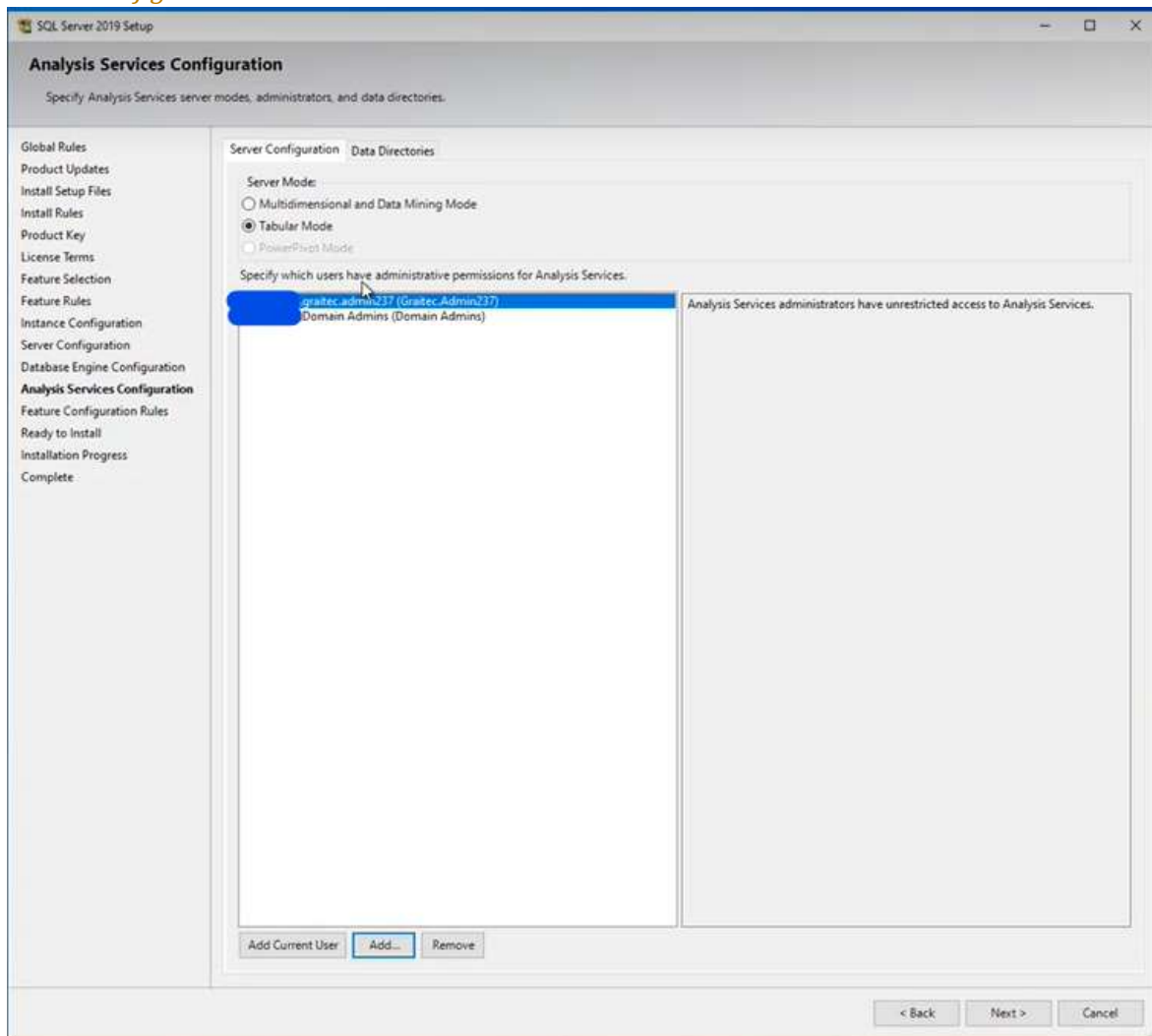
FILESTREAM Tab



First checkbox “Enable FILESTREAM for Transact-SQL access” should be checked and can now proceed to the next step of the installation.

Analysis Services Configuration

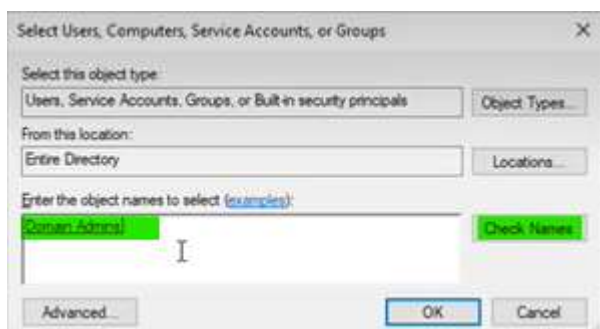
Server Configuration Tab



Current user and domain admins should be added as users with admin privileges.

Click on “Add Current User” to add the current windows user as a user with admin privileges.

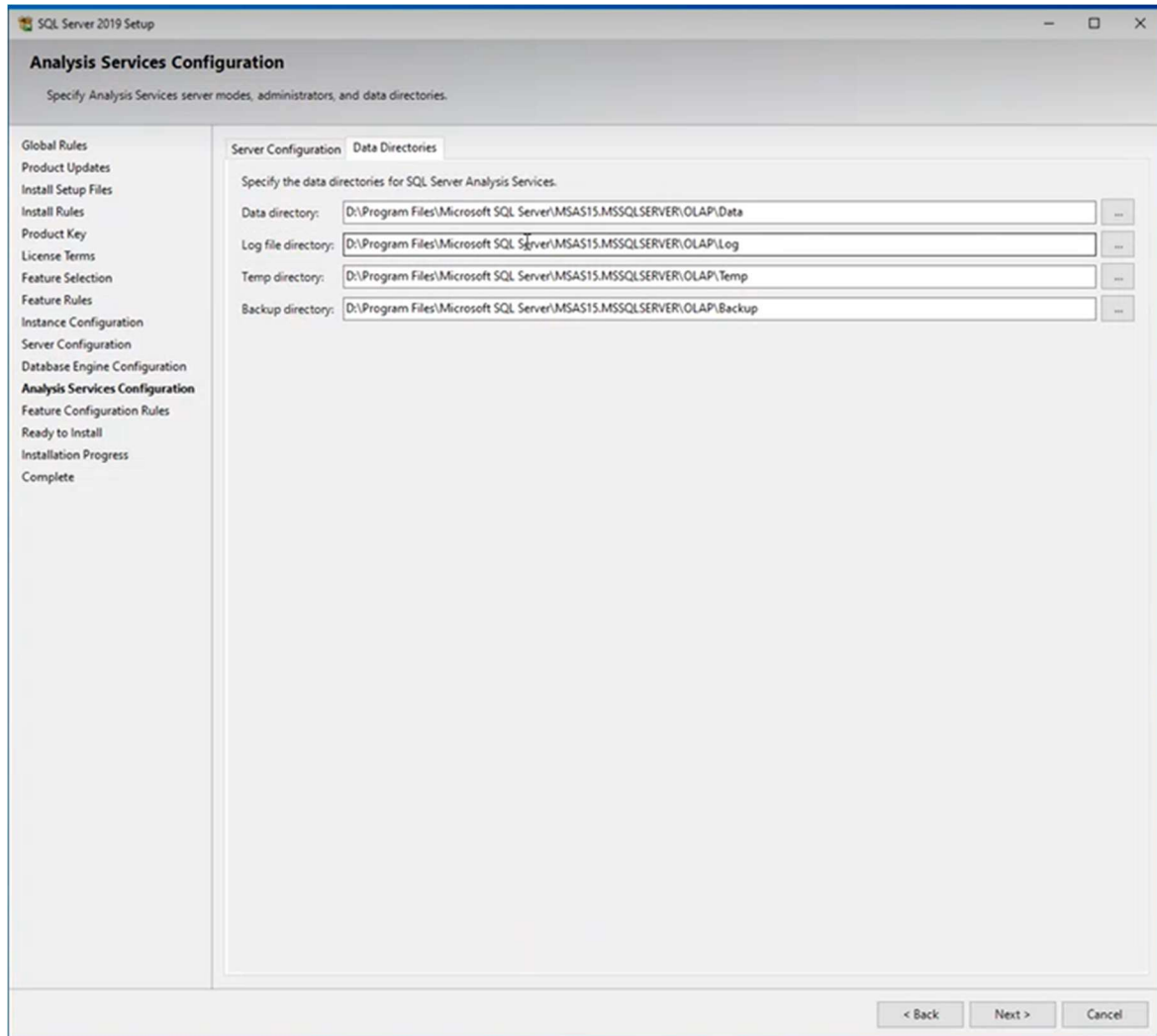
Then Click “Add” to add new users...



Type in “domain admins” and click on “Check Names” to add them. Click OK.

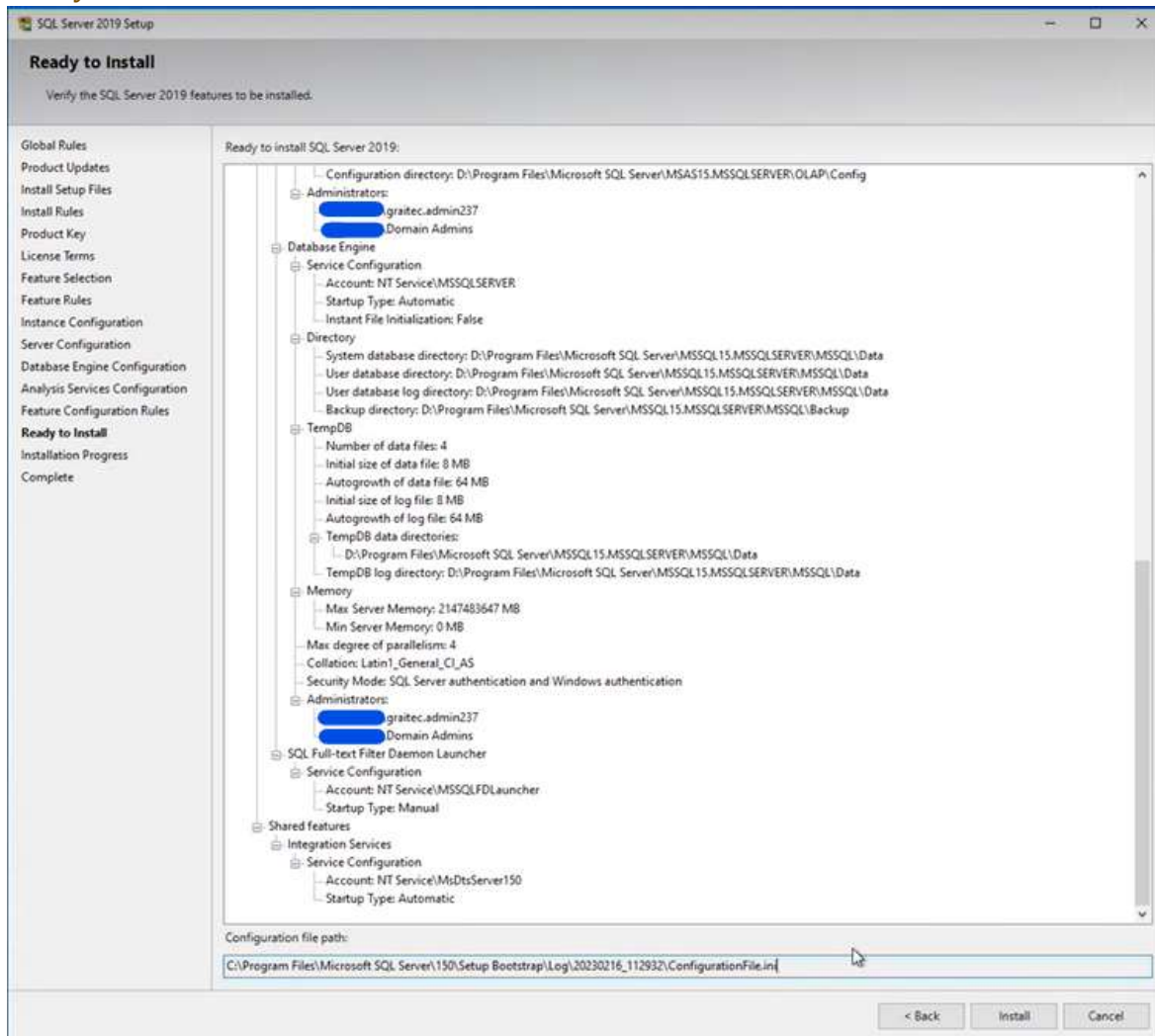
This will then add “domain admins” onto the list.

Data Directories Tab



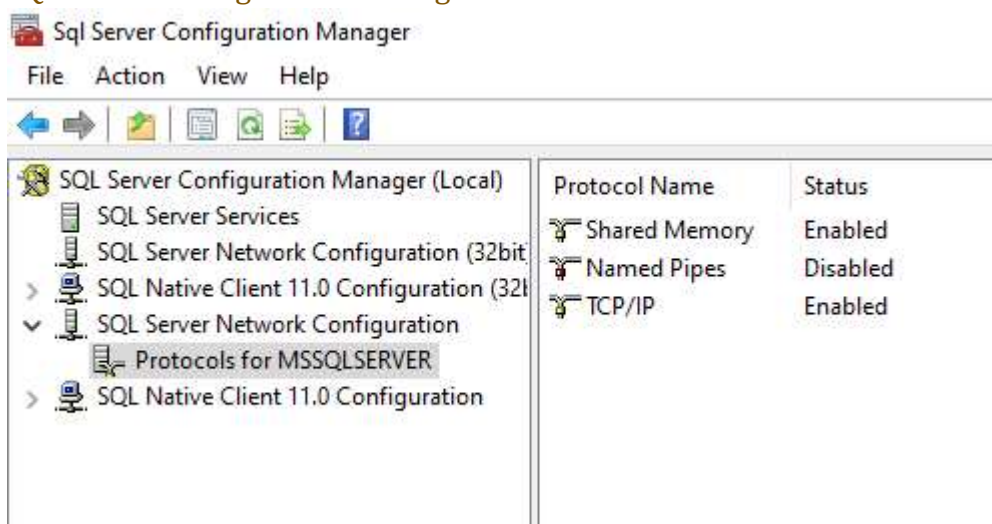
Data Directories file paths can be managed on this screen. Default configuration can be used.

Ready to Install



A summary screen with all the features and configurations is displayed. Click on “Install” to continue.

SQL Server Configuration Manager



Installation of SQL Express Advanced

When installing SQL Express version, it is key to install the advanced version

It can be downloaded here :

- https://download.microsoft.com/download/7/c/1/7c14e92e-bdcf-4f89-b7cf-93543e7112d1/SQLEXPADV_x64_ENU.exe

or

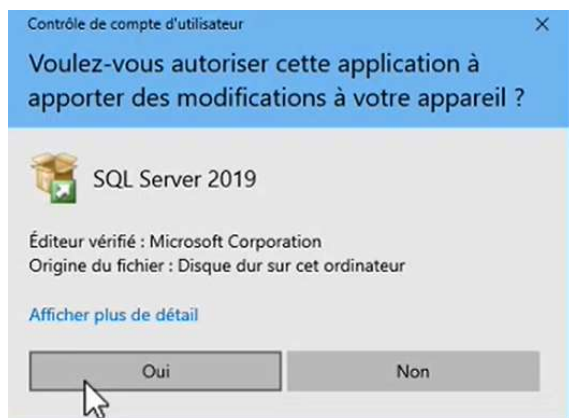
- https://www.graitec.info/Prerequisites/MsSql/SQLEXPADV/2019/SQLEXPADV_x64_ENU.exe

1) Download and extract the package

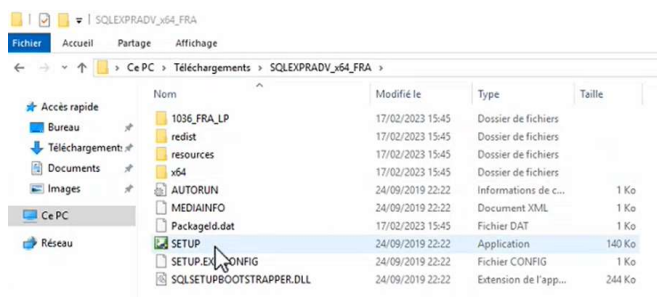


After downloading, open the downloaded file and agree on extraction.

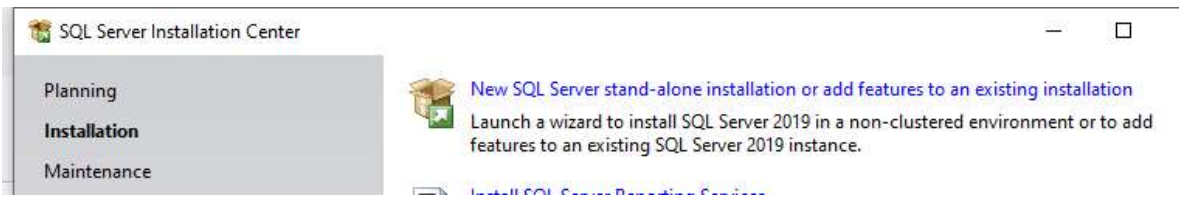
It should launch SQL Server 2019 installer



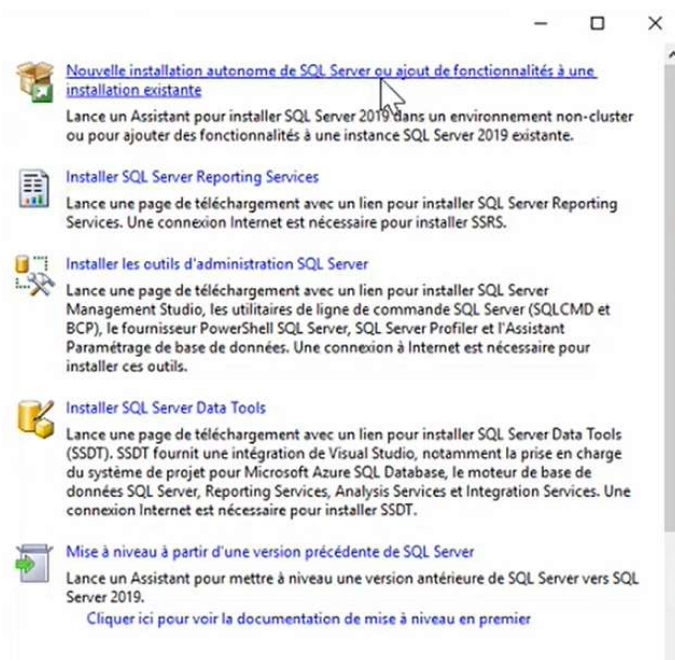
If not, find in the extracted format the setup.exe file and double click



As result, the SQL Server Installation Center should open.

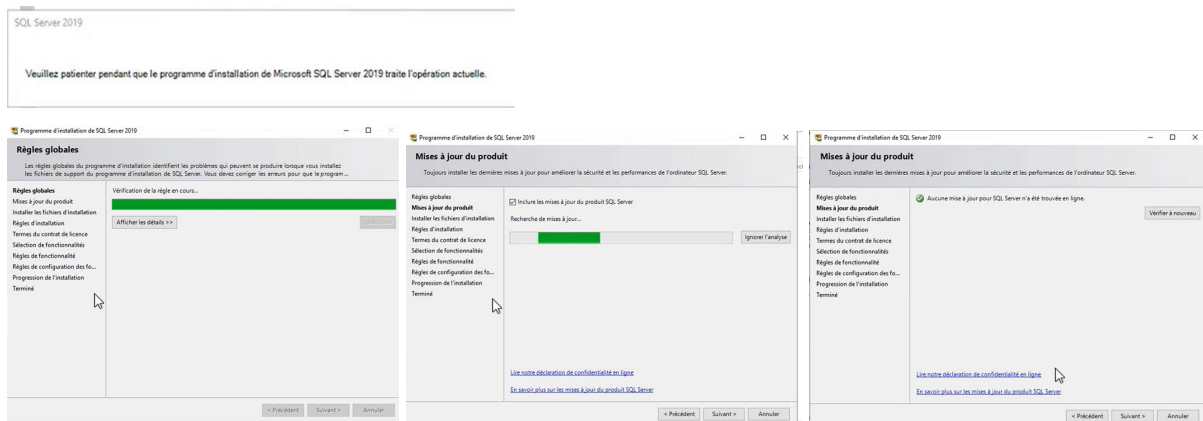


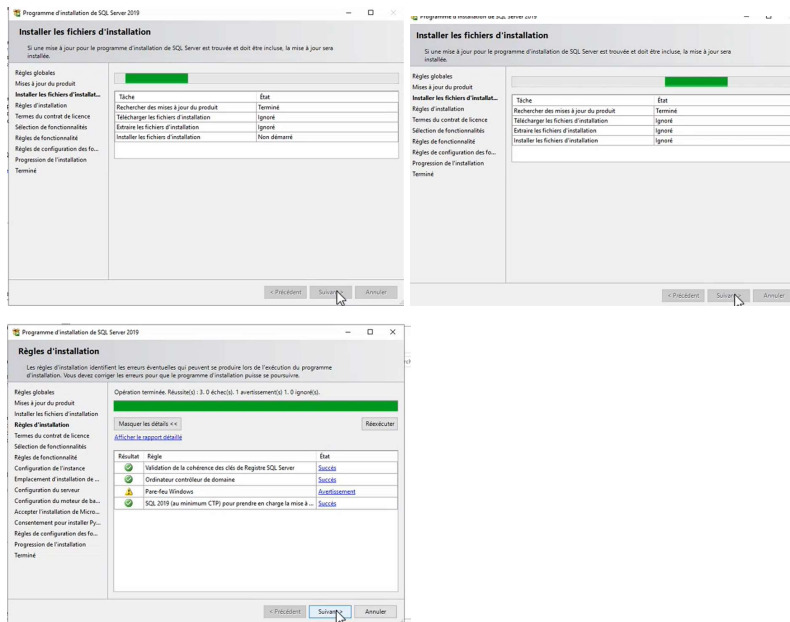
2) Launch a new installation



⇒ initialisation

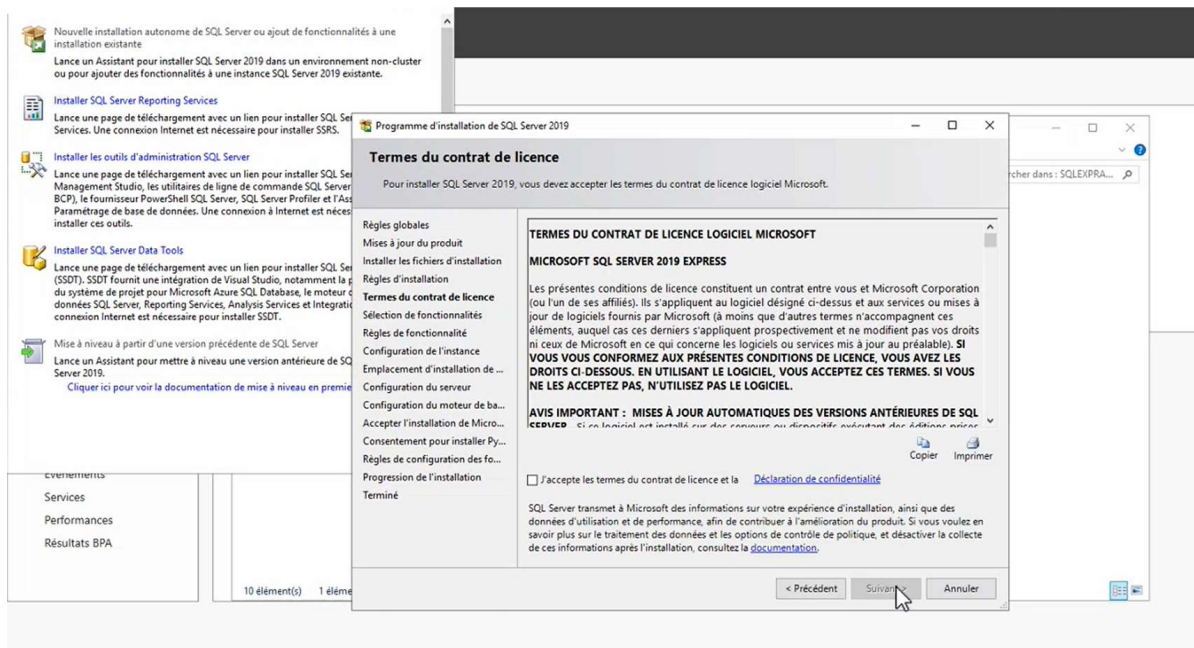
Few windows are running automatically :





⇒ Licence agreement

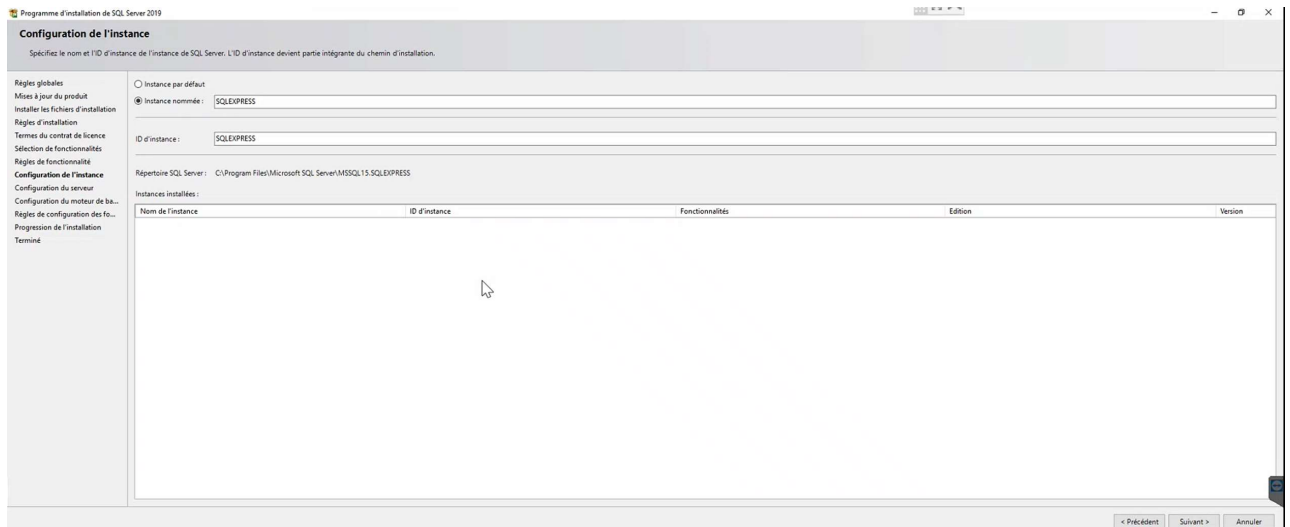
Click next and validate the licence terms :



3) Select specific functionalities

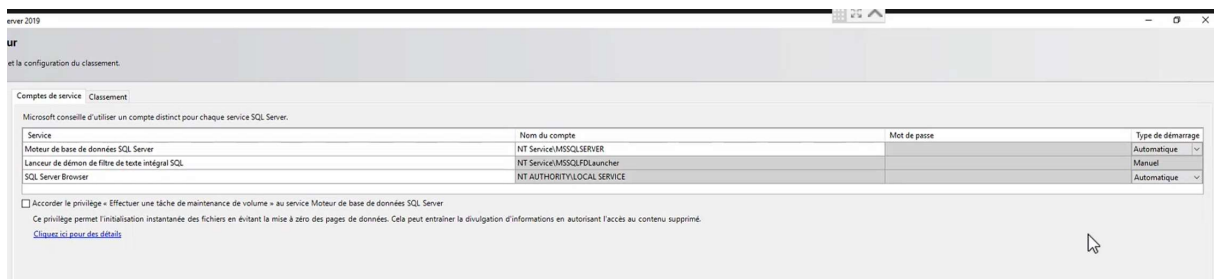
You should only keep :

- Text extraction & Semantic search (under BDD engine services)
- And the mandatory kit



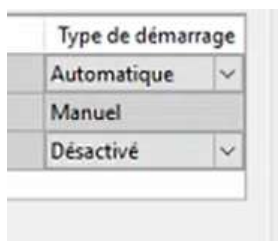
And click Next

5) Modify server configuration parameters

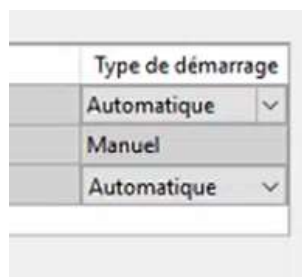


Set the BDD Engine and SQL browser to Automatic start :

Before



After



6) Modify more configuration data

Be careful, we have to modify different tabs. Do not click on next until documentation say so.

- ⇒ On tab Server configuration :
 - Select Mode mixte

Configuration du serveur

Répertoires de données

tempdb

Mémoire

Instances utilisateur

FILESTREAM

Spécifiez le mode d'authentification et les administrateurs du moteur de base de données.

Mode d'authentification

☒ Mode d'authentification Windows
☐ Mode mixte (authentification SQL Server et authentification Windows)

Spécifiez le mot de passe pour le compte d'administrateur système (sa) SQL Server.

Entrer le mot de passe :

Configuration du serveur

Répertoires de données

tempdb

Mémoire

Instances utilisateur

FILESTREAM

Spécifiez le mode d'authentification et les administrateurs du moteur de base de données.

Mode d'authentification

☐ Mode d'authentification Windows
☒ Mode mixte (authentification SQL Server et authentification Windows)

Spécifiez le mot de passe pour le compte d'administrateur système (sa) SQL Server.

Entrer le mot de passe :

Before

After

- Select Admin users for database TAB (you should already be on it)

1. Click on Add button, advanced button and then search button

Spécifiez le mode d'authentification et les administrateurs du moteur de bas

Mode d'authentification

☐ Mode d'authentification Windows
☒ Mode mixte (authentification SQL Server et authentification Windows)

Spécifiez le mot de passe pour le compte d'administrateur système (sa) SQL

Confirmer le mot de passe :

Spécifier les administrateurs SQL Server

TGK-TSE\adminaplus (admin.armaplus)

Ajouter l'utilisateur actuel

Ajouter

Supprimer

Programme d'installation de SQL Server 2019

Sélectionnez des utilisateurs ou des groupes

Sélectionnez le type de cet objet :

des utilisateurs, des groupes ou Principaux de sécurité intégrés

Types d'objets...

À partir de cet emplacement :

TGK-TSE

Emplacements...

Entrez les noms des objets à sélectionner (exemples) :

Vérifier les noms

Avancé...

OK

Annuler

Configuration de l'instance

Spécifiez le mot de passe pour le compte d'administrateur

Sélectionnez des utilisateurs ou des groupes

Sélectionnez le type de cet objet :

des utilisateurs, des groupes ou Principaux de sécurité intégrés

Types d'objets...

À partir de cet emplacement :

TGK-TSE

Emplacements...

Requêtes communes

Nom :

Commence par

Colonnes...

Description :

Commence par

Rechercher

☐ Comptes désactivés
☐ Mot de passe sans date d'expiration

Nombre de jours depuis la dernière session :

Résultats de la recherche :


OK

Annuler

Nom

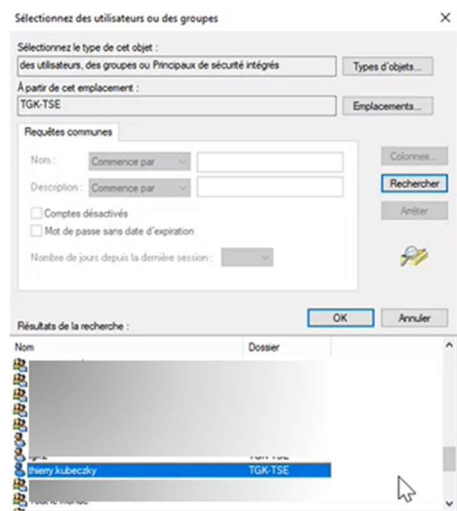
Dossier

2. Select the user that is going to do the admin of advance workshop database and click OK

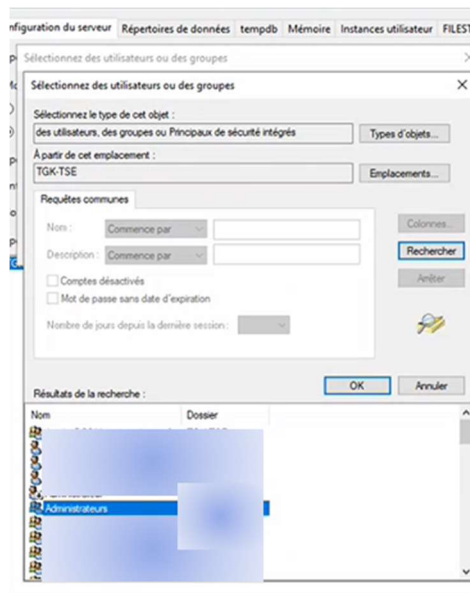
 **GRAITEC**

Advance Workshop Installation

02/10/2023



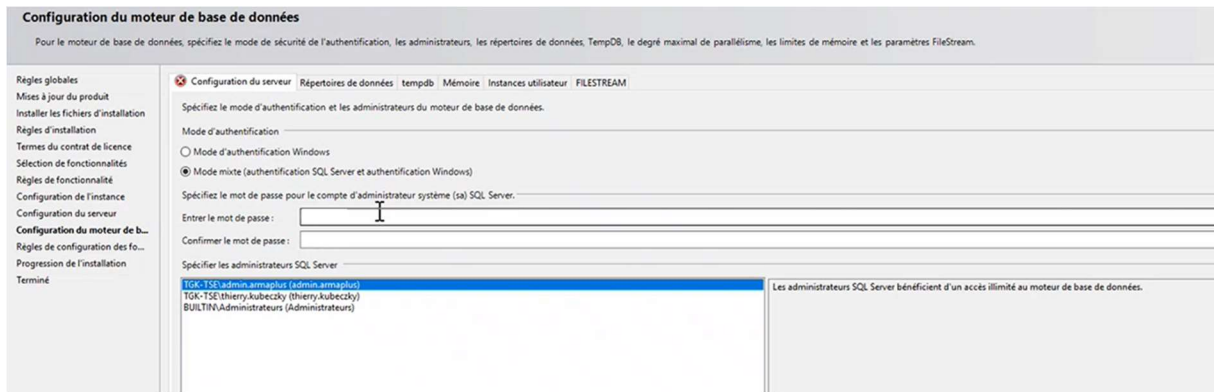
3. Same process for the user dedicated to Armaplus (if any)
4. Same process with the group of Administrators (if any)



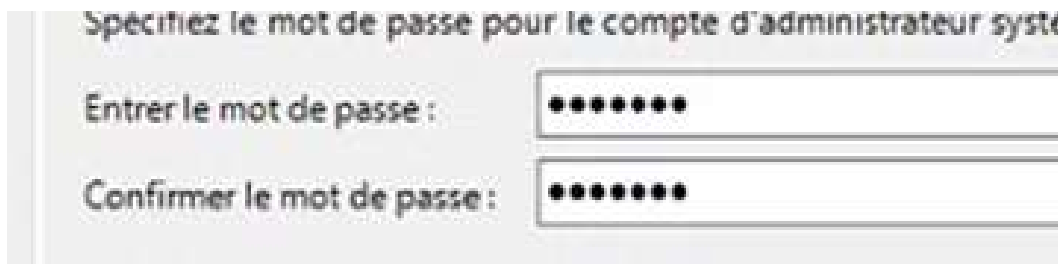
Click OK to come back to configuration screen

The selected names should now be in the box below “Select administrator”

If there is no name, then it means that the only administrator of the database will be “sa” (for system admin), and thus will be the only one that can be used to do admin



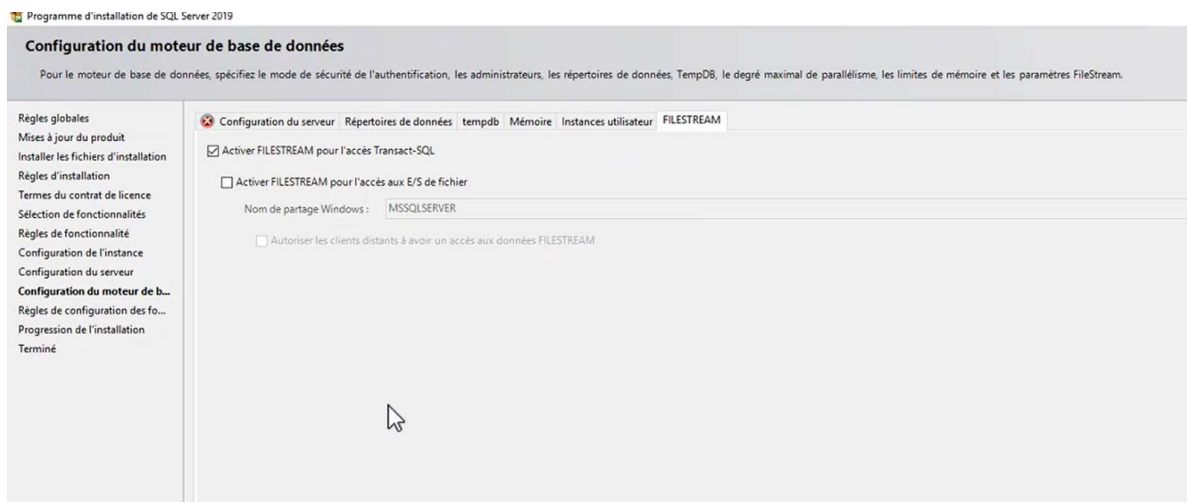
5. Enter the password for admin



Should have 10 car 1 letter, 1 capitalize car and a number

- Select FILESTREAM tab

Select Active FILESTREAL as per below image



7) Carry on by clicking next till the end

Installation with SQL Server Developer Edition

Install Prerequisites of Advance Workshop

Prerequisites can be found on [INSERT LINK HERE](#)

SQL Server Management Studio

[Installation of SQL Server Management Studio](#)

Microsoft Visual Studio Redistributable

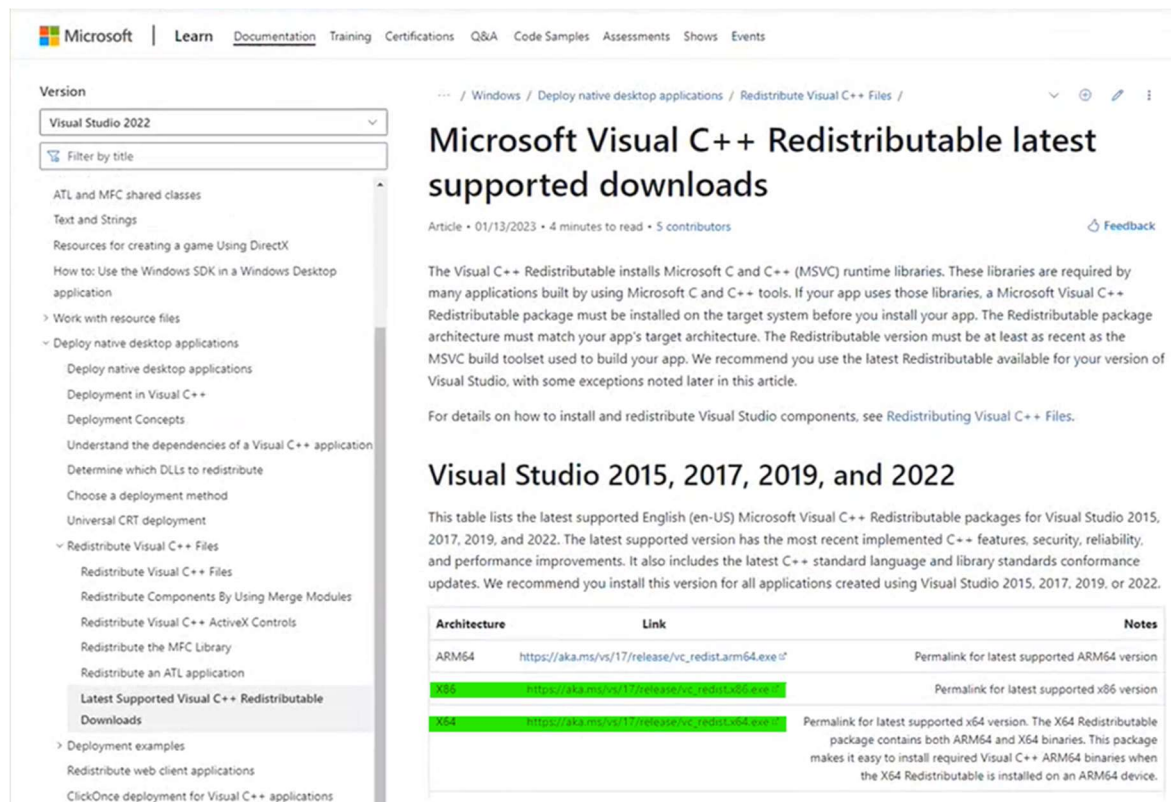
[Download and install both.](#)

Permalink for latest supported x86 version:

https://aka.ms/vs/17/release/vc_redist.x86.exe

Permalink for latest supported x64 version:

https://aka.ms/vs/17/release/vc_redist.x64.exe



Microsoft Visual C++ Redistributable latest supported downloads

Article • 01/13/2023 • 4 minutes to read • 5 contributors

The Visual C++ Redistributable installs Microsoft C and C++ (MSVC) runtime libraries. These libraries are required by many applications built by using Microsoft C and C++ tools. If your app uses those libraries, a Microsoft Visual C++ Redistributable package must be installed on the target system before you install your app. The Redistributable package architecture must match your app's target architecture. The Redistributable version must be at least as recent as the MSVC build toolset used to build your app. We recommend you use the latest Redistributable available for your version of Visual Studio, with some exceptions noted later in this article.

For details on how to install and redistribute Visual Studio components, see [Redistributing Visual C++ Files](#).

Visual Studio 2015, 2017, 2019, and 2022

This table lists the latest supported English (en-US) Microsoft Visual C++ Redistributable packages for Visual Studio 2015, 2017, 2019, and 2022. The latest supported version has the most recent implemented C++ features, security, reliability, and performance improvements. It also includes the latest C++ standard language and library standards conformance updates. We recommend you install this version for all applications created using Visual Studio 2015, 2017, 2019, or 2022.

Architecture	Link	Notes
ARM64	https://aka.ms/vs/17/release/vc_redist.arm64.exe	Permalink for latest supported ARM64 version
x86	https://aka.ms/vs/17/release/vc_redist.x86.exe	Permalink for latest supported x86 version
x64	https://aka.ms/vs/17/release/vc_redist.x64.exe	Permalink for latest supported x64 version. The X64 Redistributable package contains both ARM64 and X64 binaries. This package makes it easy to install required Visual C++ ARM64 binaries when the X64 Redistributable is installed on an ARM64 device.

Graitec Flex License Management

License Utilities

[Download and install the following License components:](#)

<https://www.graitec.info/Prerequisites/Graitec/2023.1/GRLICInstaller.msi>

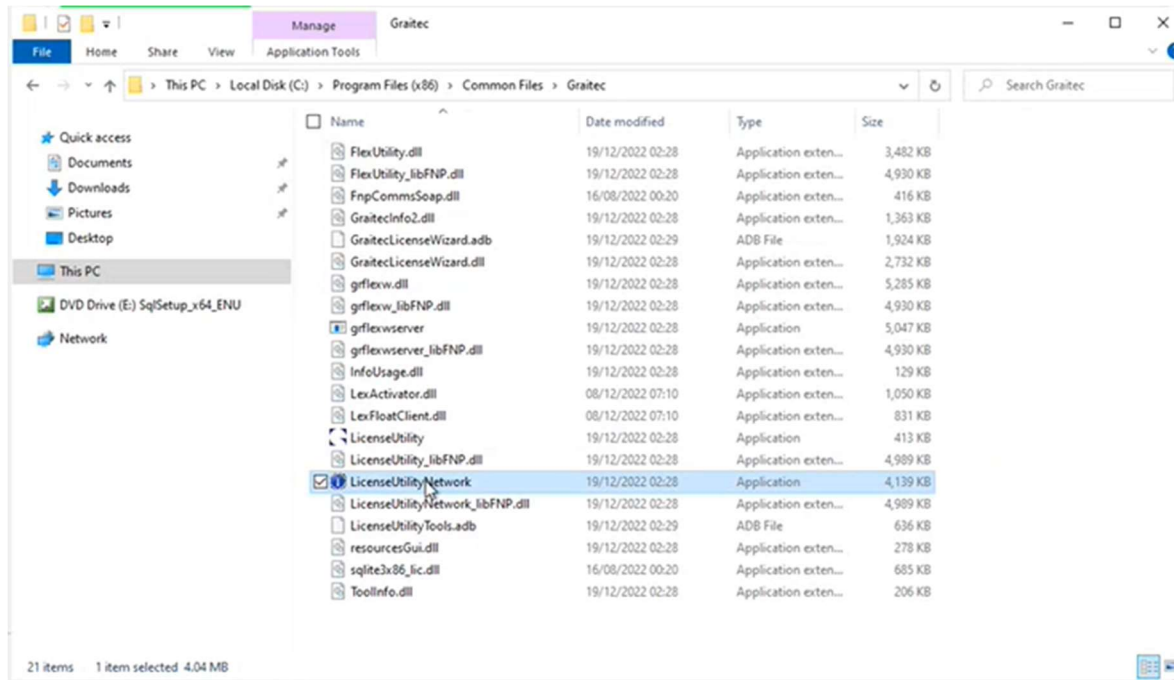
License Manager

<https://www.graitec.info/Advance2023.1/LicenseServer/LicenseServerInternational.msi>

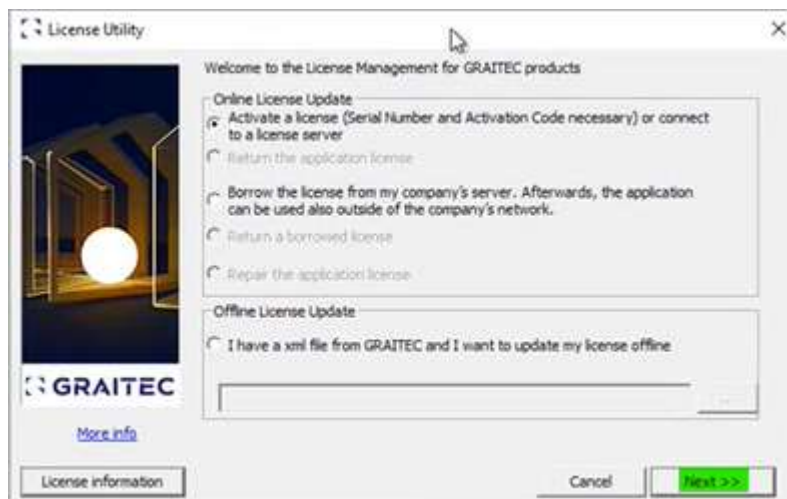
Advance Workshop Licenses

Advance Workshop licenses issued by Graitec need to be installed. This can be done by entering a product key or via an XML file.

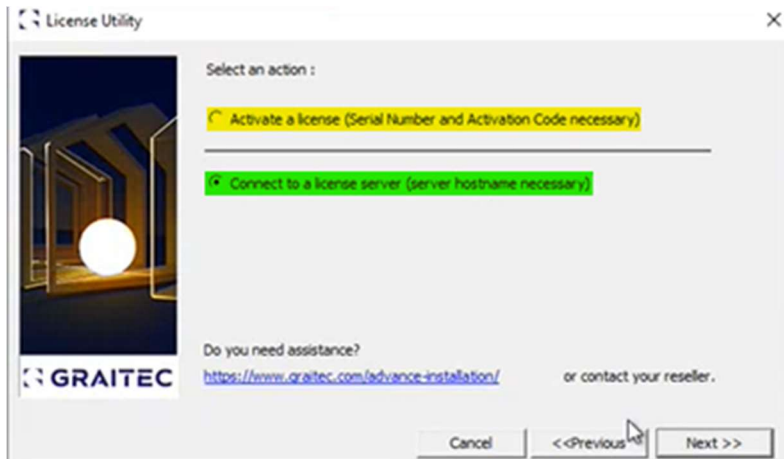
Network Licenses



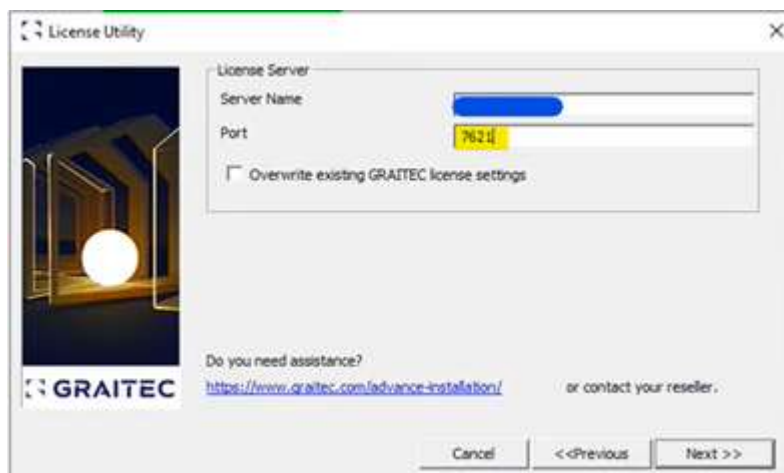
Launch “LicenseUtilityNetwork” located in C:\Program Files (x86)\Common Files\Graitec



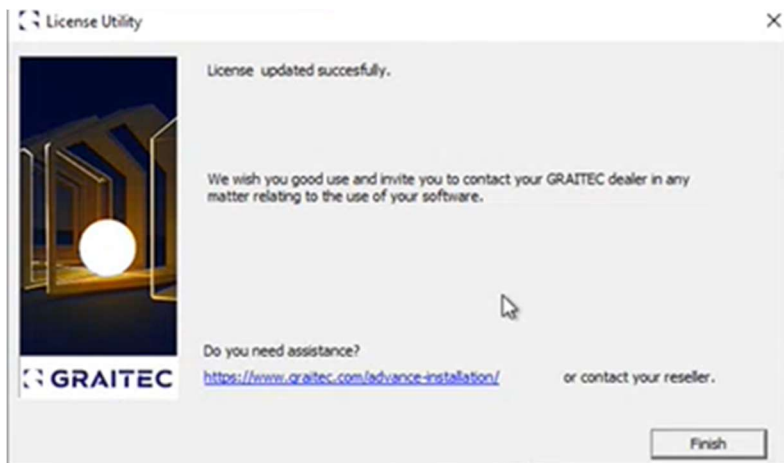
Click next to proceed.



Enter the hostname for the license server and specify Port as “7621”.



Click Next to proceed.



Prerequisites Specific to Advance Workshop Steel
01 - AWS Release

BIM Designer Modules

Documents > 01 - Product > Advance Workshop - Steel > 00 - Product - Installation & News > 01 - AWS Release

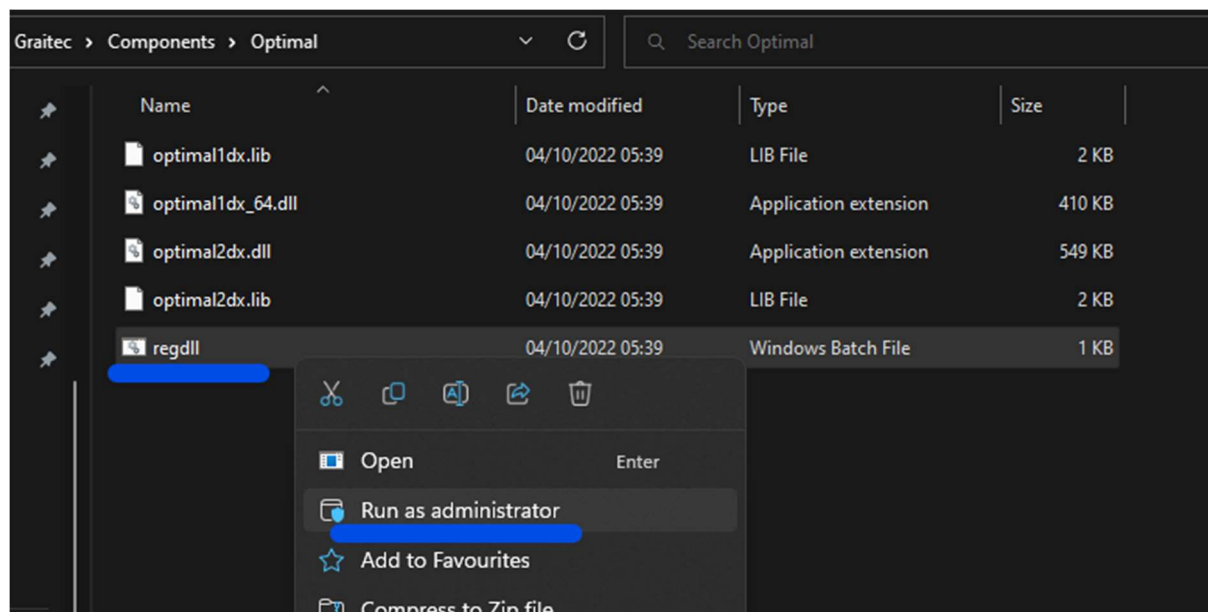
Name	Description
00 - PRE-REQUISITES	
01 - LAUNCHER	
02 - ADVANCE WORKSHOP	
03 - BIM DESIGNER MODULES	
04 - OPTIMAL	
05 - MISC	
EN-AWS-BUG_ON_DEVOPS.docx	
EN-AWS-INSTALLATION_TEST.docx	
FR-AWS-INSTALLATION_TEST.docx	

OPTIMAL

This is used for nesting.

Unzip and place in path

C:\Program Files\Graitec\Components\Optimal



For optimal : Extract the files to c:\Program Files\Common Files\Graitec\ and launch regdll.bat as Administrator

Advance Workshop

Installing the Application

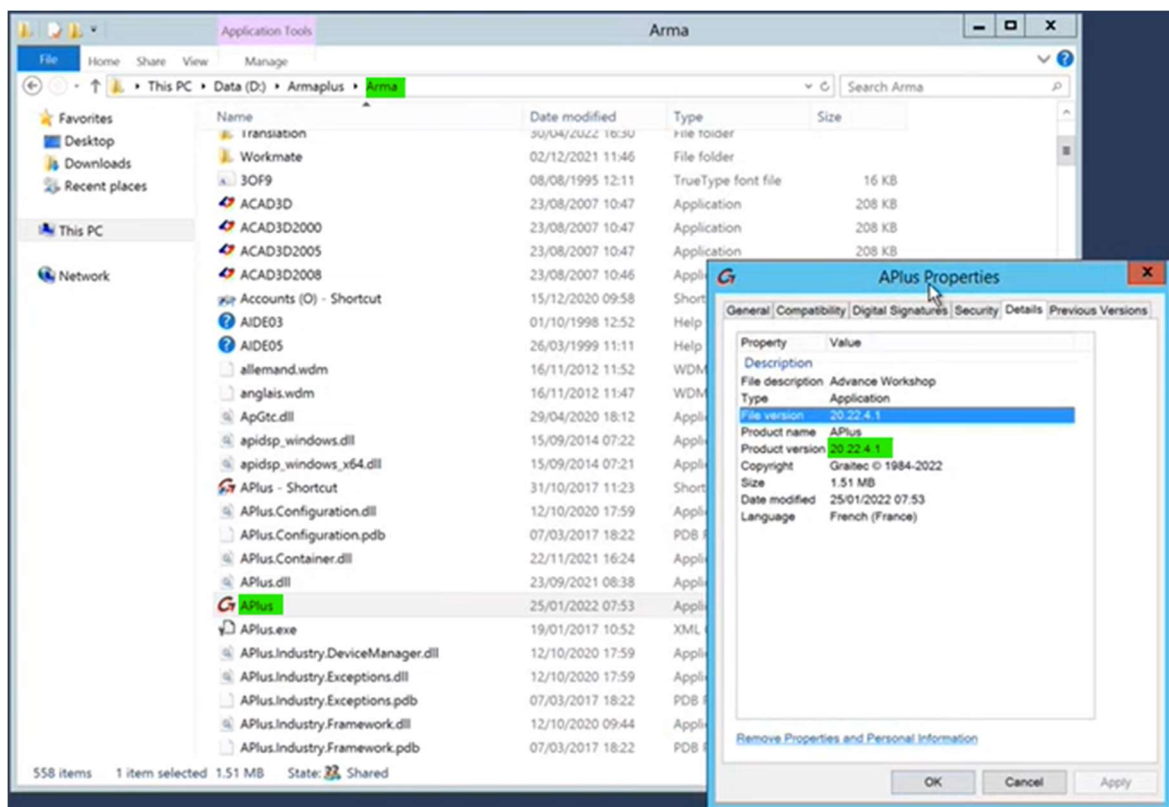
Advance Workshop is installed simply by copying the folder containing the binaries for the version.

A new version can be installed alongside any older versions simply by copying the version folder.

When performing hardware migrations, it is possible to copy the version in use on the old server, onto the new server, this will simply move the same version over to the new server hardware.

Screenshot below shows the folder containing the Advance Workshop application on an existing (old) server.

The application is installed on the “D” drive, and the version folder is named “Arma” and located in the “Armaplus” folder.



Copying the entire “Arma” folder onto the new server will mean that the same version (20.22.4.1 in this example) will run on the new server.

For new installations, follow the **restore backup process** to install the database configured for the client onto the server.

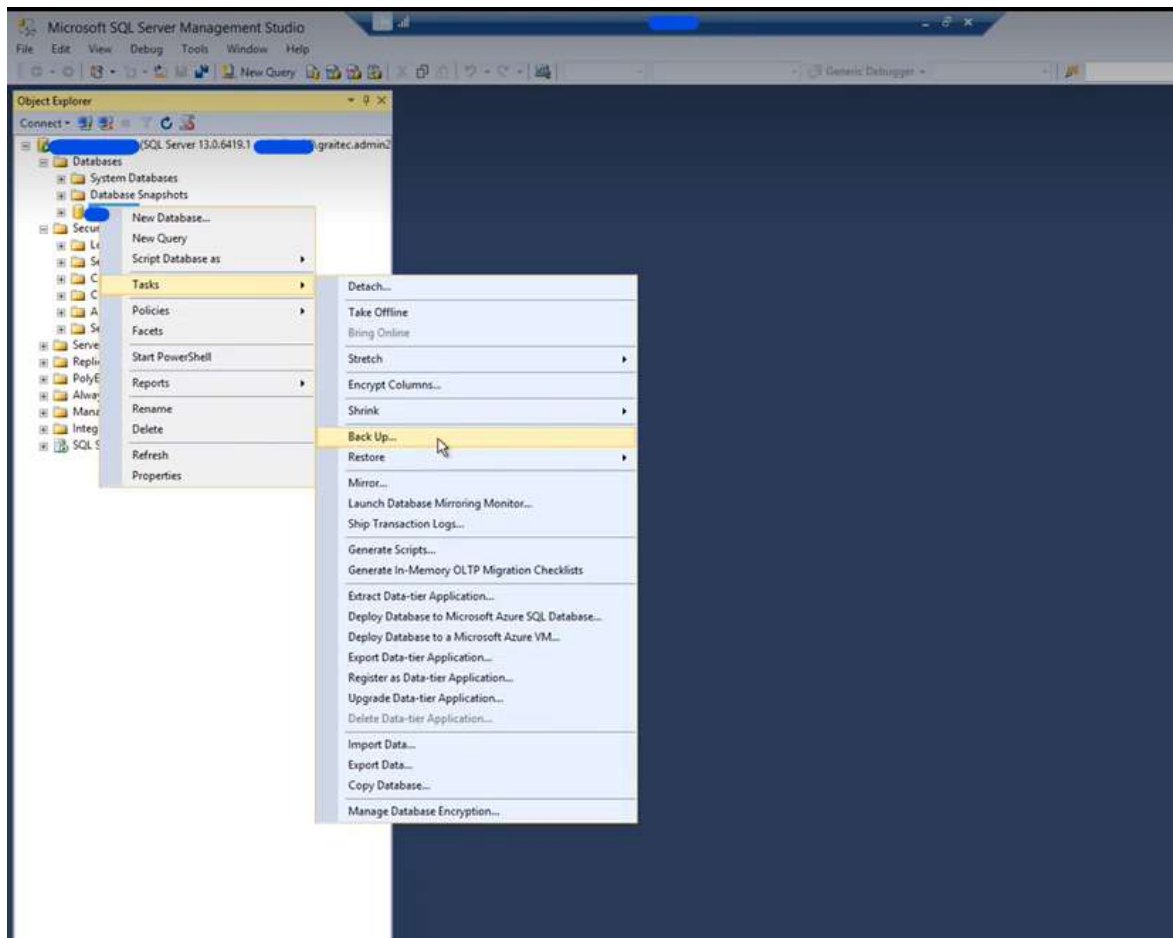
Database Backups

Creating a Database Backup Using SQL Server Management Studio

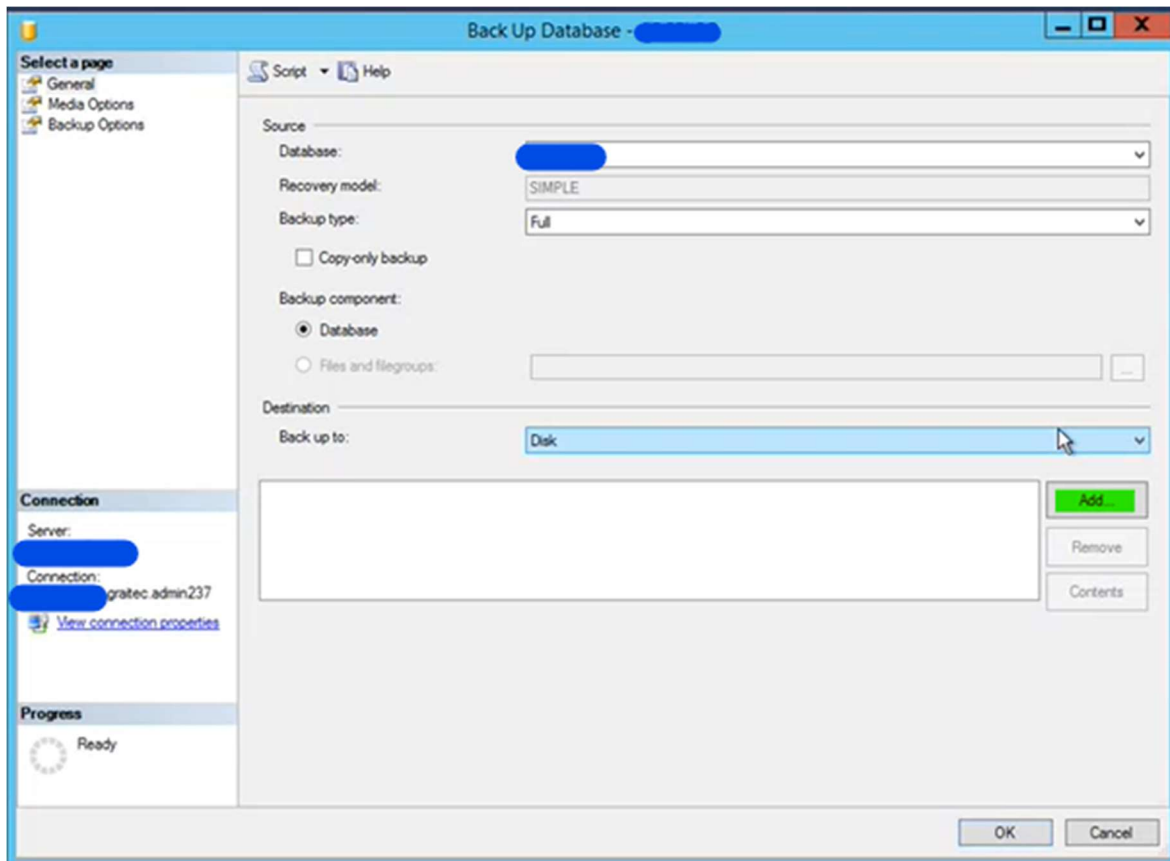
Connect to the server hosting the database.

Expand the “Databases” folder and right click on the Database that is being backed up.

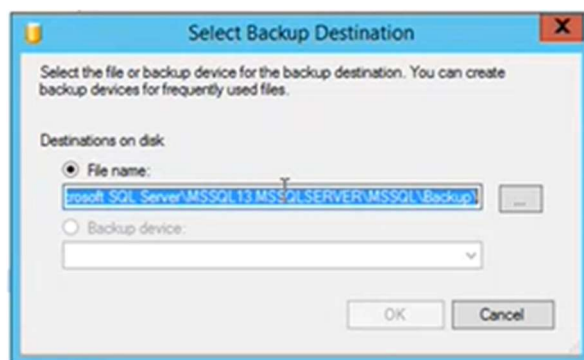
On the Right click menu, under “Tasks”, select “Back Up...”



Back Up Database screen will pop up.

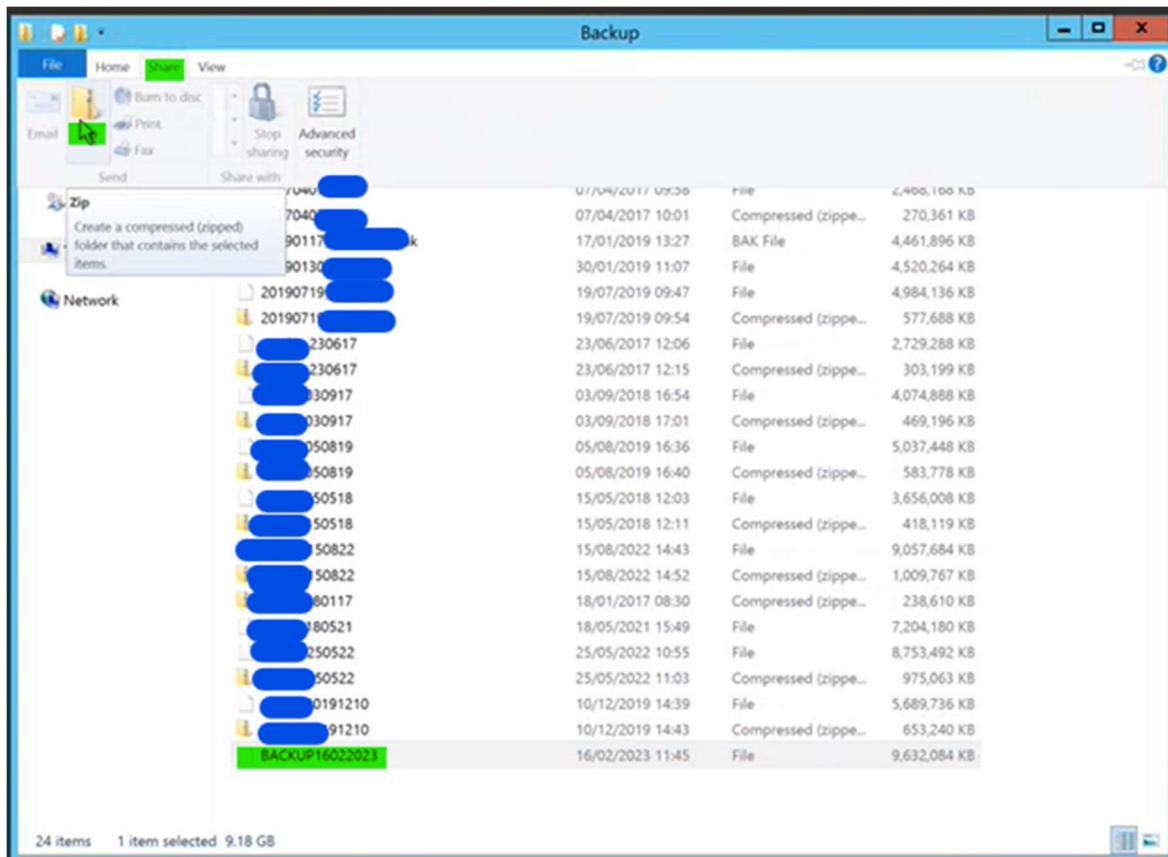


To save the backup file on the disk, select “Disk” under “Destination > Back up to” and then click “Add” to add a destination path and filename.

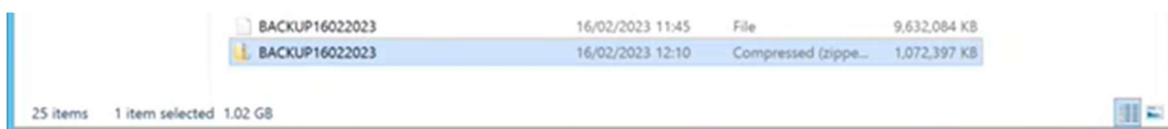


Define file path and filename and use “.bak” extension when defining the filename. At the restore stage, backup file will not be recognized without the expected “.bak” extension.

Click “OK” on the “Back Up Database” window to initiate the backup file creation.



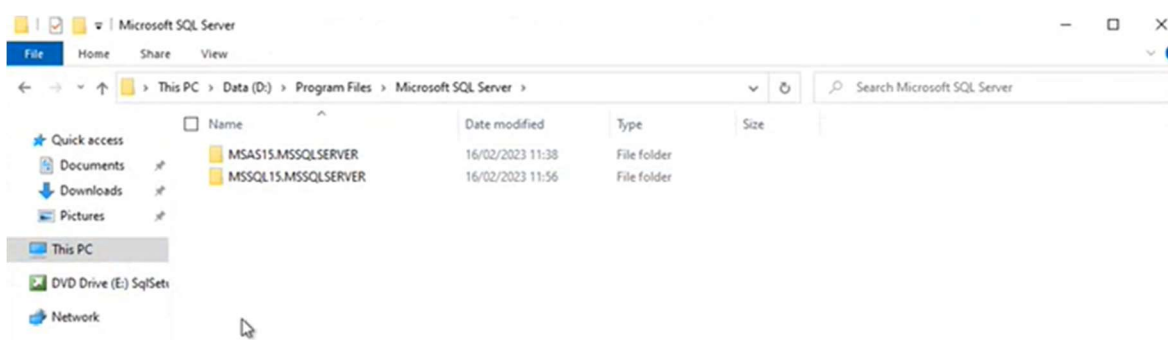
When transferring backup files, to speed up the process, the backup file can be compressed via the “Share>Zip” command on the toolbar.



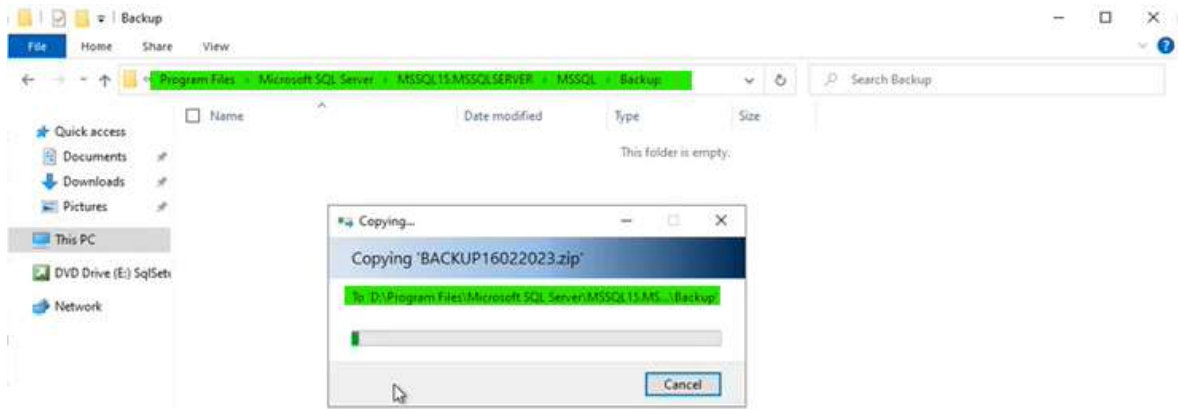
In this example, a backup file ~9.6GB is compressed to ~1.0 GB.

Restoring from a Backup Using SQL Server Management Studio

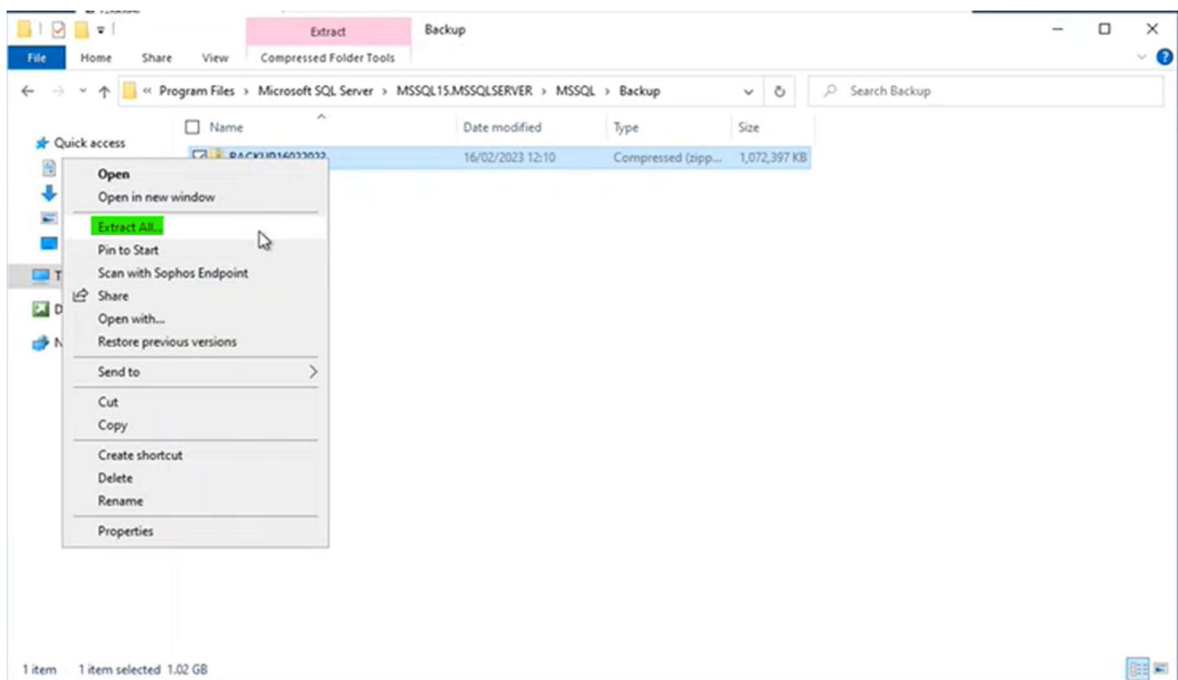
The backup file needs to be placed into the backup directory.



Locate the MSSQL folder and then the Backup folder within it.

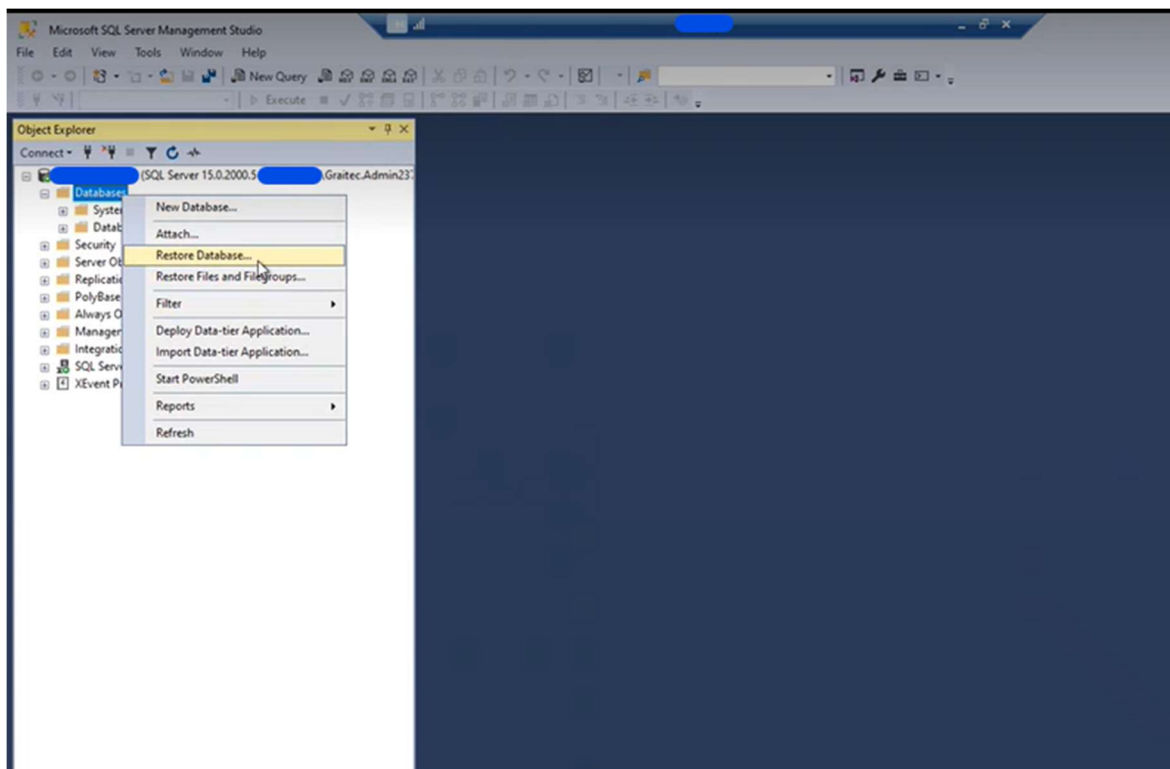


Unzip the backup files into the same location.

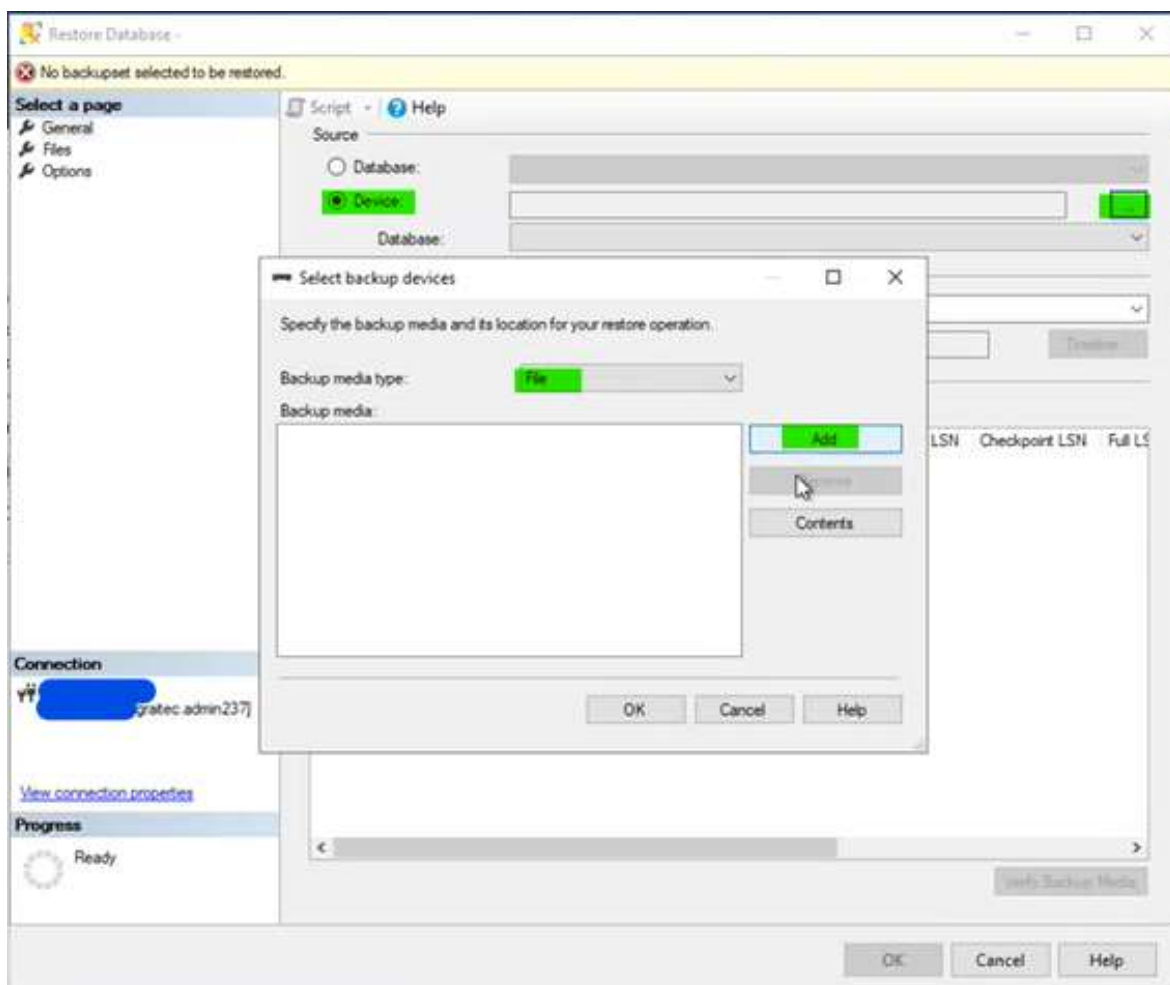


If the unzipped file does not have a “.bak” extension, rename the file to include the extension.

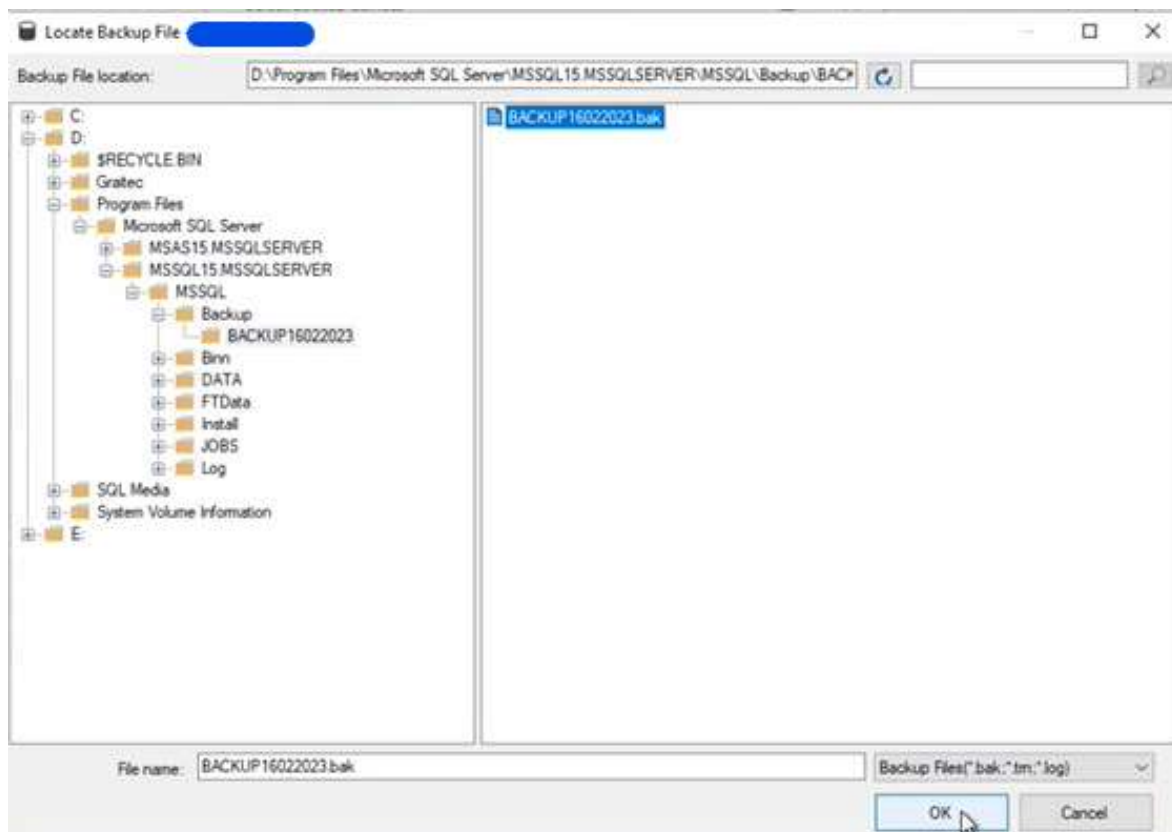
Launch the SQL Server Management Studio and connect to the server.



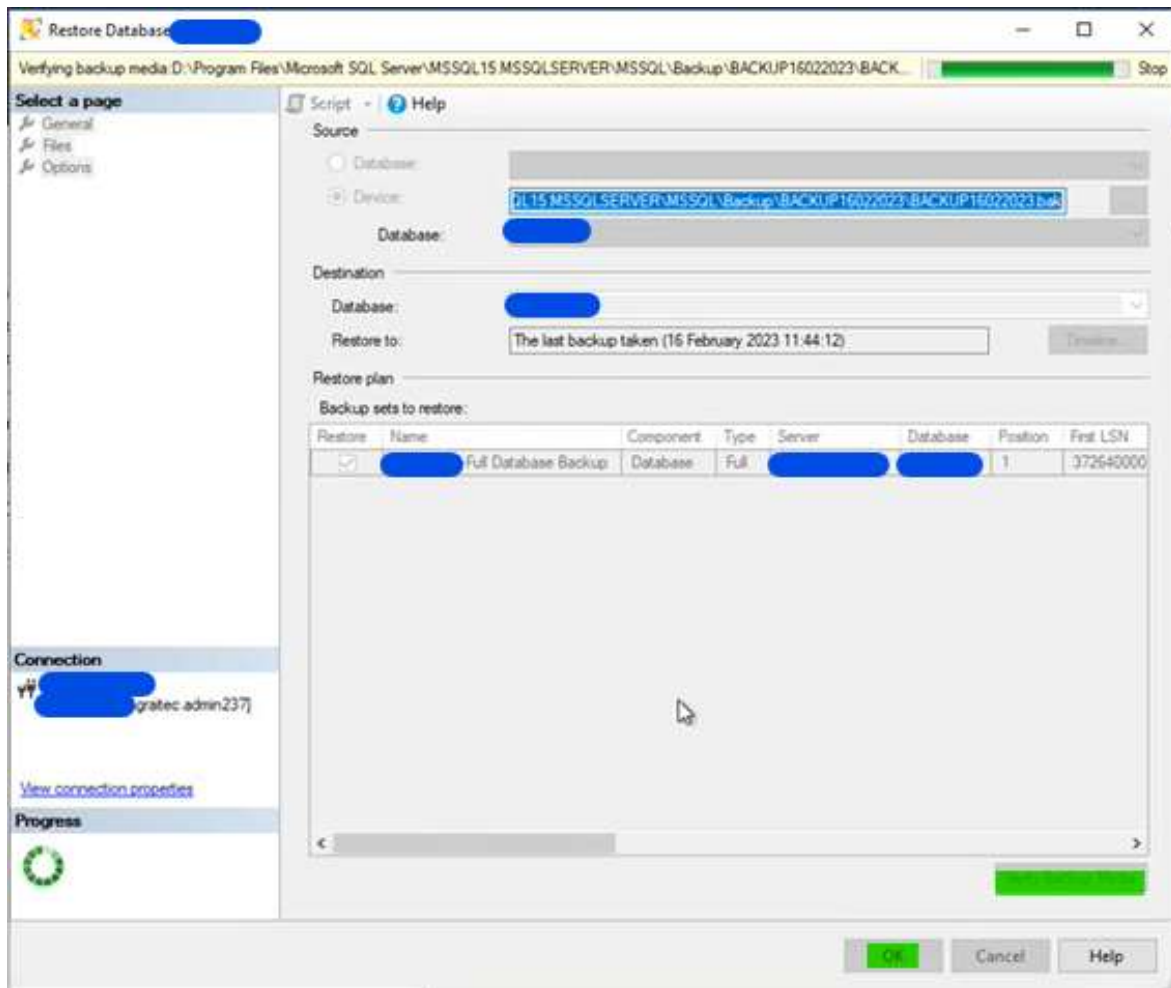
Right click on the “Databases” and select “Restore Database...”



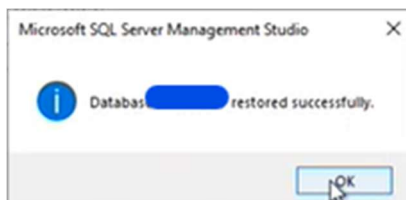
Specify the source of the file as “Device” and click on “Add” to select the backup file.



Select the backup file you’d like to use and click OK.



Click on “Verify Backup Media” to verify the integrity of the backup file.

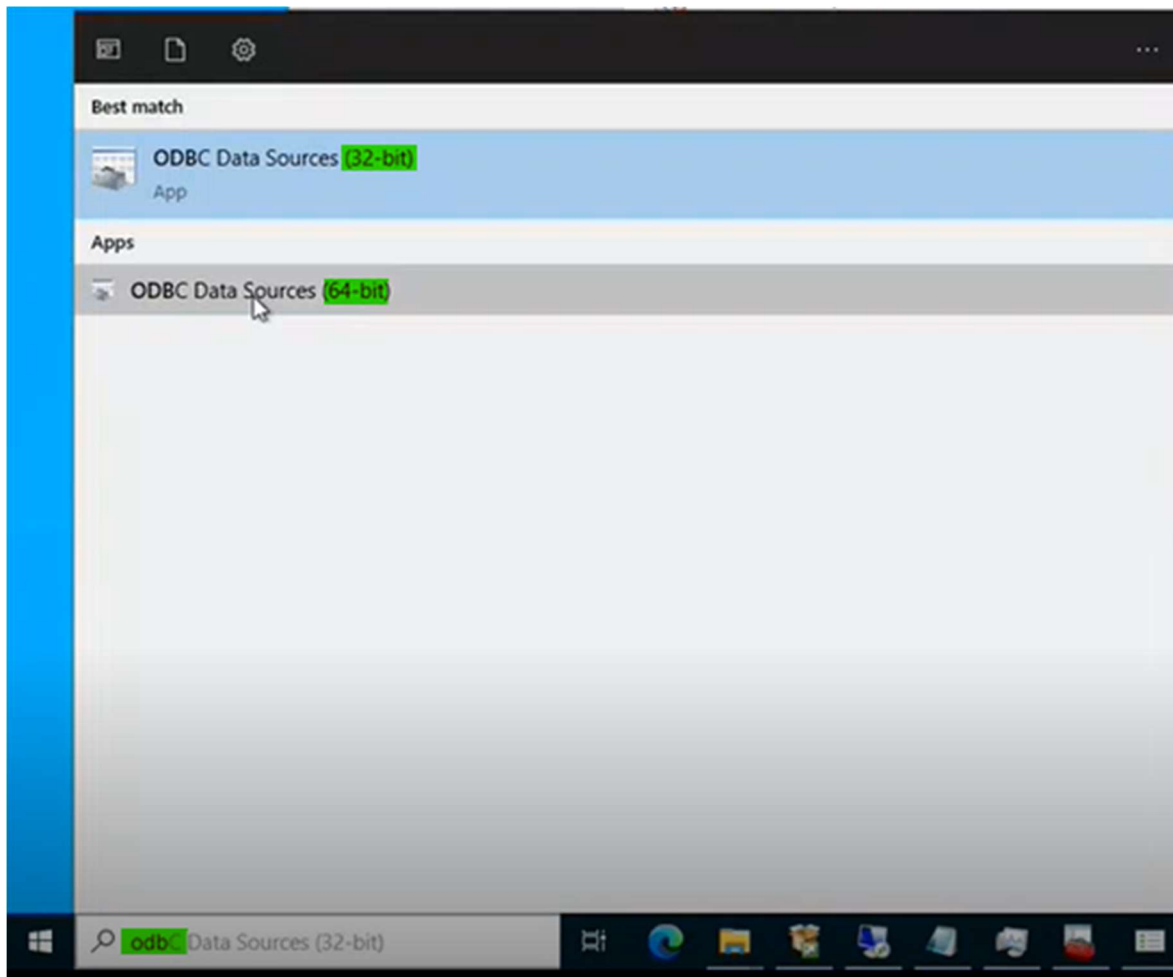


Click OK to restore the backup. A success message is displayed. Click OK to close the window.

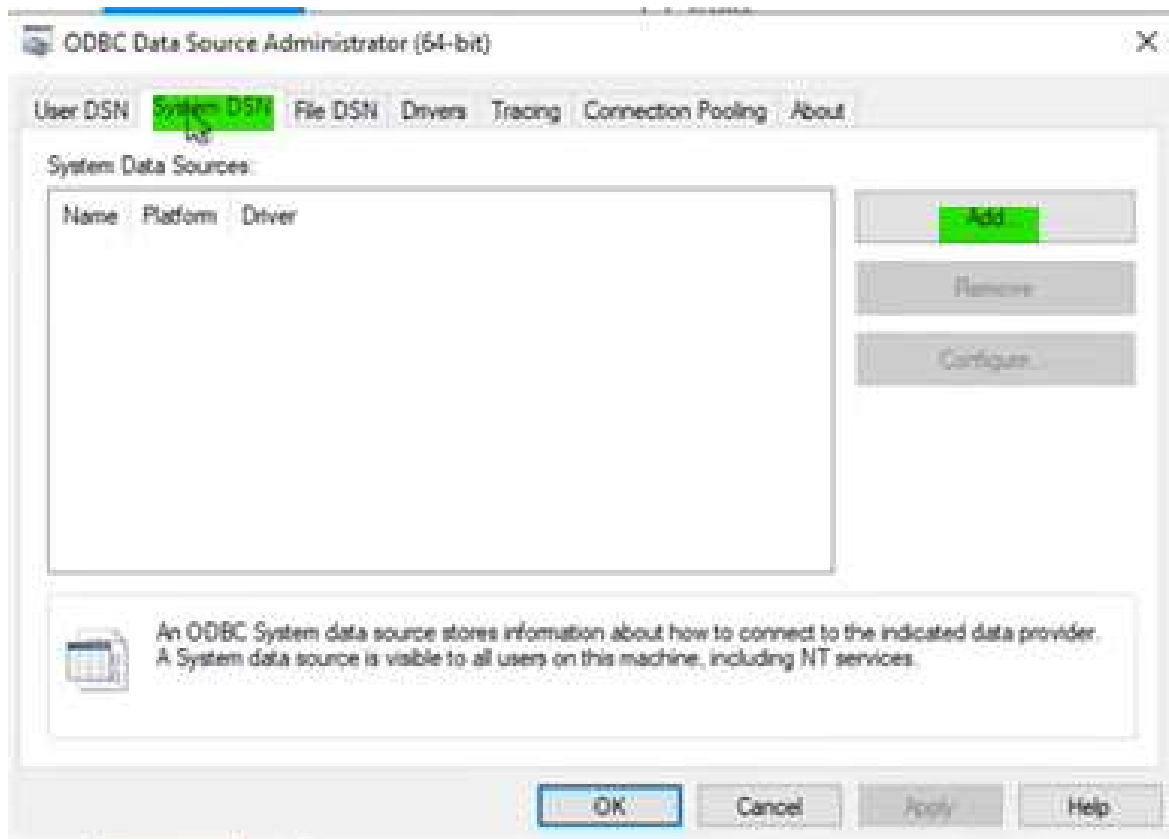
Setting Up Database Logins

Creating ODBC Connections

Type ODBC on the windows search bar.

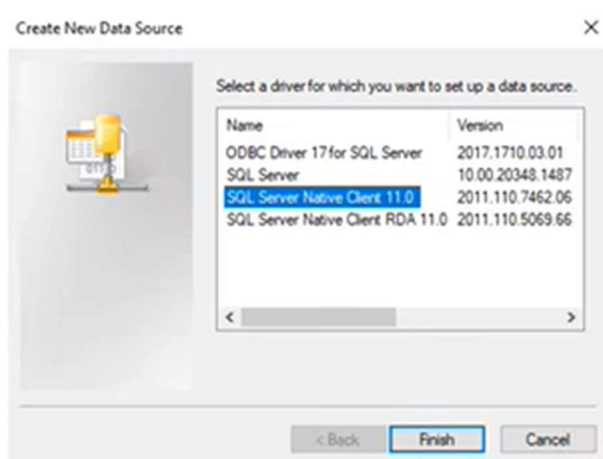


Select the version to match the need. A 64-bit ODBC Connection is needed to use Advance Workshop on 64-bit, and similarly 32-bit connection for the matching app version.

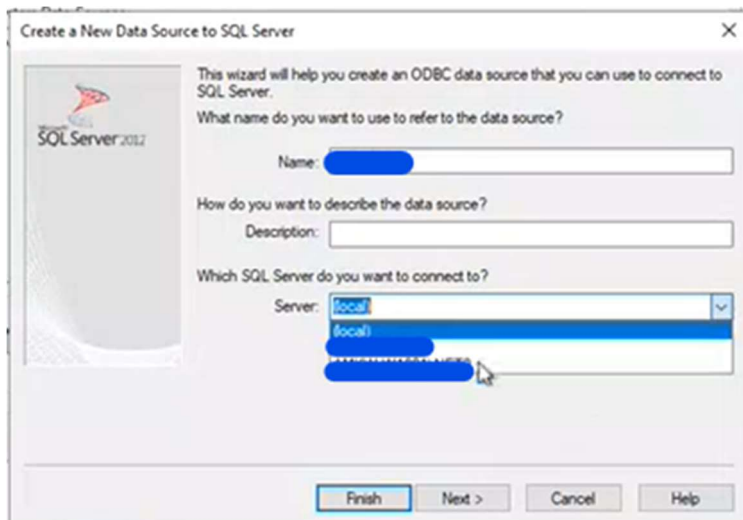


Navigate to the “System DSN” tab to ensure that the ODBC connection is made available to all users on the server.

Click on “Add” to add a new connection.



Select “SQL Server Native Client” and proceed by clicking the “Finish” button.



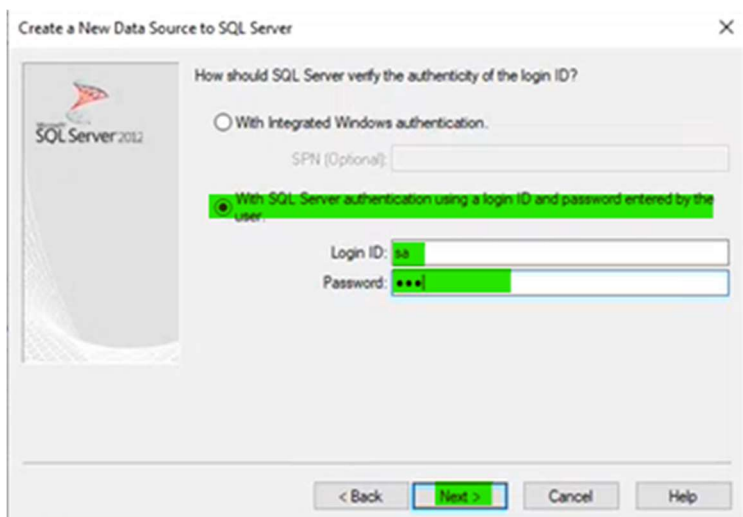
Define a name for the connection. For ease of reference, use the name of the Database that you're connecting to.

Also on this screen, you'll need to specify "Which SQL Server do you want to connect to?".

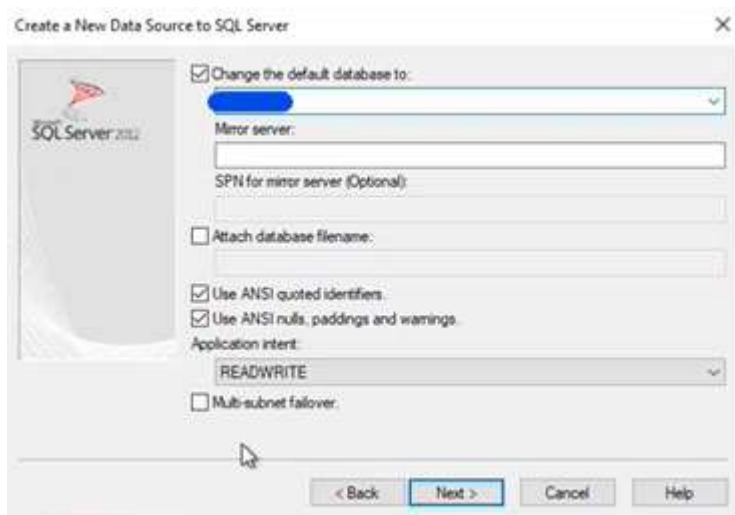
If you've installed both SQL Server and the Advance Workshop application on your local machine, you can type in "localhost". This will point the connection to your local machine.

Alternatively, you can specify the name of the server to point the tool.

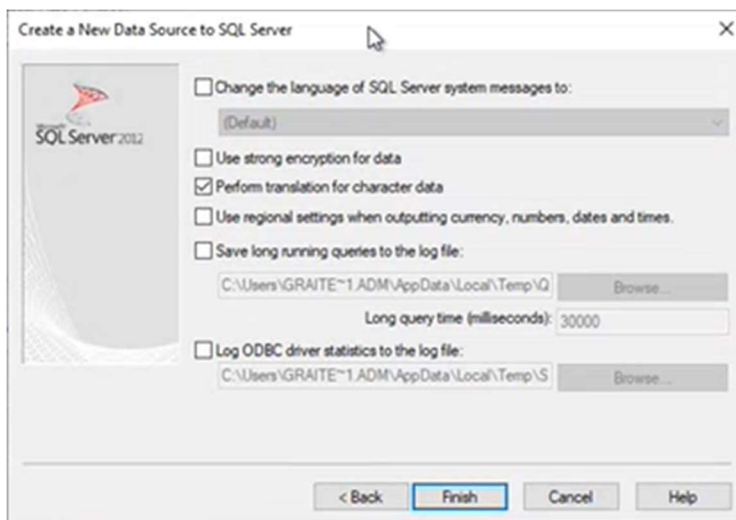
Finally, if the application server and SQL server are on different servers, the connection needs to be established to the SQL server, so that the application server can fetch the data from it.



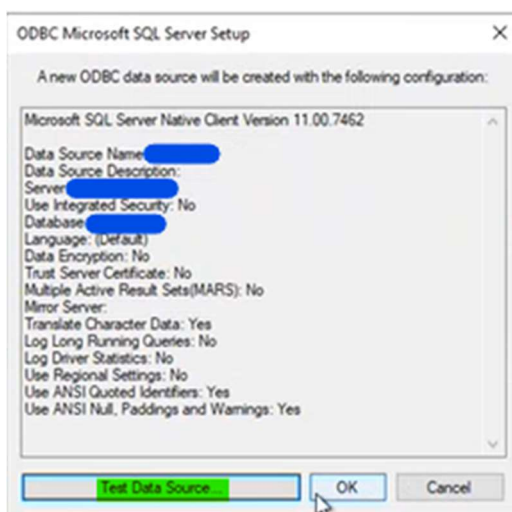
Select "With SQL Server authentication..." and enter the password defined in the [Database Engine Configuration > Server Configuration Tab](#) referenced above.



Change the default database, specify the database you wish to connect to.



Click Finish to proceed.



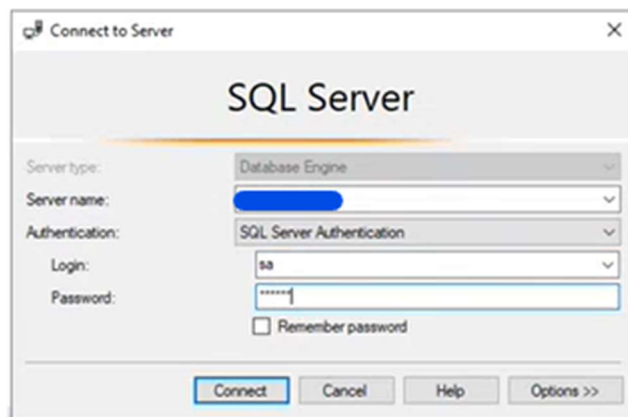
A final confirmation page will be shown. Click on “Test Data Source...” to test the connection.



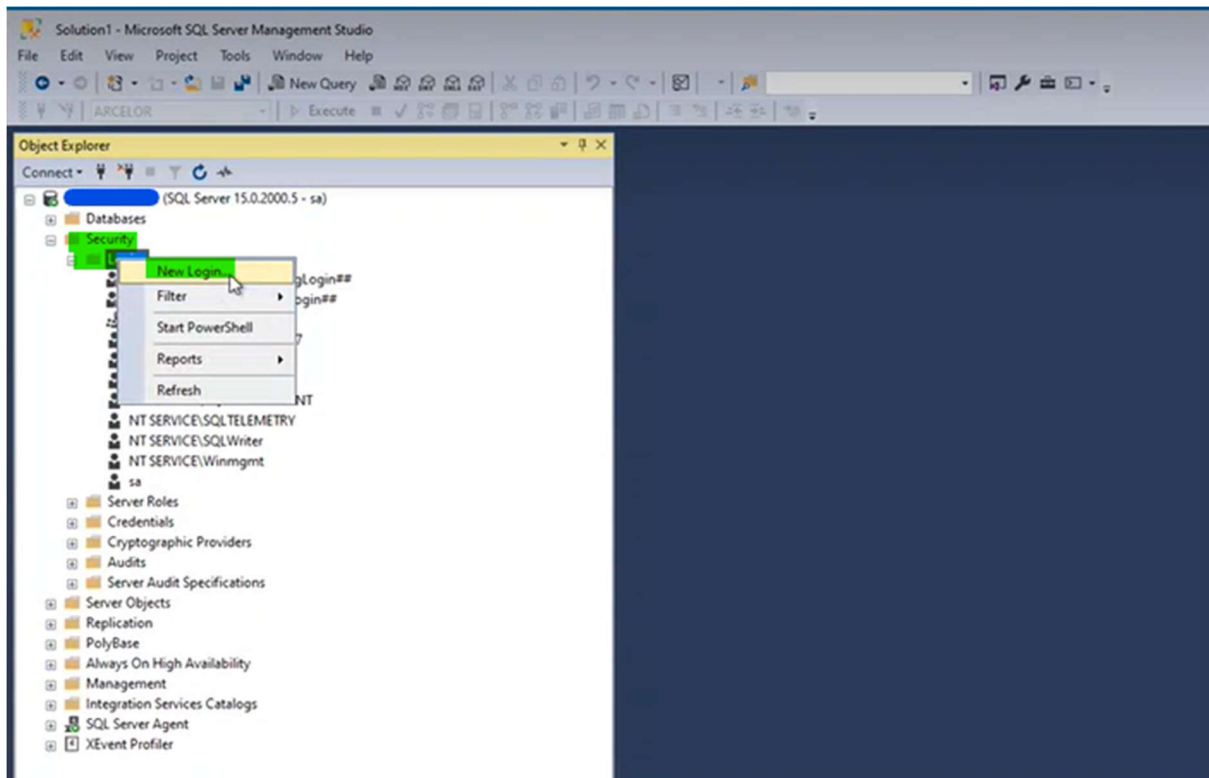
Creating a user on the Database using SQL Server Management Studio

Advance Workshop user logins must have corresponding users set up on the database.

This can be done using the SQL Server Management Studio interface.



Connect to the server using the system admin (sa) account created during the Server Configuration step of the SQL Setup.

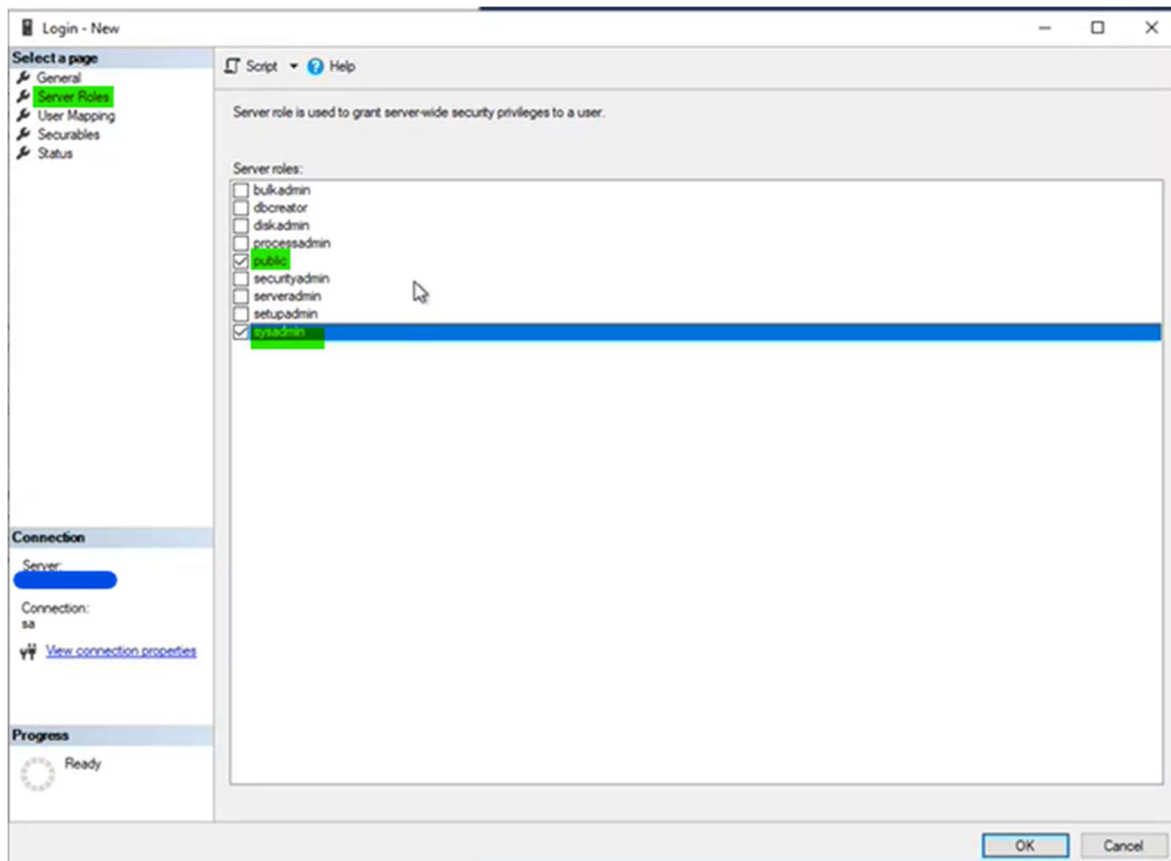


Expand the “Security” folder and right click on “Logins” to create a “New Login...”

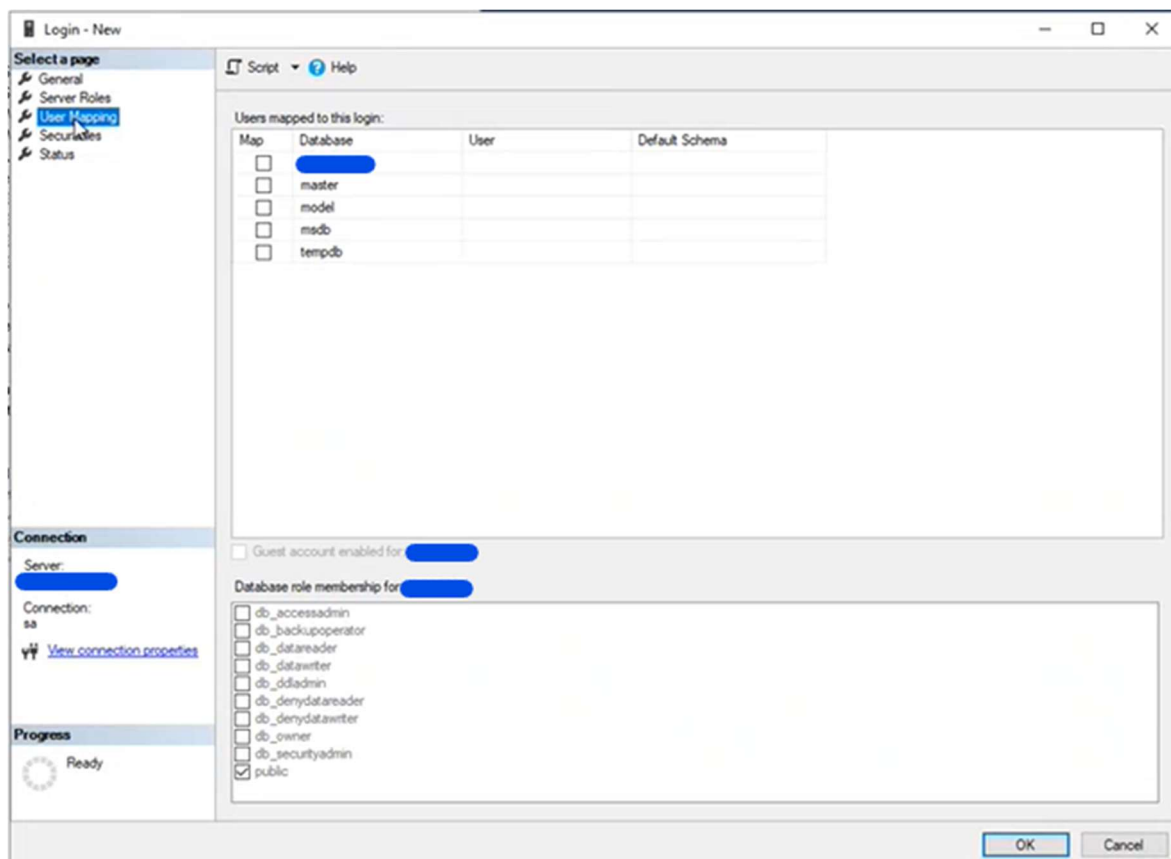
The screenshot shows the 'Login - New' dialog box with the following details:

- Select a page:** General, Server Roles, User Mapping, Securables, Status.
- Script** and **Help** buttons are present.
- Login name:** Administrator
- Authentication:** ☒ SQL Server authentication, ☐ Windows authentication.
- Password fields:** Password, Confirm password, Old password (all empty).
- Options:** ☐ Specify old password, ☐ Enforce password policy, ☐ Enforce password expiration, ☐ User must change password at next login.
- Mapping:** ☐ Mapped to certificate, ☐ Mapped to asymmetric key, ☐ Map to Credential.
- Mapped Credentials:** Credential list with 'Remove' button.
- Default database:** master
- Default language:** <default>
- Connection:** Server: <server>, Connection: sa, [View connection properties](#).
- Progress:** Ready.
- Buttons:** OK, Cancel.

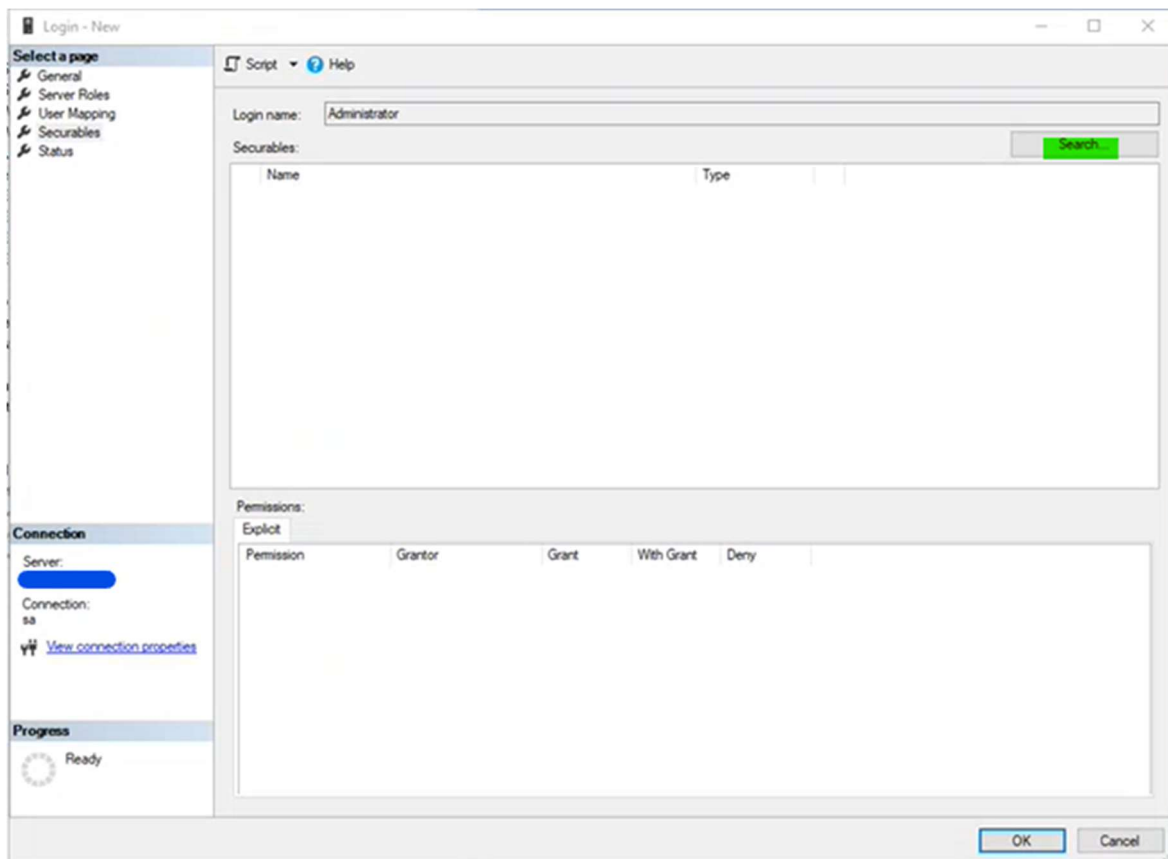
Create the user “Administrator”. This can initially be created without a password.
Proceed to the “Server Roles” page.



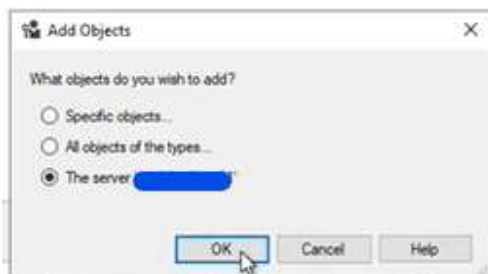
Check the sysadmin box to assign this user “Administrator” as a sysadmin. Proceed to the “User Mappings” page.

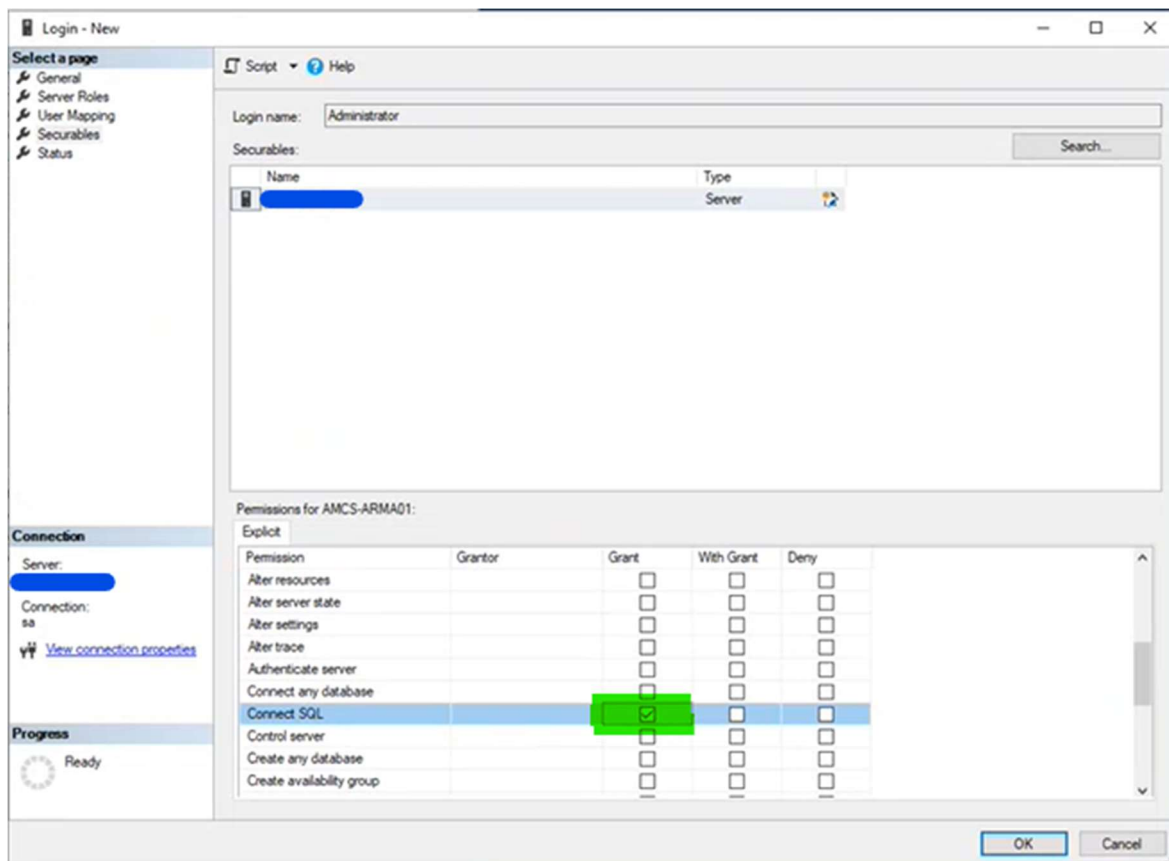


No changes needed on the default setup. Proceed to the “Securables” page.

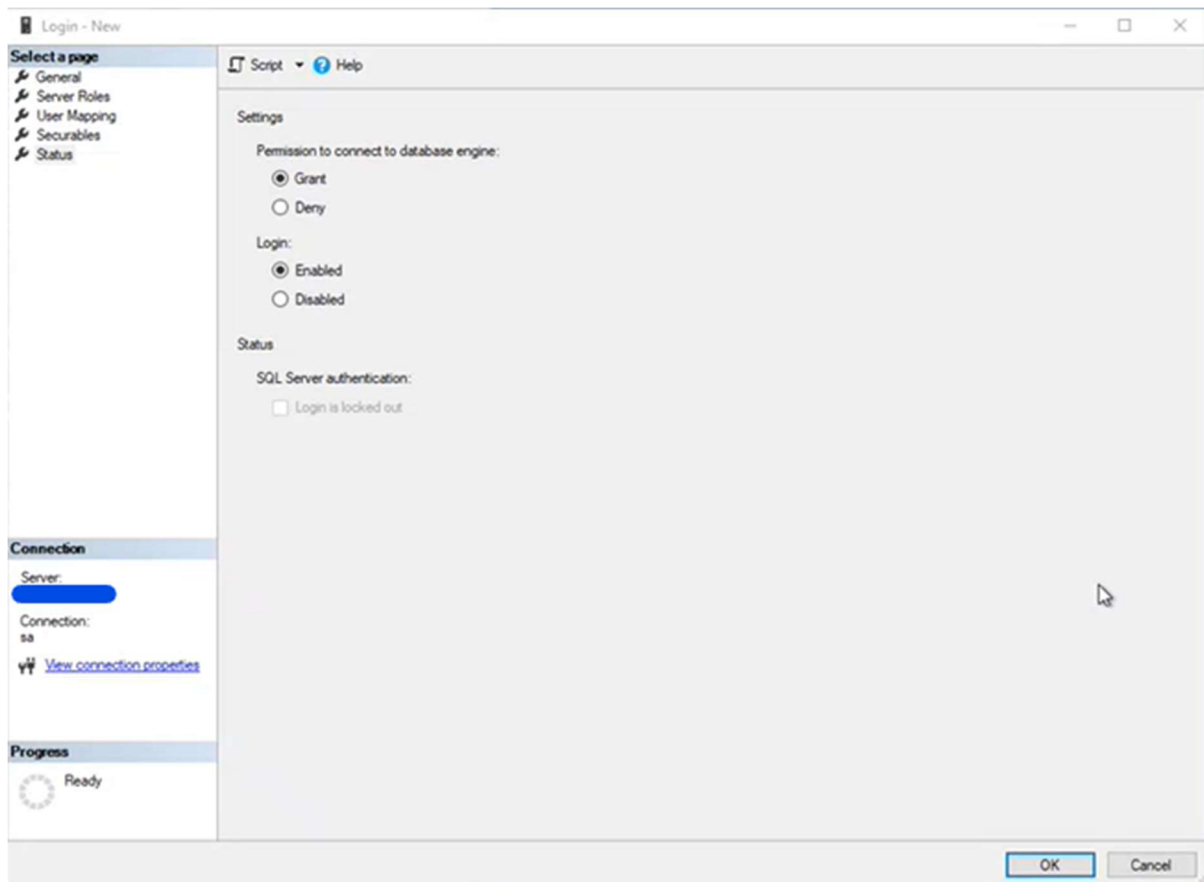


Click on “Search” and select the server.

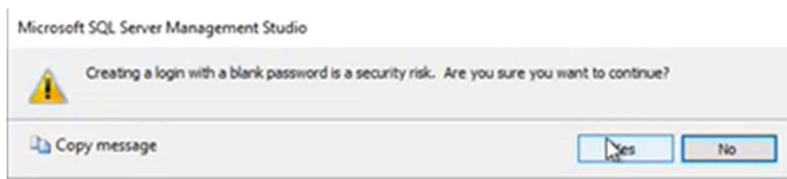




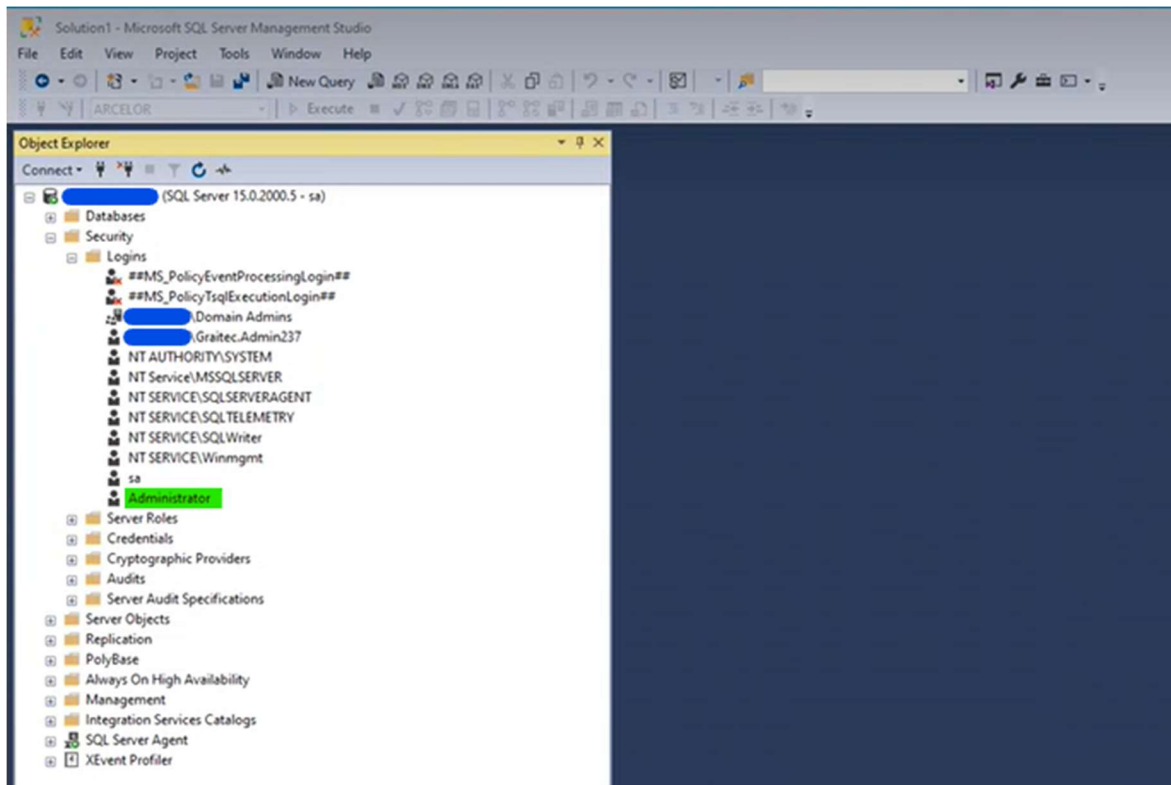
Grant permissions for “Connect SQL” and proceed to the “Status” page.



No changes needed on the status page. Click OK to finish the new login creation.



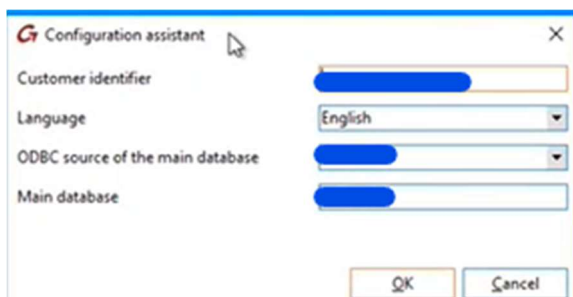
A warning is presented if no password is provided. This can be added later. Click “Yes” to proceed without a password.



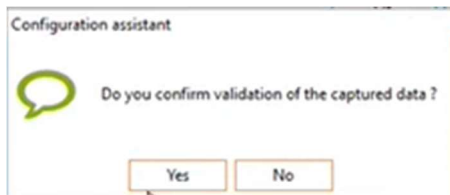
The newly added “Administrator” user can now be seen on the list of logins.

adminLaunching the Advance Workshop Application for the First Time

Upon the first launch, the application will ask for the “Customer Identifier” (Specific Client).



A confirmation will be requested.



Click “Yes” to proceed.

The main application window will be opened, and a login prompt displayed.



If you’ve followed the previous section of this guide, you can now login with the “Administrator” account just created.