



# Click Studios

Passwordstate

## Installation Instructions for SQL Server 2019 Express

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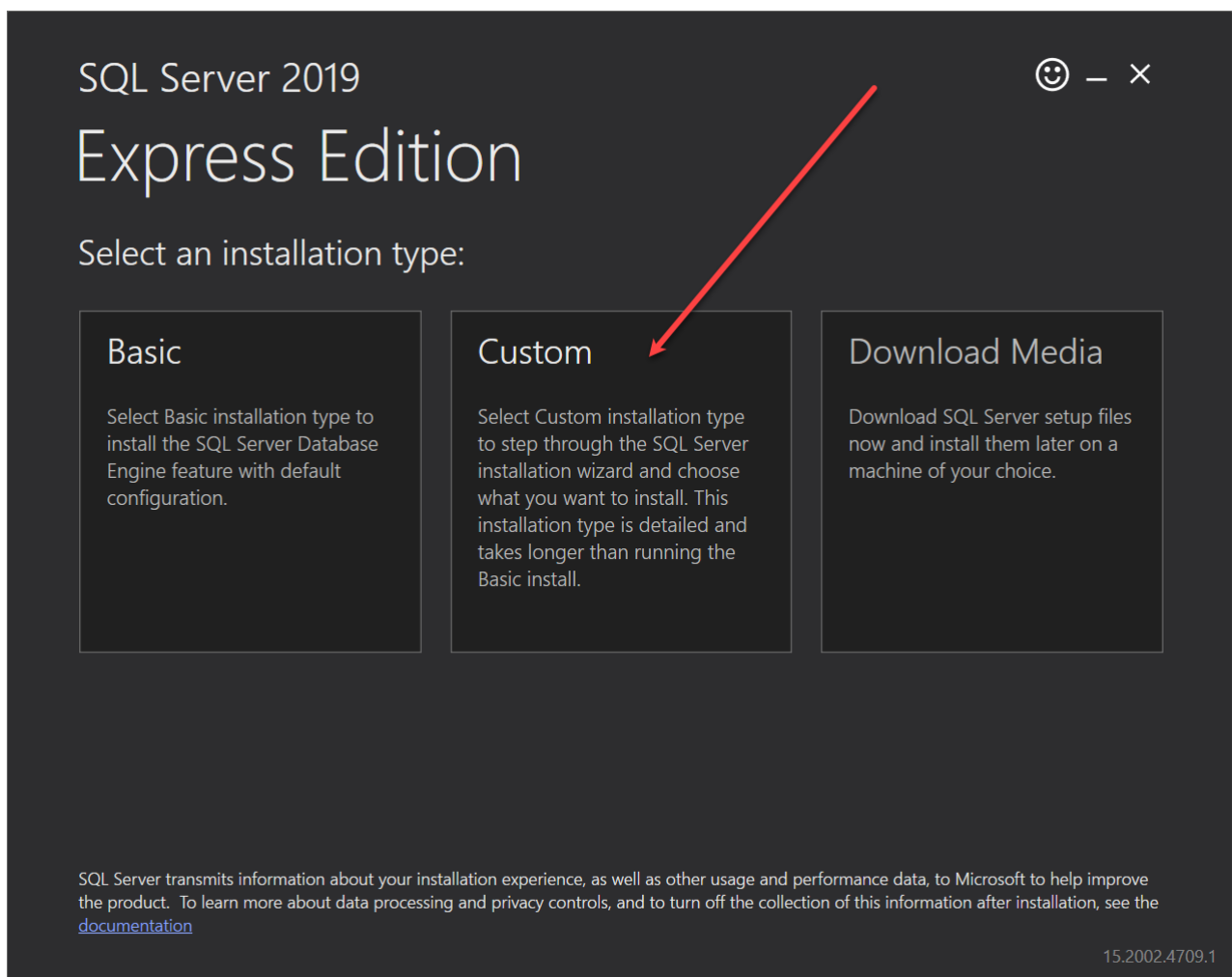
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## 1 SQL Server 2019 Express Install

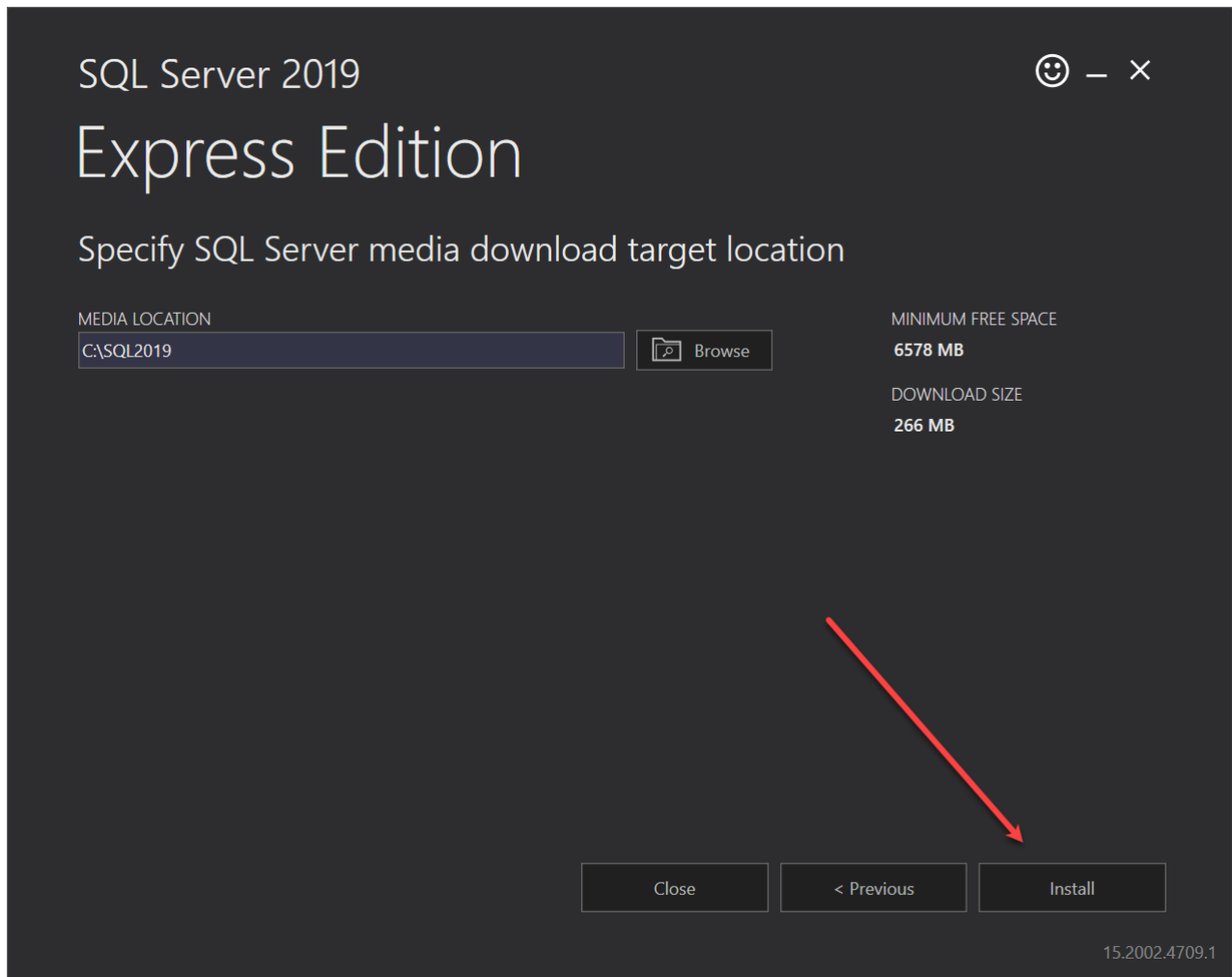
- Ensure the server you intend to install SQL Express 2019 has access to the internet. Part of this installation process requires SQL to download some source files automatically. If you don't have internet access, you can run this same installer on another machine that does, but choose the "Download Media" link in the first screenshot below. You can then transfer the full source files to your database server and perform the install manually.
- If you haven't done so already, please download SQL Server 2019 express installer from the following link - <https://www.microsoft.com/en-us/sql-server/sql-server-downloads>

### Installation Instructions

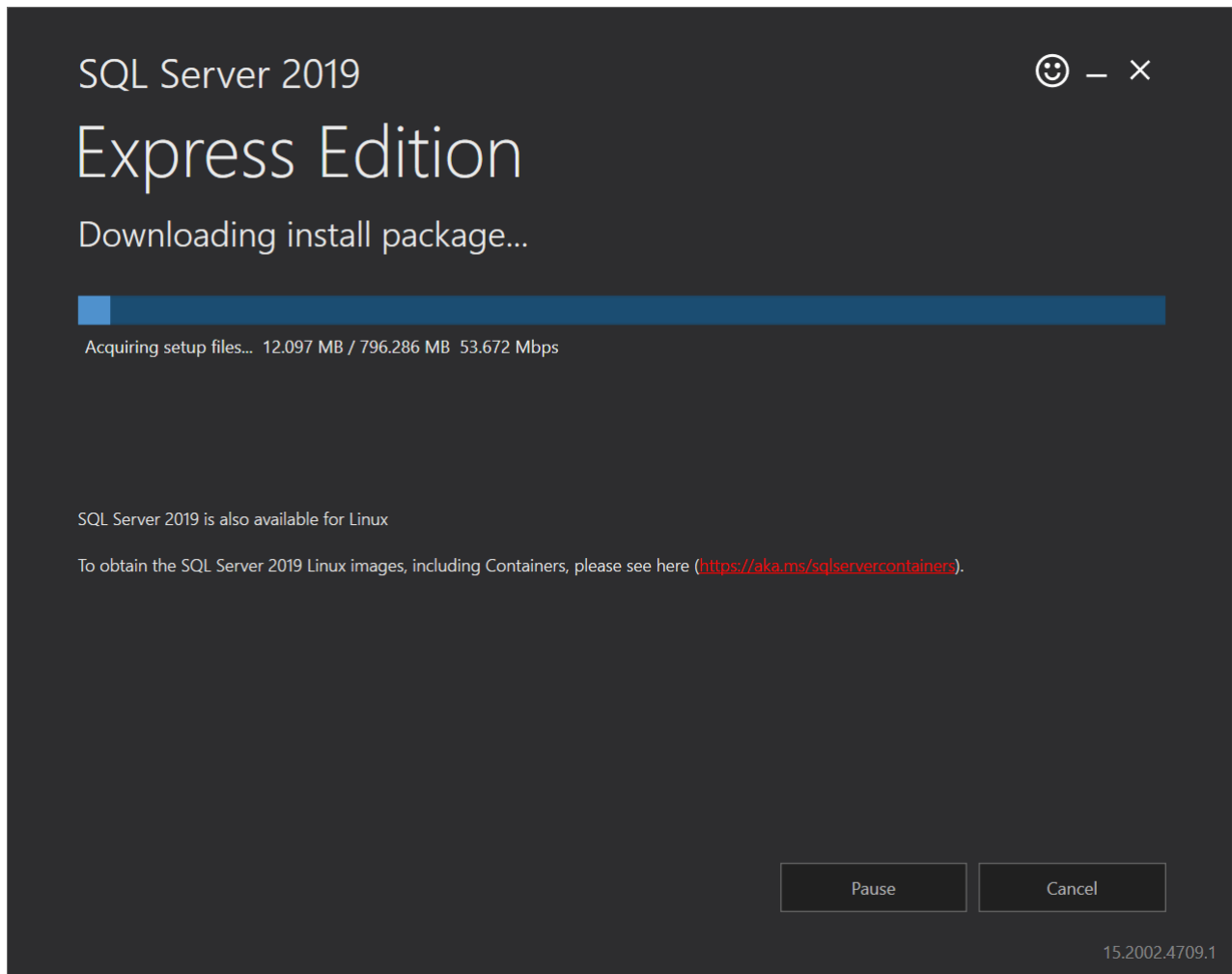
- Run the **SQLServer2019-SSEI-Expr.exe**
- At the 'Installation type' screen, select '**Custom**'



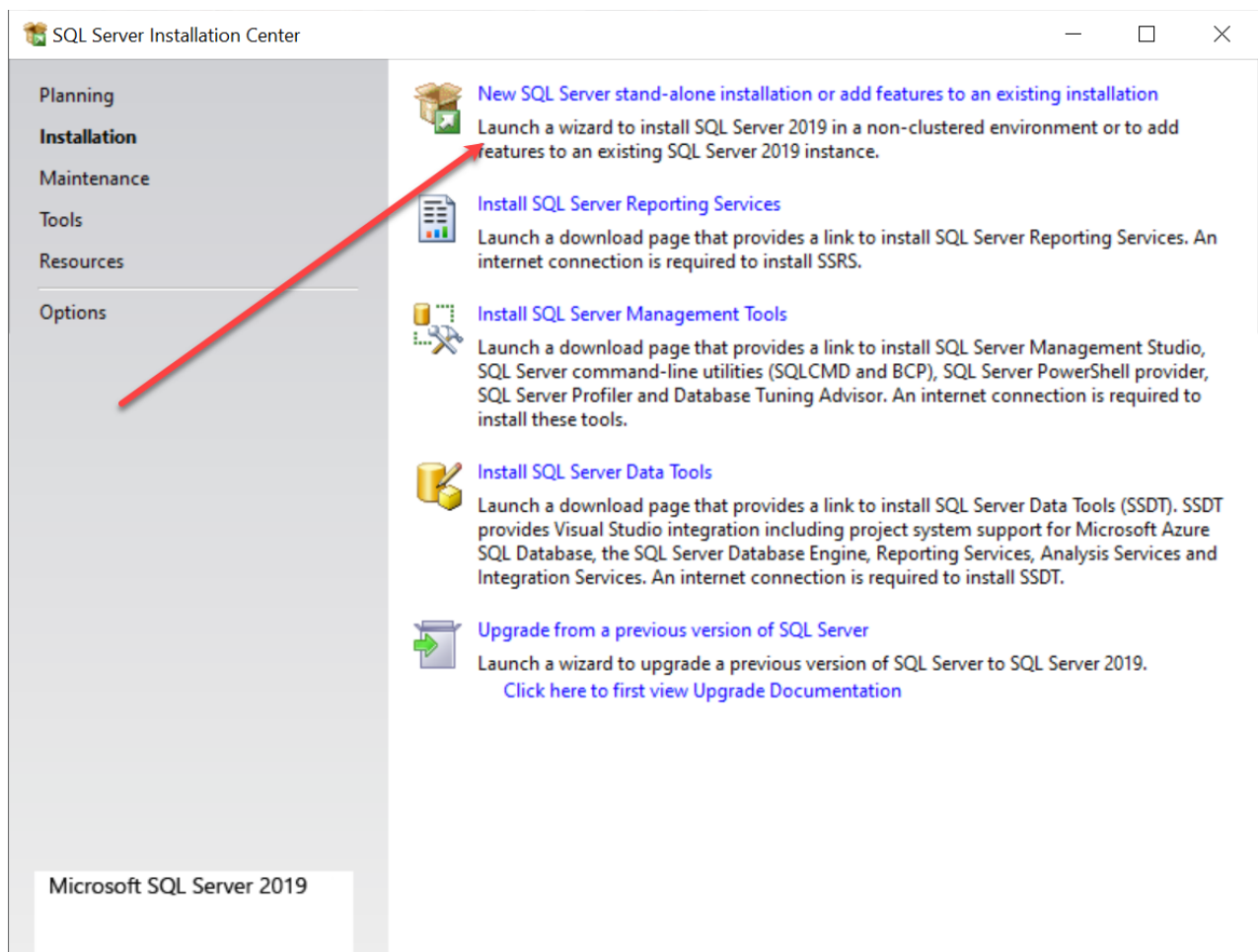
- Choose a location where the SQL 2019 Source files will download to, and click **Install**:



- The installer will now download the necessary source files:

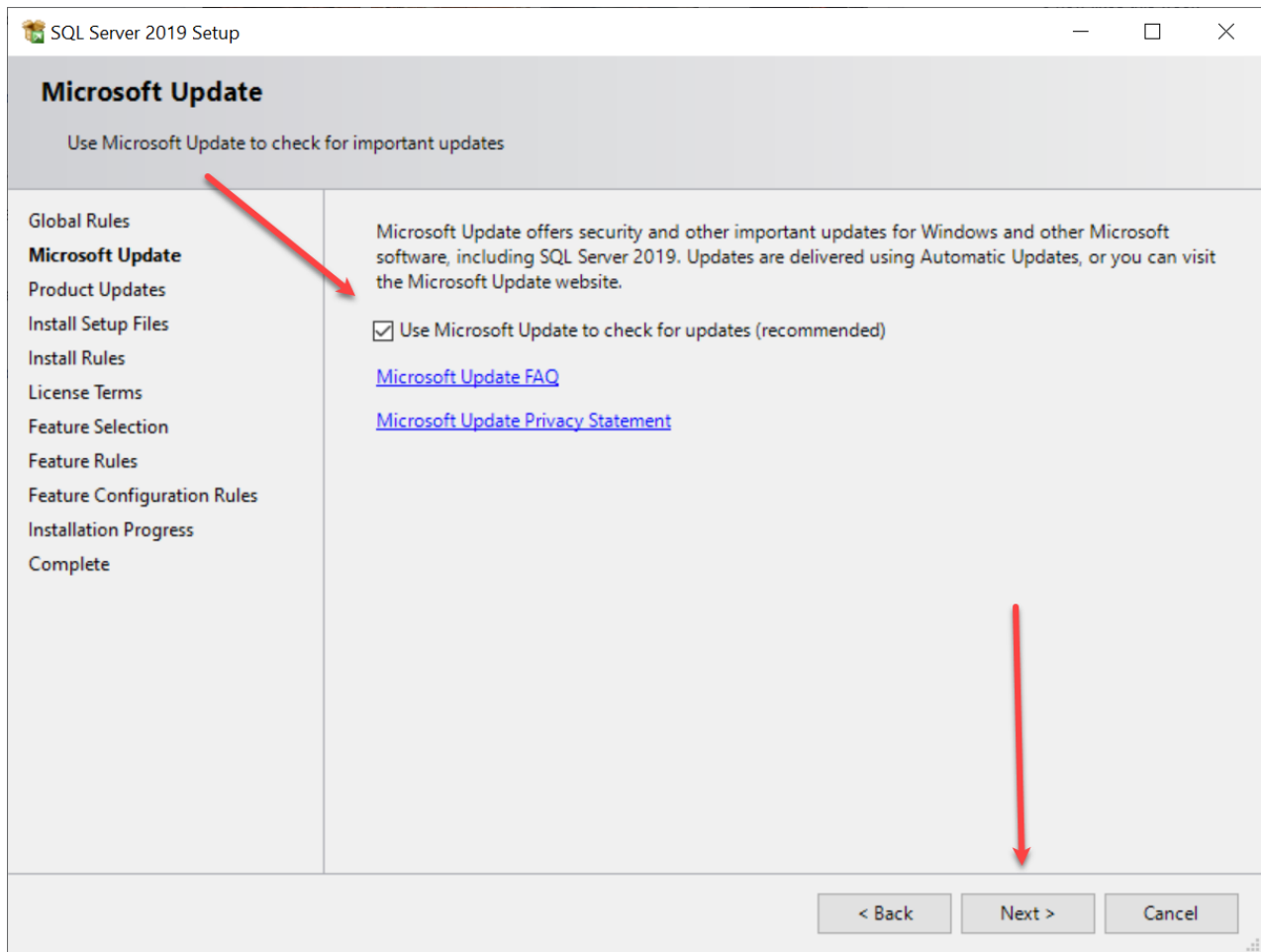


- At the Installation Screen, select the **“New SQL Server stand-alone installation or add features to an existing installation”**



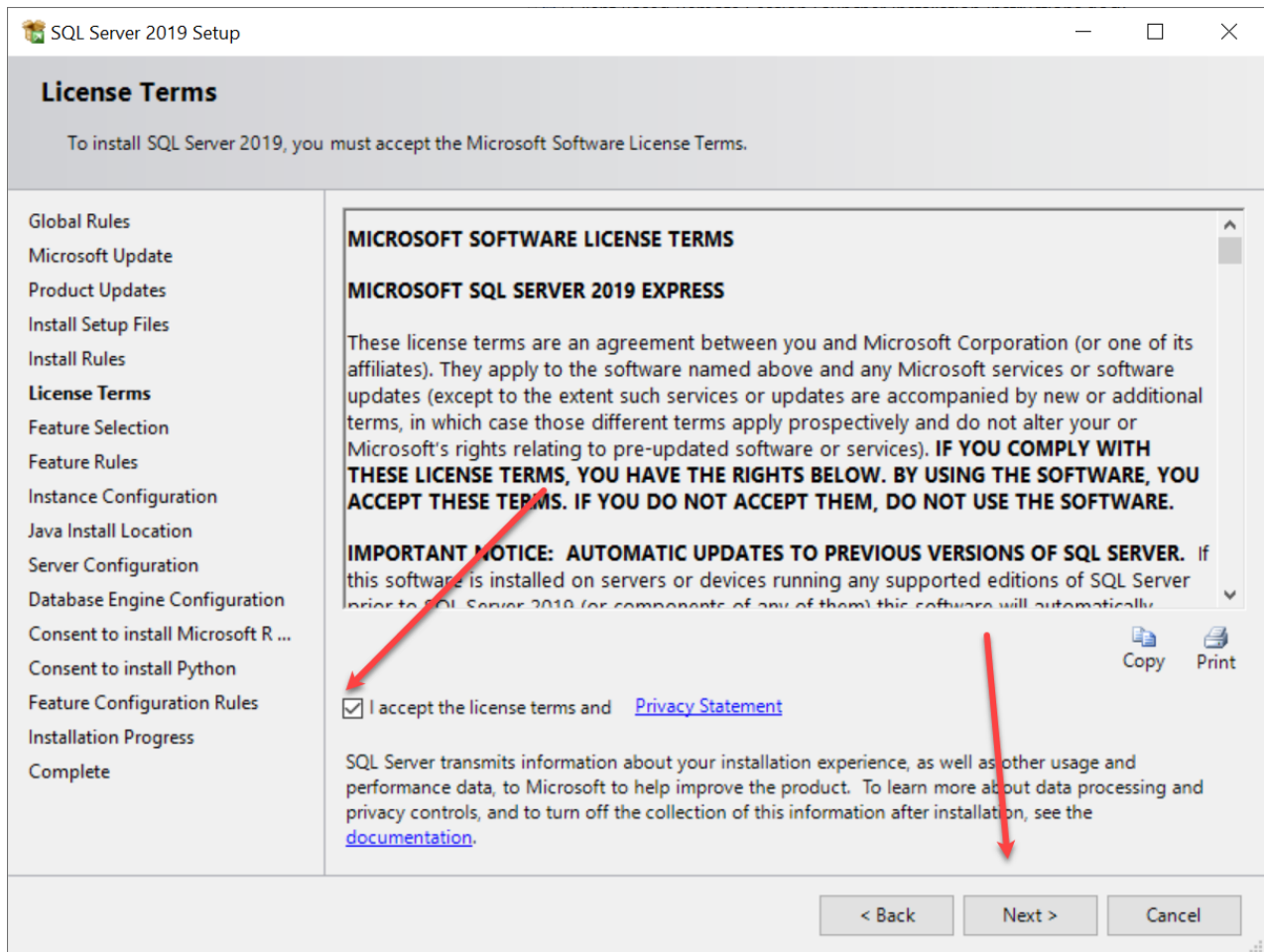
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- At the Microsoft Update screen, select automatic updates if you require and click **Next**



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- Accept the terms of the licensing and click **Next**





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- At the 'Feature Selection' screen, accept the default checked options then click on the 'Next' button

SQL Server 2019 Setup

### Feature Selection

Select the Express features to install.

Global Rules

Microsoft Update

Product Updates

Install Setup Files

Install Rules

License Terms

**Feature Selection**

Feature Rules

Instance Configuration

Java Install Location

Server Configuration

Database Engine Configuration

Consent to install Microsoft R ...

Consent to install Python

Feature Configuration Rules

Installation Progress

Complete

Looking for Reporting Services? [Download it from the web](#)

Features:

**Instance Features**

- ☒ Database Engine Services
  - ☒ SQL Server Replication
  - ☒ Machine Learning Services and Language
    - ☒ R
    - ☒ Python
    - ☒ Java
  - ☒ Full-Text and Semantic Extractions for Search
  - ☐ PolyBase Query Service for External Data
  - ☐ Java connector for HDFS data sources

Shared Features

Select All Unselect All

Instance root directory: C:\Program Files\Microsoft SQL Server\

Shared feature directory: C:\Program Files\Microsoft SQL Server\

Shared feature directory (x86): C:\Program Files (x86)\Microsoft SQL Server\

Feature description:

The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL

Prerequisites for selected features:

Already installed:

- Windows PowerShell 3.0 or higher
- Microsoft Visual C++ 2017 Redistributable

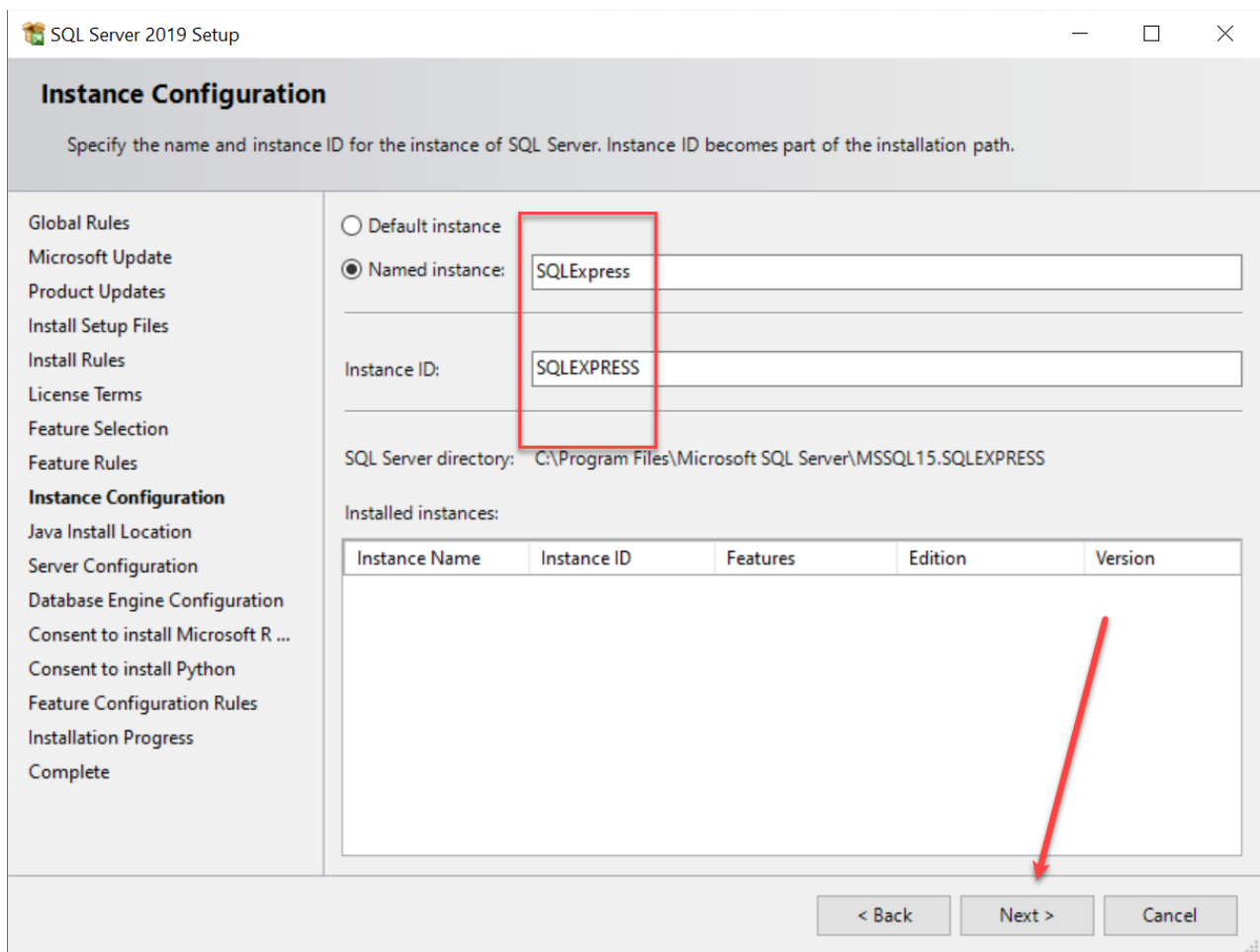
Disk Space Requirements

Drive C: 3155 MB required, 82560 MB available

< Back Next > Cancel

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- At the 'Instance Configuration' screen, accept the default **SQLExpress** instance and click on the 'Next' button



SQL Server 2019 Setup

### Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
License Terms  
Feature Selection  
Feature Rules  
**Instance Configuration**  
Java Install Location  
Server Configuration  
Database Engine Configuration  
Consent to install Microsoft R ...  
Consent to install Python  
Feature Configuration Rules  
Installation Progress  
Complete

☐ Default instance

☒ Named instance:

Instance ID:

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL15.SQLEXPRESS

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back   Next >   Cancel

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- Leave the defaults for the **Java Install Location** screen, and click **Next**

SQL Server 2019 Setup

### Java Install Location

Specify Java installed location

Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
License Terms  
Feature Selection  
Feature Rules  
Instance Configuration  
**Java Install Location**  
Server Configuration  
Database Engine Configuration  
Consent to install Microsoft R ...  
Consent to install Python  
Feature Configuration Rules  
Installation Progress  
Complete

Some selected features require a local installation of a JDK or JRE. Zulu Open JRE version 11.0.3 is included with this installation, or you can download and install a different JDK or JRE and provide that installed location here.

For information on Azul Zulu OpenJDK third party licensing, see <https://go.microsoft.com/fwlink/?linkid=2097167>.

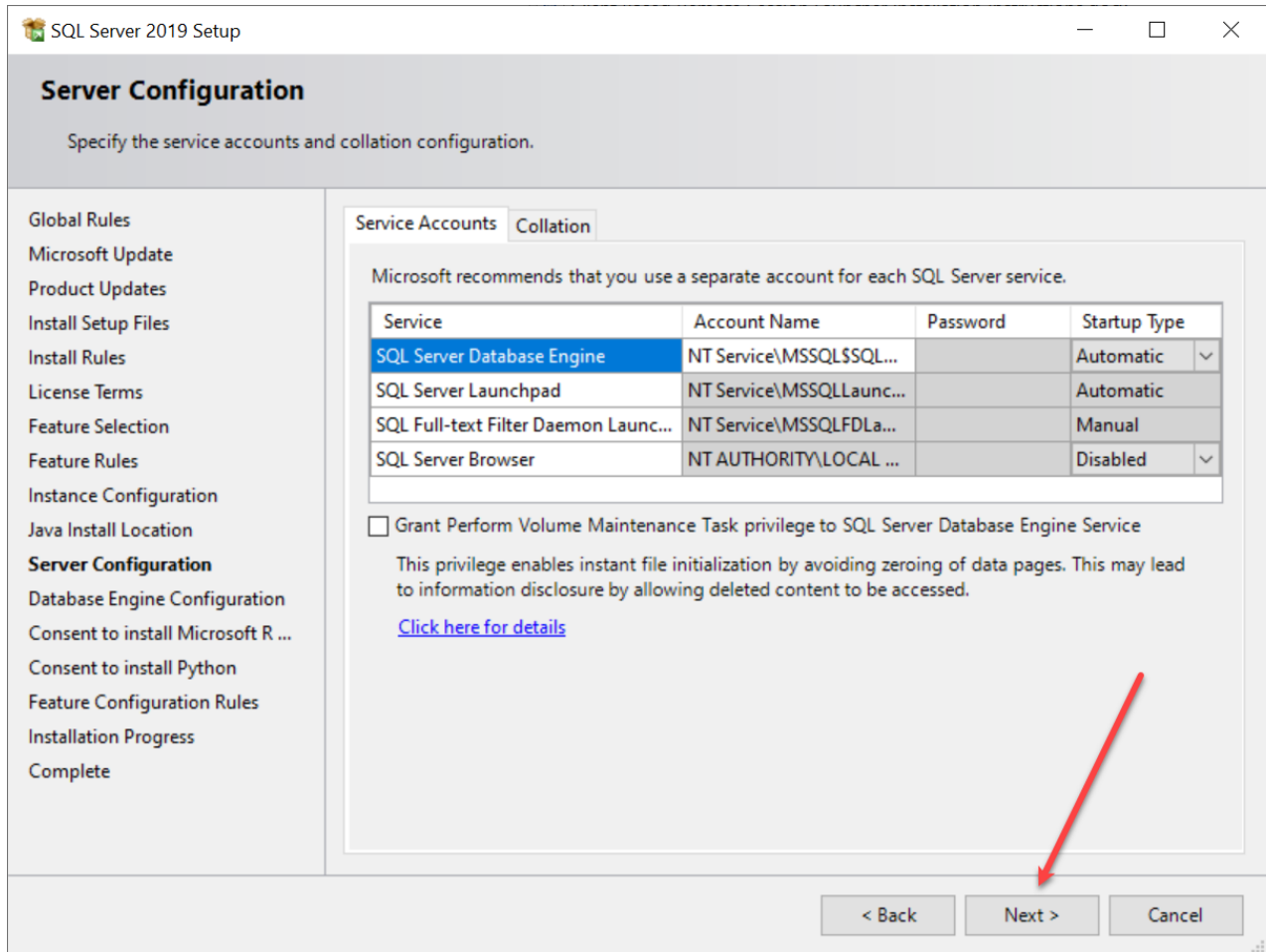
☒ Install Open JRE 11.0.3 included with this installation  
☐ Provide the location of a different version that has been installed on this computer

JDK or JRE installed location:

< Back   Next >   Cancel

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- At the 'Server Configuration' screen, accept the default settings and click on the 'Next' button



SQL Server 2019 Setup

### Server Configuration

Specify the service accounts and collation configuration.

Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
License Terms  
Feature Selection  
Feature Rules  
Instance Configuration  
Java Install Location  
**Server Configuration**  
Database Engine Configuration  
Consent to install Microsoft R ...  
Consent to install Python  
Feature Configuration Rules  
Installation Progress  
Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Database Engine	NT Service\MSSQLSSQL...		Automatic
SQL Server Launchpad	NT Service\MSSQLLaunc...		Automatic
SQL Full-text Filter Daemon Launc...	NT Service\MSSQLFDLa...		Manual
SQL Server Browser	NT AUTHORITY\LOCAL ...		Disabled

☐ Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service

This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.

[Click here for details](#)

< Back Next > Cancel

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- At the '**Database Engine Configuration**' screen, check '**Mixed Mode**' authentication, specify a strong password for the '**sa**' account. The '**Server Administrator**' account is a local SQL account with full permissions to administer your databases and settings within SQL. Your own Active Directory account will also be added in here with full permissions, and if desired you can add more Active Directory accounts on this screen. You should now click on the '**Next**' button

SQL Server 2019 Setup

### Database Engine Configuration

Specify Database Engine authentication security mode, administrators, data directories, TempDB, Max degree of parallelism, Memory limits, and Filestream settings.

Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
License Terms  
Feature Selection  
Feature Rules  
Instance Configuration  
Java Install Location  
Server Configuration  
**Database Engine Configuration**  
Consent to install Microsoft R ...  
Consent to install Python  
Feature Configuration Rules  
Installation Progress  
Complete

Server Configuration | Data Directories | TempDB | Memory | User Instances | FILESTREAM

Specify the authentication mode and administrators for the Database Engine.

Authentication Mode

☐ Windows authentication mode

☒ Mixed Mode (SQL Server authentication and Windows authentication)

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

Enter password: [password]

Confirm password: [password]

Specify SQL Server administrators

HALOX\lsand (Lee Sandford)

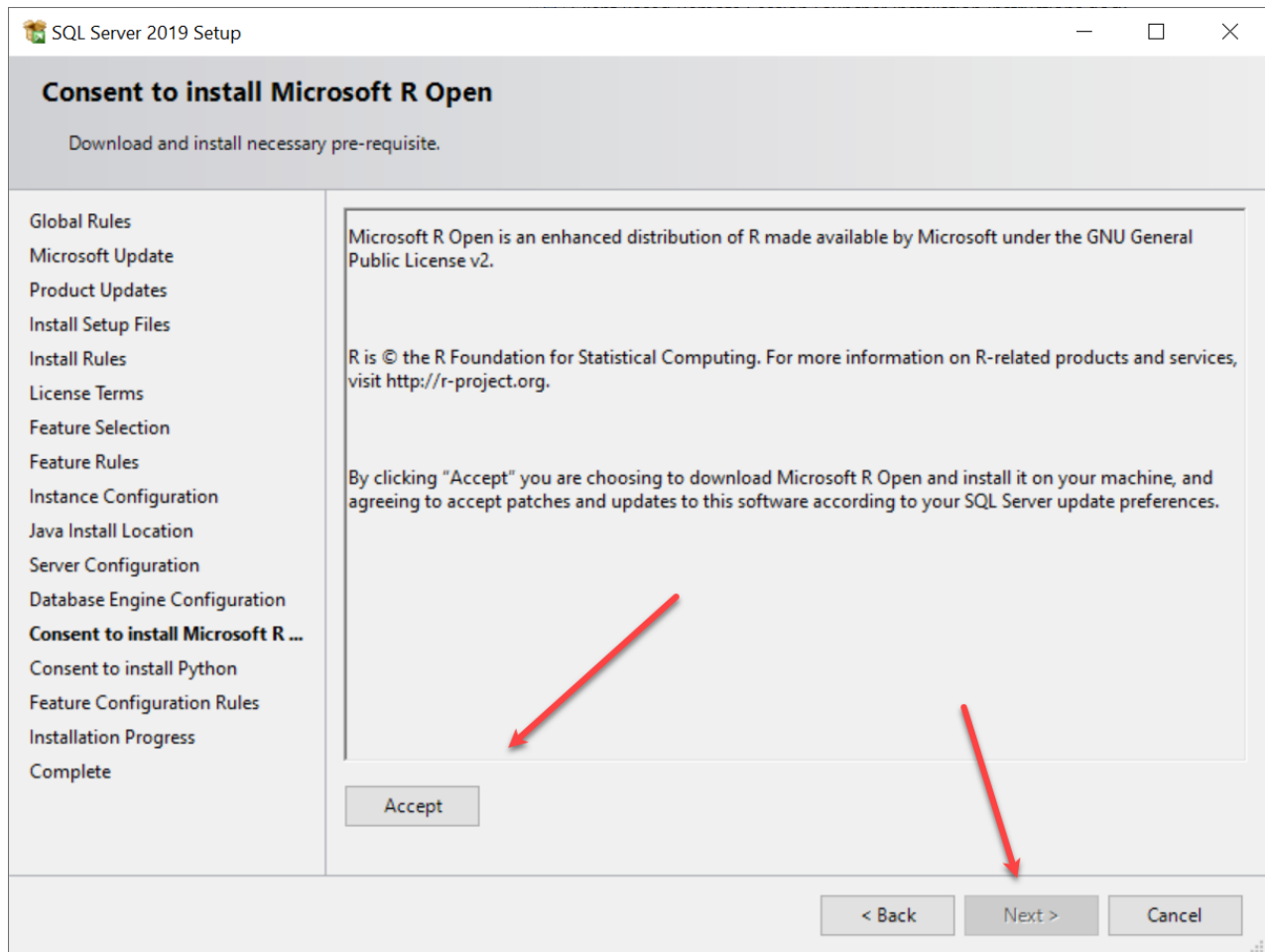
SQL Server administrators have unrestricted access to the Database Engine.

Add Current User | Add... | Remove

< Back | Next > | Cancel

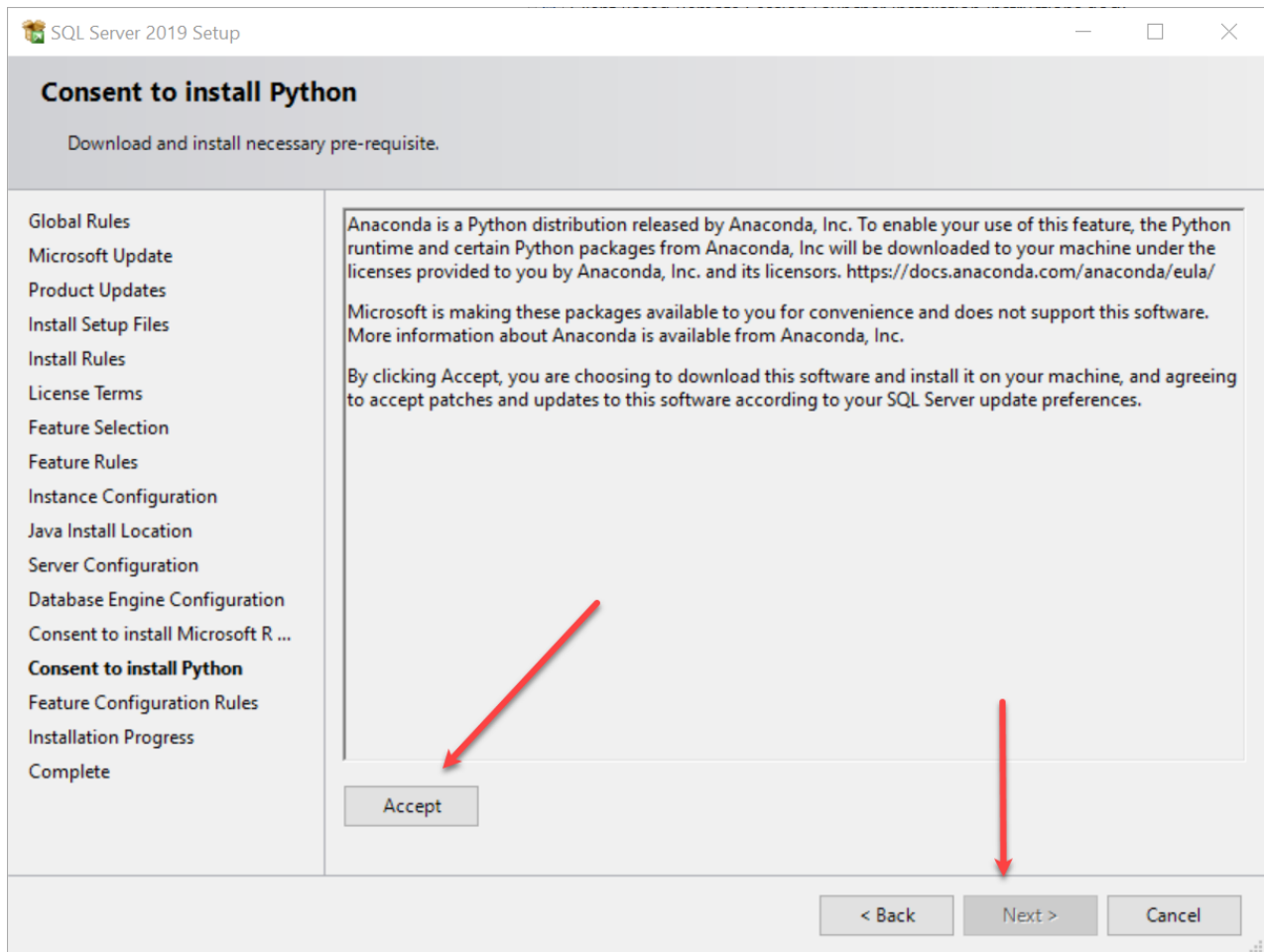
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- Click **Accept** to install **Microsoft R Open** and then click **Next**



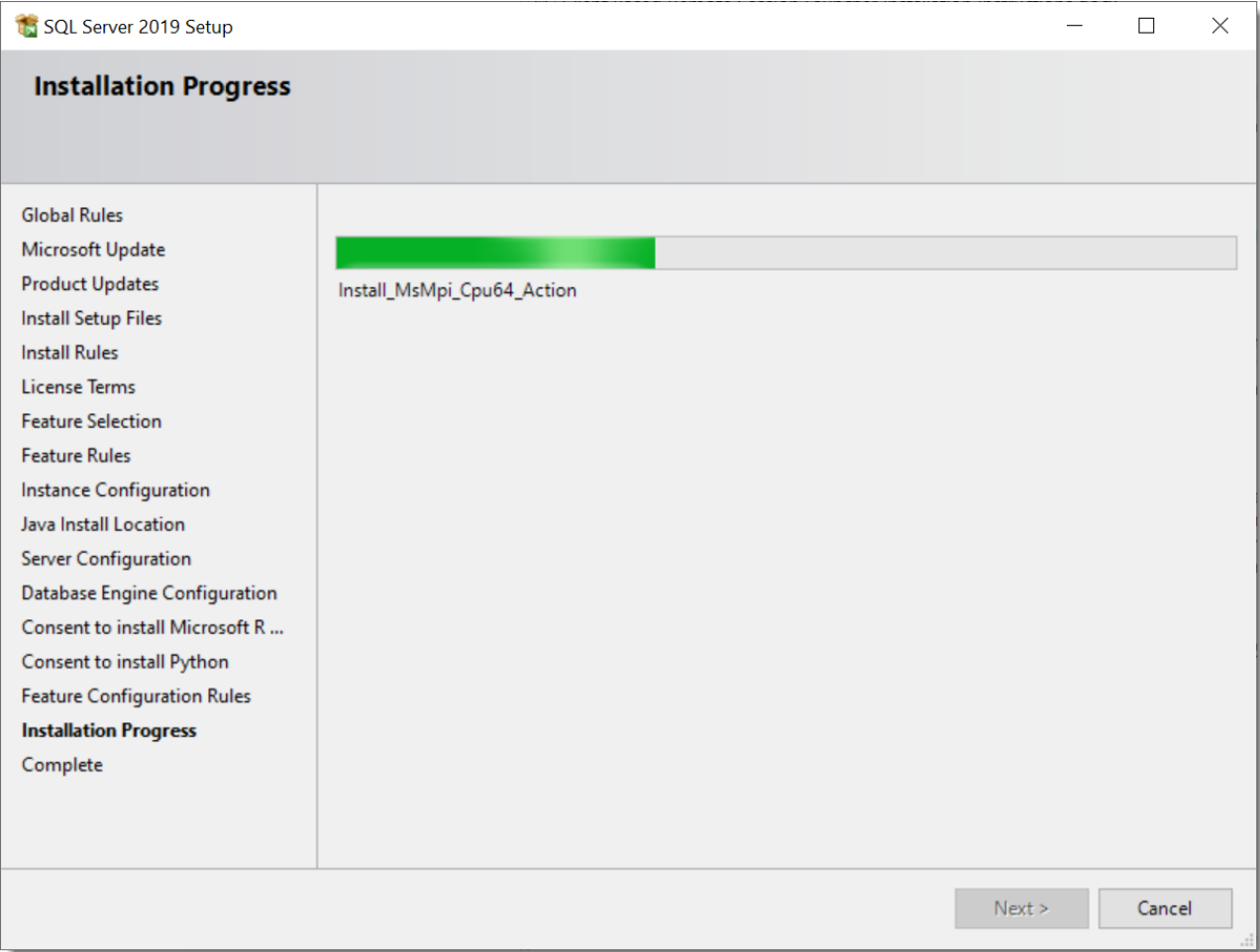
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- Click **Accept** to install **Python**, and click **Next**



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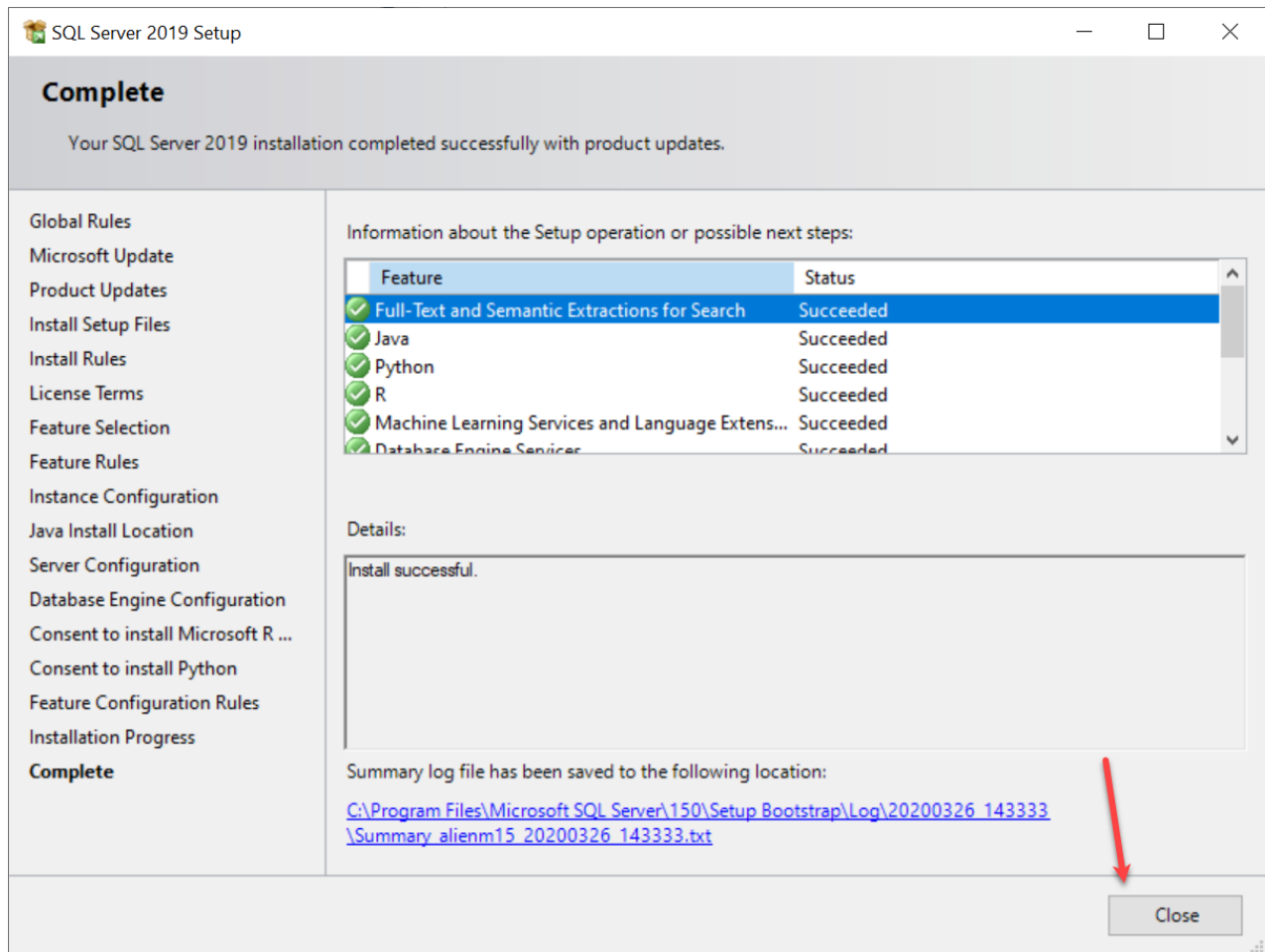
- SQL Express will now begin installing





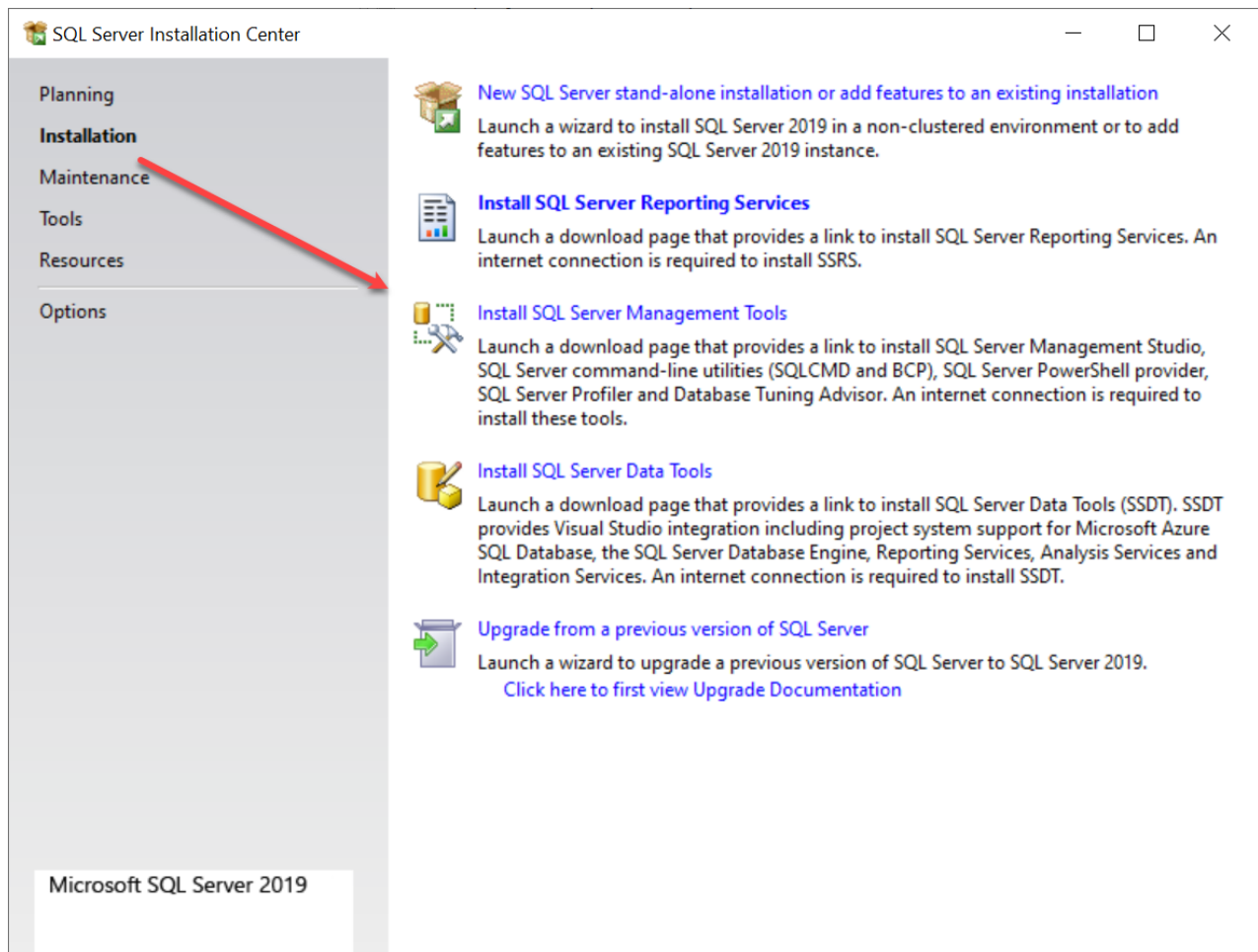
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- SQL Server Express is now installed and you can **Close** to complete the install



### Installing the SQL Server Management Tools

- On the Installation screen run the **Install SQL Server Management Studio Tools** (If you need to launch the installer again, you can run setup.exe from C:\SQLServer2019Media\ExpressAdv\_ENU – or wherever you specified to download the source files to earlier in this guide)



- A web page will launch, and you'll need to click the following download link (Name may change slightly compared to the below screenshot) and run the **SSMS-Setup-ENU.exe** file that is downloaded

Download SQL Server Management Studio (SSMS)

02/18/2020 • 4 minutes to read • +27

**APPLIES TO:** SQL Server Azure SQL Database Azure Synapse Analytics (SQL DW) Parallel Data Warehouse

SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure, from SQL Server to Azure SQL Database. SSMS provides tools to configure, monitor, and administer instances of SQL Server and databases. Use SSMS to deploy, monitor, and upgrade the data-tier components used by your applications, and build queries and scripts.

Use SSMS to query, design, and manage your databases and data warehouses, wherever they are - on your local computer, or in the cloud.

SSMS is free!

**Download SSMS**

[Download SQL Server Management Studio \(SSMS\)](#)

SSMS 18.4 is the latest general availability (GA) version of SSMS. If you have a previous GA version of SSMS 18 installed, installing SSMS 18.4 upgrades it to 18.4.

**Version information**

Version: SQL Server 2019

Filter by title

SQL Server

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Database design

Development

Internals & Architecture

Installation

Migrate & load data

Manage, monitor, & tune

Query data

Reporting & Analytics

Security

Tools

Overview

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[Supported operating systems \(SSMS 18.4\)](#)

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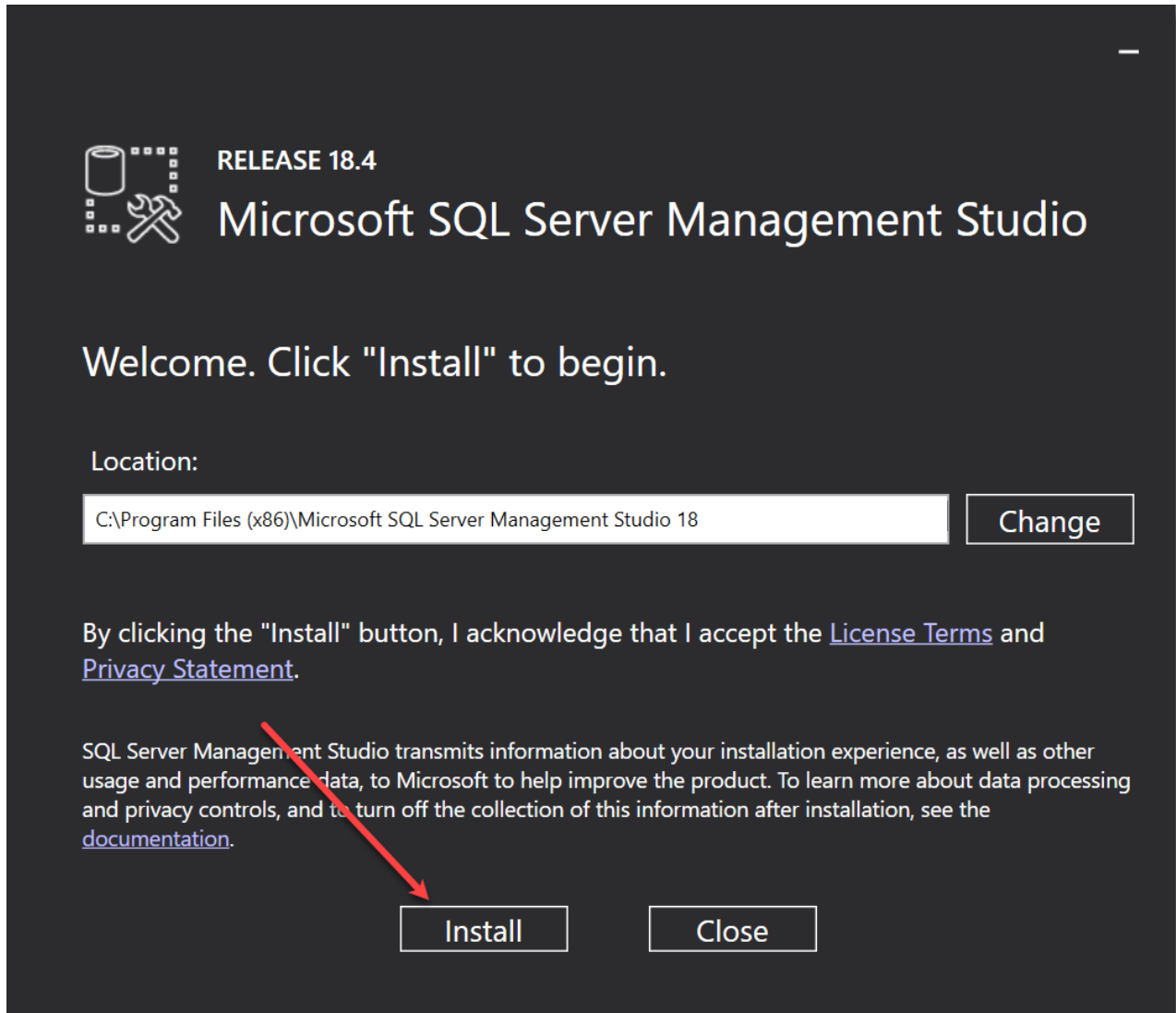
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SSMS-Setup-ENU.exe

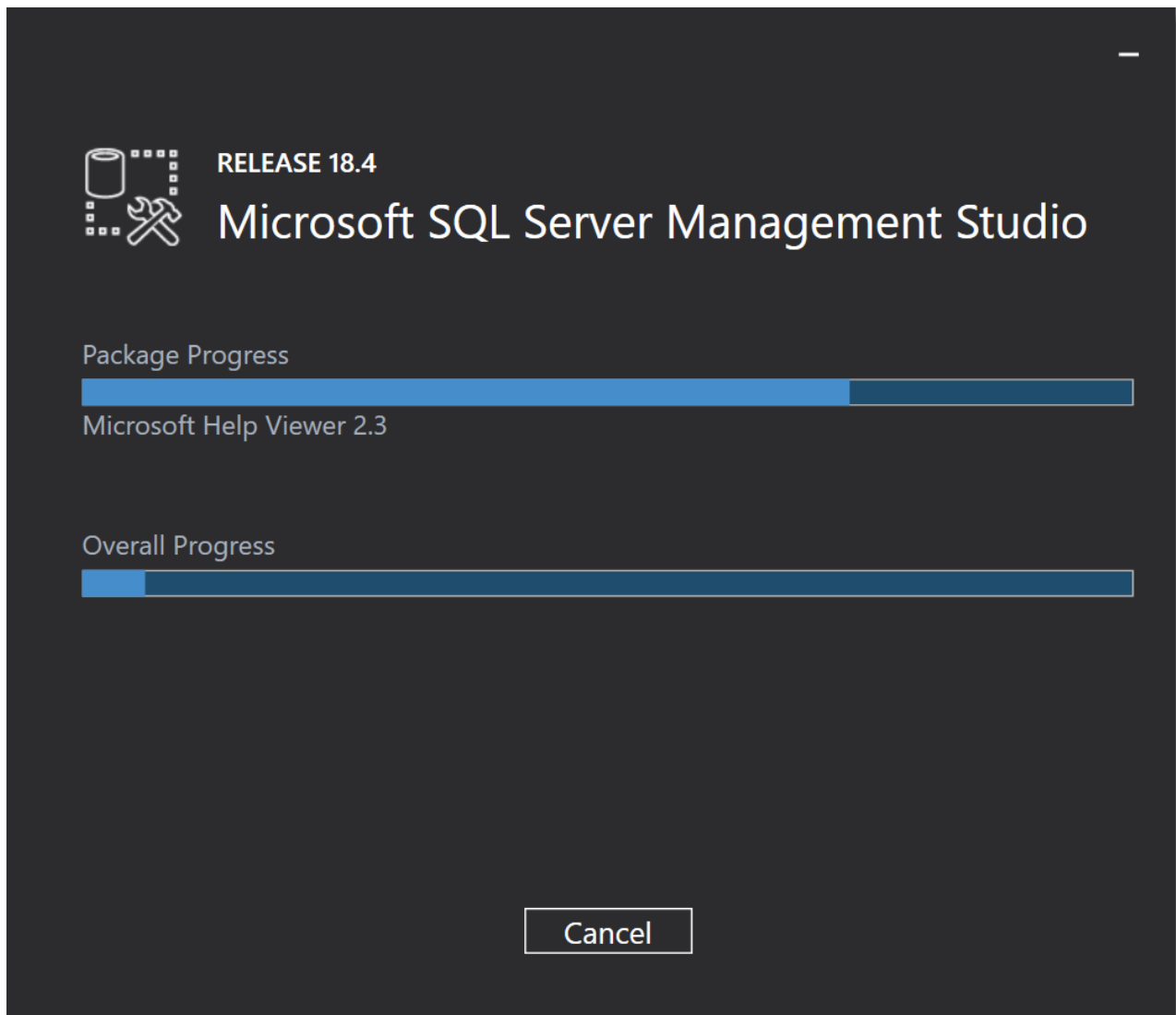
[Open file](#)

Show all

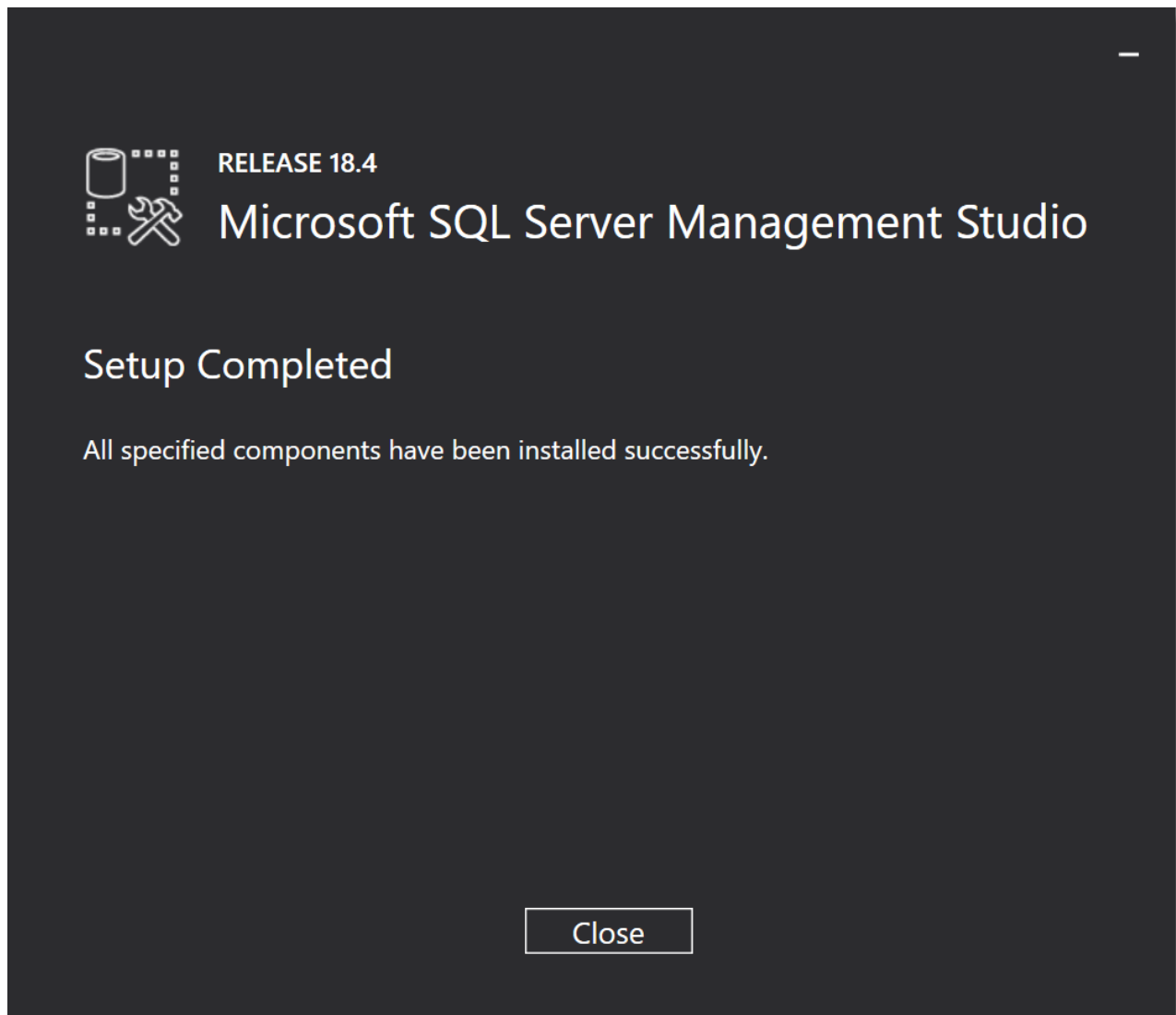
- Click the **Install** button



- The SQL Management Studio Tools will now begin installing



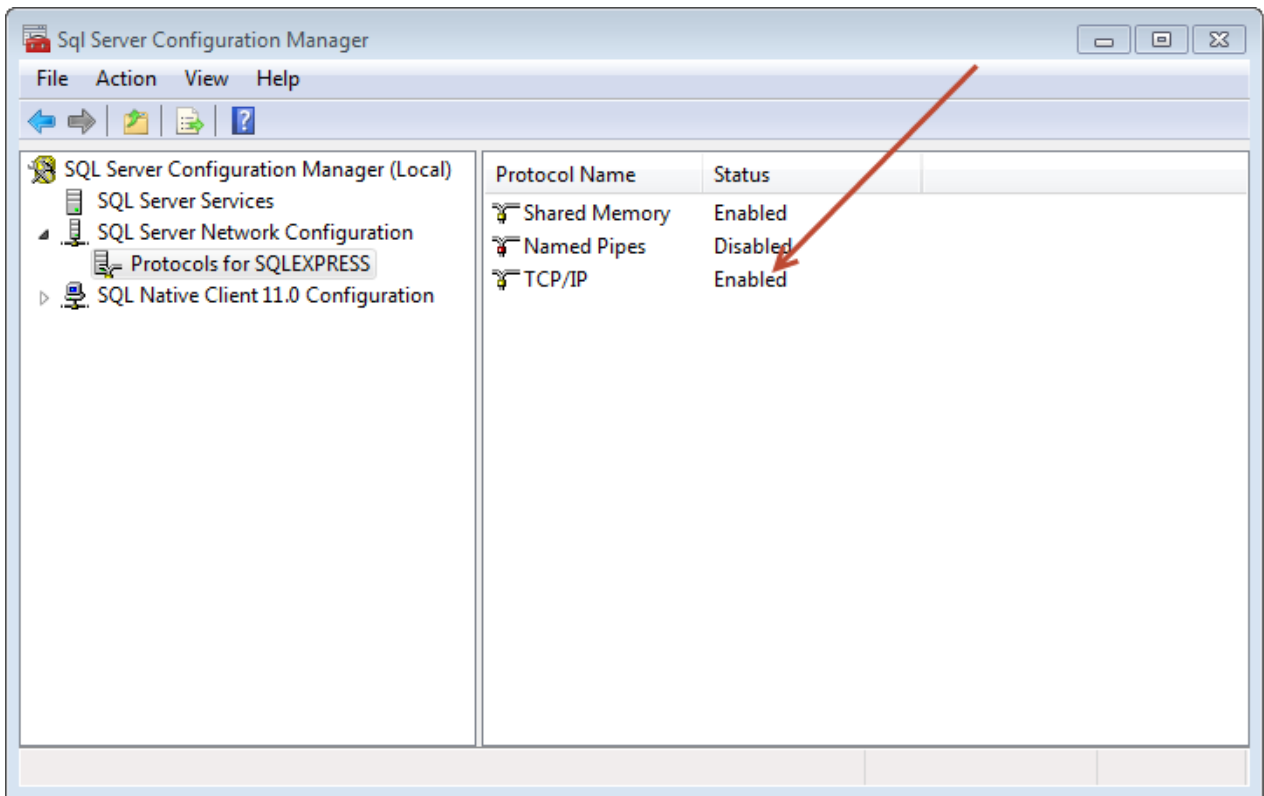
- Click **Restart** to finish the install if required, otherwise the installation is complete



## 2 SQL Server Express Considerations

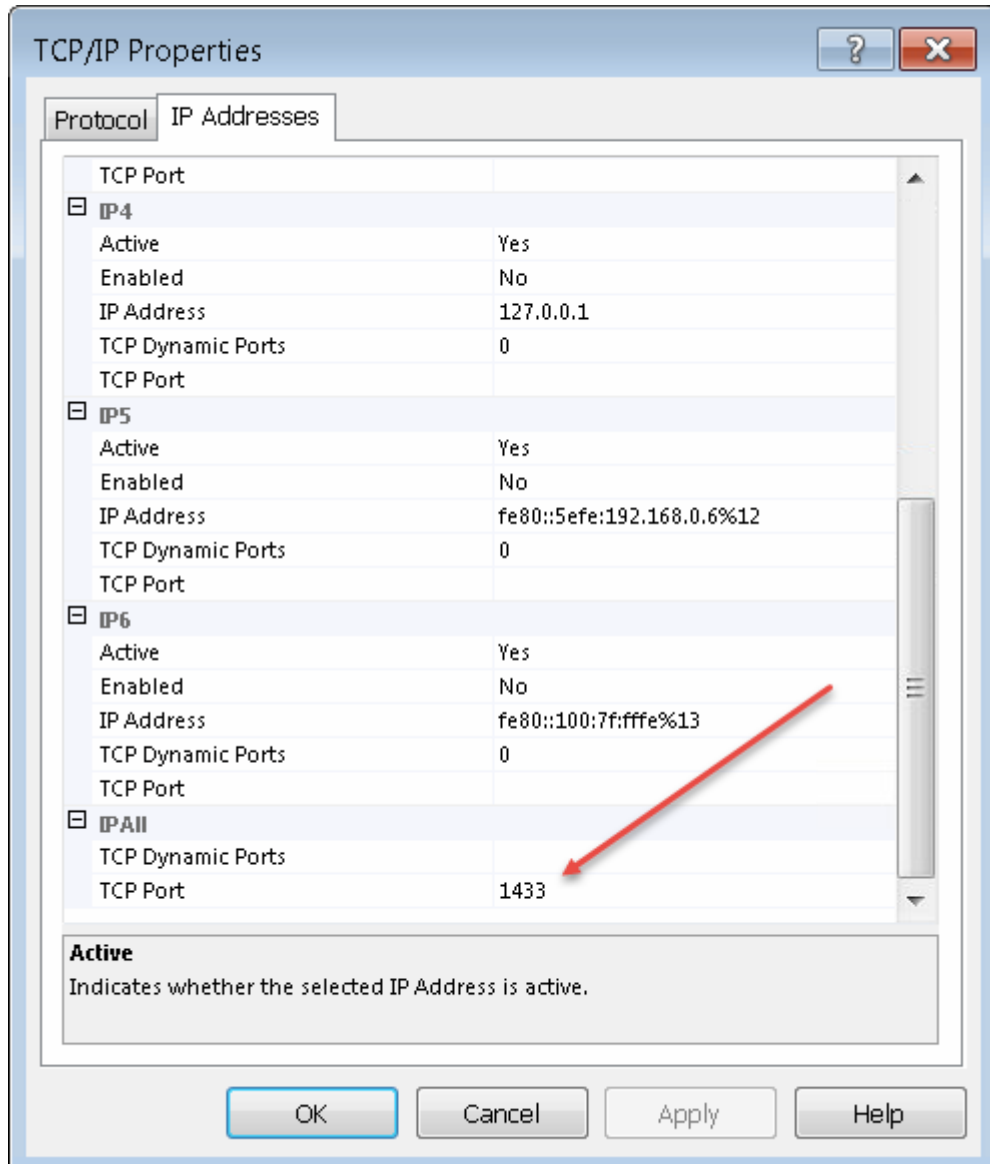
If you intend to use SQL Server Express to host your Passwordstate database, please consider the following before installing Passwordstate:

1. If you're using SQL Server Express on a different server to where you installed Passwordstate, please ensure the TCP/IP Protocol is enabled (use SQL Server Configuration Manager -> SQL Server Network Configuration), and also the Windows Service 'SQL Server Browser' is set to 'Automatic' Startup Type and has been started. You will need to restart SQL Server Express after changing these settings



2. By default, SQL Server Express installs with an 'instance' name of SQLEXPRESS. When you're configuring Passwordstate for first time use, specifically the 'Database Settings' page, please ensure you have specified the name of the instance correctly i.e. HostName\SQLEXPRESS
3. If you intend to also install the High Availability instance of Passwordstate, SQL Server Express can only be used as the Subscriber for data replication, not the Publisher or Distribution database.

4. By default, SQL Express configures the TCP/IP Protocol to communicate on a dynamic port. If you have a firewall enabled on your database server, you may need to set a static port in the TCP/IP properties which will match your firewall rule. Restart the service again after configuring the option in the screenshot below:

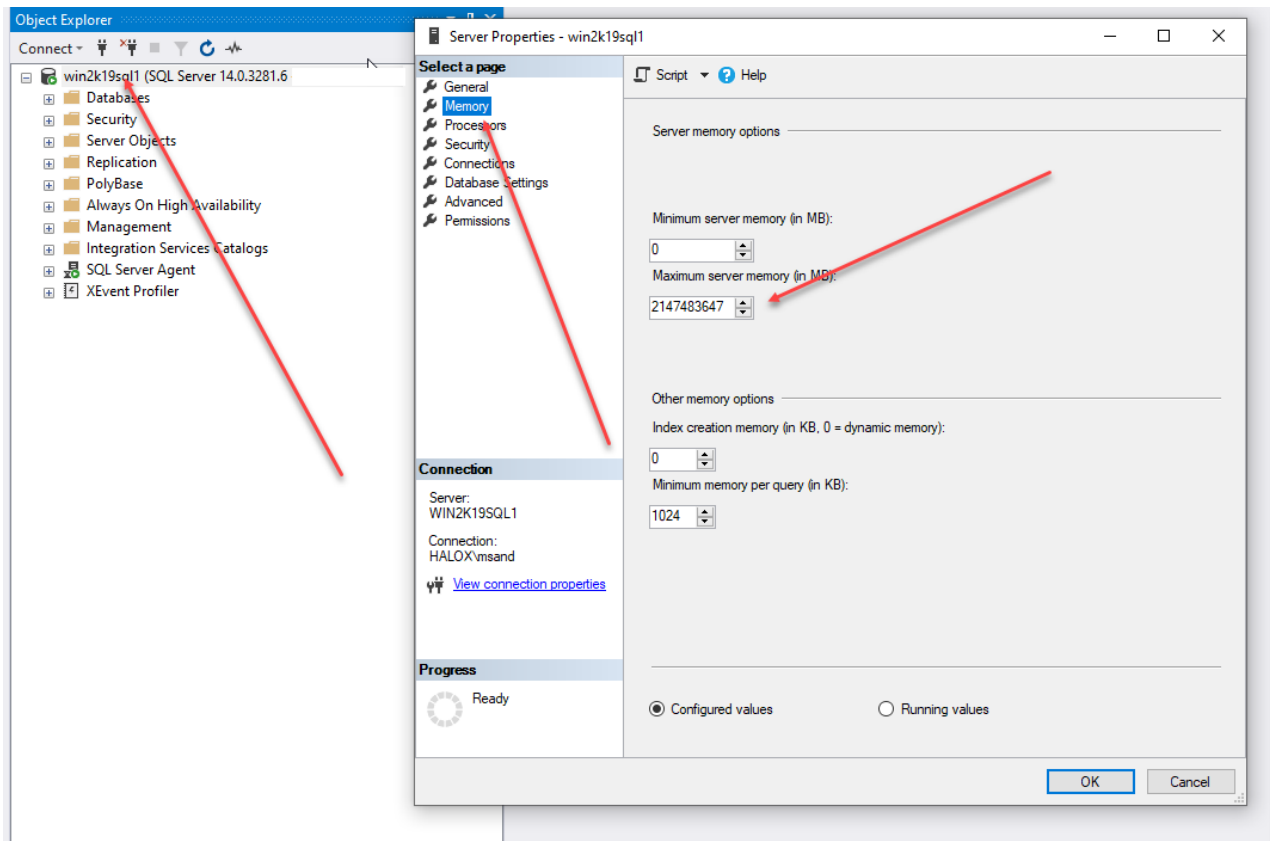




### 3 SQL Server Memory Size Management

By default, SQL Server is configured to consume all available memory. If you have SQL Server installed on the same machine as where Passwordstate is installed, it's recommended you cap the amount of memory SQL Server uses, as we generally recommend keeping up to 2GB of memory free at all times.

Below is a screenshot of the 'Properties' of your SQL Server, where you can modify the memory settings. The SQL Server Windows Services should be restarted after making any changes here.

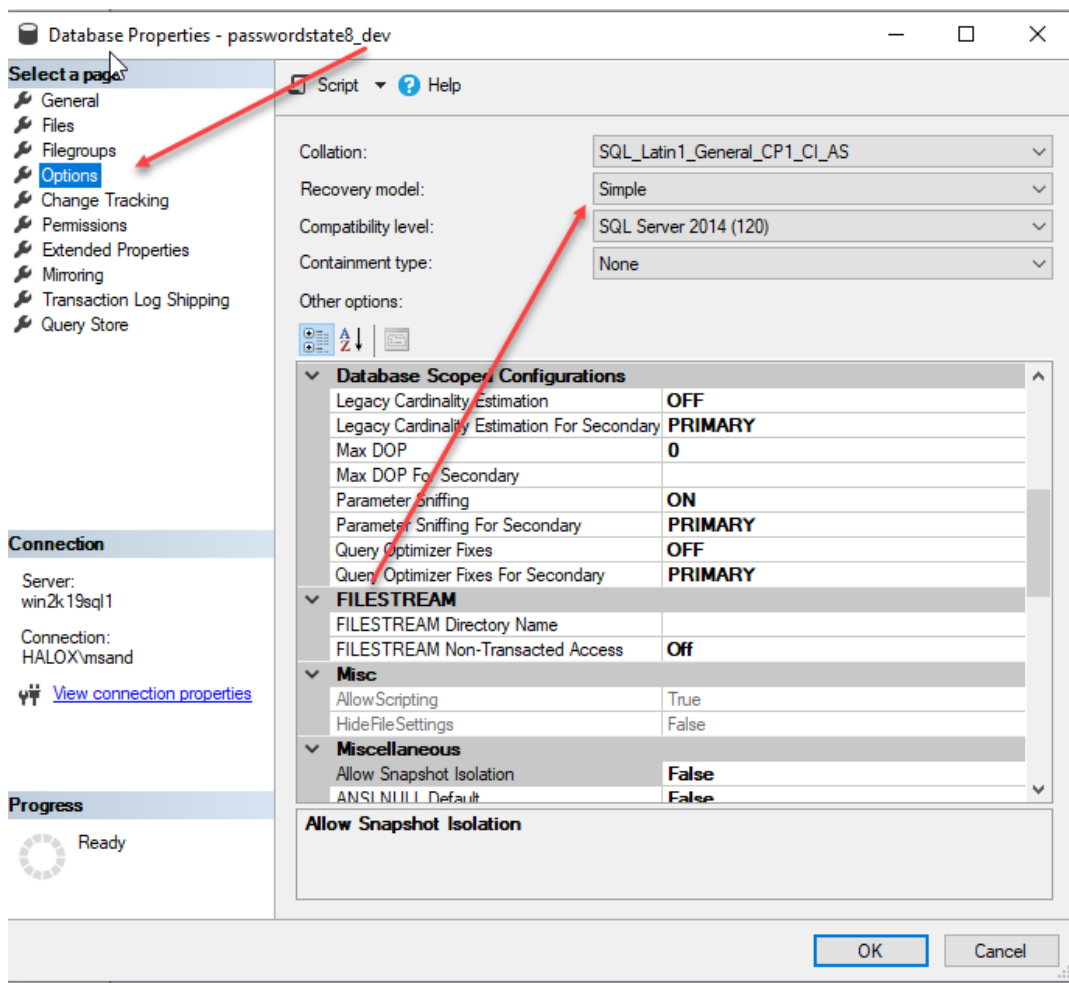


## 4 SQL Server Database Size Management

By default, when creating databases in SQL Server, the '**Recovery Model**' for databases is set to Full. From a database management perspective, this means your Database Administrators must be managing the growth of the database transaction log, so it does not grow too large in size i.e. truncating the transaction log on a regular basis.

If a daily backup of your database is an option for you, in terms of recovery, then we can simplify the database management required, by setting the 'Recovery Model' to simple. Please follow the instructions below to do this, and also you can shrink your files if required, with the instructions below as well.

Right click on your database, select '**Properties**', and set Recovery Model to '**Simple**'.



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Then right click again on your database, and choose to shrink your files – see screenshots below. I'd suggest doing both Data and Log (it is probably Log that is causing your issue, and now that you have set Recovery Model to Simple, you should not see this issue again).

