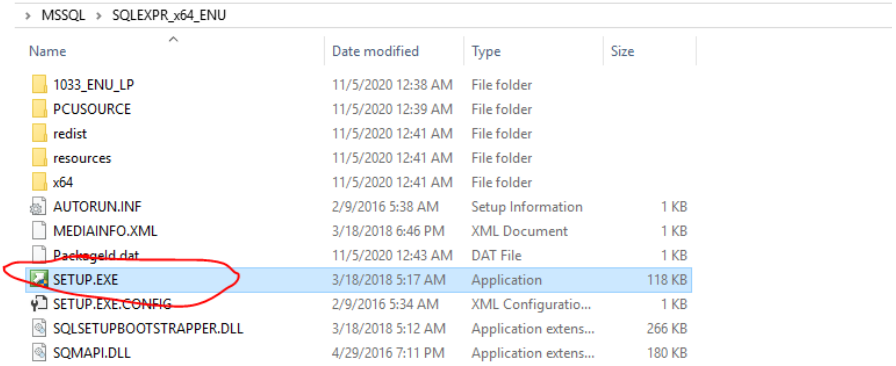
1. Download SQLEXPR-x64_ENU.zip and SSMS-Setup-ENU.exe from Internet.

https://download.microsoft.com/download/7/f/8/7f8a9c43-8c8a-4f7c-9f92-83c18d96b681/SQL2019-SSEI-Expr.exe

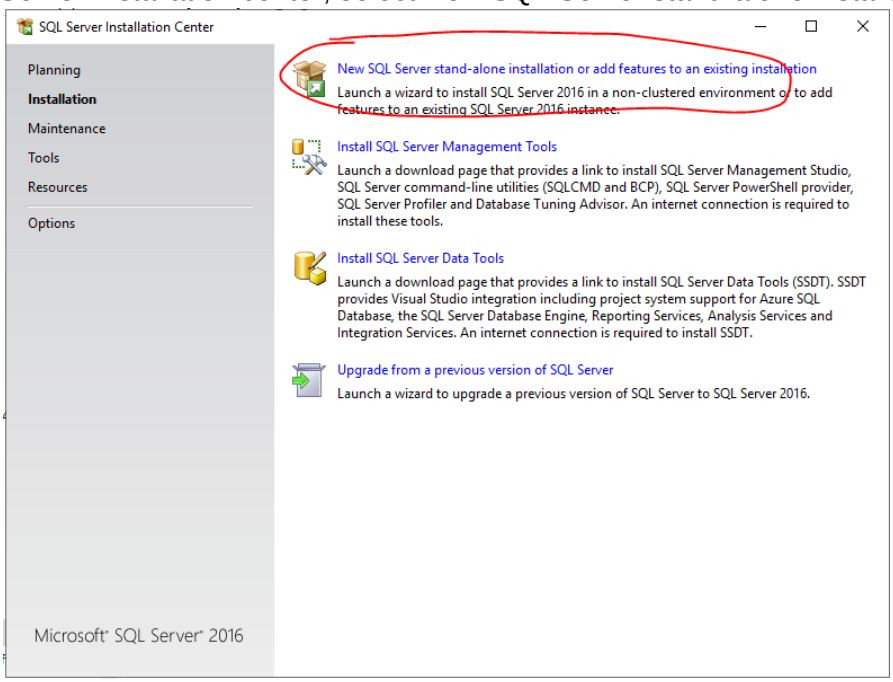
https://aka.ms/ssmsfullsetup

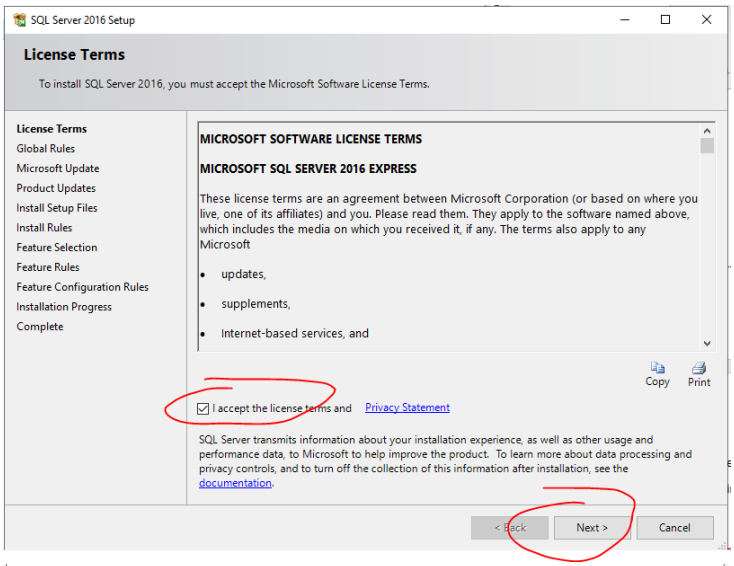
2. SQL Server Setup

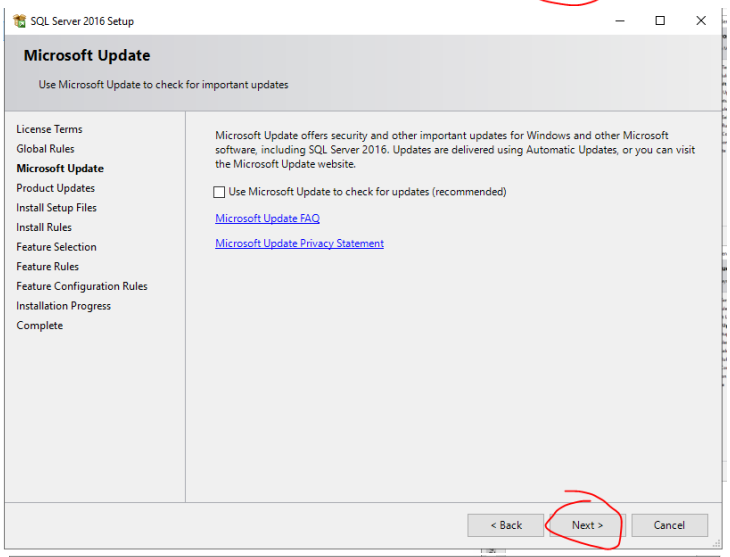
Run SETUP.EXE

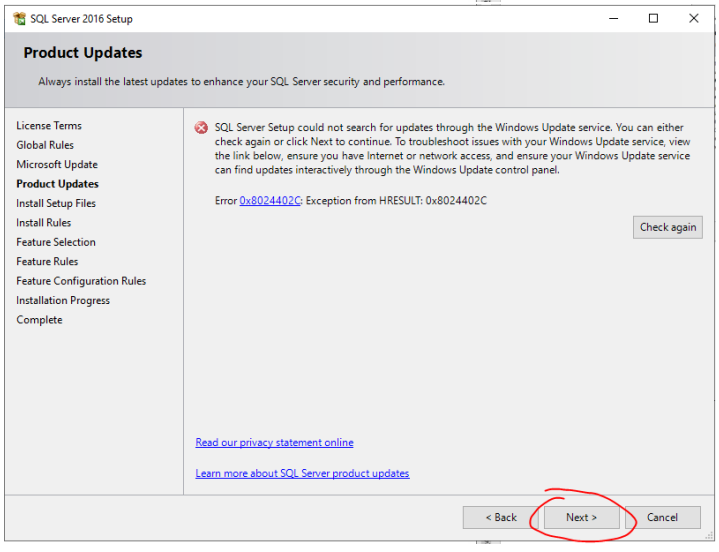


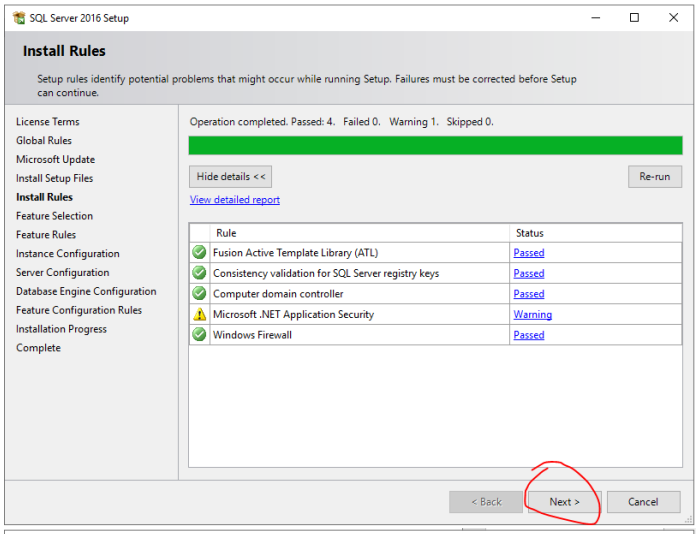
In SQL Server Installation center, select New SQL Server stand-alone installation

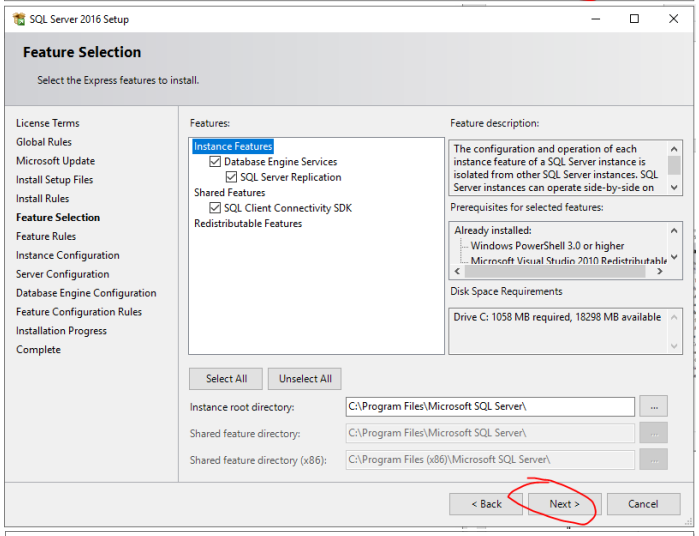


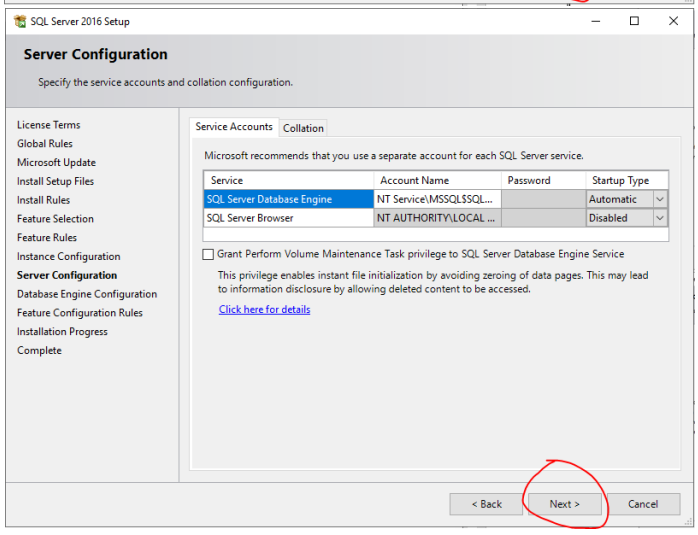

SQL Server 2016 Setup
License Terms
To install SQL Server 2016, you must accept the Microsoft Software License Terms.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Installation Progress
Complete
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT SQL SERVER 2016 EXPRESS
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
updates,
supplements,
Internet-based services, and
Copy
Print
I accept the license terms and
Privacy Statement
SQL Server transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the documentation.
< Back
Next >
Cancel


SQL Server 2016 Setup
Microsoft Update
Use Microsoft Update to check for important updates
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Installation Progress
Complete
Microsoft Update offers security and other important updates for Windows and other Microsoft software, including SQL Server 2016. Updates are delivered using Automatic Updates, or you can visit the Microsoft Update website.
Use Microsoft Update to check for updates (recommended)
Microsoft Update FAQ
Microsoft Update Privacy Statement
< Back
Next >
Cancel

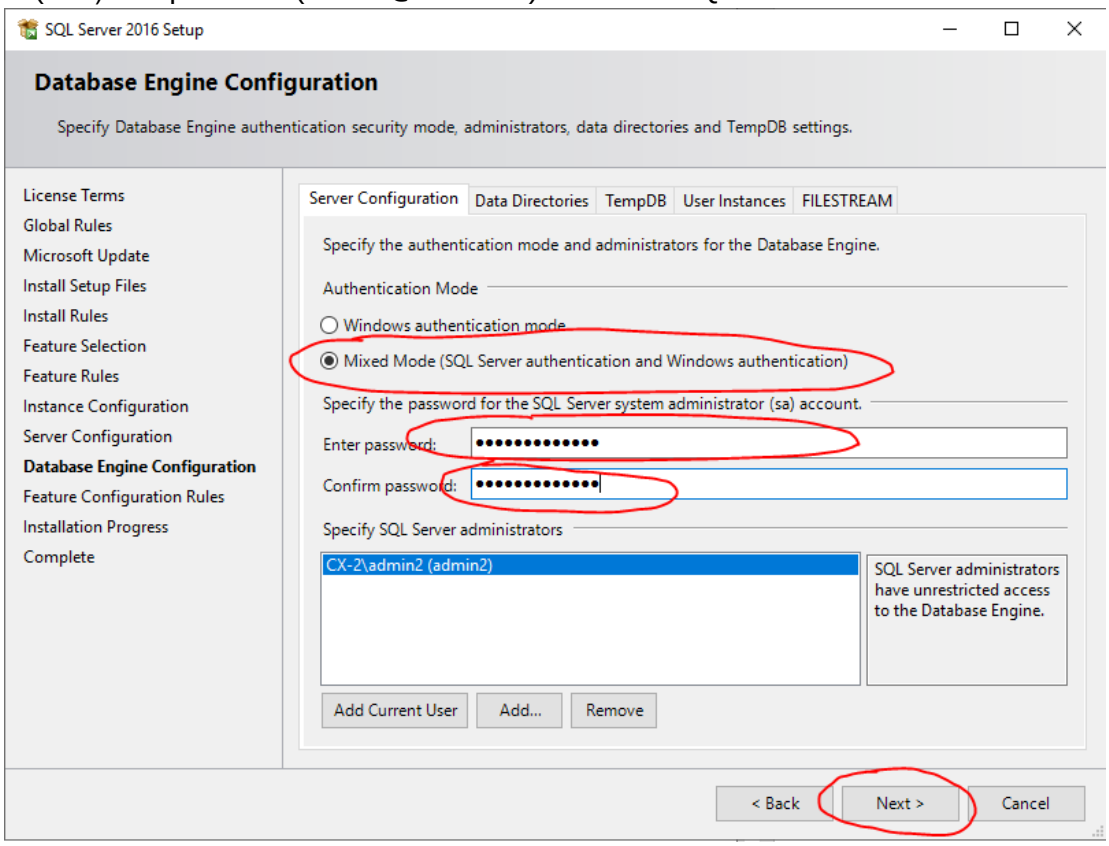

SQL Server 2016 Setup
Product Updates
Always install the latest updates to enhance your SQL Server security and performance.
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Installation Progress
Complete
SQL Server Setup could not search for updates through the Windows Update service. You can either check again or click Next to continue. To troubleshoot issues with your Windows Update service, view the link below, ensure you have Internet or network access, and ensure your Windows Update service can find updates interactively through the Windows Update control panel.
Error 0x8024402C: Exception from HRESULT: 0x8024402C
Check again
Read our privacy statement online
Learn more about SQL Server product updates
< Back
Next >
Cancel


SQL Server 2016 Setup
Install Rules
Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup can continue.
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Installation Progress
Complete
Operation completed. Passed: 4. Failed 0. Warning 1. Skipped 0.
Hide details <<
Re-run
View detailed report
Rule
Status
Fusion Active Template Library (ATL)
Passed
Consistency validation for SQL Server registry keys
Passed
Computer domain controller
Passed
Microsoft .NET Application Security
Warning
Windows Firewall
Passed
< Back
Next >
Cancel

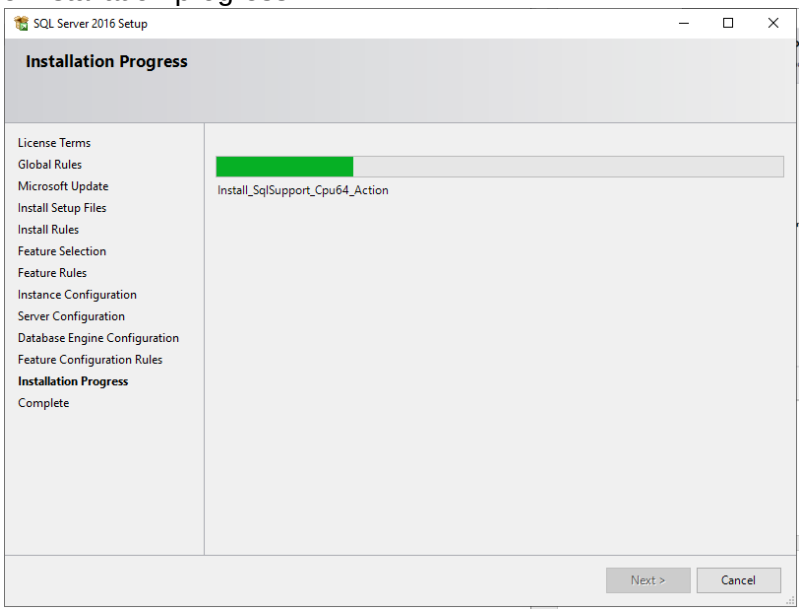

SQL Server 2016 Setup
Feature Selection
Select the Express features to install.
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Installation Progress
Complete
Features:
Instance Features
Database Engine Services
SQL Server Replication
Shared Features
SQL Client Connectivity SDK
Redistributable Features
Feature description:
The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on
Prerequisites for selected features:
Already installed:
Windows PowerShell 3.0 or higher
Disk Space Requirements
Drive C: 1058 MB required, 18298 MB available
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\
< Back
Next >
Cancel


SQL Server 2016 Setup
Server Configuration
Specify the service accounts and collation configuration.
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
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 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

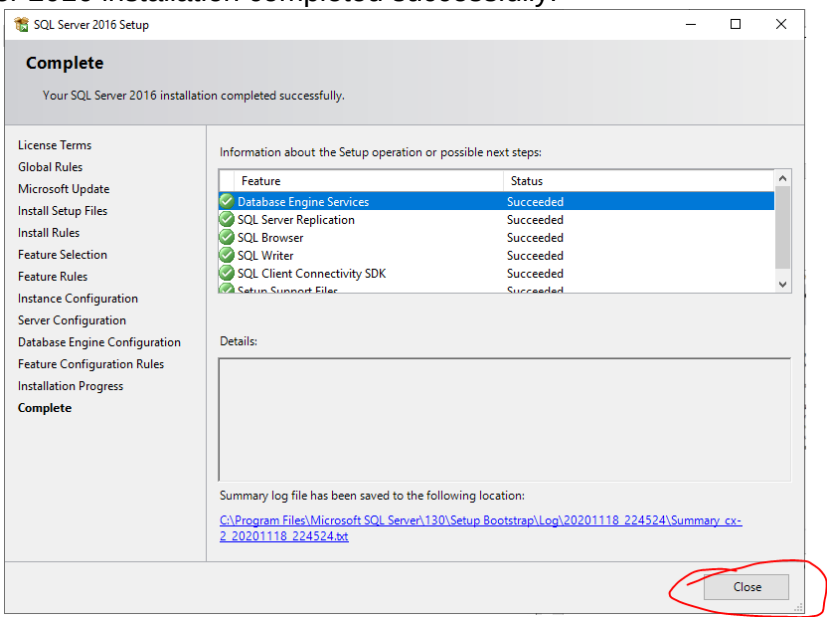
In the Database Engine Configuration, set the Authentication Mode to Mixed Mode. Enter password and click Next. Set password to “admin@123.com” for now. We will use SQL Server account(“sa”) and password(“admin@123.com”) to access SQL Server next time.



Please while Installation progress.

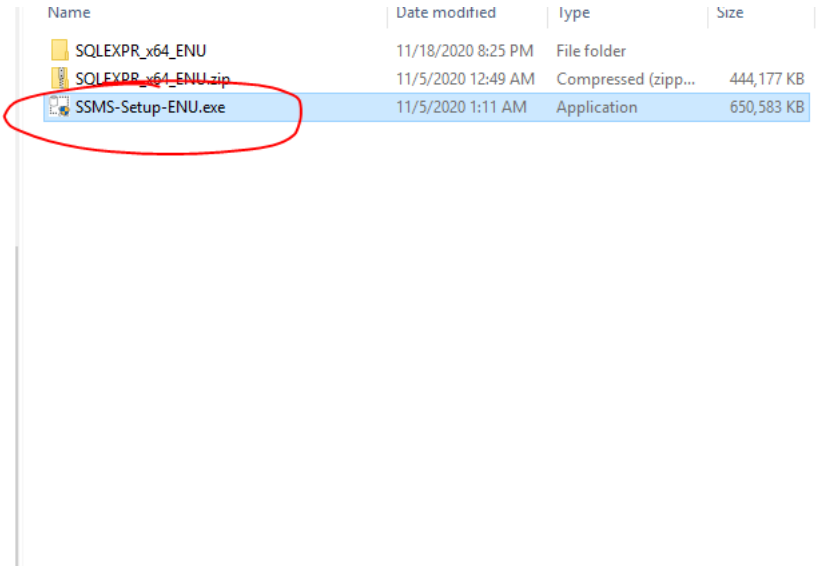


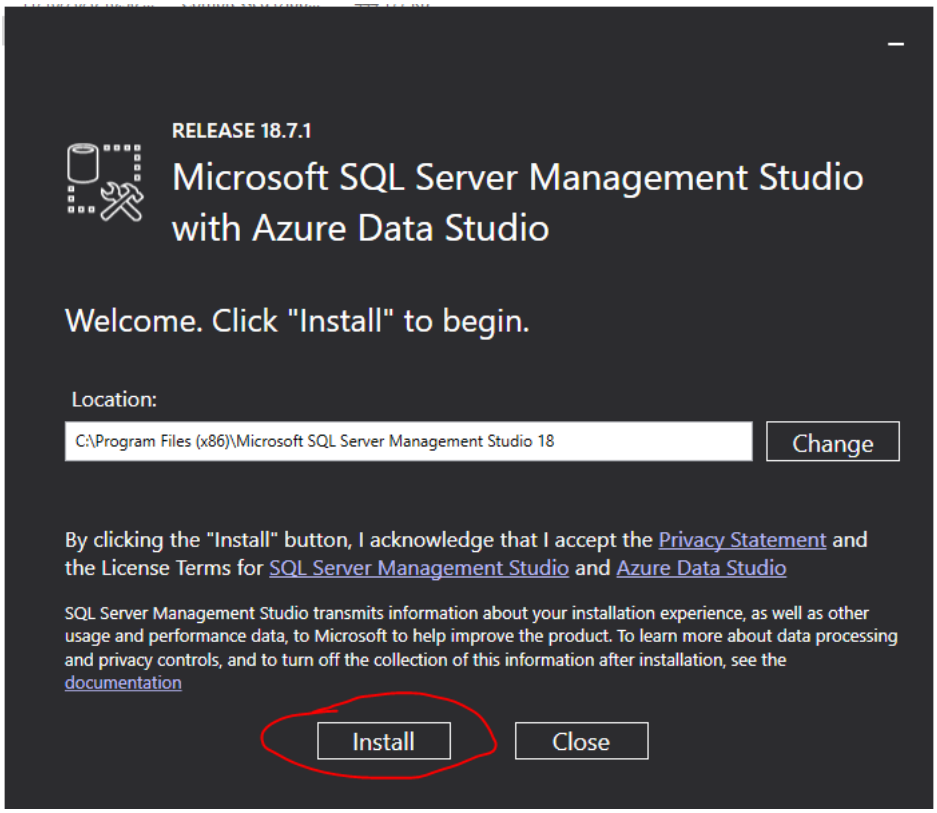
SQL Server 2016 installation completed successfully.



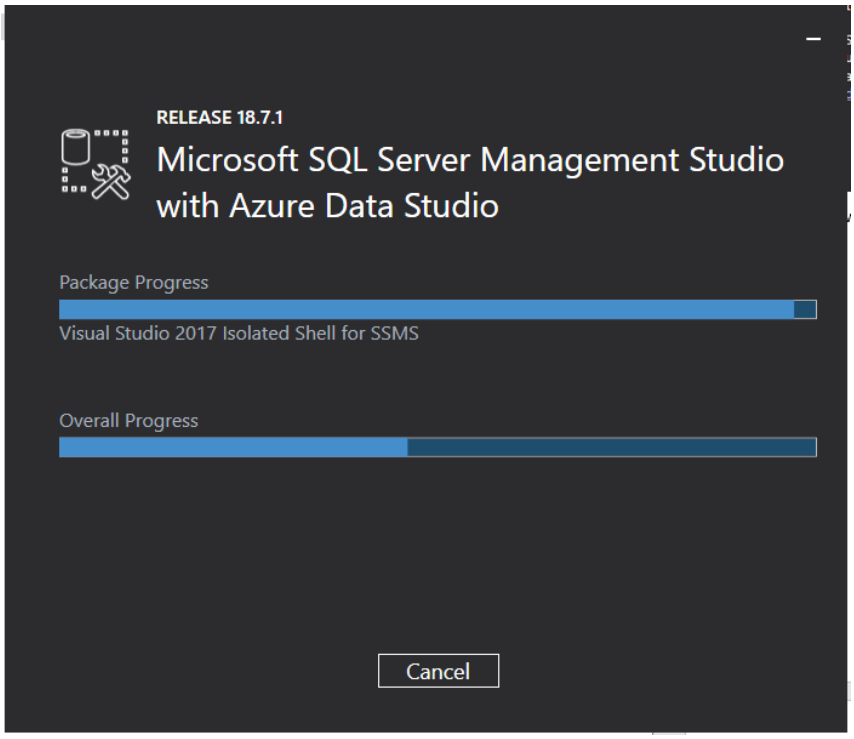
3. SQL Server Management Studio Setup

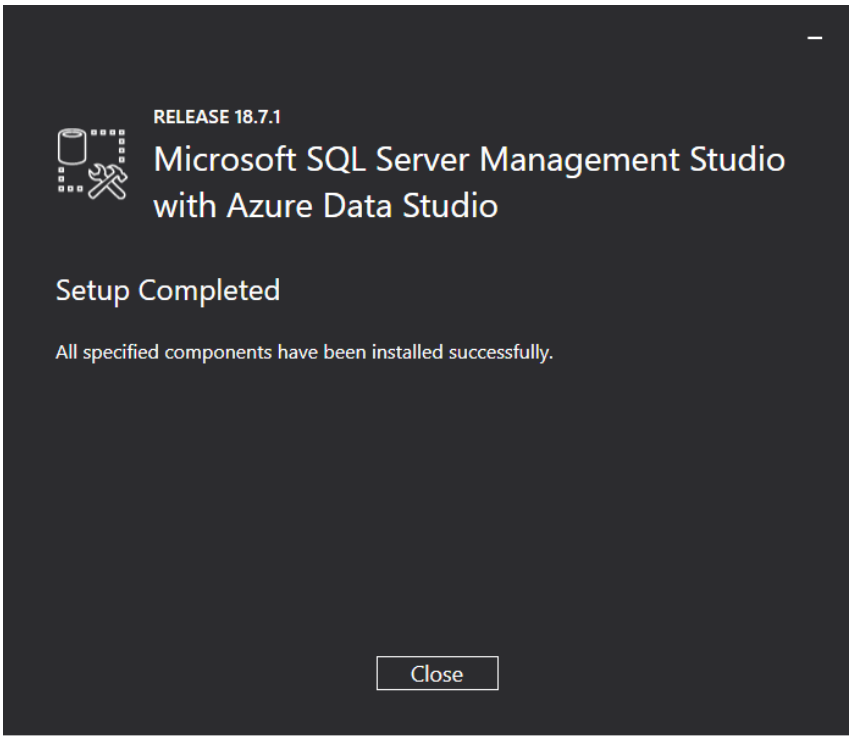
Run SSMS-Setup-ENU.exe in Windows explorer.





Please wait while progress.

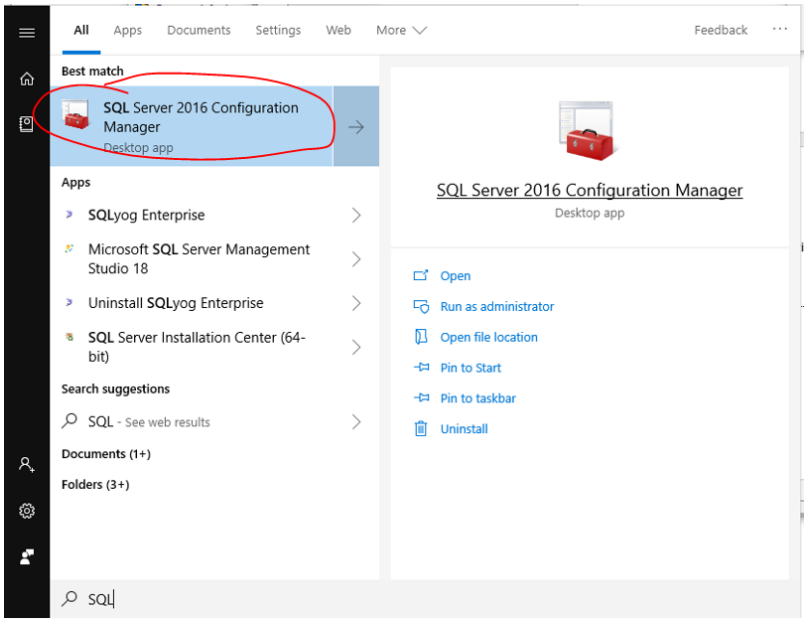




Now, Microsoft SQL Server Management Studio has been installed successfully.

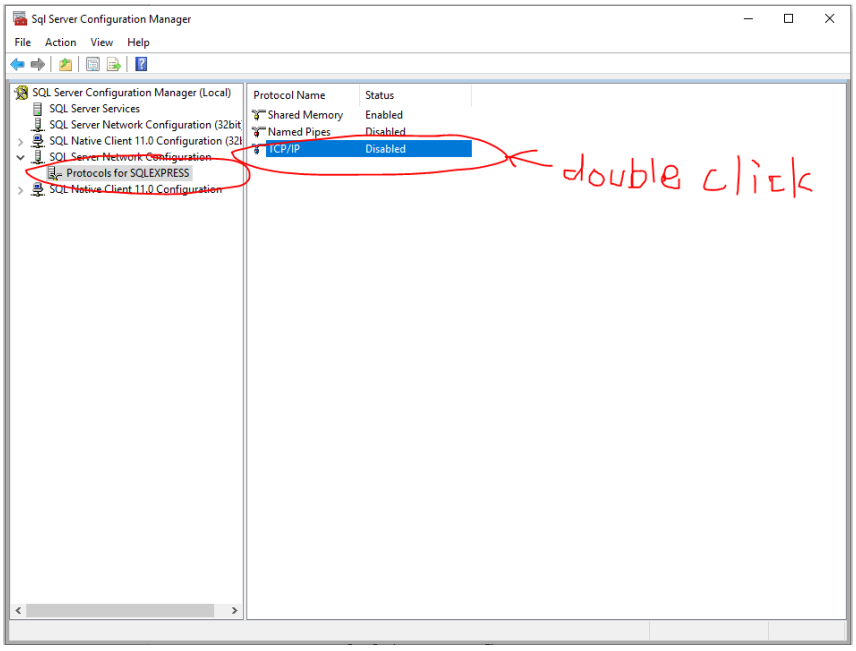
4. Run SQL SERVER Configuration Manager

Run Start->SQL Server 2016->SQL Server 2016 configuration

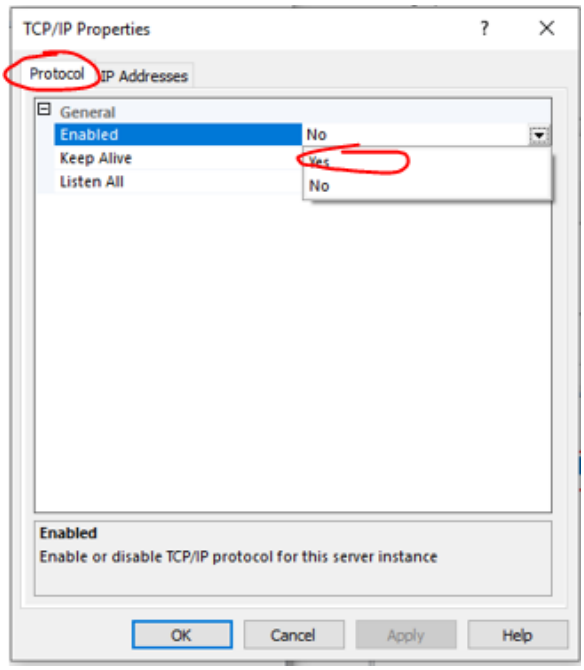


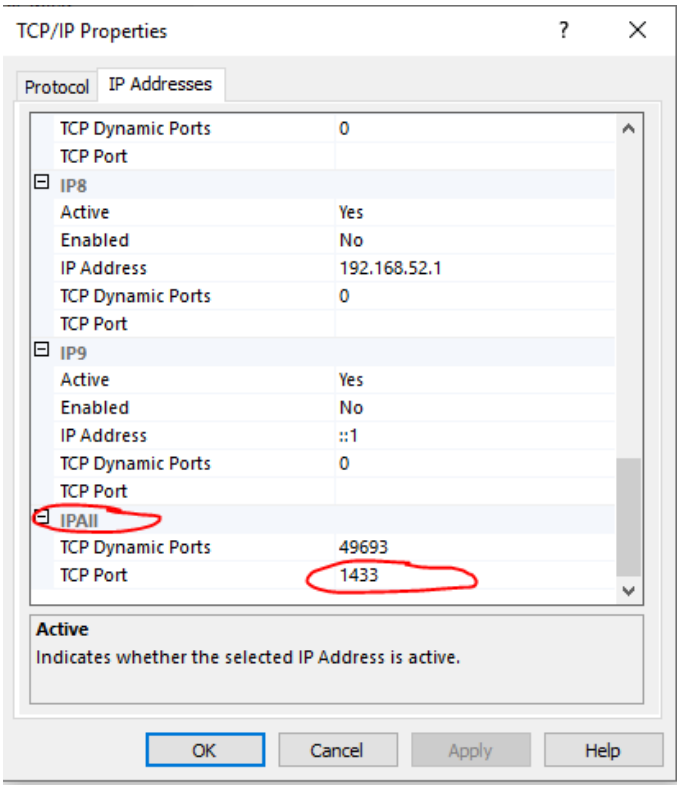
You can see Sql Server Configuration manager opened.

Select the SQL Server network Configuration->Protocols for SQLEXPRESS and at the right panel double click TCP/IP.



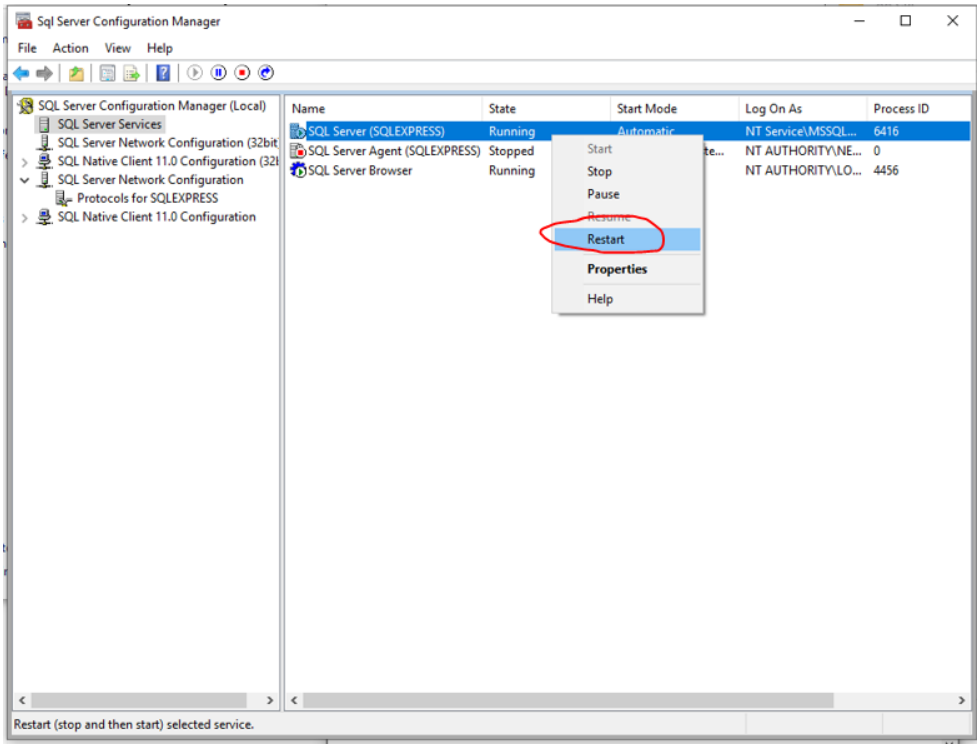
Set enable TCP/IP Protocol.





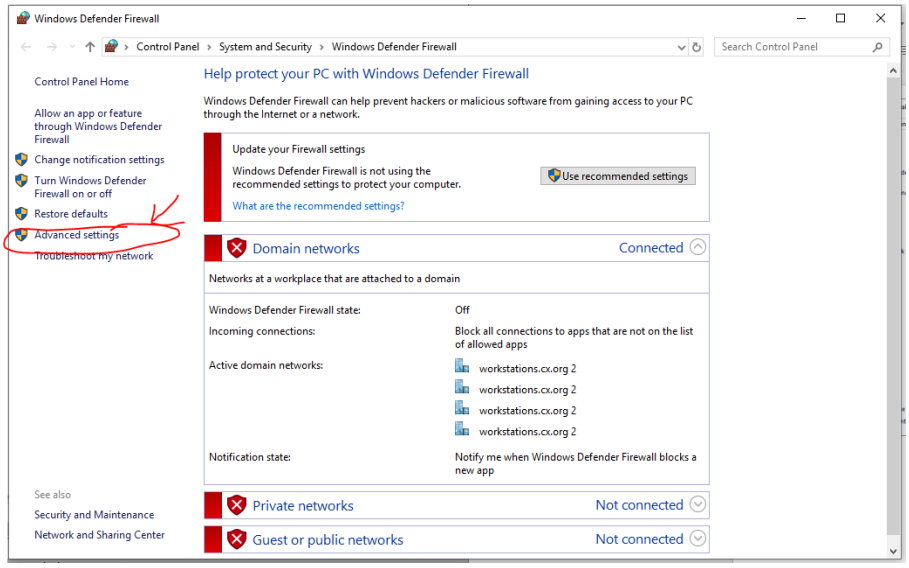
Select IP Adresses tab and in the IPAll set TCP Port to 1433. Click Apply.

Now enable TCP/IP port to 1433. You must restart SQL Server.

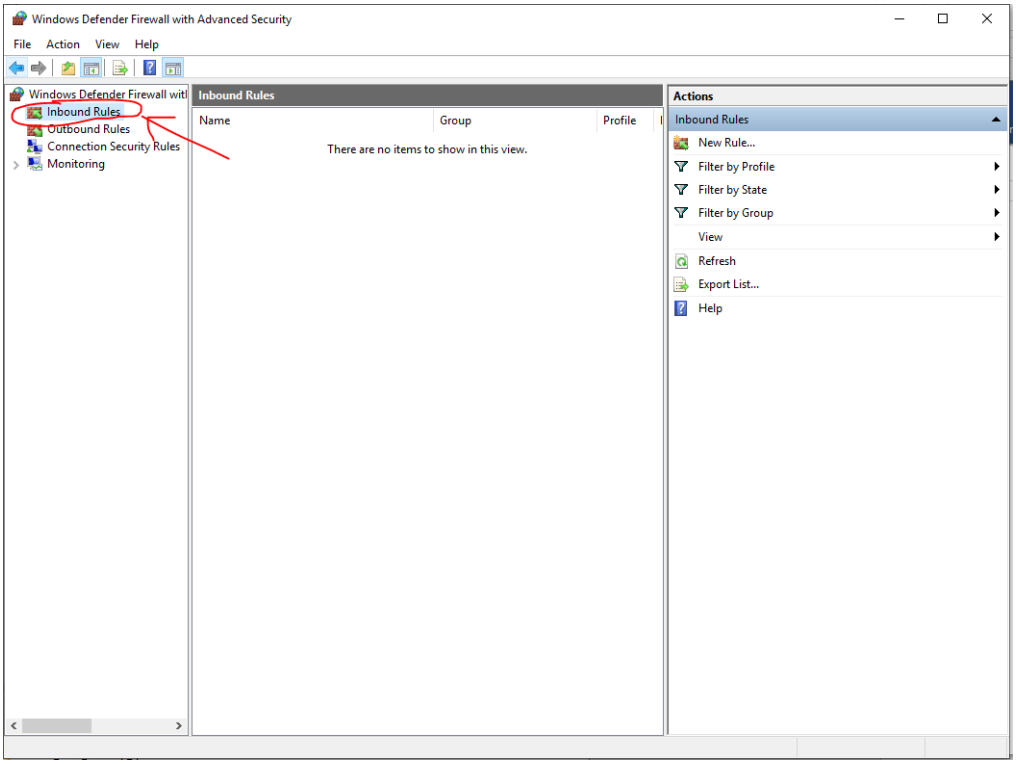

Sql Server Configuration Manager
File Action View Help
SQL Server Configuration Manager (Local)
SQL Server Services
SQL Server Network Configuration (32bit
SQL Native Client 11.0 Configuration (32
SQL Server Network Configuration
Protocols for SQLEXPRESS
SQL Native Client 11.0 Configuration
Name State Start Mode Log On As Process ID
SQL Server (SQLEXPRESS) Running Automatic NT Service\MSSQL... 6416
SQL Server Agent (SQLEXPRESS) Stopped NT AUTHORITY\NE... 0
SQL Server Browser Running NT AUTHORITY\LO... 4456
Start
Stop
Pause
Restart
Properties
Help
Restart (stop and then start) selected service.

5. Enable port 1433

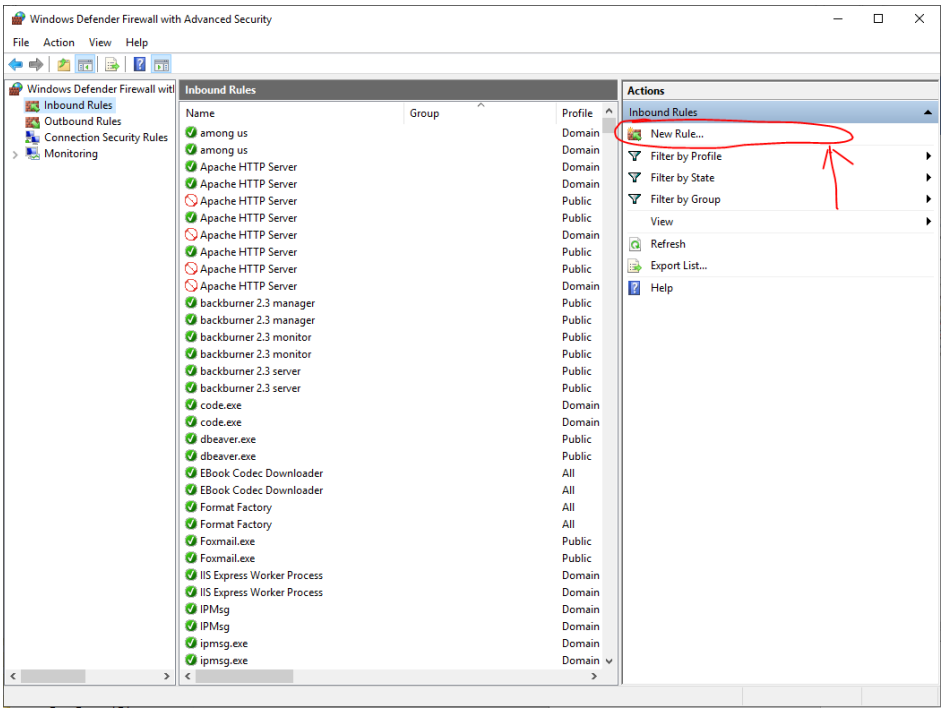
Run System->Setting-Windows Defender Firewall->Advanced Settings



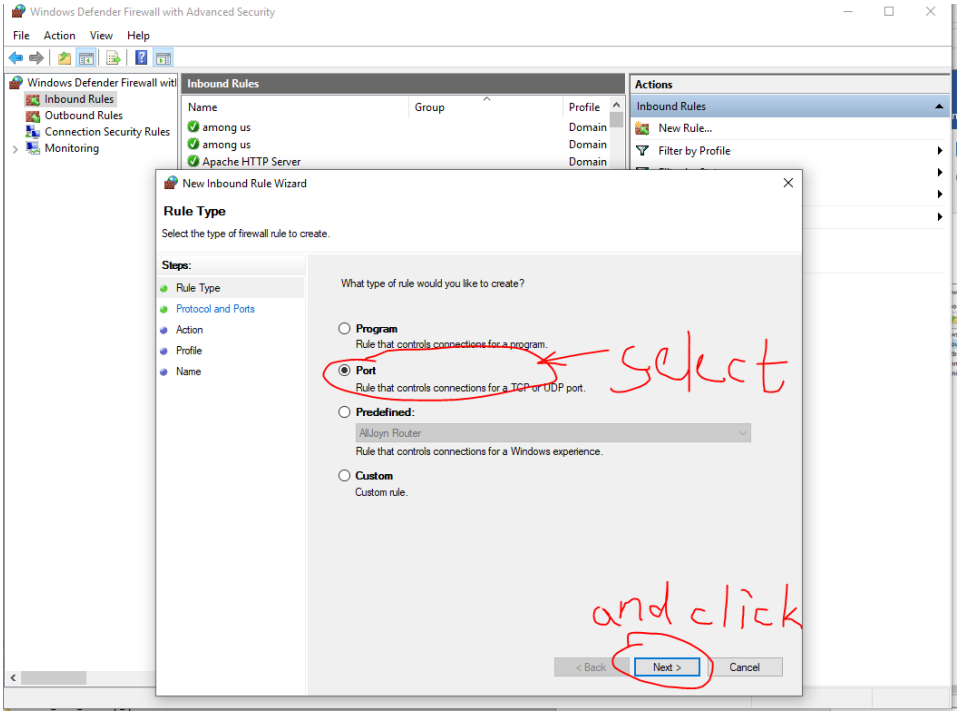
Select Iinbouned Rules



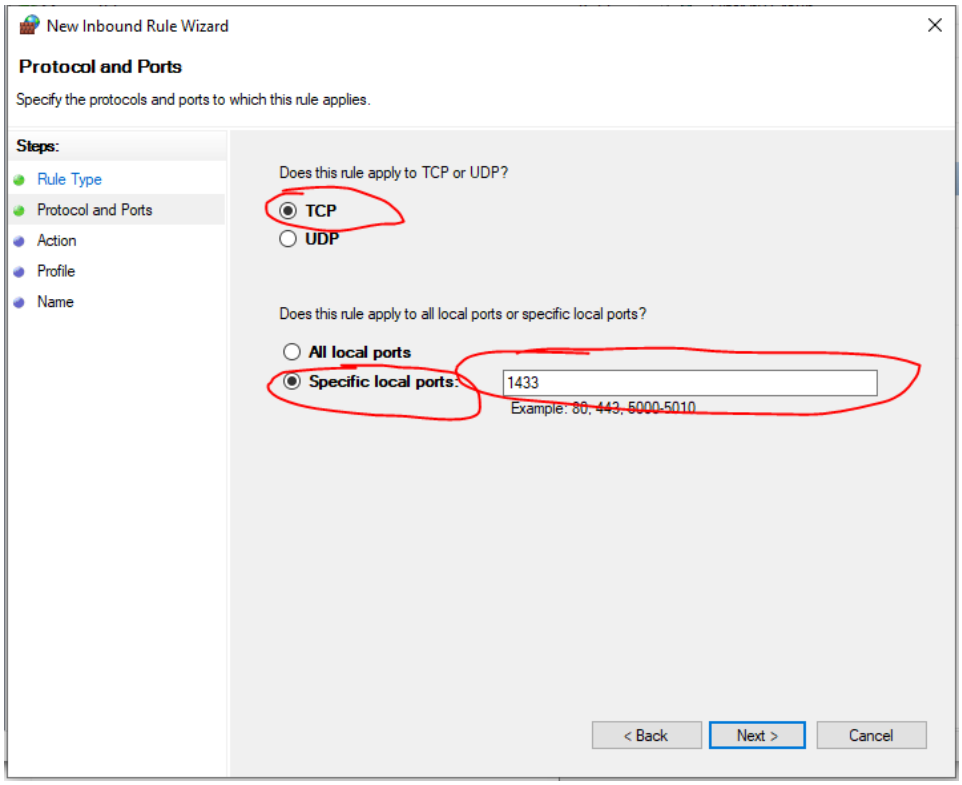
Create new rule and open port 1433



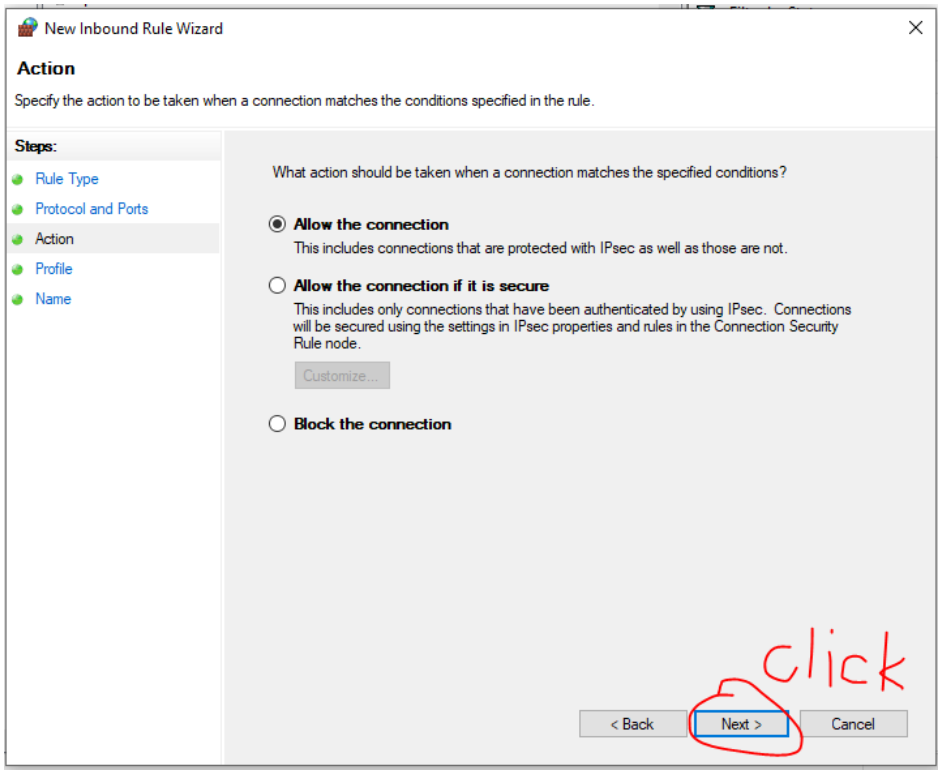
New Inbound Rul Wizard will be displayed. Select Port as a type of rule, and then click Next button.

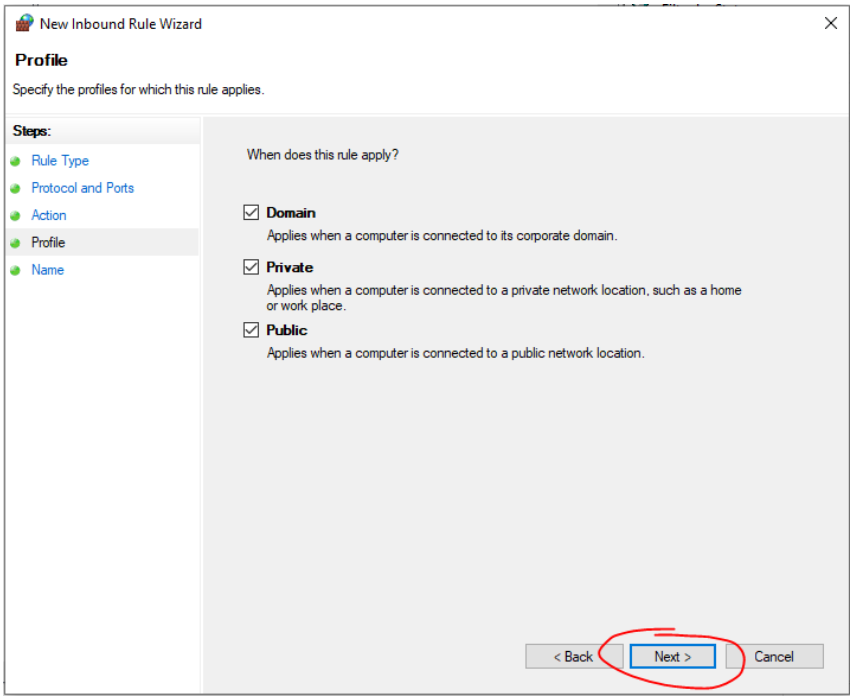


Apply rule to TCP and Input 1433 into Specific local ports

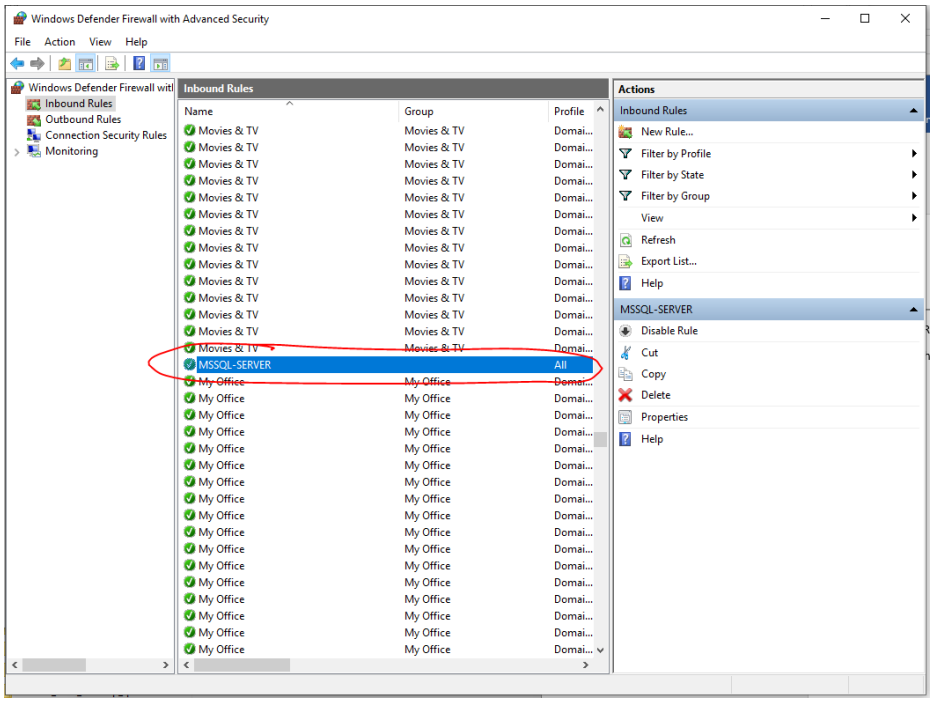


Select Allow the connection and click Next.





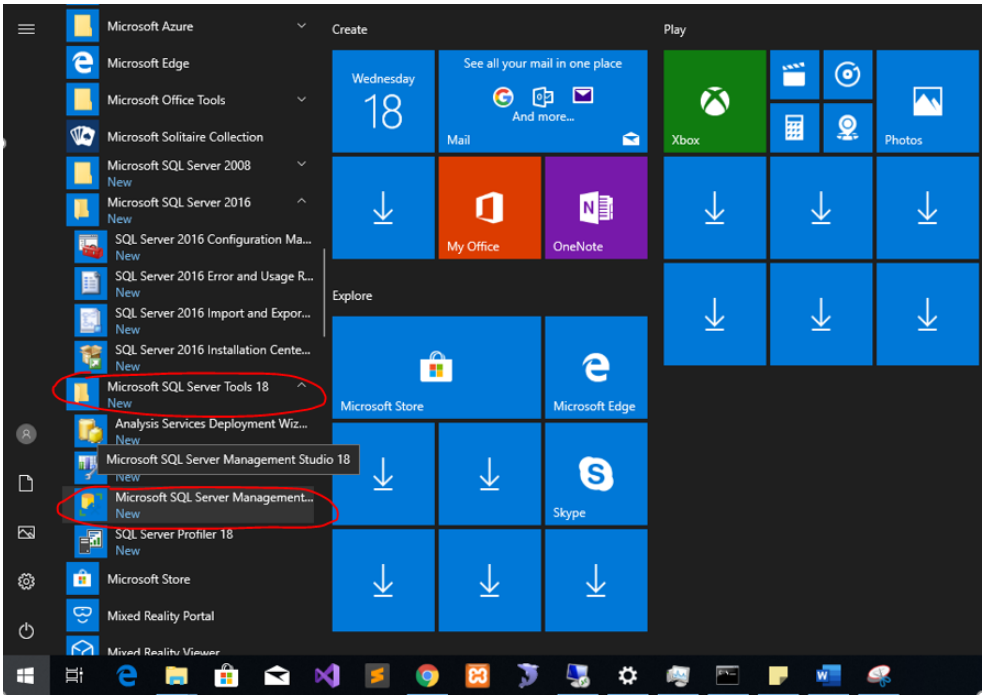
Input Rule name and click Finish. You can find new Rule has been added in the list.



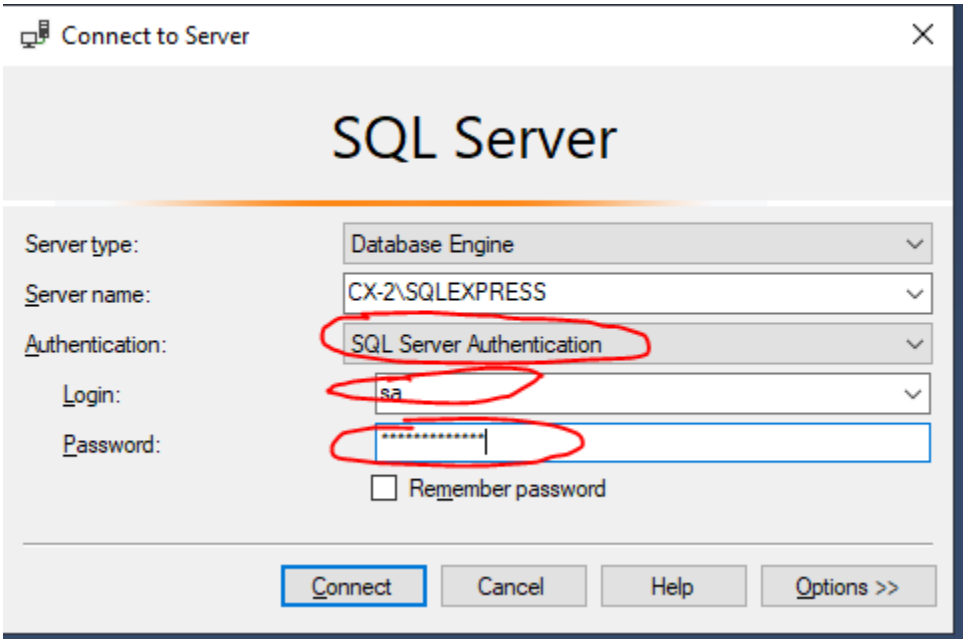
Now the port 1433 has been enabled so that any remote user can access to this machine via port 1433.

6. Run SQL Server Management Studio and Create a new database and tables for our application.

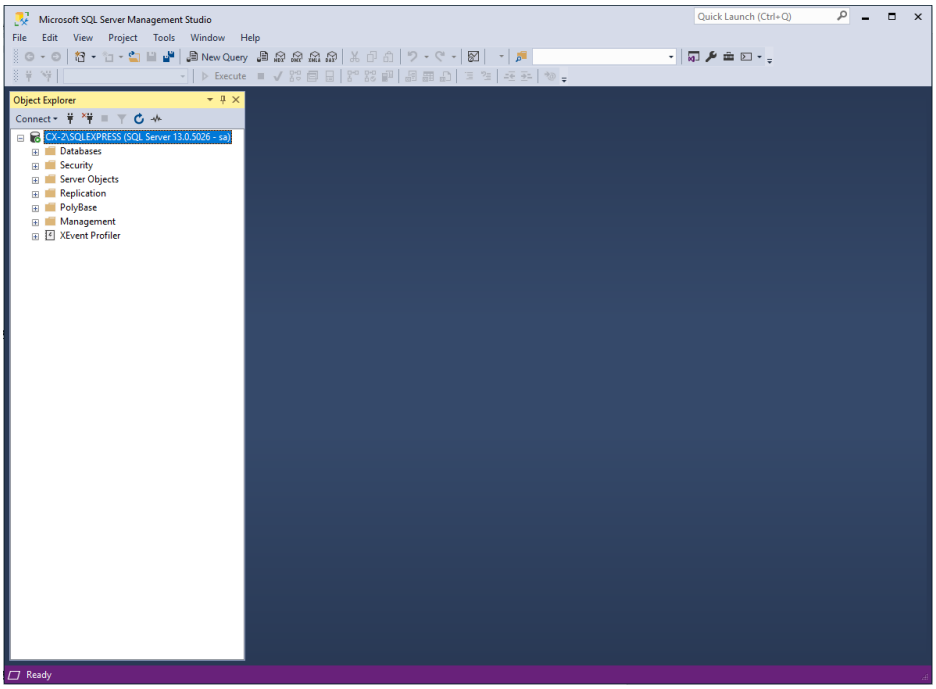
1) Run *Start->SQL Server Tools 18->Microsoft SQL Server Management.*



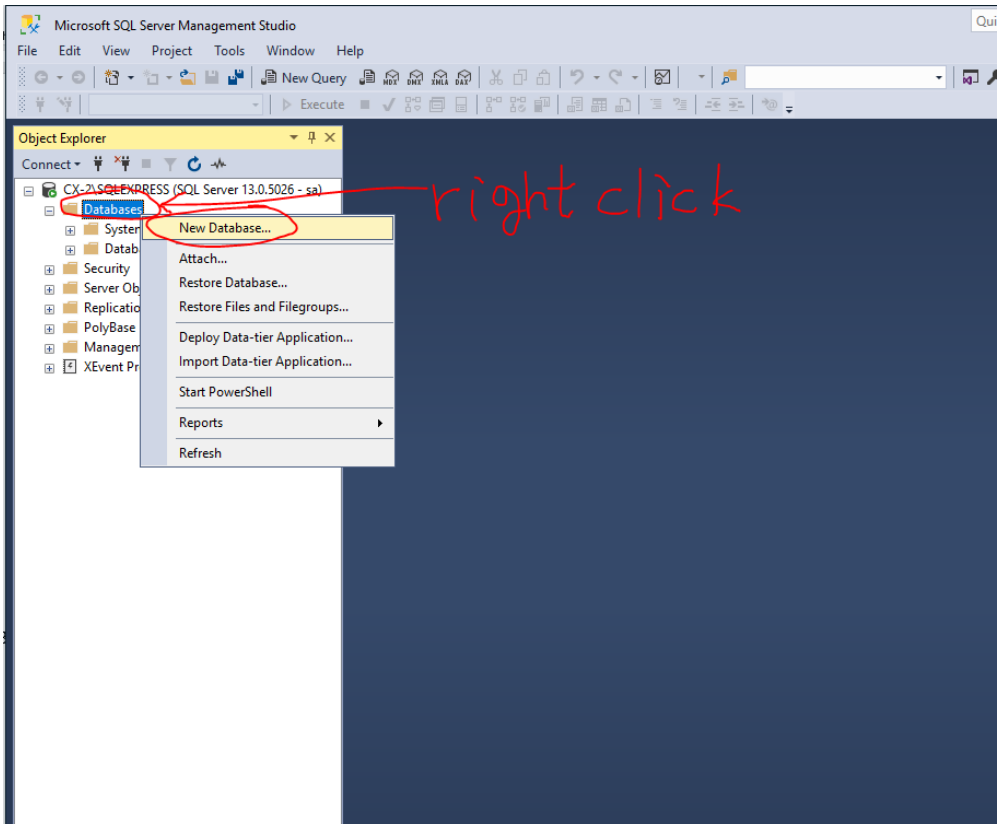
2) Connect to Server
Set Authtication to *SQL Server Authentication.*
Login: sa Password: admin@123.com



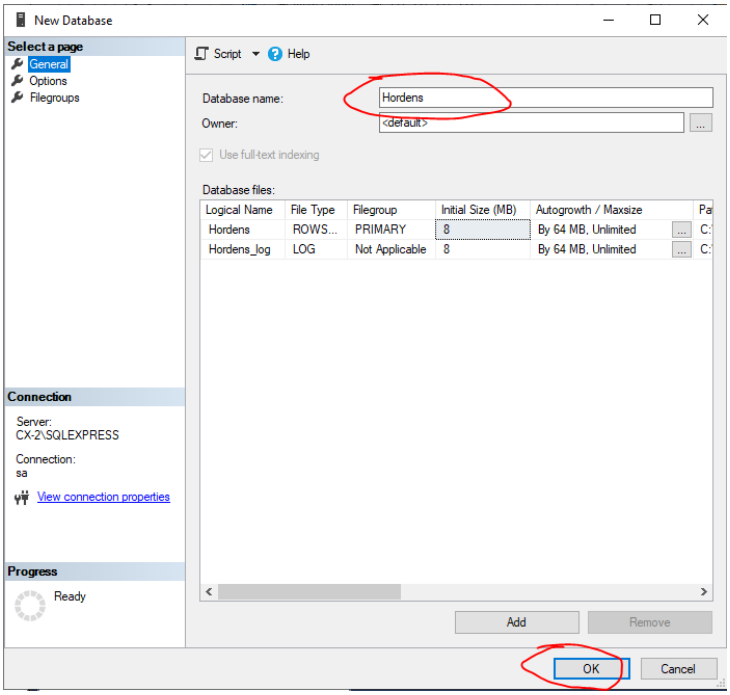
You have been connected to SSMS.



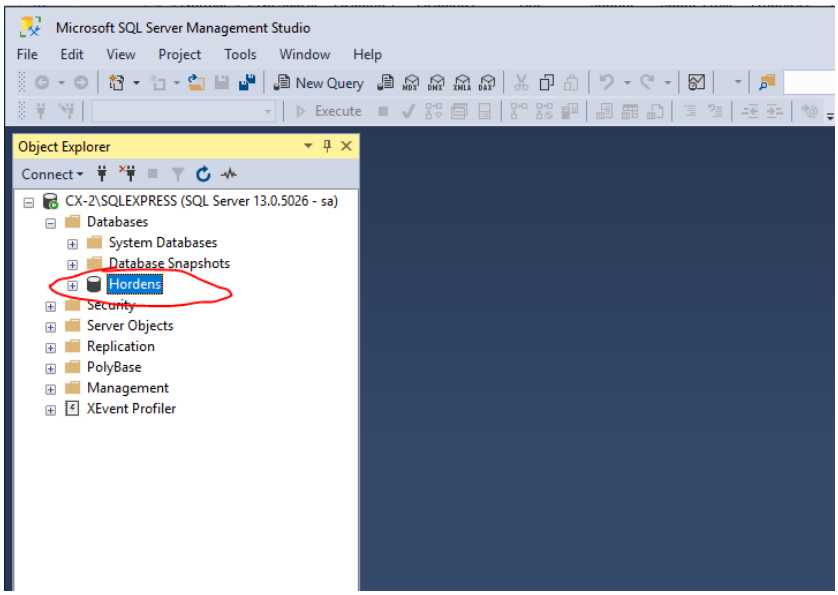
3) Create a new Database “Hordens”
In Object Explorer, right click *Databases* and select *New Database…*



Input Database name “Hordens” and click OK.

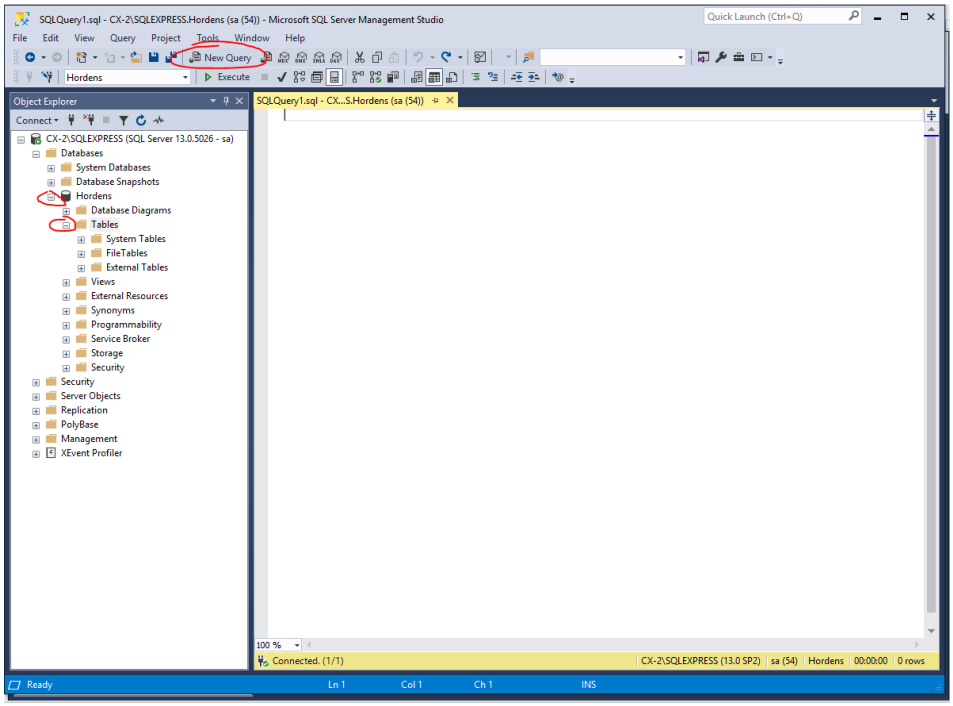


New database *"Hordens"* has been created.

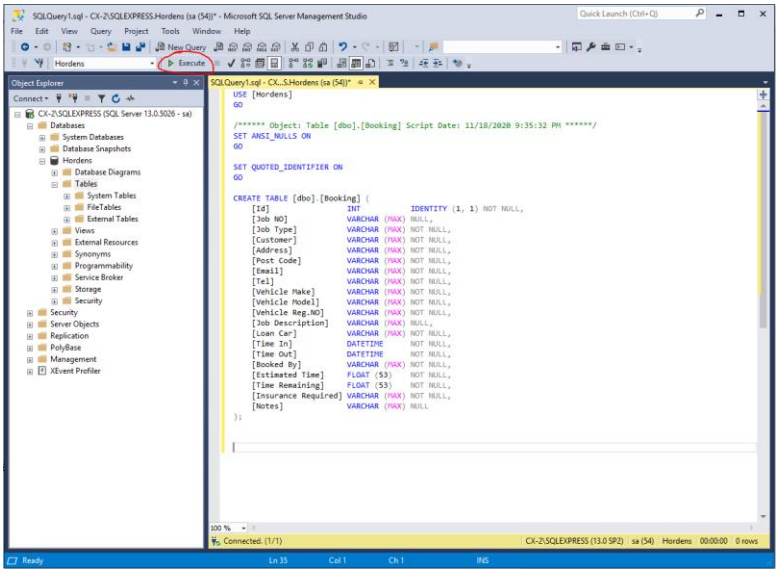


4) Create 3 tables: *dbo.Booking, dbo.JobType, dbo.Technician*

Navigate the *Hordens->Tables* and Click *New Query* in the tooltip



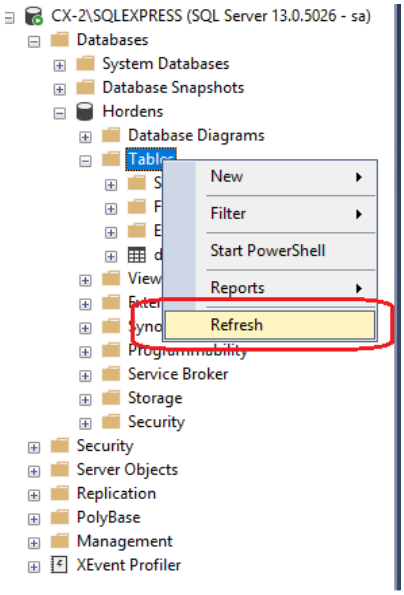
To Create a table *"dbo.Booking"*, Execute script as follows. And Refresh Tables.

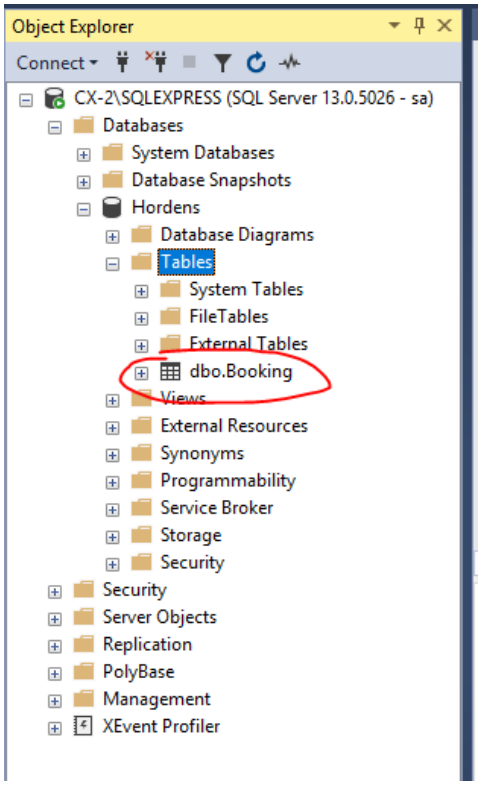


Script of dbo.Booking

```
USE [Hordens]
GO

/****** Object: Table [dbo].[Booking] Script Date: 11/18/2020 9:35:32 PM ******/
SET ANSI_NULLS ON
GO

SET QUOTED_IDENTIFIER ON
GO

CREATE TABLE [dbo].[Booking] (
   [Id]              INT         IDENTITY (1, 1) NOT NULL,
   [Job NO]          VARCHAR (MAX) NULL,
   [Job Type]        VARCHAR (MAX) NOT NULL,
   [Customer]        VARCHAR (MAX) NOT NULL,
   [Address]         VARCHAR (MAX) NOT NULL,
   [Post Code]       VARCHAR (MAX) NOT NULL,
   [Email]           VARCHAR (MAX) NOT NULL,
   [Tel]             VARCHAR (MAX) NOT NULL,
   [Vehicle Make]    VARCHAR (MAX) NOT NULL,
   [Vehicle Model]   VARCHAR (MAX) NOT NULL,
   [Vehicle Reg.NO]  VARCHAR (MAX) NOT NULL,
   [Job Description] VARCHAR (MAX) NULL,
   [Loan Car]        VARCHAR (MAX) NOT NULL,
   [Time In]         DATETIME      NOT NULL,
   [Time Out]        DATETIME      NOT NULL,
   [Booked By]       VARCHAR (MAX) NOT NULL,
   [Estimated Time]  FLOAT (53)    NOT NULL,
   [Time Remaining]  FLOAT (53)    NOT NULL,
   [Insurance Required] VARCHAR (MAX) NOT NULL,
   [Notes]           VARCHAR (MAX) NULL
);
```

You can see a new table *dbo.Booking* has been added into database *Hordens.*


CX-2\SQLEXPRESS (SQL Server 13.0.5026 - sa)
Databases
System Databases
Database Snapshots
Hordens
Database Diagrams
Tables
New
Filter
Start PowerShell
Reports
Refresh
Service Broker
Storage
Security
Security
Server Objects
Replication
PolyBase
Management
XEvent Profiler


Object Explorer
Connect
CX-2\SQLEXPRESS (SQL Server 13.0.5026 - sa)
Databases
System Databases
Database Snapshots
Hordens
Database Diagrams
Tables
System Tables
FileTables
External Tables
dbo.Booking
Views
External Resources
Synonyms
Programmability
Service Broker
Storage
Security
Security
Server Objects
Replication
PolyBase
Management
XEvent Profiler

Create databases *dbo.JobType* and *dbo.Technician* at the same way.

Scripts of *JobType* and *Technician* as follows

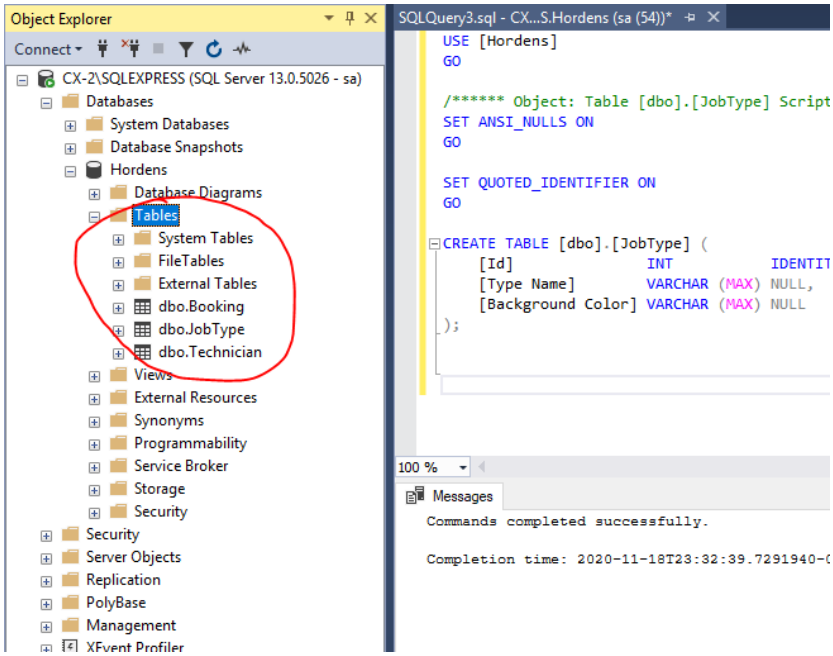
Script of JobType

```
USE [Hordens]
GO

/****** Object: Table [dbo].[JobType] Script Date: 11/18/2020 9:35:47 PM ******/
SET ANSI_NULLS ON
GO

SET QUOTED_IDENTIFIER ON
GO

CREATE TABLE [dbo].[JobType] (
    [Id]              INT          IDENTITY (1, 1) NOT NULL,
    [Type Name]       VARCHAR (MAX) NULL,
    [Background Color] VARCHAR (MAX) NULL
);
```

Script of Technician

```
USE [Hordens]
GO

/***** Object: Table [dbo].[Technician] Script Date: 11/18/2020 9:35:53 PM *****/
SET ANSI_NULLS ON
GO

SET QUOTED_IDENTIFIER ON
GO

CREATE TABLE [dbo].[Technician] (
    [Id]          INT          IDENTITY (1, 1) NOT NULL,
    [Name]        VARCHAR (MAX) NOT NULL,
    [Working Hours] FLOAT (53)    NOT NULL,
    [Date]        DATETIME     NOT NULL
);
```

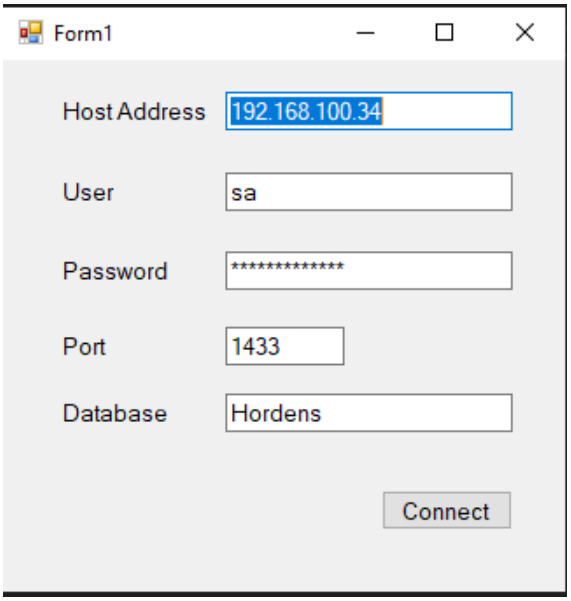
Now, database *Hordens* and 3 tables have been created successfully.



Tips: You can Add or Edit SQL Account name and password in this SSMS.

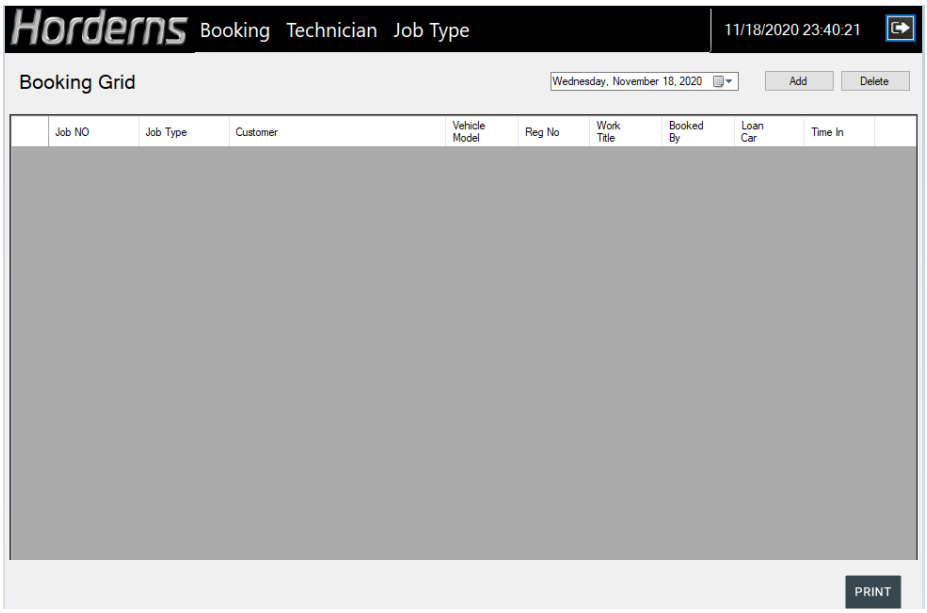
7. Test connection in application

Run the app from another pc and connect to remote sql server.



Host Address: Host IP Address
User: SQL Account you have created when you set up SQL Server. (sa)
Password: password(admin@123.com)
Database: Database to connect. You created the database in SSMS.

Test connection. If you configure SQL Server correctly, you will managed to run the app.



THANK YOU!!!