

PNNL-30250

HBET V2.0 Installation Manual

August 2020

Jingxian Wang
Hongfei Hou
Zhiqun Deng

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Pacific Northwest National Laboratory
Richland, Washington 99354

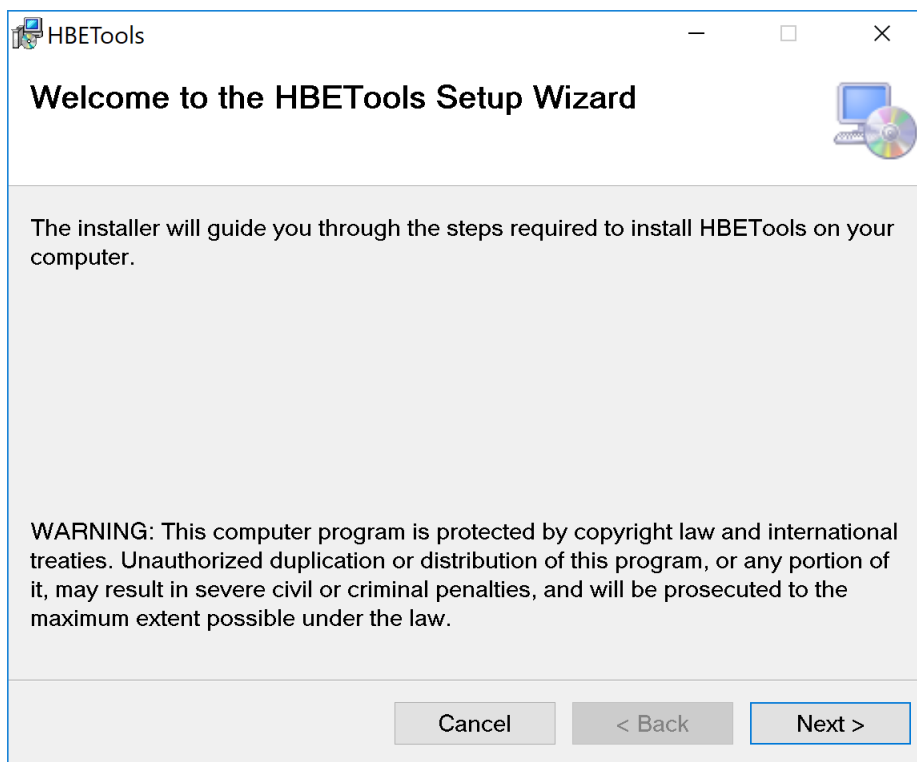
HBET V2.0 Installation Manual

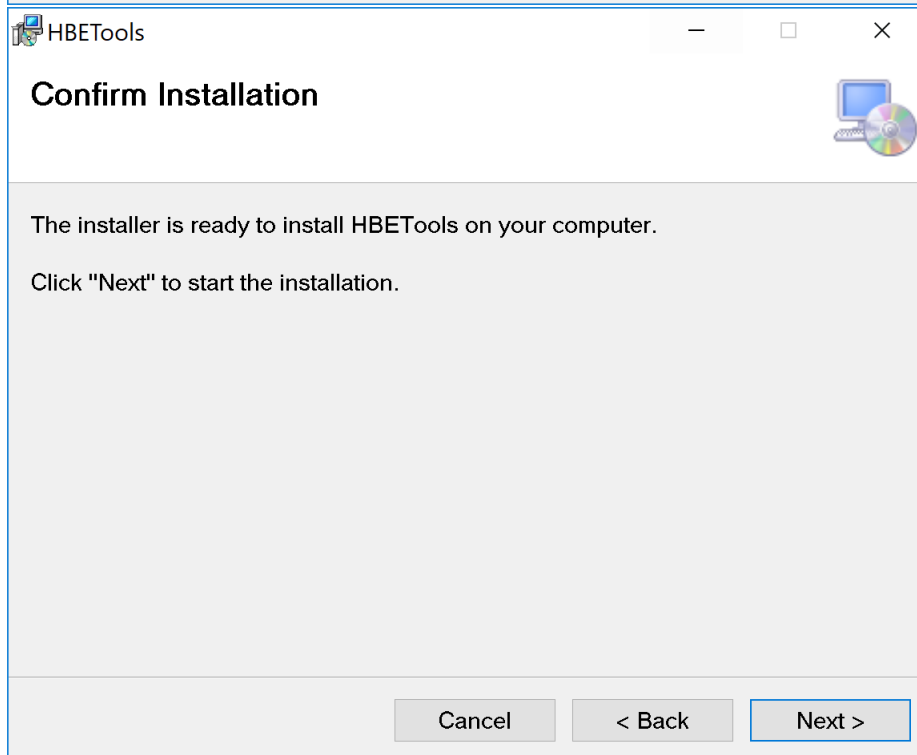
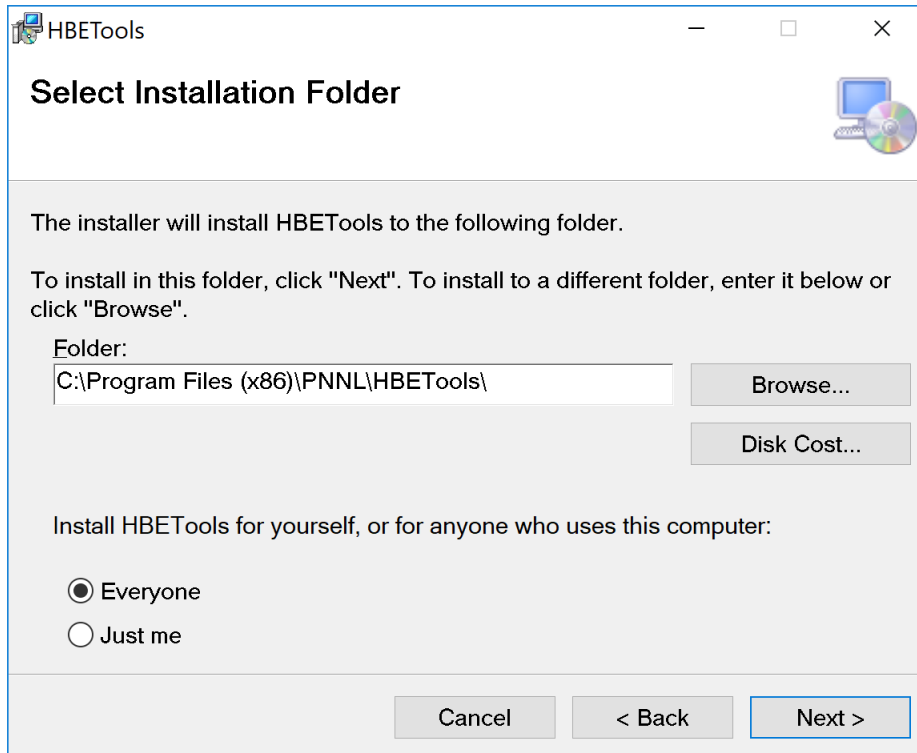
January 5, 2021

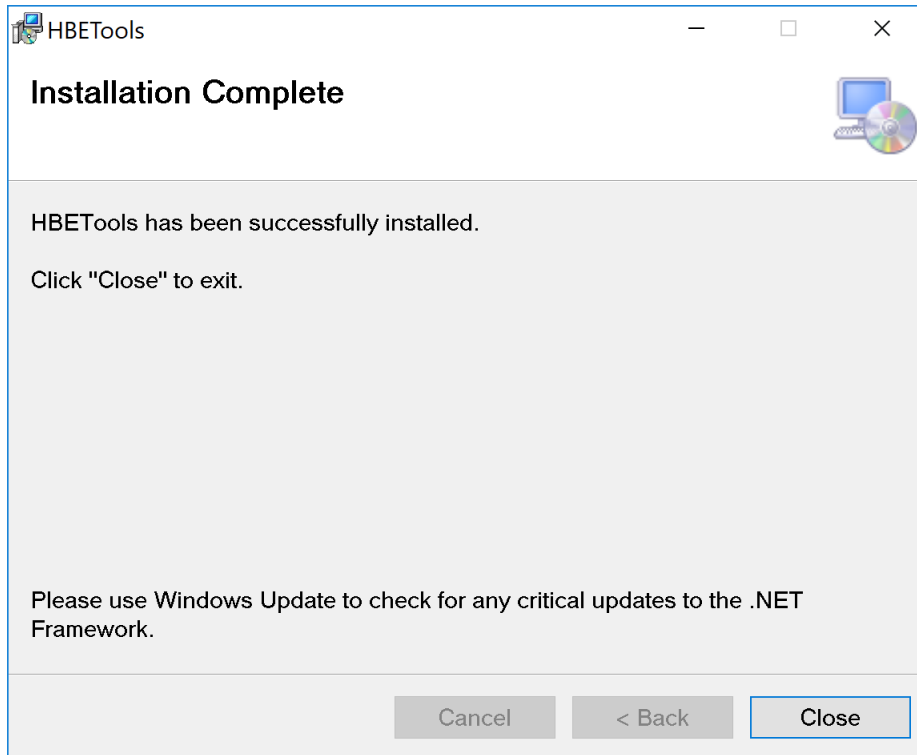
To upgrade from a previous version, please go to page 36 directly.

Fresh installation:

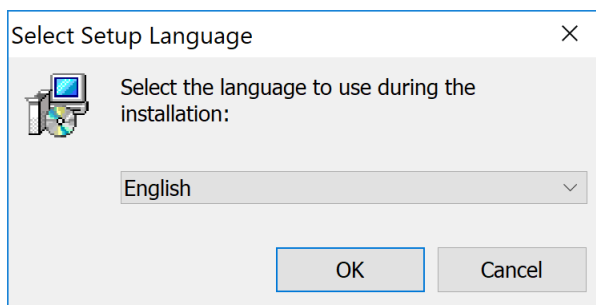
1. Unzip HBET_V2_Installer.zip
2. Double click setup.exe and follow screenshots below to install HBET. Choose “Yes” if the system asks “Do you want to allow this app to make changes to your device?”

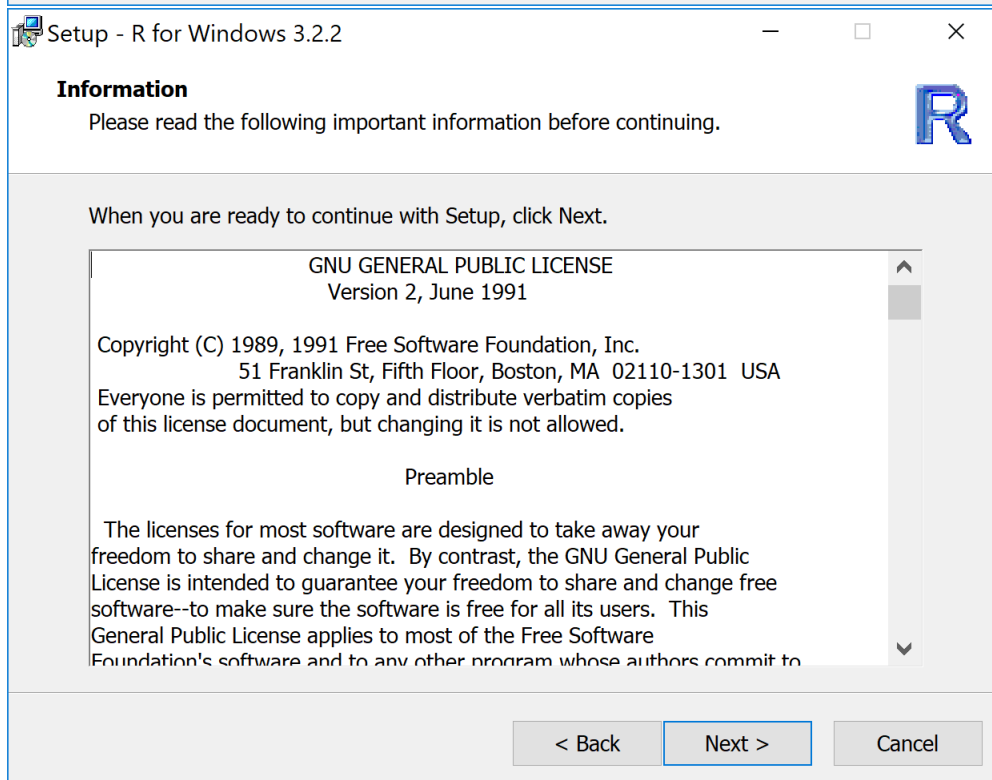
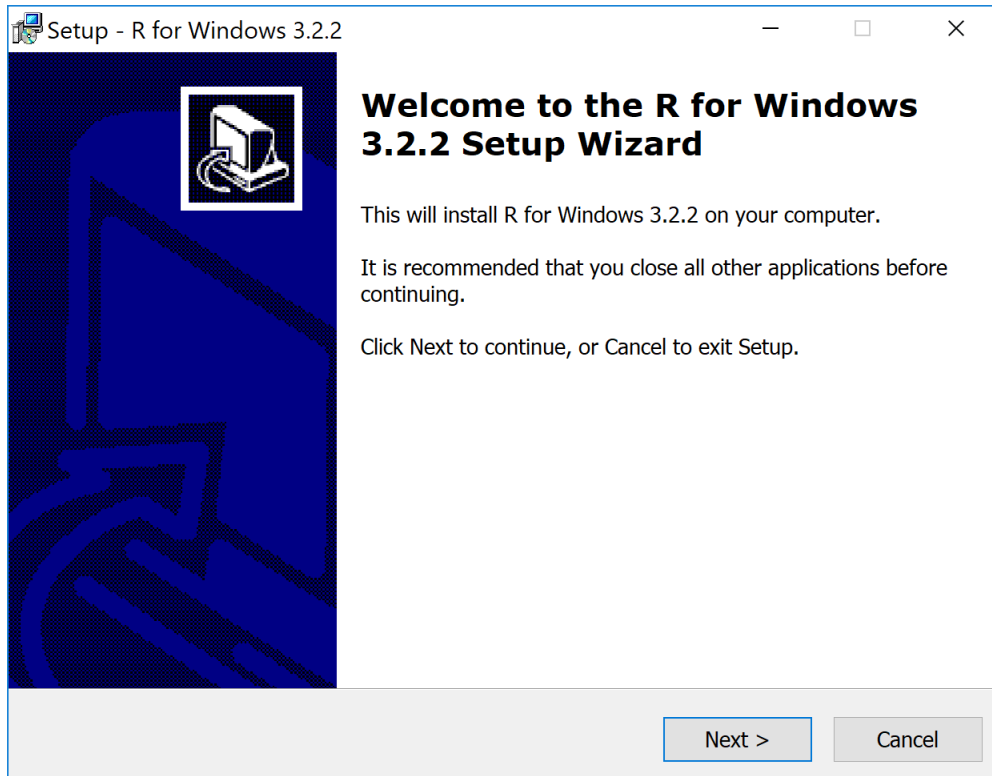


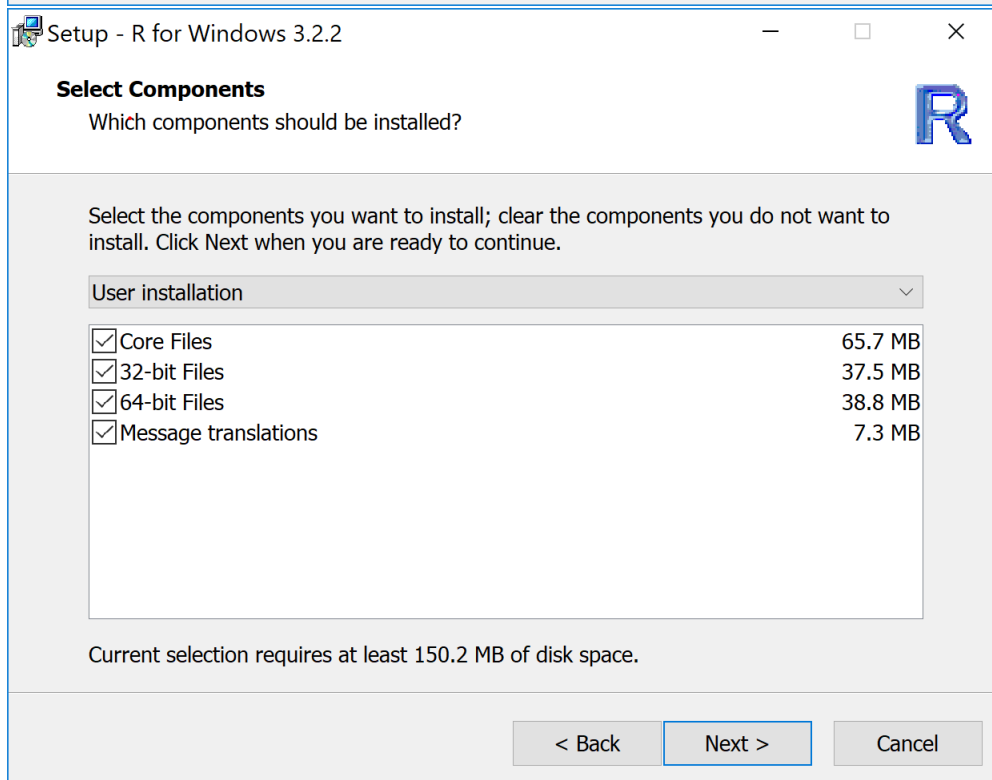
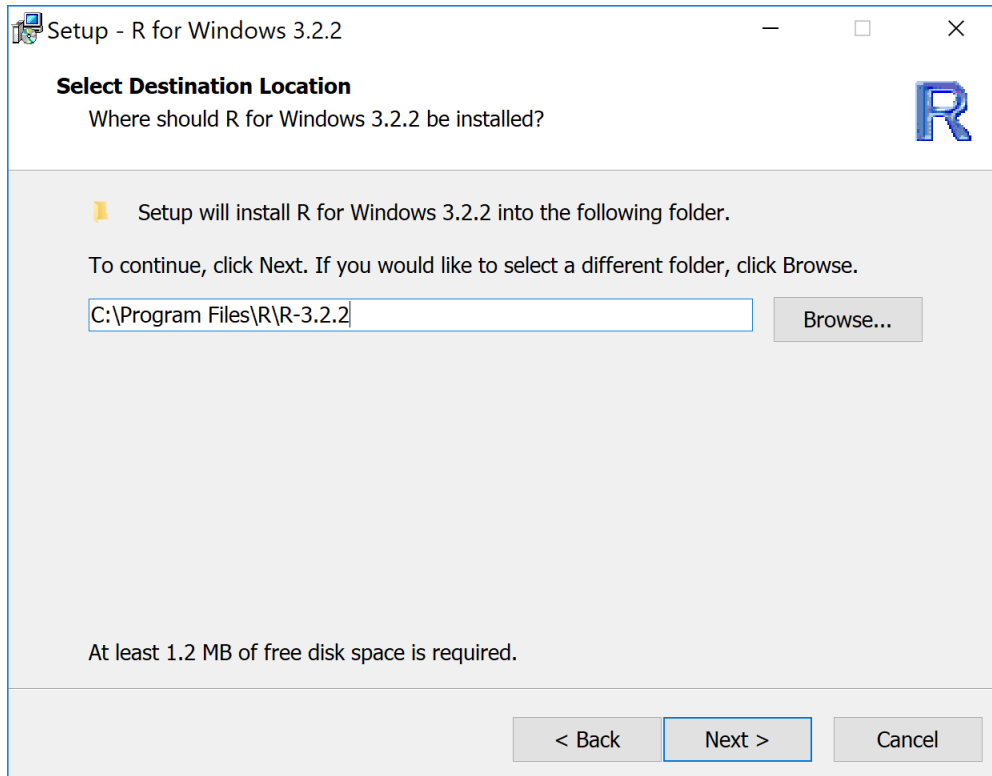


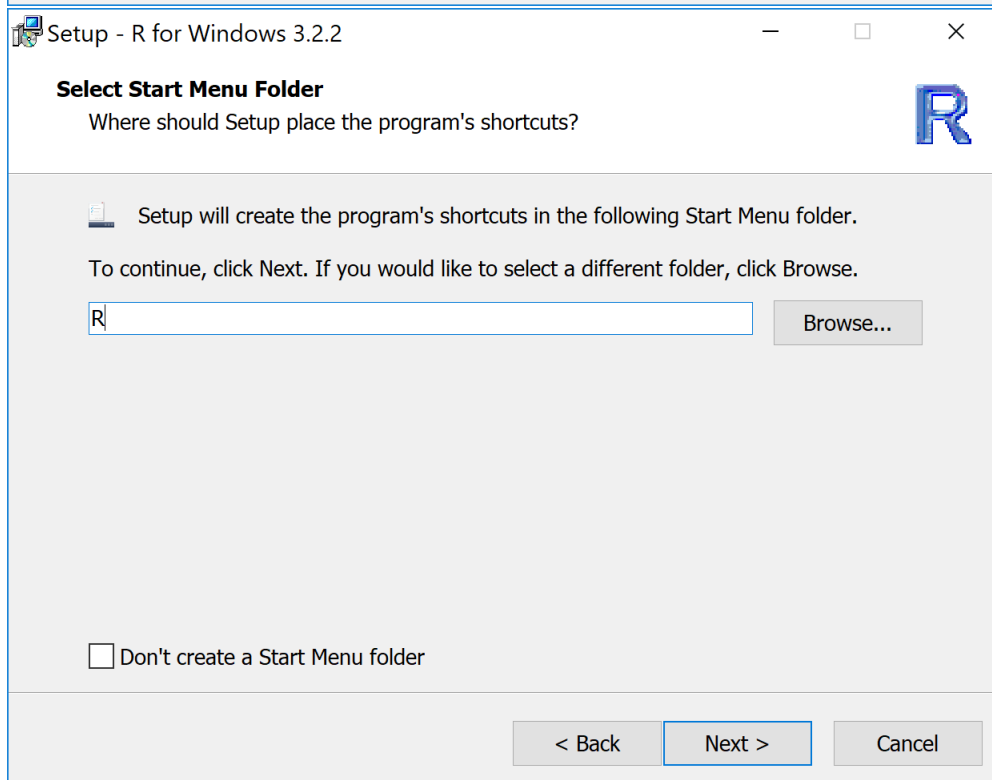
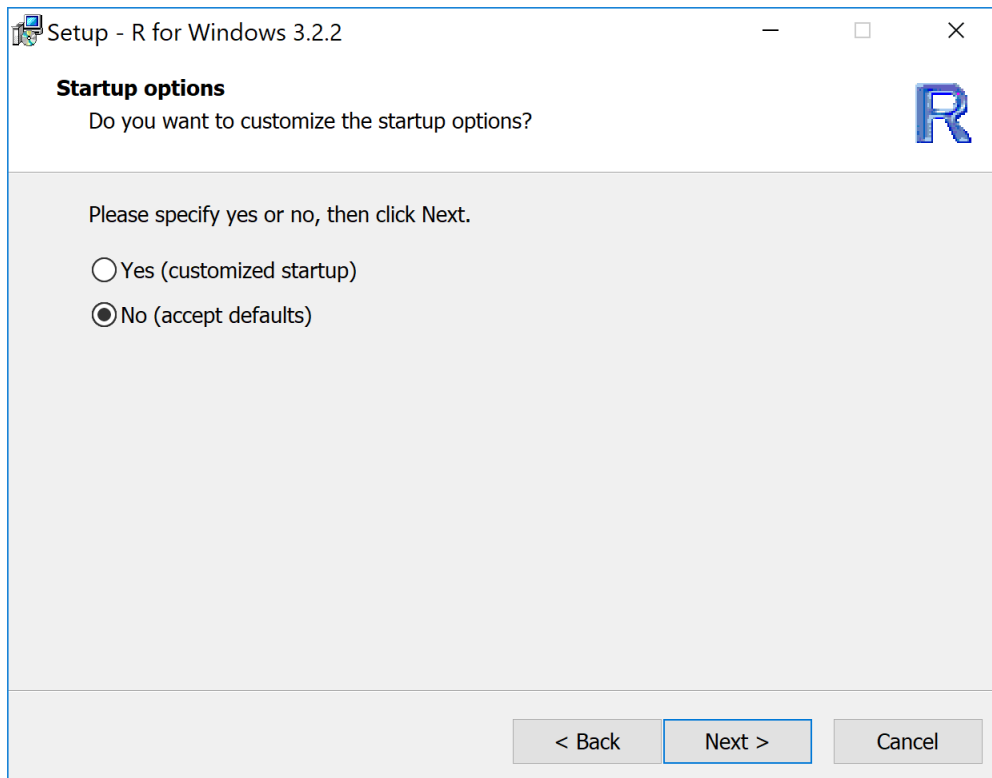


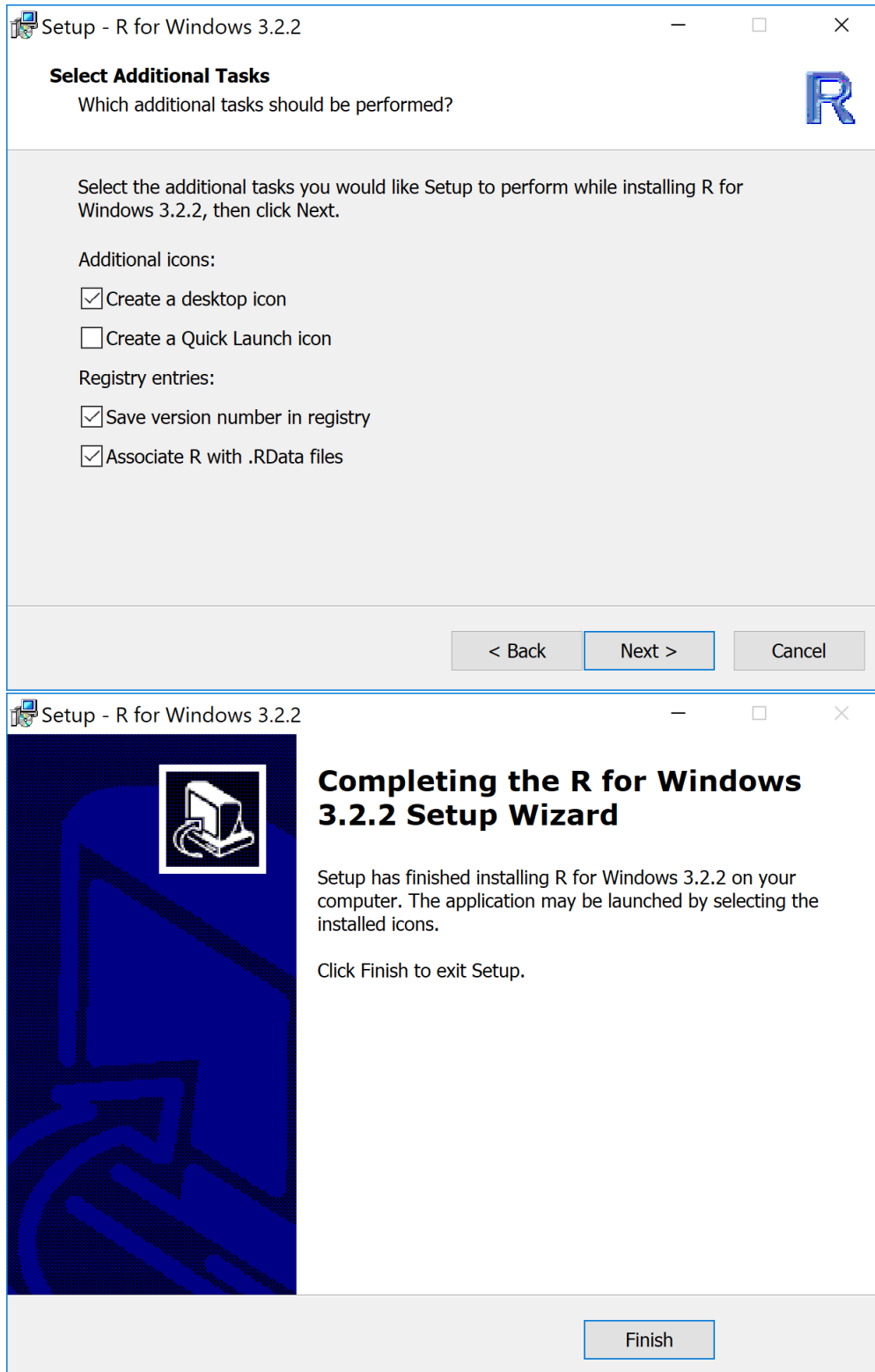
3. Double click R-3.2.2-win.exe and follow screenshots below to install the R code support. Choose "Yes" if the system asks "Do you want to allow this app to make changes to your device?"



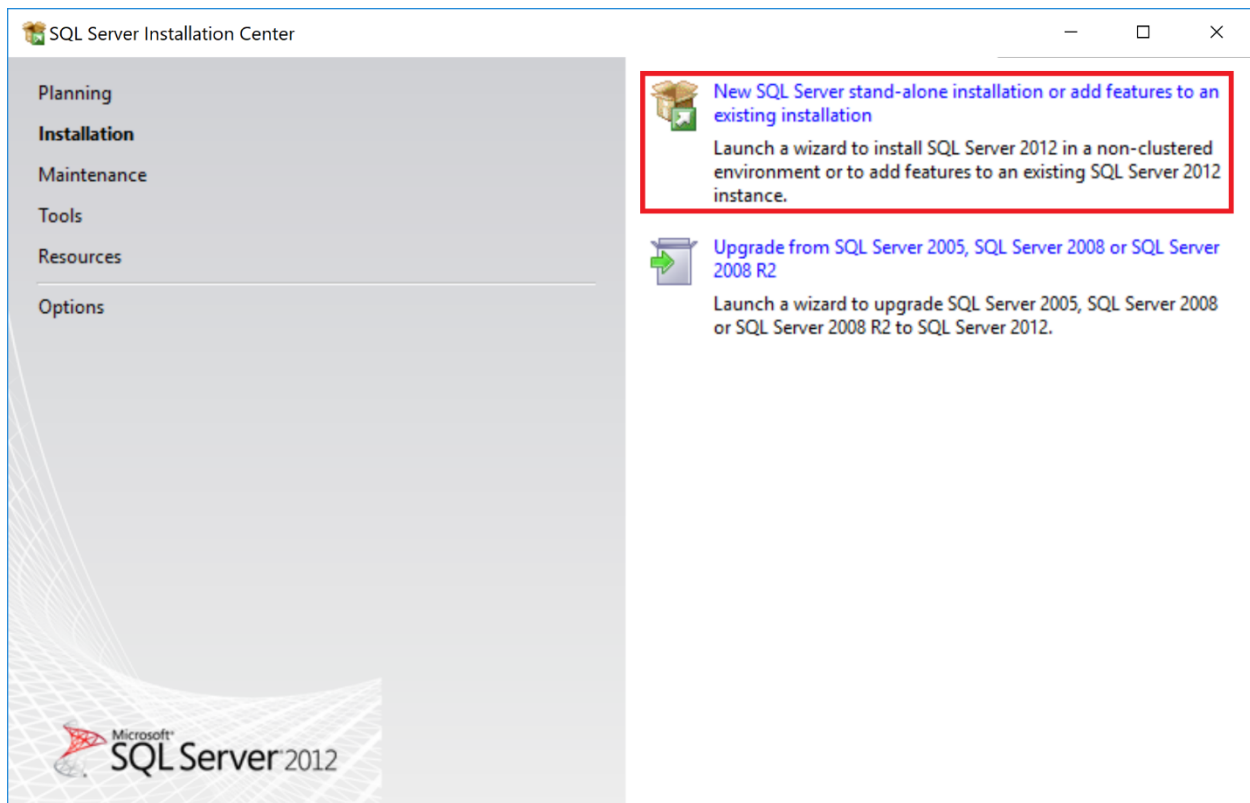








4. Double click SQLEXPRTW_x64_ENU.exe and follow screenshots below to install SQL Server Express and SQL Server Management Studio. Choose "Yes" if the system asks "Do you want to allow this app to make changes to your device?"



SQL Server 2012 Setup

License Terms

To install SQL Server 2012, you must accept the Microsoft Software License Terms.

License Terms

Product Updates

Install Setup Files

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MICROSOFT SQL SERVER 2012 EXPRESS

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- supplements,
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- support services.

☒ I accept the license terms.

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Copy Print

< Back Next > Cancel

SQL Server 2012 Setup

Product Updates

Always install the latest updates to enhance your SQL Server security and performance.

License Terms

Product Updates

Install Setup Files

☒ Include SQL Server product updates

Name	Size (MB)	More Information
SQL Server 2012 SP1 Setup Update	14	KB 2674319

1 updates (14 MB) found online.

The Setup updates (14 MB) will be installed when you click Next.

[Read our privacy statement online](#)

[Learn more about SQL Server product updates](#)

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SQL Server 2012 Setup

Feature Selection

Select the Express features to install.

Setup Support Rules

Feature Selection

Installation Rules

Instance Configuration

Disk Space Requirements

Server Configuration

Database Engine Configuration

Error Reporting

Installation Configuration Rules

Installation Progress

Complete

Features:

Instance Features

☒ Database Engine Services
☒ SQL Server Replication

Shared Features

☒ Management Tools - Basic
☒ SQL Client Connectivity SDK
☐ LocalDB

Redistributable Features

Select All

Unselect All

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 Server instances can operate side-by-side on the same computer.

Prerequisites for selected features:

Already installed:

Microsoft .NET Framework 4.0

Windows PowerShell 2.0

Microsoft .NET Framework 3.5

To be installed from media:

Microsoft Visual Studio 2010 Shell

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SQL Server 2012 Setup

Instance Configuration

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

Setup Support Rules

Feature Selection

Installation Rules

Instance Configuration

Disk Space Requirements

Server Configuration

Database Engine Configuration

Error Reporting

Installation Configuration Rules

Installation Progress

Complete

☐ Default instance

☒ Named instance:

Instance ID:

Instance root directory: ...

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL11.SQLEXPRESS

Installed instances:

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

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SQL Server 2012 Setup

Server Configuration

Specify the service accounts and collation configuration.

Setup Support Rules

Feature Selection

Installation Rules

Instance Configuration

Disk Space Requirements

Server Configuration

Database Engine Configuration

Error Reporting

Installation Configuration Rules

Installation Progress

Complete

Service AccountsCollation

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\MSSQLSQL...		Automatic
SQL Server Browser	NT AUTHORITY\LOCAL ...		Disabled

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SQL Server 2012 Setup

Database Engine Configuration

Specify Database Engine authentication security mode, administrators and data directories.

- Setup Support Rules
- Feature Selection
- Installation Rules
- Instance Configuration
- Disk Space Requirements
- Server Configuration
- Database Engine Configuration**
- Error Reporting
- Installation Configuration Rules
- Installation Progress
- Complete

Server Configuration | Data Directories | 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:

Confirm password:

Specify SQL Server administrators

PNL\wang695 (Wang, Jingxian)	SQL Server administrators have unrestricted access to the Database Engine.

< Back Next > Cancel Help

SQL Server 2012 Setup

Error Reporting

Help Microsoft improve SQL Server features and services.

- Setup Support Rules
- Feature Selection
- Installation Rules
- Instance Configuration
- Disk Space Requirements
- Server Configuration
- Database Engine Configuration
- Error Reporting**
- Installation Configuration Rules
- Installation Progress
- Complete

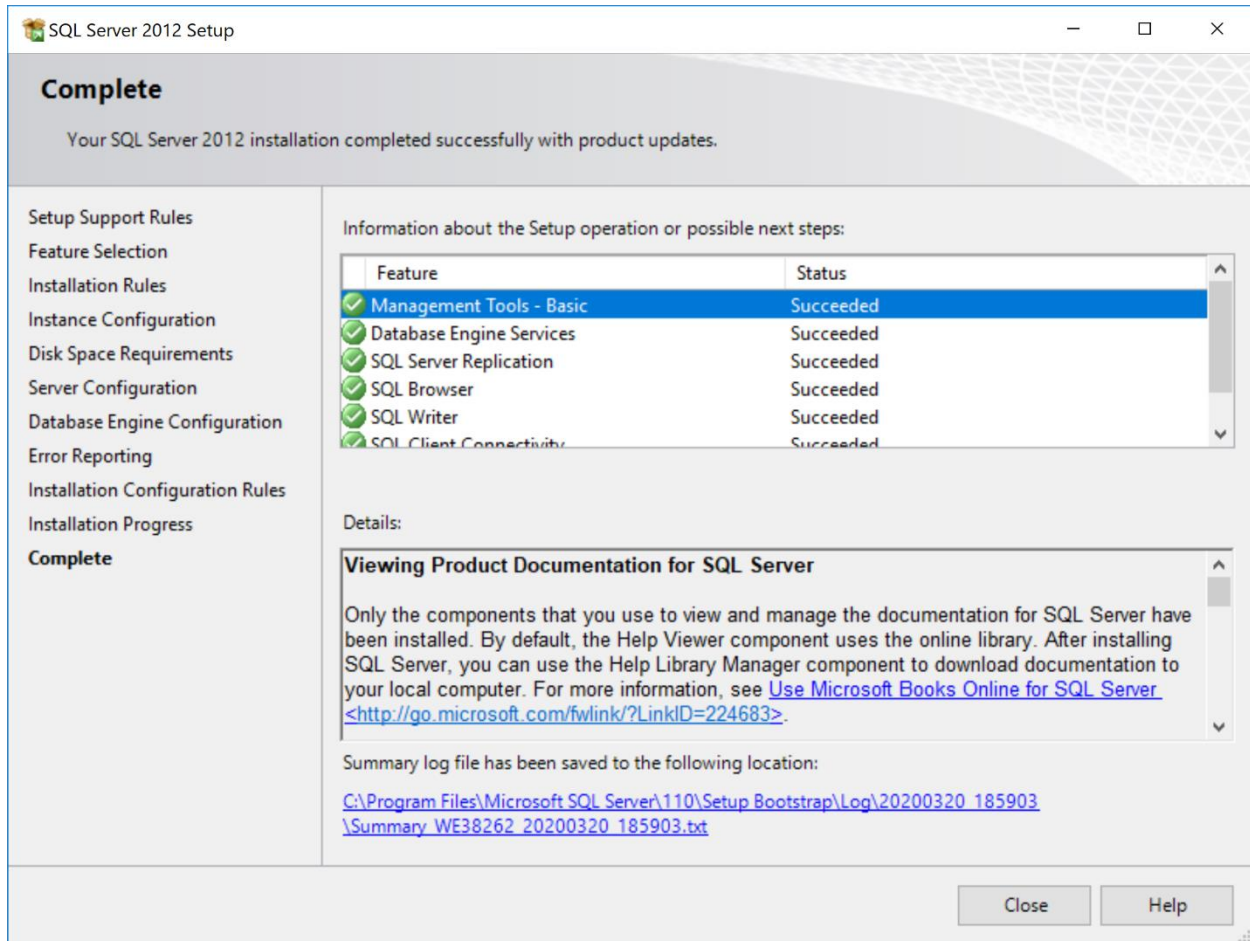
Specify the information that you would like to automatically send to Microsoft to improve future releases of SQL Server. These settings are optional. Microsoft treats this information as confidential. Microsoft may provide updates through Microsoft Update to modify feature usage data. These updates might be downloaded and installed on your machine automatically, depending on your Automatic Update settings.

[See the Microsoft SQL Server 2012 Privacy Statement for more information.](#)

[Read more about Microsoft Update and Automatic Update.](#)

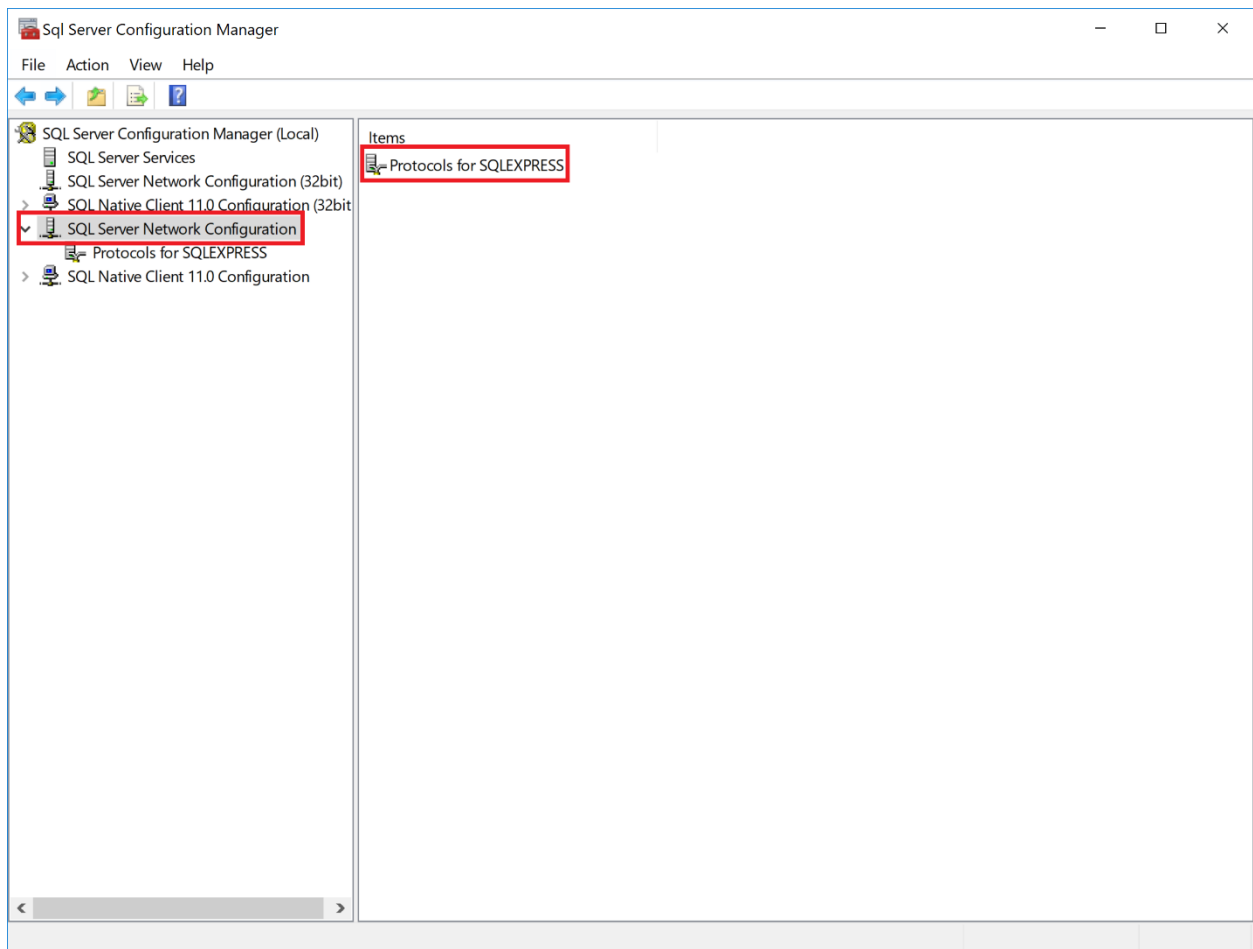
☐ Send Windows and SQL Server Error Reports to Microsoft or your corporate report server. This setting only applies to services that run without user interaction.

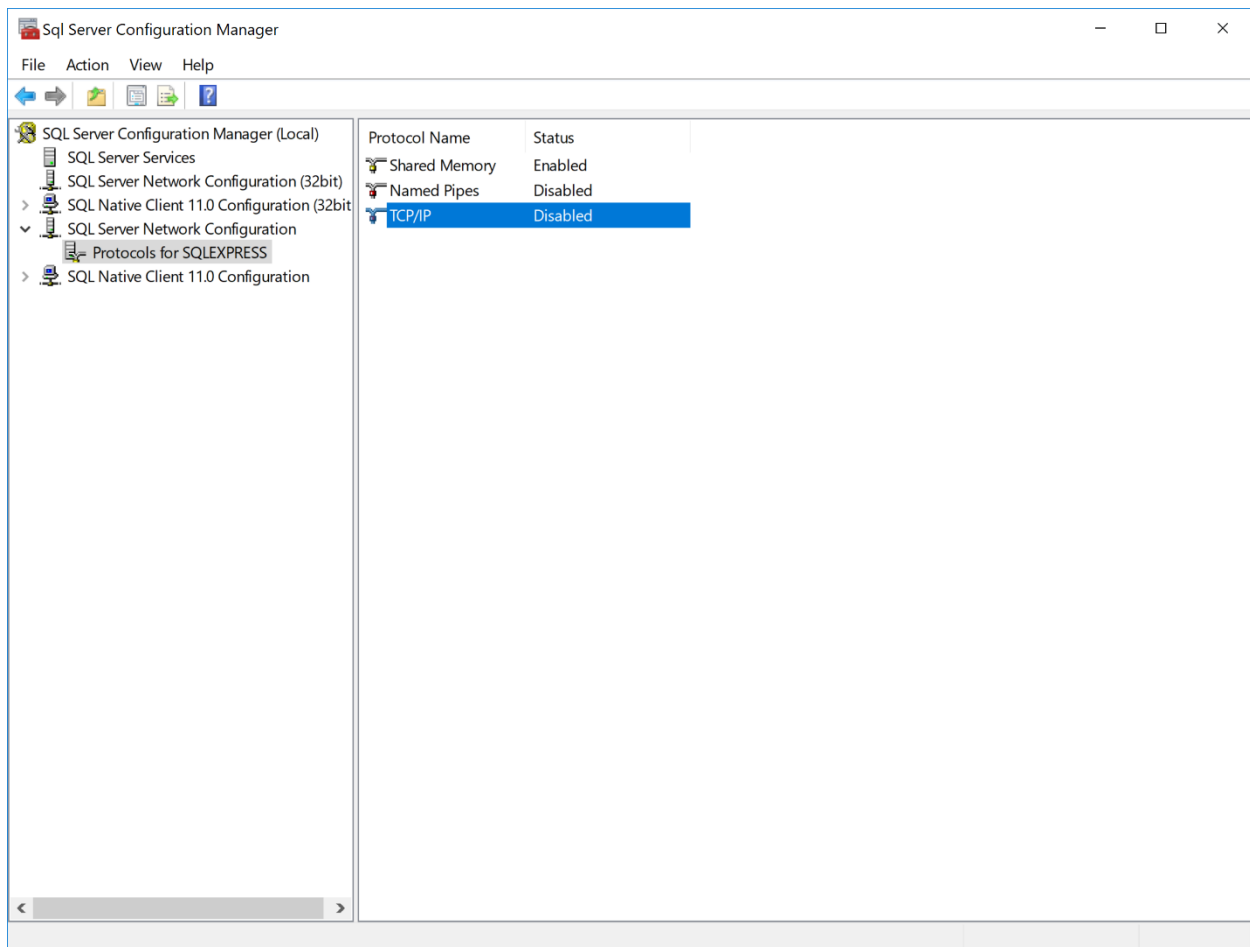
< Back Next > Cancel Help



5. Open SQL Server Configuration Manager from Start > Microsoft SQL Server 2012 > SQL Server Configuration Manager and follow instructions below.

- a. Select SQL Server Network Configuration > Protocols for SQLEXPRESS > TCP/IP to open the TCP/IP Properties window.





- b. In the Protocol tab, select Yes to Enabled; in the IP Address Tab, assign TCP Port to 7732.

TCP/IP Properties ? X

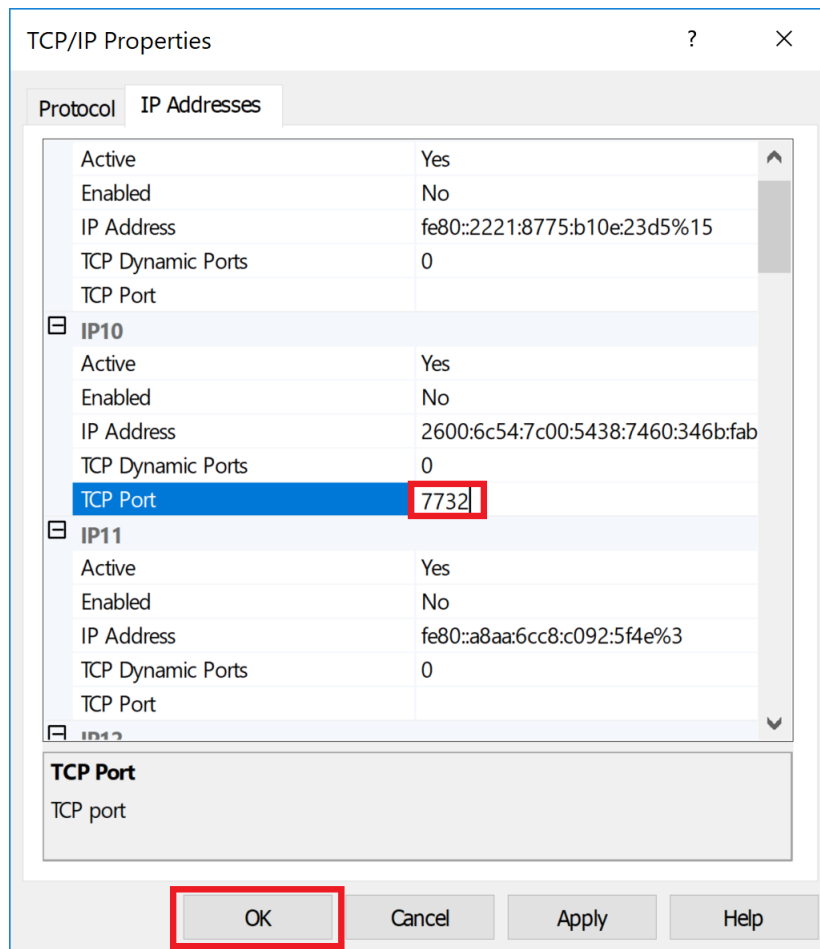
Protocol IP Addresses

General

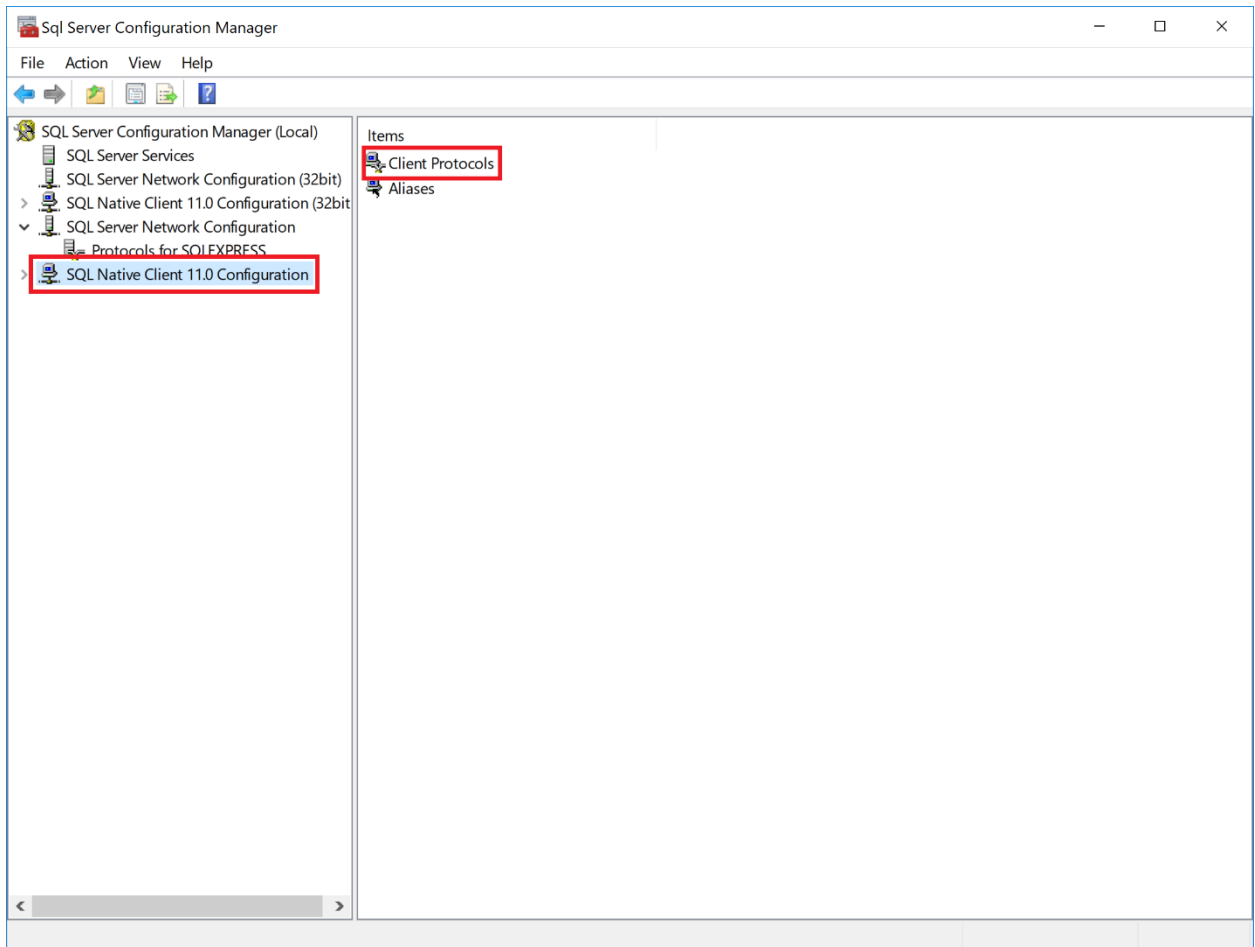
Enabled	Yes
Keep Alive	30000
Listen All	Yes

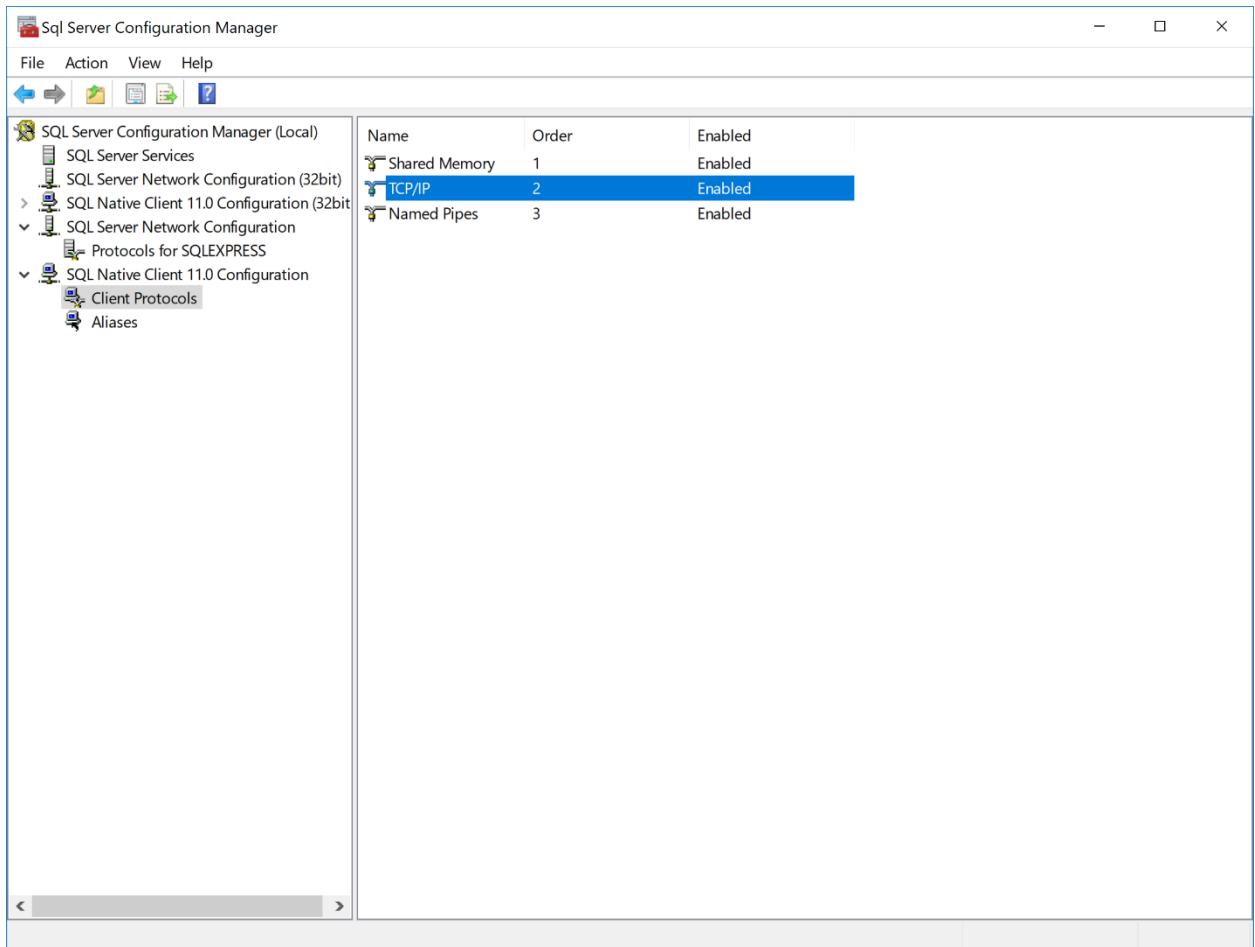
Enabled
Enable or disable TCP/IP protocol for this server instance

OK Cancel Apply Help

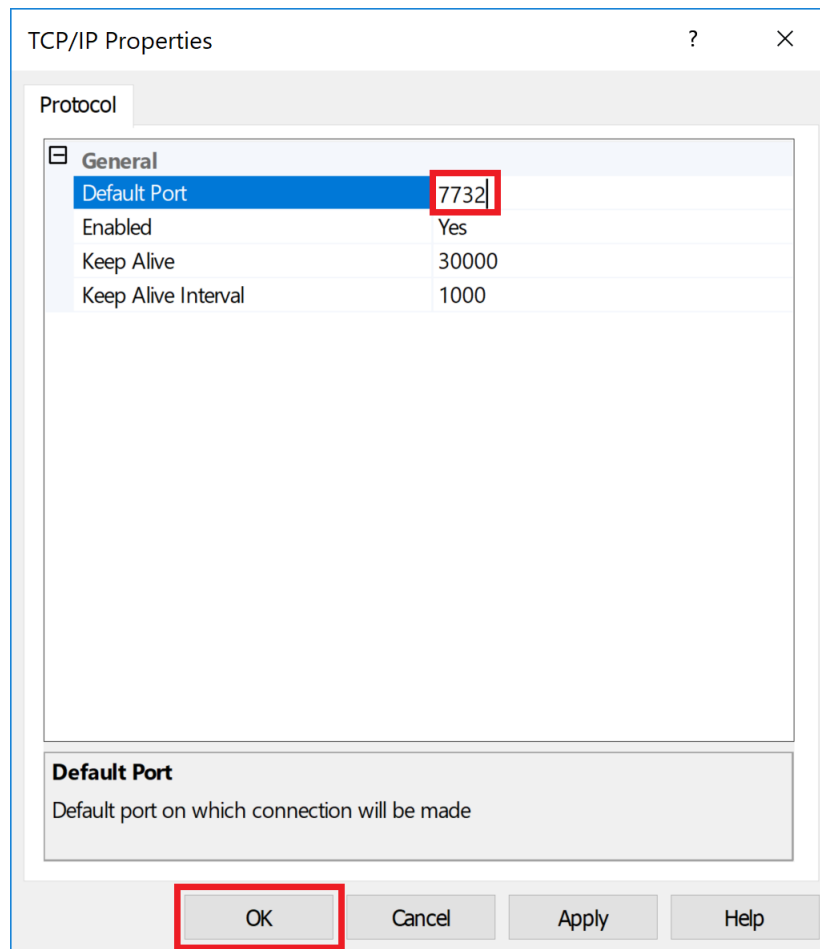


- c. Select SQL Native Client 11.0 Configuration > Client Protocols > TCP/IP to open the TCP/IP Properties window.

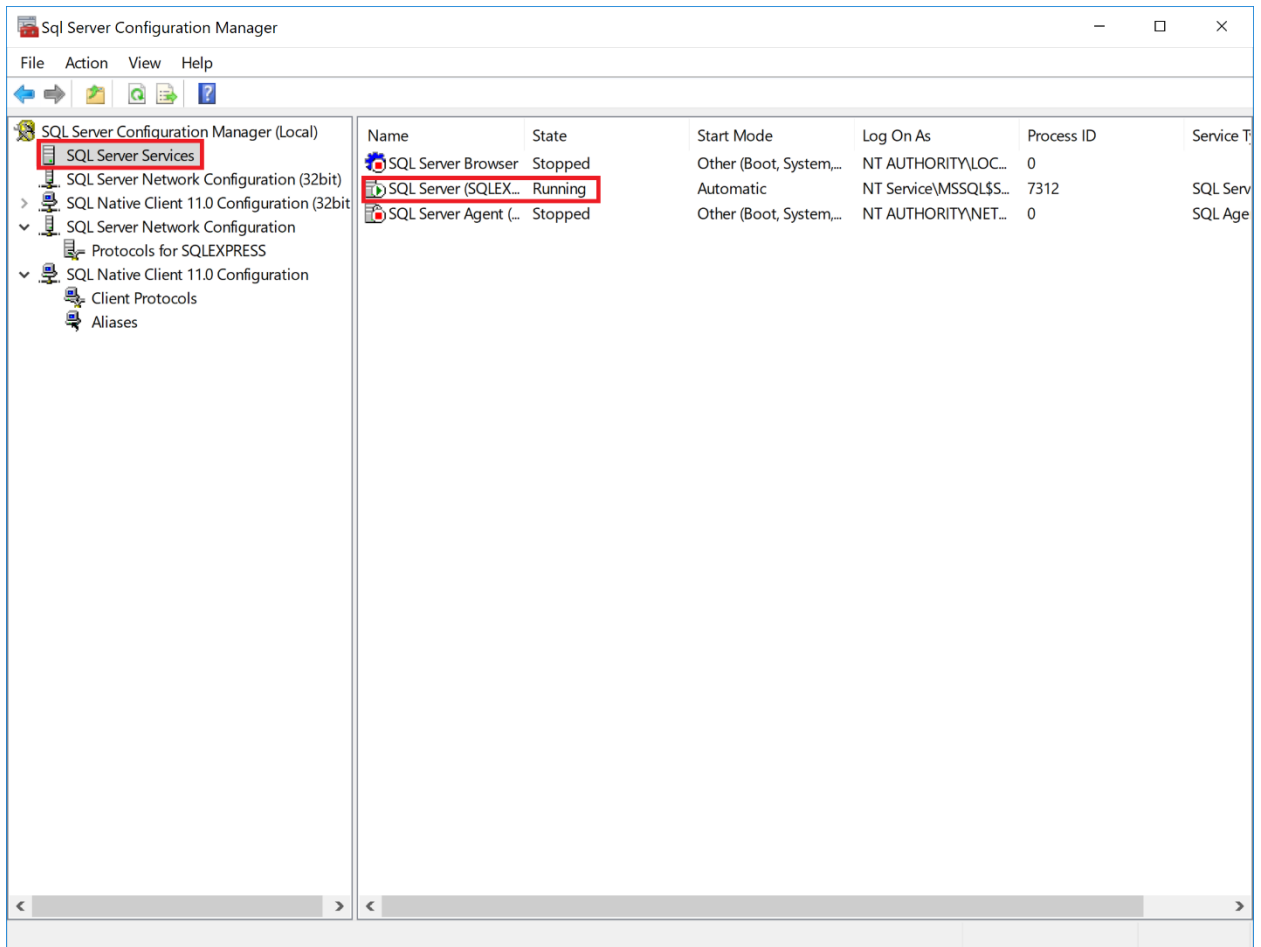


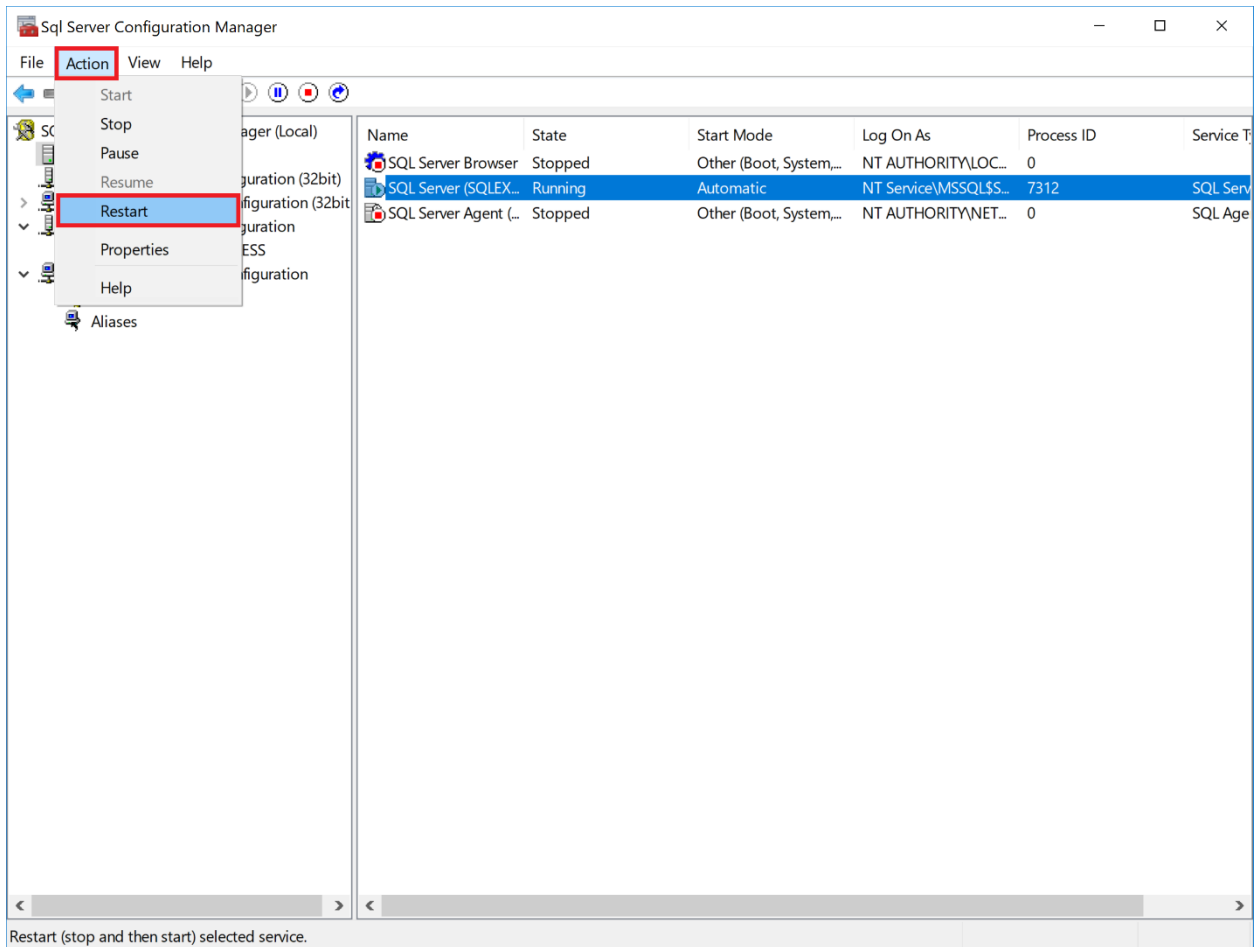


d. Change Default Port to 7732.



- e. Select SQL Server Service > SQL Server and click Restart in the Action menu.

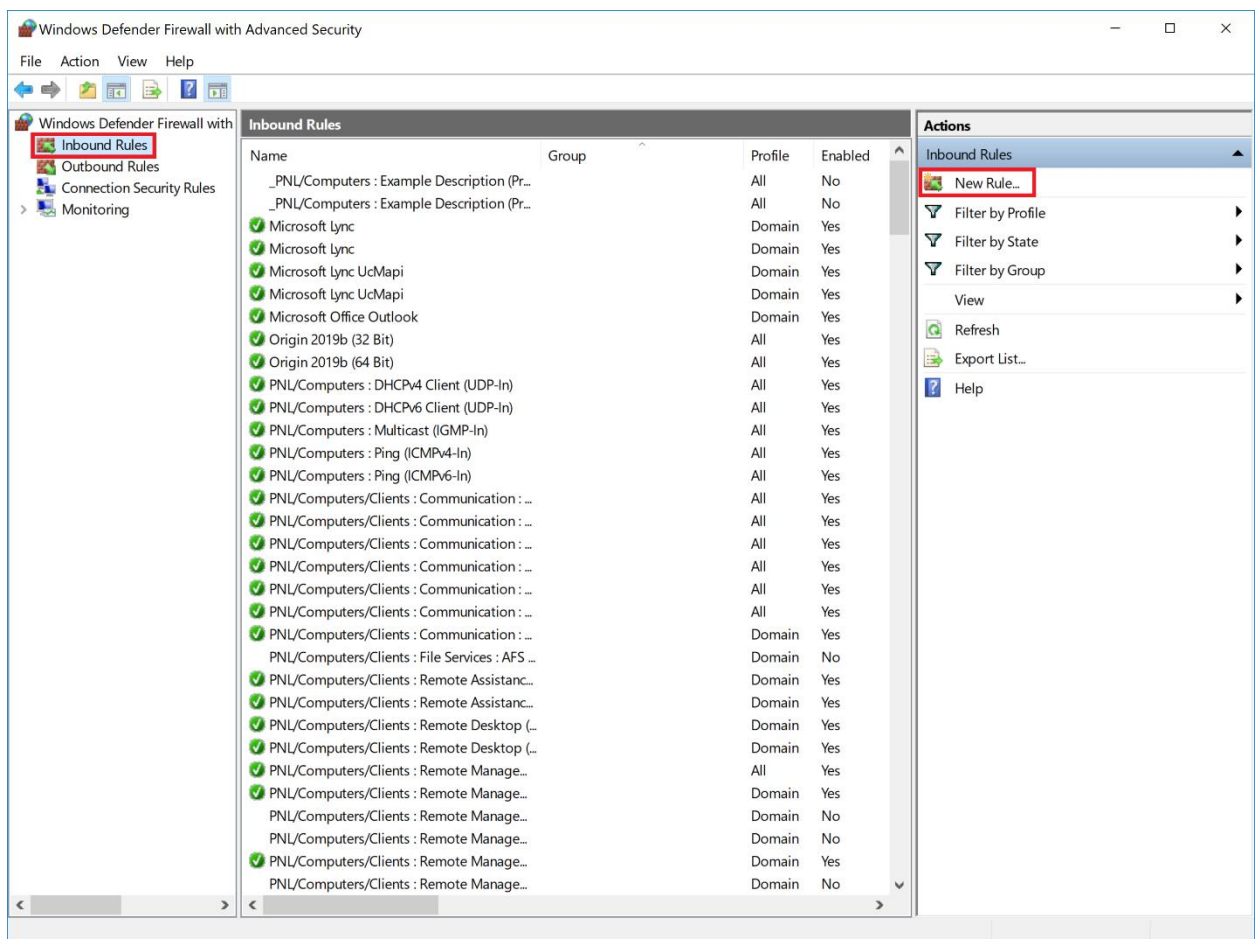
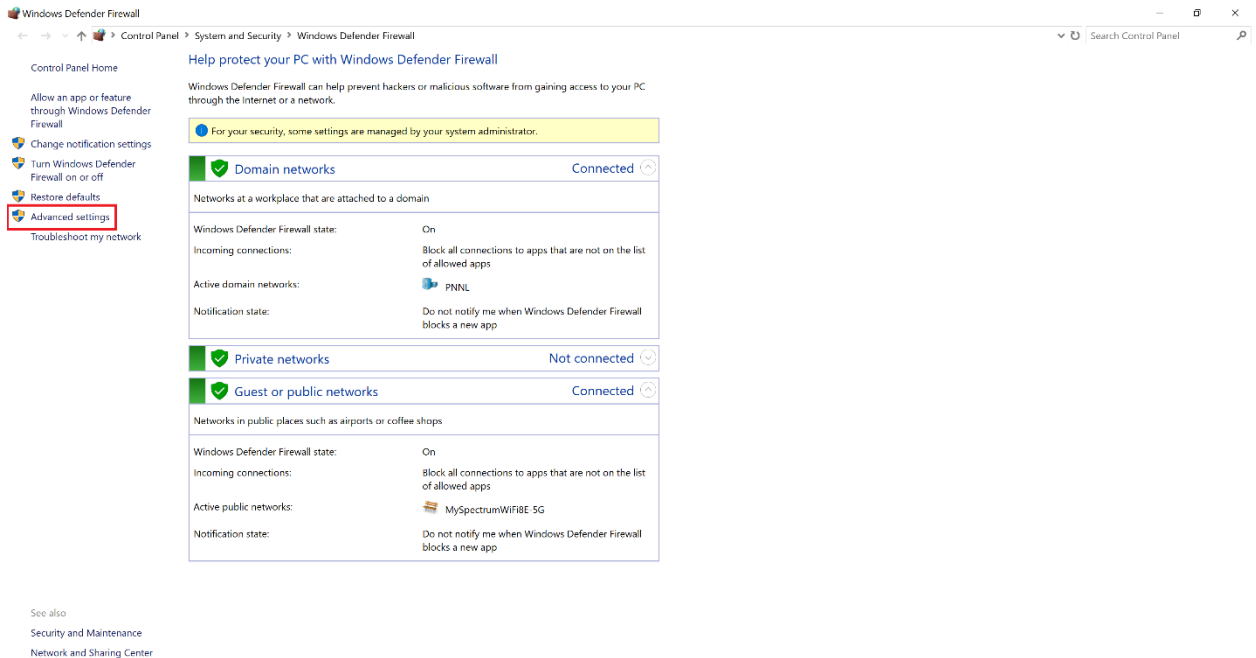




f. Close SQL Server Configuration Manager.

6. Select Windows Defender Firewall from Start > Control Panel > Windows Defender Firewall and follow instructions below.

a. In Advanced settings, select Inbound Rules, click New Rule in the right panel and follow screenshots below.



New Inbound Rule Wizard

×

Rule Type

Select the type of firewall rule to create.

Steps:

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

What type of rule would you like to create?

☐ **Program**
Rule that controls connections for a program.

☒ **Port**
Rule that controls connections for a TCP or UDP port.

☐ **Predefined:**

AllJoyn Router

Rule that controls connections for a Windows experience.

☐ **Custom**
Custom rule.

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New Inbound Rule Wizard

×

Protocol and Ports

Specify the protocols and ports to which this rule applies.

Steps:

- Rule Type
- Protocol and Ports**
- Action
- Profile
- Name

Does this rule apply to TCP or UDP?

☒ TCP

☐ UDP

Does this rule apply to all local ports or specific local ports?

☐ All local ports

☒ Specific local ports:

7732

Example: 80, 443, 5000-5010

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Cancel

New Inbound Rule Wizard

×

Action

Specify the action to be taken when a connection matches the conditions specified in the rule.

Steps:

- Rule Type
- Protocol and Ports
- **Action**
- Profile
- Name

What action should be taken when a connection matches the specified conditions?

☒ **Allow the connection**
This includes connections that are protected with IPsec as well as those are not.

☐ **Allow the connection if it is secure**
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.
[Customize...](#)

☐ **Block the connection**

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Cancel

New Inbound Rule Wizard

×

Profile

Specify the profiles for which this rule applies.

Steps:

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

When does this rule apply?

☒ **Domain**

Applies when a computer is connected to its corporate domain.

☒ **Private**

Applies when a computer is connected to a private network location, such as a home or work place.

☒ **Public**

Applies when a computer is connected to a public network location.

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Cancel

New Inbound Rule Wizard

Name

Specify the name and description of this rule.

Steps:

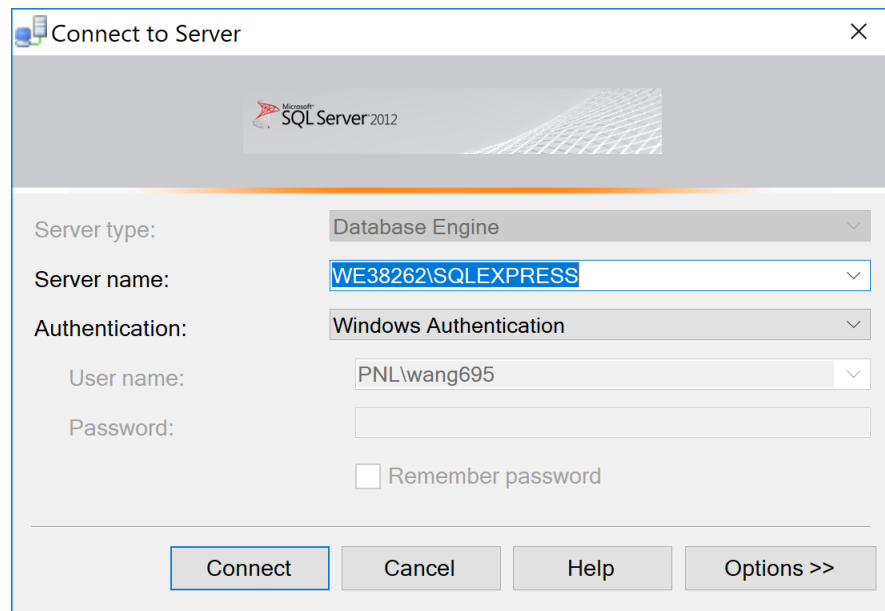
- Rule Type
- Protocol and Ports
- Action
- Profile
- Name**

Name:
Sohodox_SQL_Port

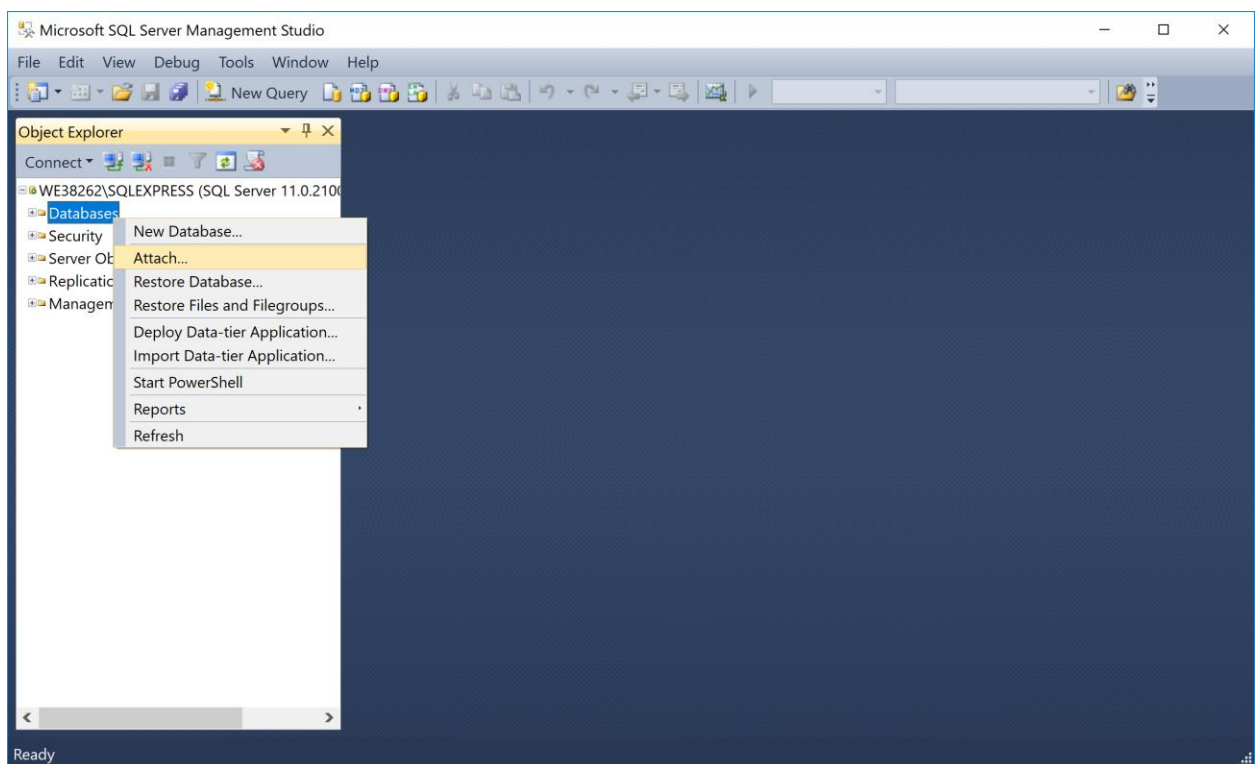
Description (optional):
Sohodox_SQL_Port

< Back Finish Cancel

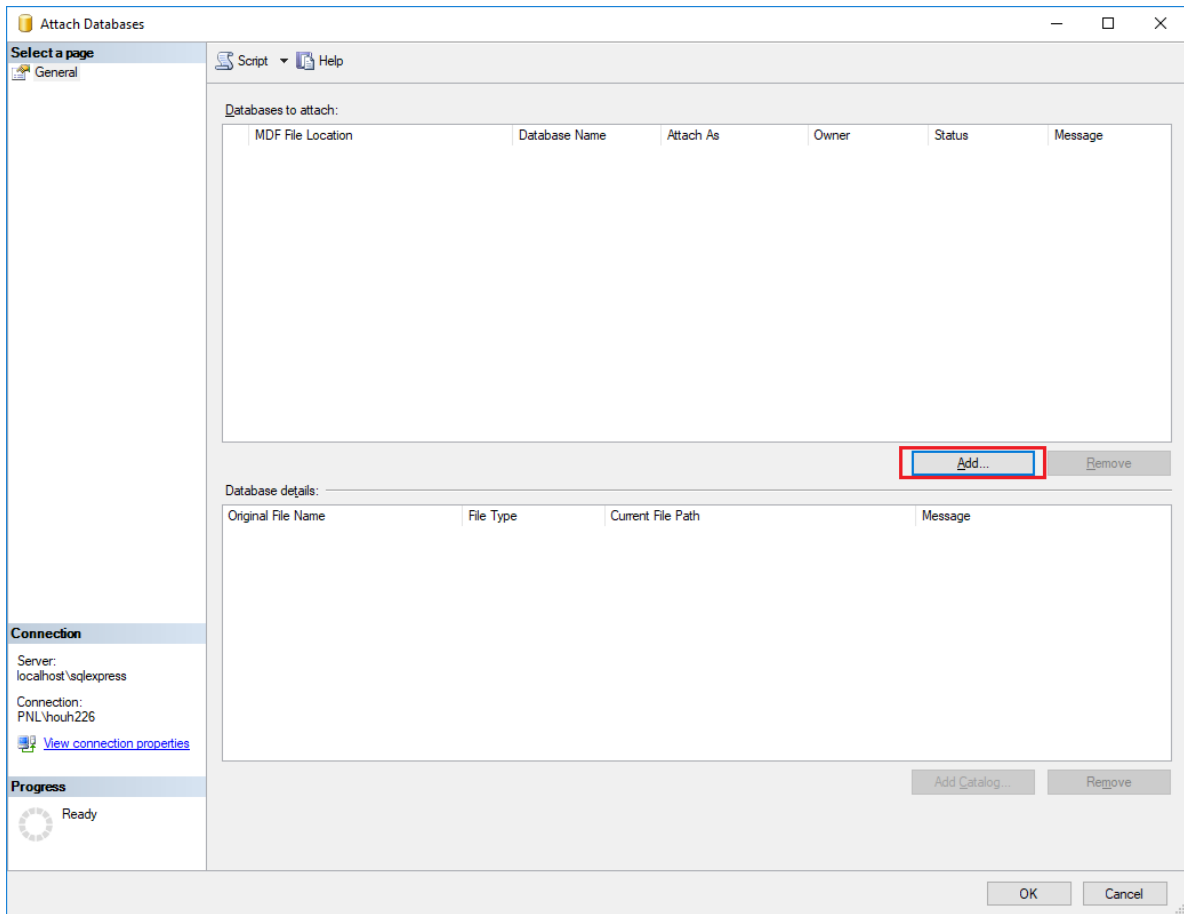
- b. Close Window Defender Firewall.
-
7. Restart computer.
 8. Copy and paste "SensorFishDB.mdf" and "SensorFishDB_log.ldf" files from the unzipped HBET_V2_Installer file folder into "C:\Program Files\Microsoft SQL Server\MSSQL11.SQLEXPRESS\MSSQL\DATA".
 9. Open Microsoft SQL Server Management Studio from Start > Microsoft SQL Server 2012 > SQL Server Management Studio and follow screenshots below to attach the Sensor Fish database.

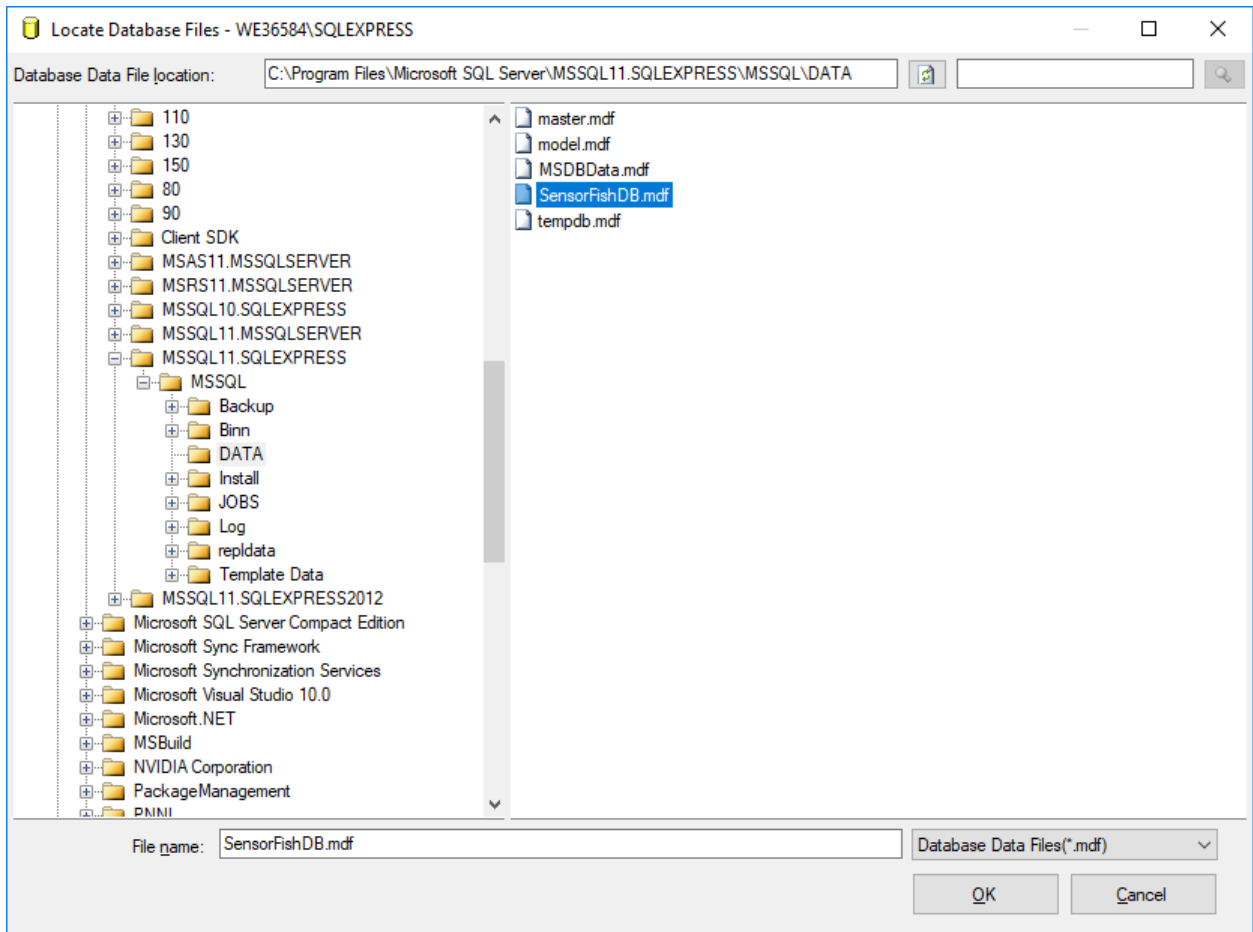


a. Connect to the server.

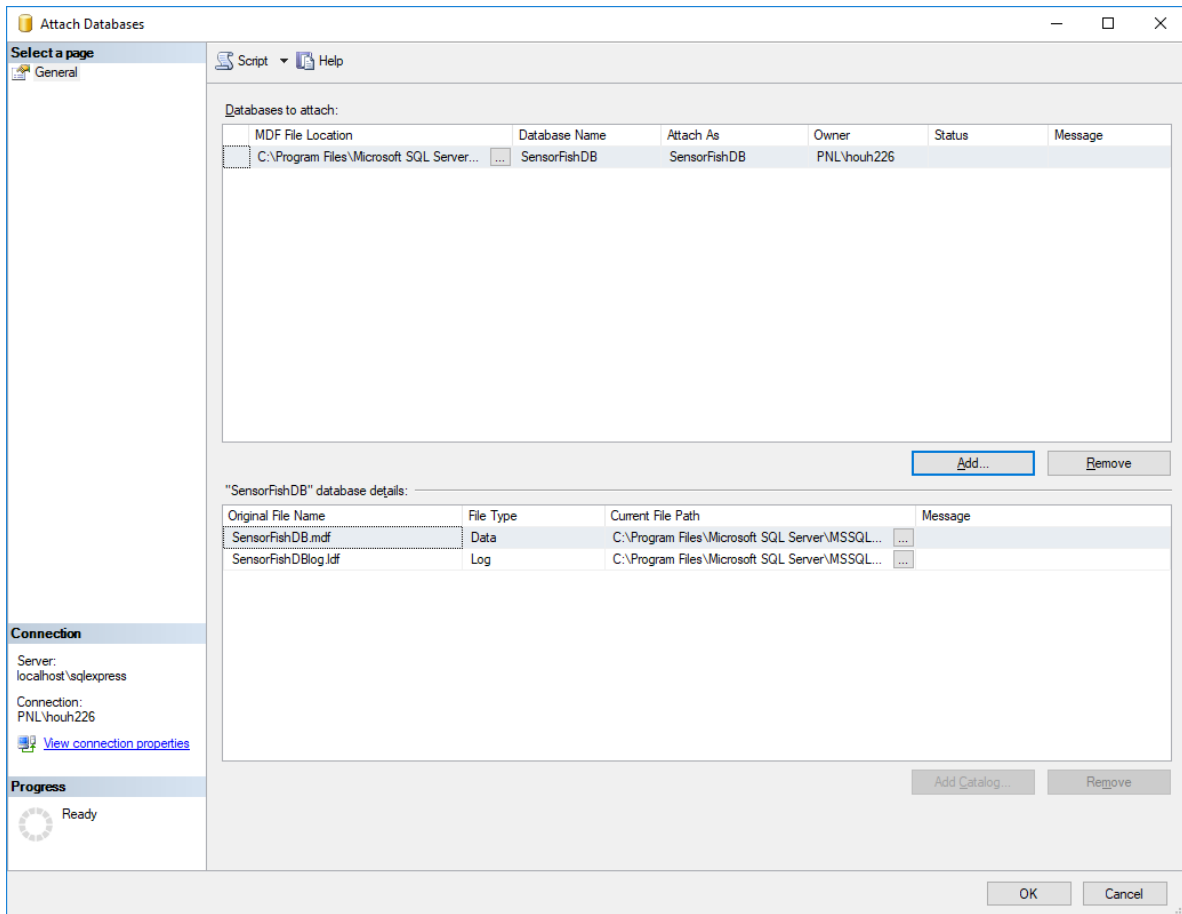


b. Right click Database and select Attach to open the following Attach Databases window.





- c. Select Add, choose the appropriate Selected path and enter the file name with expanded directory tree in File name to attach SensorFishDB.mdf.



- d. Return to the Attach Databases window, SensorFishDBlog.ldf will be added automatically in the database details.
- e. Click OK and close Microsoft SQL Server Management Studio.

10. Run the HBETools.exe application.

Upgrade from a previous version:

1. Uninstall the previously installed HBET;
2. Double click setup.exe to install the HBET; (By default, the installation folder: C:\Program Files (x86)\PNNL\HBETools);
3. Run HBETools.exe application;
4. Follow instructions on page 3.9 in HBET2.0UserGuide.pdf to export all studies uploaded after the previous installation.

The associated files will be in c:\temp folder. Each exported study will have a separate folder under c:\temp (i.e., c:\temp\teststudy);

And the field sheet file resides in each exported study folder (i.e., c:\temp\teststudy\teststudyfieldsheet.xls).

5. Detach the database SensorFishDB (SensorFishDB.mdf) following instructions below:

<https://docs.microsoft.com/en-us/sql/relational-databases/databases/detach-a-database?view=sql-server-ver15>

6. Attach the NEW database SensorFishDB (SensorFishDB.mdf which is included in this package) following instructions below:

<https://msdn.microsoft.com/en-us/library/ms190209.aspx>

***** Make sure to choose the database file SensorFishDB.mdf included in this package *****

7. Run the HBETools.exe application.
8. Follow instruction on page 3.5 in HBET2.0UserGuide.pdf to create corresponding study site, study name; then upload files that have been exported studies in step 4.

Pacific Northwest National Laboratory

902 Battelle Boulevard
P.O. Box 999
Richland, WA 99354

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