



PersonalEffect

Microsoft® SQL Server® 2014 Installation Guide



one to one in one™

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Microsoft® SQL Server® 2014

Document revision: 1.1, September 2015

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Introduction

XMPie® PE™ Server products and modules (uProduce, uStore and Marketing Console) require an installation of Microsoft® SQL Server® 2014.

This document explains how to install SQL Server 2014 Express with Advanced Services, so that it works properly with uProduce, uStore and Marketing Console.

NOTE: To ensure a successful installation, it is highly recommended to install the SQL Server on a machine that is dedicated to production, and to refrain from installing XMPie products on this machine.

Audience

This document is intended for support engineers who wish to install Microsoft SQL Server, in order to install XMPie server products (such as uProduce, uStore and Marketing Console).

These engineers are assumed to be familiar with installation procedures, general database concepts and have basic knowledge of the SQL query language.

Installation prerequisites

This section guides you through verifying important prerequisite components that are essential for the proper installation process of the SQL Server 2014.

1. Make sure you are installing SQL Server 2014 on top of Windows Server 2012 R2. Windows Server 2012 R2 must be installed with all hot fixes and critical updates from Microsoft.
2. Verify that **Microsoft .NET Framework 3.5.x** is installed:
 - a. Open the **Server Manager** by clicking **Server Manager** on the taskbar.
 - b. Point to and click **Manage** in the right upper menu.
 - c. Click **Add Roles and Features**. The **Add Roles and Feature Wizard** appears.
 - d. On the **Before you begin** page, verify that your destination server and network environment are prepared for the role and feature you want to install. Click **Next**.
 - e. On the **Select installation type** page, select **Role-based or feature-based installation** to install all parts of roles or features on a single server. Click **Next**.
 - f. On the **Select destination server** page, select the local server from the server pool. After you have selected the destination server, click **Next**.
 - g. Select roles, select role services for the role if applicable, and then click **Next** to select features.
 - h. In the **Select Features** window, expand **.NET Framework 3.5. Features** and verify that the **.NET Framework 3.5.x** and **HTTP Activation** checkboxes are selected.
 - i. Click **Cancel** to quit the **Add Feature Wizard** in case the **.NET Framework 3.5** is already checked.
 - j. If the **.NET Framework 3.5** is not installed, select the **.NET Framework 3.5** checkbox and **HTTP Activation** checkbox. The **Add Feature Wizard** popup appears.

- k. In the **Add Roles and Features Wizard** popup, click the **Add Features** button.
 - l. Click **Next**.
 - m. In the **Confirmation** page click **Install**. The installation summary and status is displayed in the **Installation Results** page of the **Add Roles and Features Wizard**.
 - n. Click **Close** to close the **Add Roles and Features Wizard** window.
 - o. Close the **Server Manager**.
3. Verify that **IIS Component** is installed:

NOTE: IIS Component is only mandatory when XMPie Marketing Console is intended to be installed. In case there is no intention to install XMPie Marketing Console, you can skip this step and move directly to [Installing SQL Server 2014](#).

- a. Open the **Server Manager** by clicking **Server Manager** on the taskbar.
 - b. Point to and click **Manage** in the right upper menu.
 - c. Click **Add Roles and Features**. The **Add Roles and Features** wizard appears.
 - d. On the **Before you begin** page, verify that your destination server and network environment are prepared for the role and feature you want to install. Click **Next**.
 - e. On the **Select installation type** page, select **Role-based or feature-based installation** to install all parts of roles or features on a single server. Click **Next**.
 - f. Select roles, select role services for the role if applicable, and then click **Next** to select features.
 - g. Verify that the **Web Server (IIS)** checkbox is checked.
 - h. Click **Cancel** to quit the **Add Roles and Features Wizard** in case the Web Server (IIS) is already checked.
 - i. If the Web Server (IIS) is not installed, select the checkbox and click **Next**.
4. Click **Next** until you reach **Select Role Services** page.
5. Scroll down the list, and make sure the following components are selected:
- Under **Common HTTP** features select all components except **WebDAV Publishing**.
 - Under **Performance**, select **Static Content Compression**.
 - Under **Security**:
 - Request Filtering
 - Basic Authentication
 - Client Certificate Mapping Authentication
 - IIS Client Certificate Mapping Authentication
 - Windows Authentication

- Under **Application Development**:
 - ASP.NET 3.5 & 4.5, a window may be displayed asking you to add role services required for ASP.NET. Click **Add Required Role Services**.
 - .NET Extensibility (checked automatically, once ASP.NET service is selected)
 - ASP
 - ISAPI Extensions (checked automatically, once ASP.NET service is selected)
 - ISAPI Filters (checked automatically, once ASP.NET service is selected)
 - Under **Management Tools** select all options.
6. Click **Next** until you reach the **Confirmation** page and then click **Install**. The installation summary and status is displayed in the **Installation Results** page of the **Add Roles and Features Wizard**.

Installing SQL Server 2014

Introduction

This document provides a step-by-step procedure for installing a new instance of Microsoft SQL Server 2014 Express Edition with Advanced Services, using the SQL Server setup installation wizard. The SQL Server Installation Center provides a single feature tree for installation of all SQL Server components, so that you do not have to install them individually.

In this section, we will show the installation for some of the features available in the SQL Server 2014 Express Edition with Advanced Services that are essentials for XMPie server products. You may find that in your version you have some other features available.

Preparation

Download the Microsoft SQL Server 2014 Service Pack 2 (SP2) Express from the following URL:

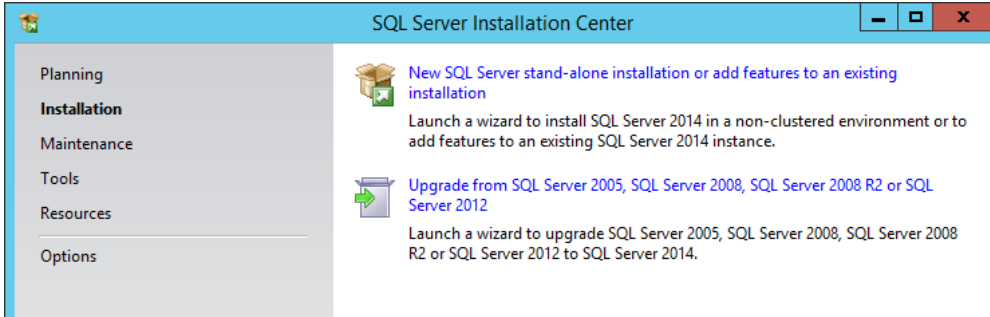
<https://www.microsoft.com/en-us/download/details.aspx?id=53167>

Once the download is complete, continue with the step-by-step installation section below.

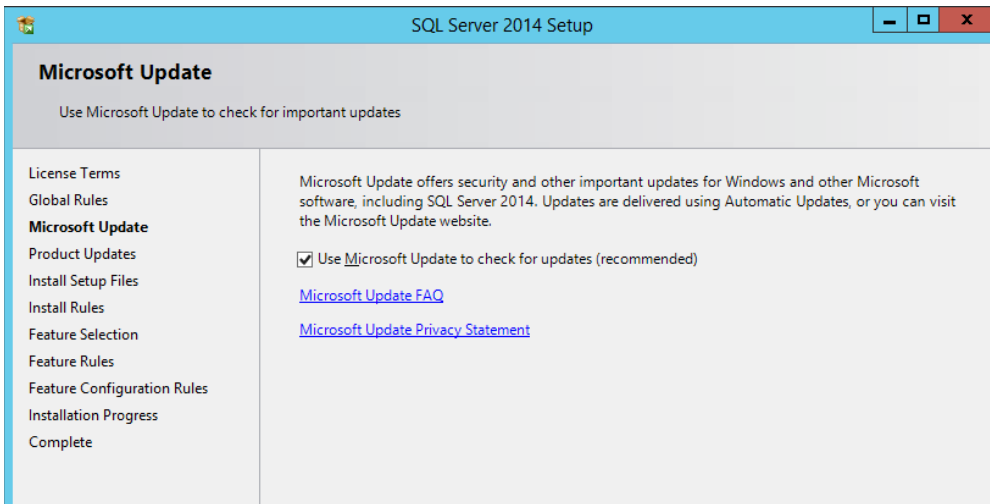
Step-by-step installation

For local installations, you must run setup as an administrator.

1. Double click the **SQLXPRADV_x64_ENU.exe** file. When prompted to **Choose Directory for Extracted Files**, click **OK** to use the default directory, or click **Browse...** and select a different directory.
2. Upon starting the installation, the following window appears:



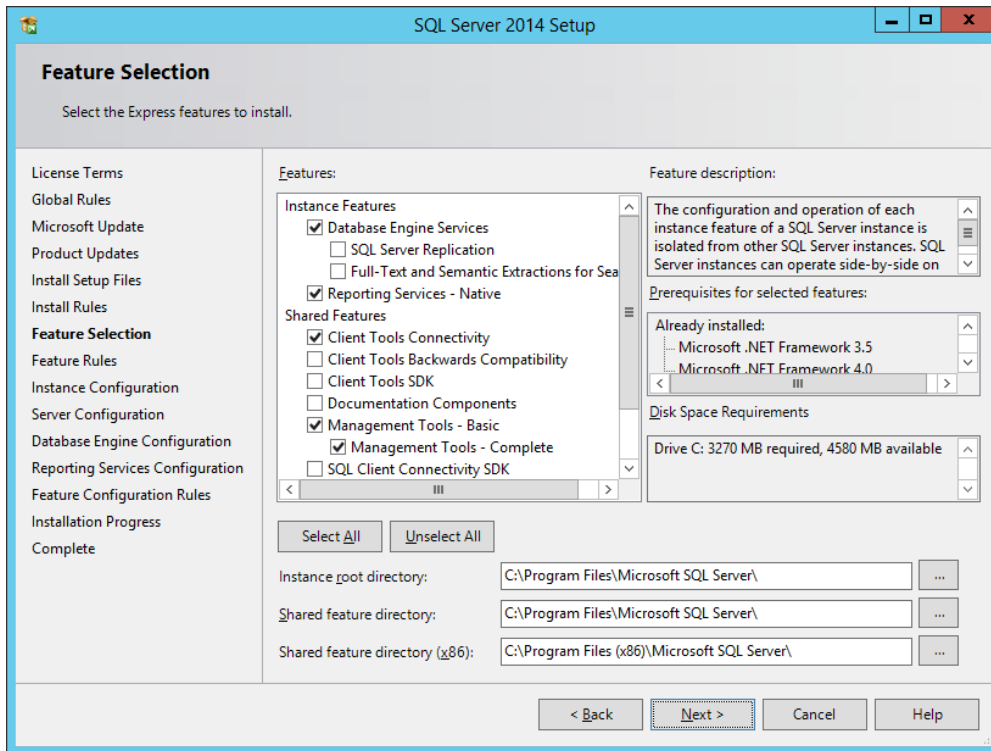
3. Click **New SQL Server stand-alone installation or add features to an existing installation**.
4. Select the **I accept the license terms** checkbox to accept the license terms, and click **Next**.



5. In the **Microsoft Update** window, select the checkbox in order to use Microsoft Update to check for updates after you finish the installation, and then click **Next**.
The **Install Rules** window may open.
6. The SQL Server installation program checks your machine to make sure it meets the hardware and software requirements for installing the SQL Server. If you get any errors in the results, use the link in the error message to receive more information.

If you receive errors in this report, do not move on to the next step until you resolve them.

Once you are done, click **Next** to continue to the **Feature Selection** window.
7. Select the features to install. We are going to choose our features manually in the **Feature Selection** window.



8. Choose the following features to install:

Instance Features:

- Database Engine Services
- Reporting Services - Native

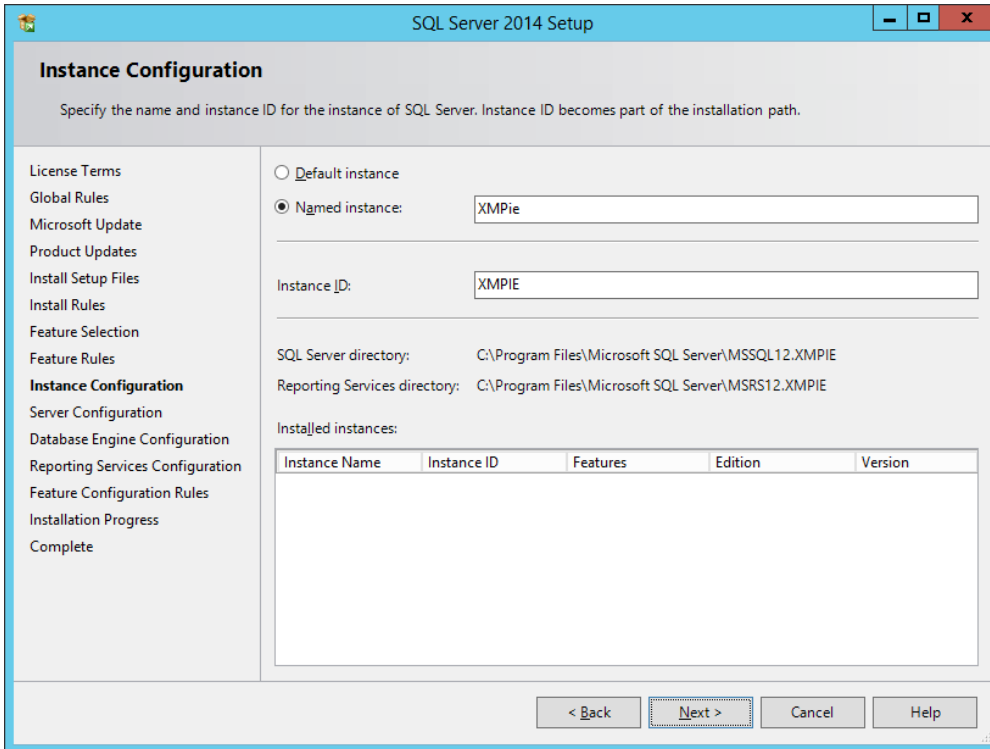
Shared Features:

- Client Tools Connectivity
- Management Tools – Basic
- Management Tools - Complete

It is highly recommended not to choose all the features on a production server if you don't need them. Choose only the features listed above.

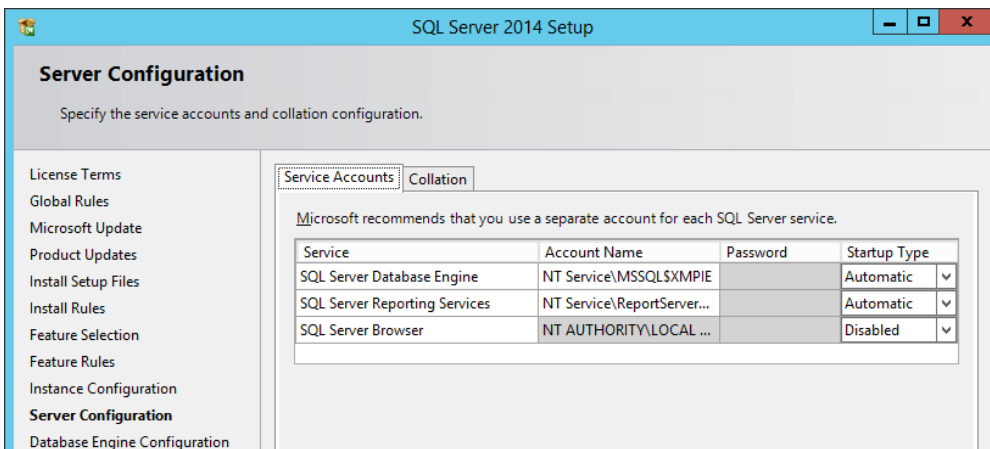
You can also specify a custom directory for Instance directory and shared components by using the field at the bottom of the **Feature Selection** page. To change the installation path, either update the path in the field at the bottom of the window, or click **Browse** to move to an installation directory. The default installation path is C:\Program Files\Microsoft SQL Server and C:\Program Files (x86)\Microsoft SQL Server.

When you are done, click **Next** to move on to the **Instance Configuration** window.



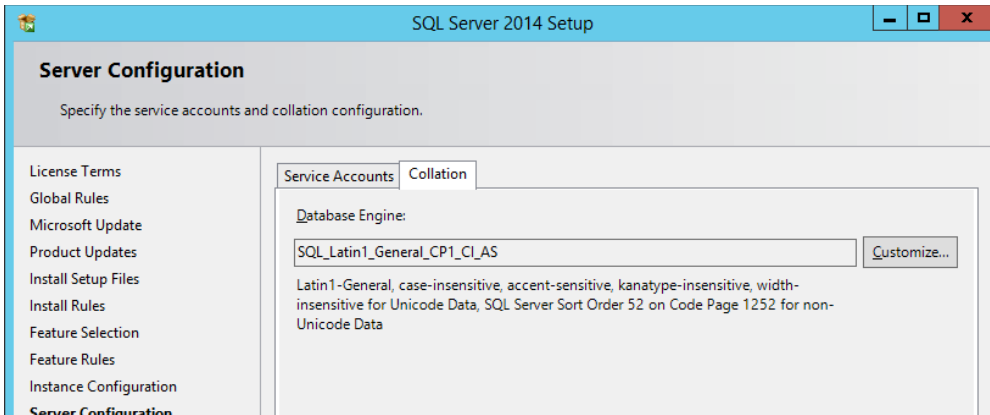
9. On the **Instance Configuration** window, type **XMPie** as the **Named instance**. The **Instance ID** will automatically change accordingly.

When you have finished specifying the name and instance ID for the instance SQL server, click **Next** to move on to the **Server Configuration** window.

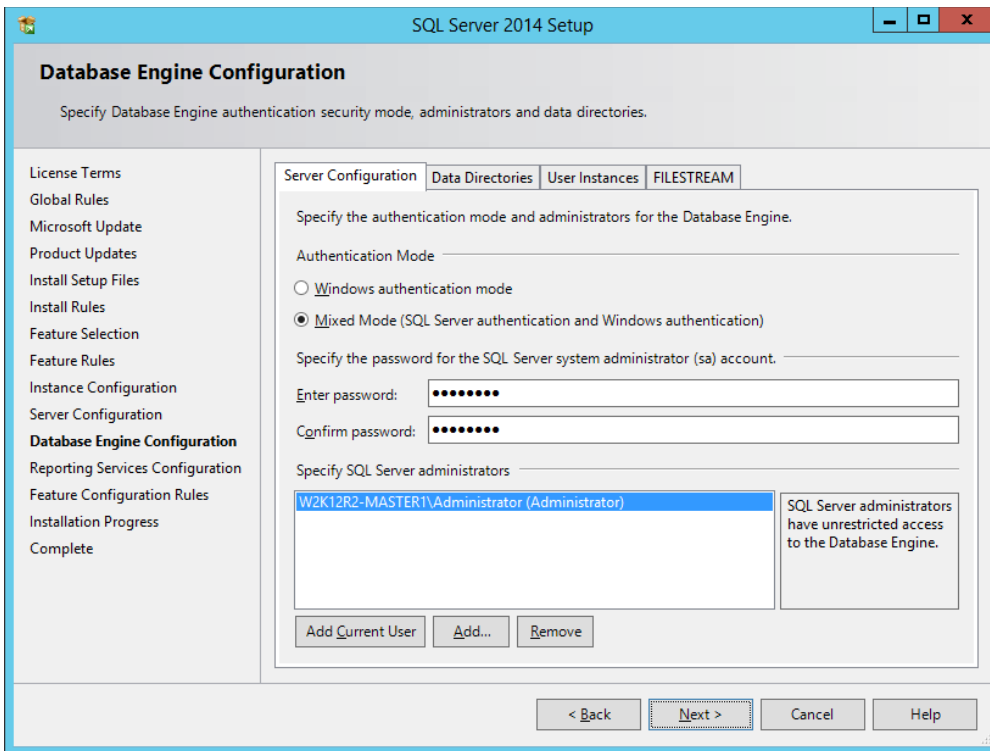


10. In the **Server Configuration** window, **Service Accounts** tab you can select the service accounts for the SQL Server actions. Each service in SQL Server represents a process or a set of processes that manage authentication of SQL Server operations with Windows. Each service can be configured to use its own service account. For XMPie Database installation, simply leave the settings with the default configuration.

Once you configure this step, click the **Collation** tab.



11. Define the collation as **SQL_Latin1_General_CP1_CI_AS** (as shown above) and then click **Next** to move to the **Database Engine Configuration** window.



12. SQL Server can operate in one of two security (authentication) modes:

- **Windows authentication mode** which allows a user to connect through an operating system user account or a domain user account.

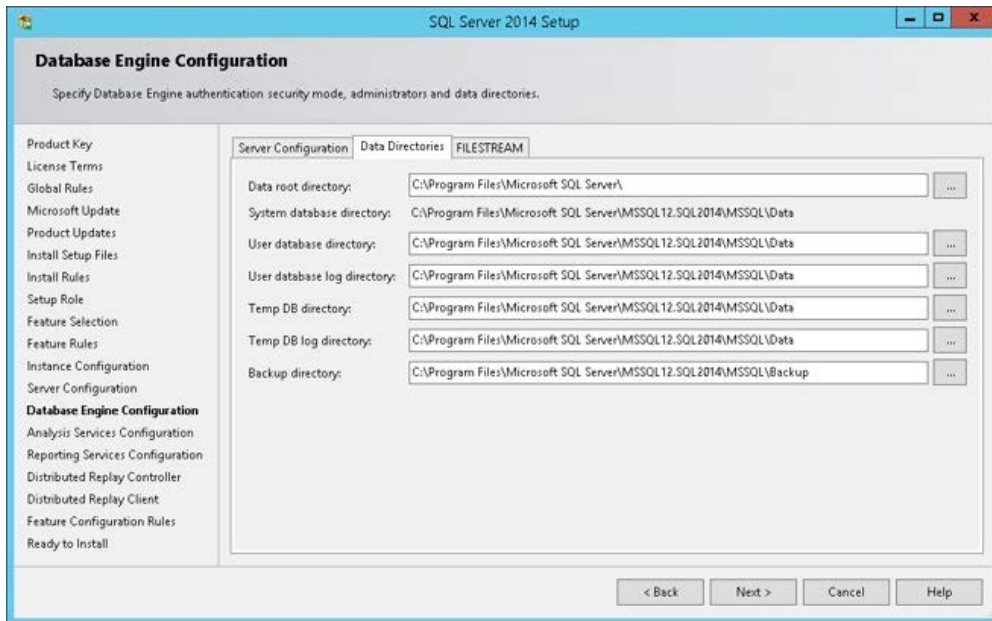


If you select this option, after the installation of SQL Server is done make sure to complete the section [Creating a Login in SQL Server for Windows Authentication](#).

- **Mixed mode** which allows users to connect to an instance of an SQL Server using either Windows authentication or SQL Server authentication.

In the **Database Engine Configuration** window, **Server Configuration** tab, select **Mixed Mode**, enter 'Xmpiesa1' in the **Enter password** field, confirm it in the **Confirm password** field, and then go on to the **Data Directories** tab.

NOTE: If the default Windows password complexity policy is enabled, this password may be considered as weak. You should provide a strong password in order to meet the Windows password complexity policy. In addition, make sure that the current user (Administrator) is shown the list of Specify SQL Server administrators. If not, click the Add Current User button to add the current user.

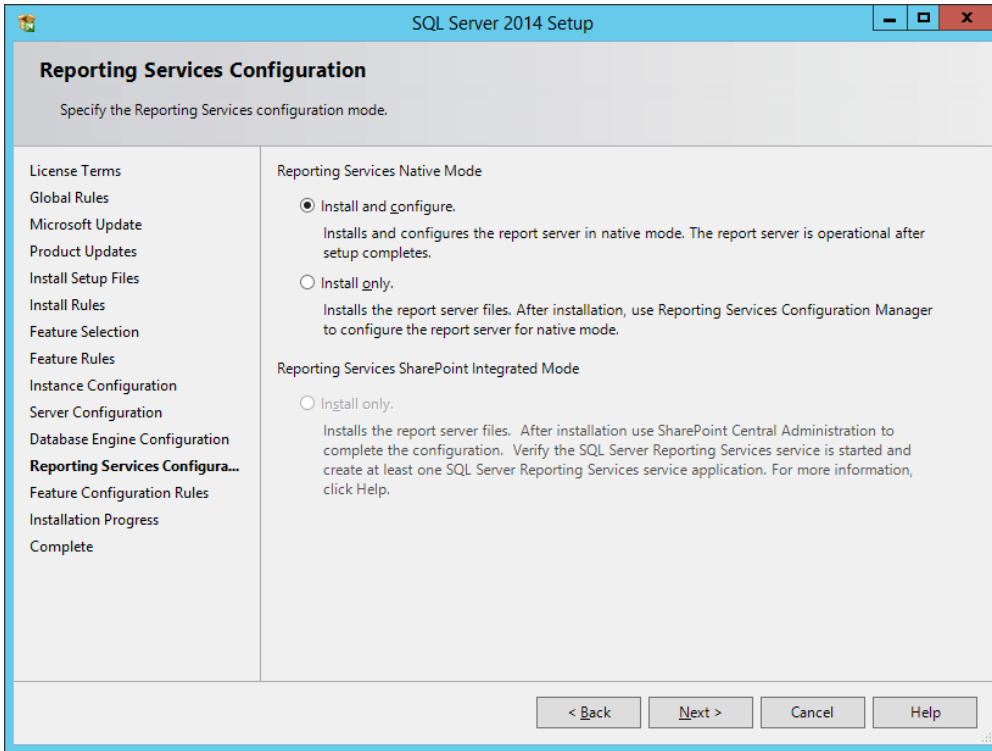


13. By default, SQL Server uses the system operation disk. Thus it is highly recommended to use the best practice according to your specific system and usage. Separating the log files from the data files can improve performance significantly.

The system database tempDB is used extensively by the SQL Server. This database is rebuilt each time the server restarts. It is highly recommended to use a fast disk for this database. It is best practice to separate data, transaction logs, and tempDB for environments where you can guarantee that separation.

There are important points to consider and this document does not cover them all. For small systems you can use the default configuration and later on change as needed.

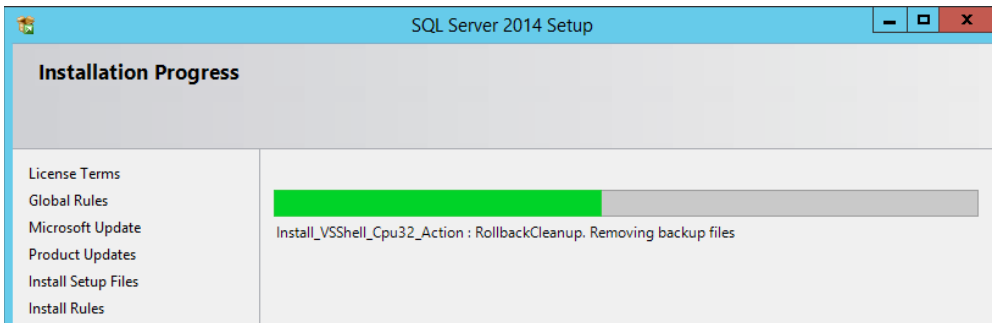
Click **Next** to continue to the **Reporting Service Configuration** window.



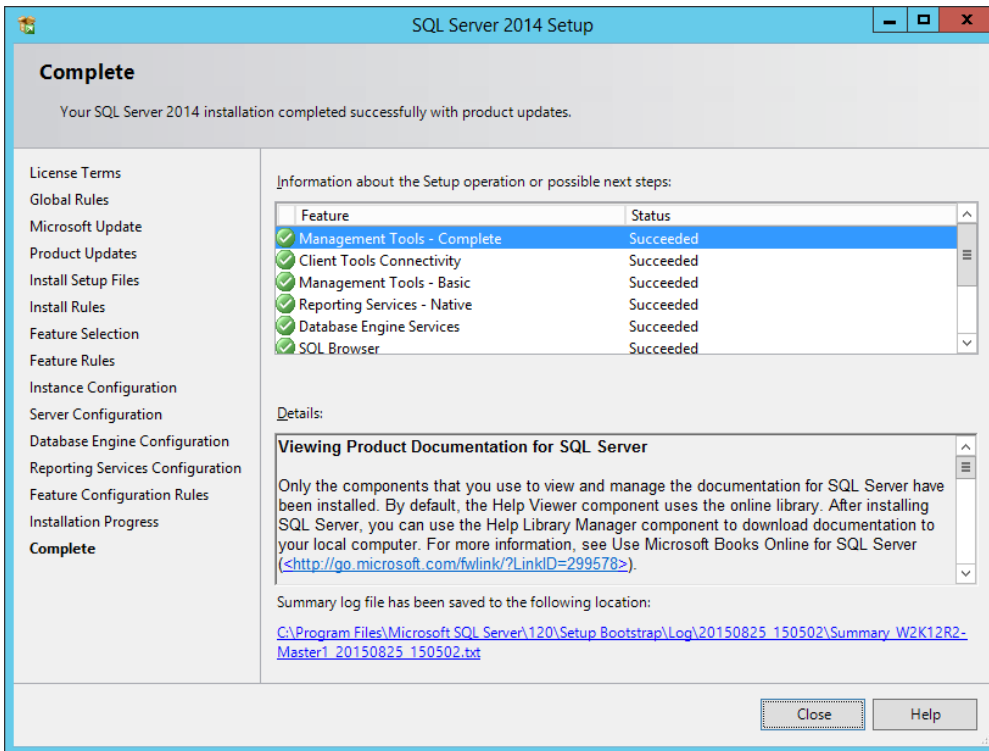
14. Choose **Install and configure** and then click **Next**.

The installation now starts.

The **Installation Progress** window is displayed, listing the components being configured and indicating the installation progress.



15. That is all. Considering everything went well, you should get a final report which indicates the successful completion of each installed service. You may be asked to restart your computer. Click **OK** and restart the computer. If no restart is required, click **Close** to close the Setup Wizard.




16. Close the SQL Server Installation Center.

Post-installation setup and configuration

The following settings/parameters must be verified after the installation of Microsoft SQL Server 2014:

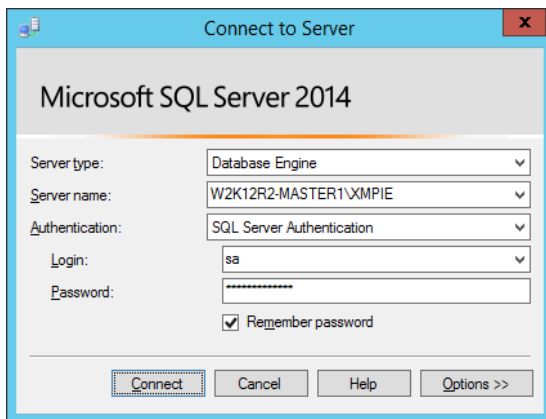
1. Verify that remote connections are allowed to the SQL Server.
See [Allowing Remote Connections to the SQL Server](#).
2. Enable TCP/IP Protocol for SQL Server Network Configuration.
See [Enabling TCP/IP Protocol for SQL Server Network Configuration](#).
3. Assign a static TCP Port to the SQL Server Database Engine – XMPiE instance.
See [Assigning a Static TCP Port to the SQL Server Database Engine – XMPiE Instance](#).
4. Configure Surface Area.
See [Configuring Surface Area \(Tracking DB\)](#).
5. Create a login in SQL Server.
See [Creating a Login in SQL Server for Windows Authentication](#).

 This procedure is relevant only if you intend to choose Windows Authentication during the installation of XMPiE Server products.

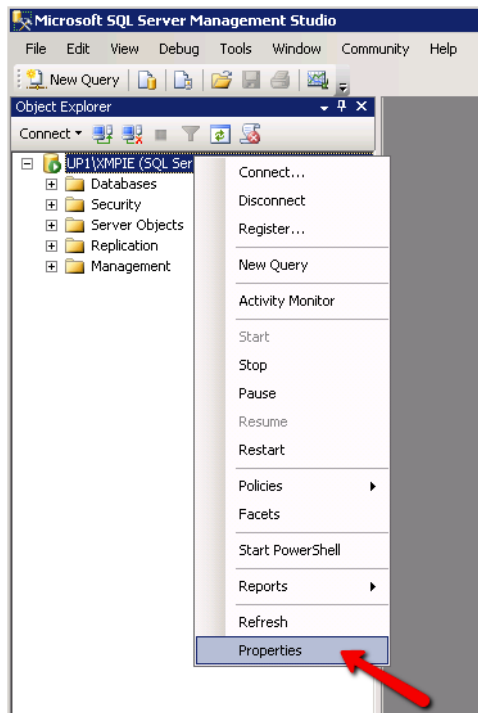
Allowing remote connections to the SQL server

To access SQL Server Management Studio:

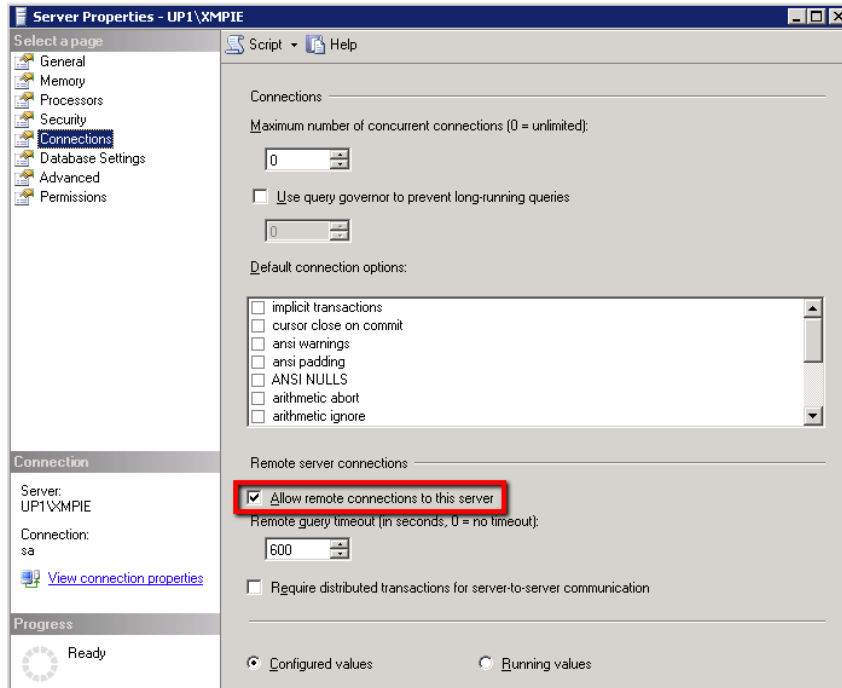
1. On the taskbar, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2014**, and then click **SQL Server 2014 Management Studio**.
The **Connect to Server** window is displayed.



2. Enter/select the following values and click **Connect** to login to the SQL Server Management Studio:
 - **Server type:** Database Engine
 - **Server name:** [<SQL Server 2014 Host name>\XMPIE>]
 - **Authentication:** SQL Server Authentication
 - **Login:** sa (lowercase)
 - **Password:** password corresponding to the sa user
3. In the **Object Explorer** on the left pane, right-click the XMPIE instance and select Properties from the context menu.



The **Server Properties** window appears.

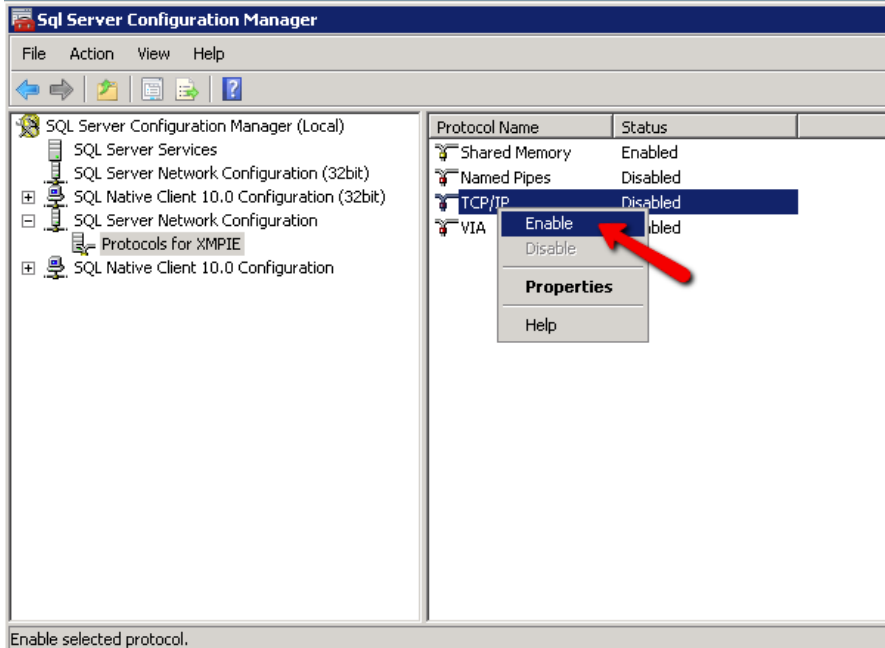


4. Click **Connections** and verify that the **Allow remote connections to this server** checkbox in the **Remote server connections** section is selected. If not, select it.
5. Click **OK** to close the **SQL Server Properties**.

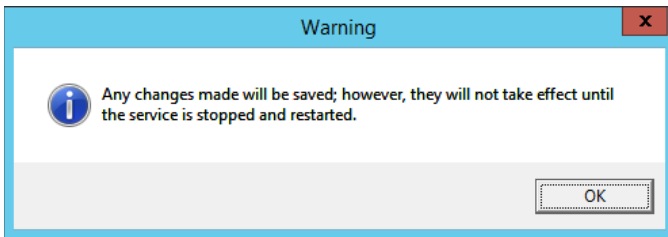
Enabling TCP/IP protocol for SQL server network configuration

To enable TCP/IP protocol to the SQL Server Database Instance:

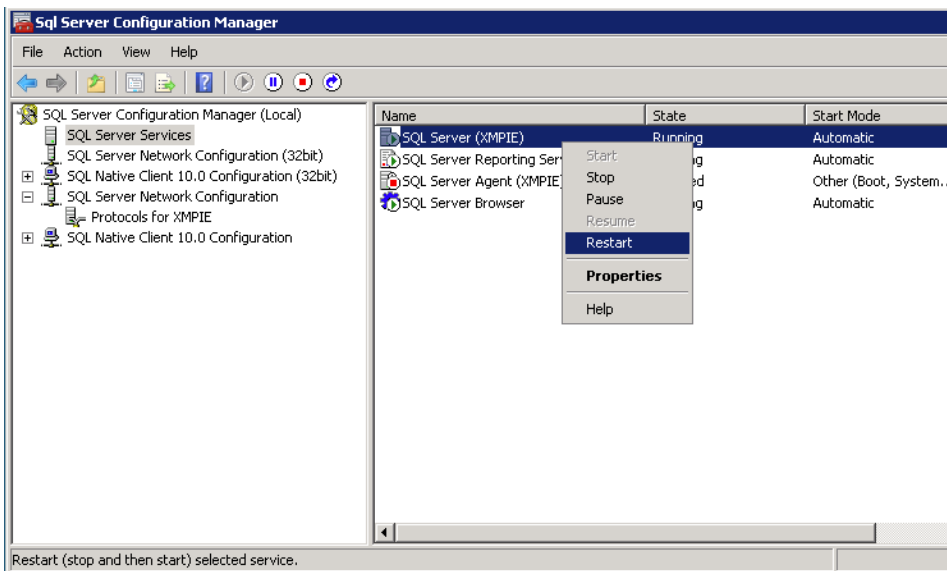
1. On the taskbar, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2014**, and then click **SQL Server 2014 Configuration Manager**.
2. In the **SQL Server Configuration Manager**, on the left pane, expand **SQL Server Network Configuration** and select **Protocols for XMPIE**.
3. Verify that the TCP/IP protocol is enabled. If not, right-click **TCP/IP** in the **Protocol Name** column and choose **Enable**.



A warning message is displayed. Click **OK** to continue.



4. Click the **SQL Server Services** on the left pane.
5. Right-click the **SQL Server (XMPPIE)** service and click **Restart** in order to restart the SQL Server (XMPPIE) service.



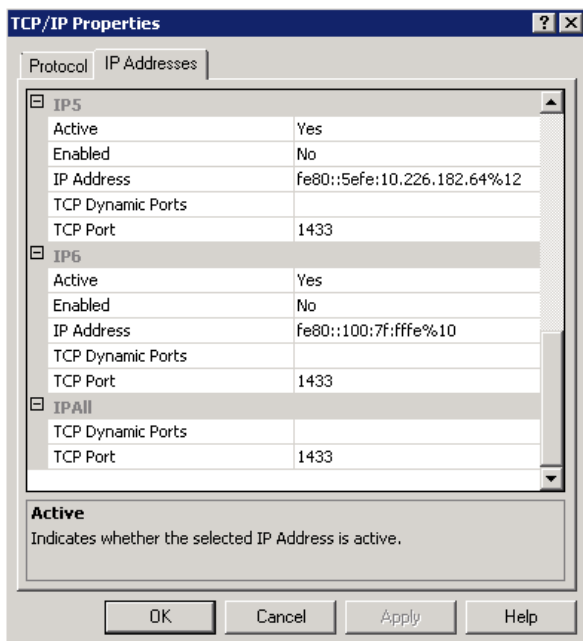
Assigning a static TCP port to the SQL server database engine – XMPIE instance

This is a one-time procedure to be performed on the server that hosts the XMPIE instance of SQL Server to indicate which protocol to use when communicating with remote clients. This procedure uses the TCP/IP protocol.

The default instance of the Microsoft SQL Server Database engine listens on TCP port 1433. When connecting to a named instance (XMPIE) through a firewall, configure the Database Engine to listen on a specific TCP port, so that the appropriate port can be opened in the firewall.

To assign a TCP static port number to the SQL Server Database instance:

1. On the taskbar, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2014**, and then click **SQL Server 2014 Configuration Manager**.
2. In **SQL Server Configuration Manager**, in the **Console** pane, expand **SQL Server Network Configuration**, expand **Protocols for XMPIE instance**, and then double-click **TCP/IP**.
3. In the **TCP/IP Properties** dialog box, in the **IP Addresses** tab, several IP addresses appear, in the format IP1, IP2, up to IPAll. One of these IP addresses - 127.0.0.1- is used for the loopback adapter. Additional IP addresses appear for each IP Address on the computer. If the **TCP Dynamic Ports** dialog boxes contain 0, indicating the Database instance is listening on dynamic ports, delete the 0.
4. In the **IP Properties** area box, in all the **TCP Port** text boxes, type the port number 1433 and then click **OK**.



5. After setting the protocol you must restart the SQL Server service. In the **Console** pane, click **SQL Server Services**. In the details pane, right-click **SQL Server (XMPIE)** and then click **Restart**, to restart SQL Server service.

The static TCP Port number 1433 is now defined.

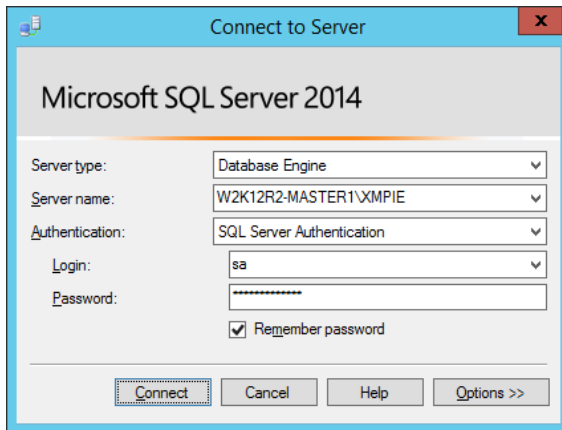
Configuring surface area (tracking DB)

NOTE: The following step is necessary **ONLY** where the tracking database is installed. If the tracking DB is separated from the uProduce Server, there is no need to implement this configuration in the uProduce DB.

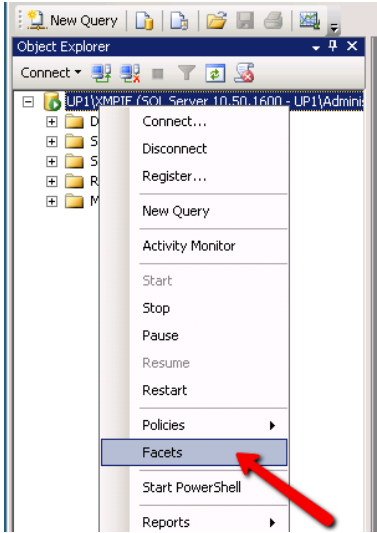
To access SQL Server Management Studio:

1. On the taskbar, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2014**, and then click **SQL Server 2014 Management Studio**.

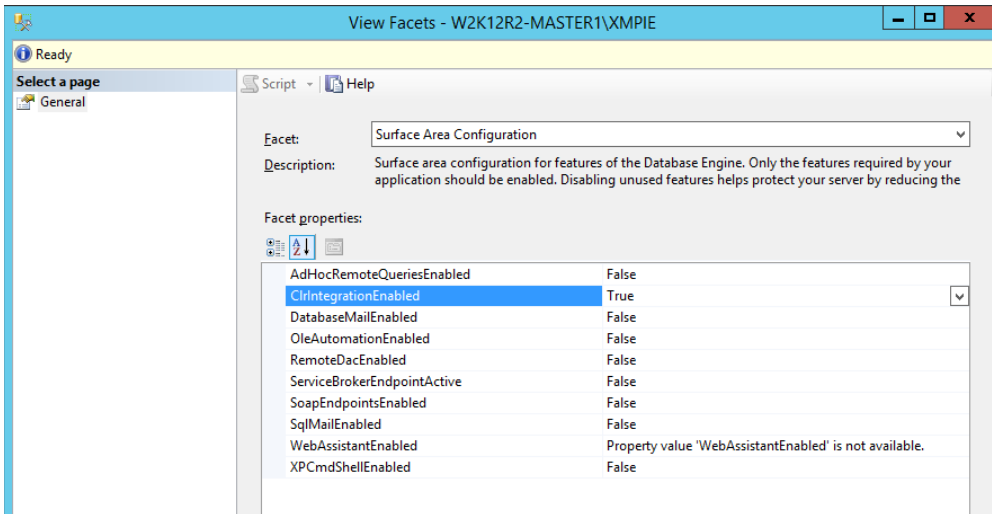
The **Connect to Server** window is displayed.



2. Enter/select the following values and click **Connect** to login to the SQL Server Management Studio:
 - **Server type:** Database Engine
 - **Server name:** [<SQL Server 2008 Host name>\XMPIE<]
 - **Authentication:** SQL Server Authentication
 - **Login:** sa (lowercase)
 - **Password:** password corresponding to the sa user.
3. In the **Object Explorer** on the left pane, right-click the XMPIE instance and from the context menu select **Facets**.



The **View Facets** window is displayed.



4. From the **Facet** dropdown menu, choose **Surface Area Configuration**.
5. Under **Facet Properties**, change the value of the **ClrIntegrationEnabled** facet from **False** to **True**.
6. Click **OK** to close the **Facets Properties** and then close the **Microsoft SQL Server Management Studio**.

Creating a login in SQL server for Windows authentication

This section describes how to create a login in SQL Server by using SQL Server Management Studio. A login is the identity of the person or process that is connecting to an instance of SQL Server.

Overview

Due to security principles, SQL Server authentication might not be permitted by certain organizations. In such scenarios, **Windows Authentication** is mandatory.

In order to connect to SQL Server, prior to the installation of XMPie server products (uProduce, uStore), you must create a login based on a Windows principle (such as a domain user account or a Windows local user account).

Prerequisites

Before creating SQL Server logins, make sure you have prepared two Windows account users (either a domain user account or a Windows local user account). Work with your network administrator to ensure that these accounts are ready to use.

- **XMPie-Installer-User** - this account will be used by XMPie server applications for connecting to the SQL Server database and for the installation process only.
- **XMPie-Application-User** (Service User) – this account will be used by XMPie server applications and all internal activities will be performed through this account.

Despite security concerns, you can alternatively use a single user both for the installation process and XMPie application internal activities.

Create an SQL server login using SQL Server Management Studio

1. On the taskbar, click **Start**, point to **All Programs**, point to **Microsoft SQL Server 2014**, and then click **SQL Server 2014 Management Studio**.
The **Connect to Server** window is displayed.
2. Login to the SQL Server Management Studio with the corresponding credentials.
3. In **Object Explorer**, expand the folder of the server instance in which you want to create the new login.
4. Right-click the **Security** folder, point to **New**, and select **Login...**
5. In the **Login – New** dialog box, on the **General** page, enter the name of the Install-User in the **Login name** box. Alternately, click **Search...** to open the **Select User or Group** dialog box.

If you click **Search...**:

- a. Under **Select this object type**, click **Object Types...** to open the **Object Types** dialog box and select any or all of the following: **Built-in security principals**, **Groups** and **Users**. **Built-in security principals** and **Users** are selected by default. When finished, click **OK**.
- b. Under **From this location**, click **Locations...** to open the **Locations** dialog box and select one of the available server locations. When finished, click **OK**.
- c. Under **Enter the object name to select (examples)**, enter the *XMPIE-Installer-User* that you want to find.

- d. Click **Advanced...** for more advanced search options.
- e. Click **OK**.
6. To create a login based on a Windows principal, select **Windows authentication**. This is the default selection.
7. From the **Default database** list, select a default database for the login. **Master** is the default for this option.
8. From the **Default language** list, select a default language for the login.
9. Go to the **Server Roles** page, select the **dbcreator** check box. The **public** server role is already selected by default. If not, make sure to select it as well.
10. Click **OK** to close the **Login – New** dialog box.
11. Repeat steps 3-8 in order to create the XMPie-Application-User. Note that for this user, only the **public** role is sufficient.

You may now proceed with XMPie Server application installation.