



Microsoft SQL Server Installation Guide for ADSS Server

ASCERTIA LTD

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1 Introduction

This manual summarizes the installation, configuration, and administration of Microsoft SQL Server 2016, 2014 and 2012 Enterprise and Express Edition Installation when used with the Ascertia ADSS Server. Large organizations with complex requirements should take advantage of Enterprise Edition. It offers advanced enterprise data management, developer productivity, and business intelligence tools to meet the needs of critical applications.

Significant advancements in high-availability technologies have been made, including new advanced database mirroring functionality such as log shipping, additional backup and restore capabilities, and replication enhancements to allow organizations to build and deploy highly reliable applications.

Additionally, Enterprise Edition provides analytical and enterprise reporting capabilities to deliver business insights to all levels of your organization. Enterprise Edition delivers out-of-the-box robust scalability, high availability, and advanced business intelligence features, making it the most competitively priced and comprehensive enterprise solution available.

In summary the steps to install SQL Server are as follows:

- Install and configure MS SQL Server
- Install MS SQL Management Studio
- Configuring the Network parameters of SQL Server
- Creating a database for the ADSS Server
- Creating a database user account



This is a quick start guide only; you should read Microsoft's documentation for full details.

1.1 Intended Readership

This guide is intended for ADSS Server administrators, database administrators and corporate security analysts. The server administrator is defined as a system administrator, or network administrator, who is responsible for installing, configuring, and maintaining the ADSS Server.

ADSS administrators include:

- Customers with technical networking background and experience.
- System administrators who are familiar with the fundamentals of digital certificates and validation.
- System administrators who are responsible for installing and configuring software packages.

1.2 Conventions

The following typographical conventions are used in this guide to help locate and identify information:

- **Bold** text identifies menu names, menu options, items you can click on the screen, file names, folder names, and keyboard keys.
- `Courier` font identifies code and text that appears on the command line.
- **Bold courier** identifies commands that you are required to type in.

1.3 Technical Support

If Technical Support is required, Ascertia has a dedicated support team providing debugging assistance, integration assistance and general customer support. Ascertia Support can be accessed in the following ways:

Website	https://www.ascertia.com
Email	support@ascertia.com
Knowledge Base	https://www.ascertia.com/products/knowledge-base/adss-server/
FAQs	https://ascertia.force.com/partners/login

In addition to the free support service describe above, Ascertia provides formal support agreements with all product sales. Please contact sales@ascertia.com for more details.

A Product Support Questionnaire should be completed to provide Ascertia Support with further information about your system environment. When requesting help it is always important to confirm:

- System Platform details
- ADSS Server version numbers and build date
- Details of the specific issue and the relevant steps taken to reproduce it
- ADSS Server Database version and patch level
- The product log files

2 Downloading Microsoft SQL Server

You can download the Microsoft SQL Server from location:

<https://www.microsoft.com/en-us/sql-server/sql-server-downloads>

If you don't have a licensed version of Microsoft SQL Server, you can download the free Express Edition. Use Windows Update to install the latest service packs.



The Express Edition has database size limitations that generally make it inappropriate for production deployments.

3 SQL Server 2016

3.1 System Requirements

The system should meet the following requirements prior to installation:

<ul style="list-style-type: none"> • .NET Framework 4.6. SQL Server 2016 setup automatically installs .NET Framework. • Microsoft Windows Installer 4.5 or a later version (SQL Server will install this if necessary) • Windows PowerShell 2.0 • Internet Explorer 7 or a later version is required for Microsoft Management Console (MMC), SQL Server Data Tools (SSDT), the Report Designer component of Reporting Services, and HTML Help. • TCP/IP networking 	
RAM	Minimum: 512 MB Recommended: 4 GB or higher
Hard Disk space	10 GB free space
Processor (x64)	AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support Minimum: 1.4 GHz Recommended: 2.0 GHz or faster
Operating System	Windows 7 Windows 7 Service Pack 1 Windows 8 Windows 8.1 Windows 10 Windows Server 2008 R2 Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016 Windows Server 2019

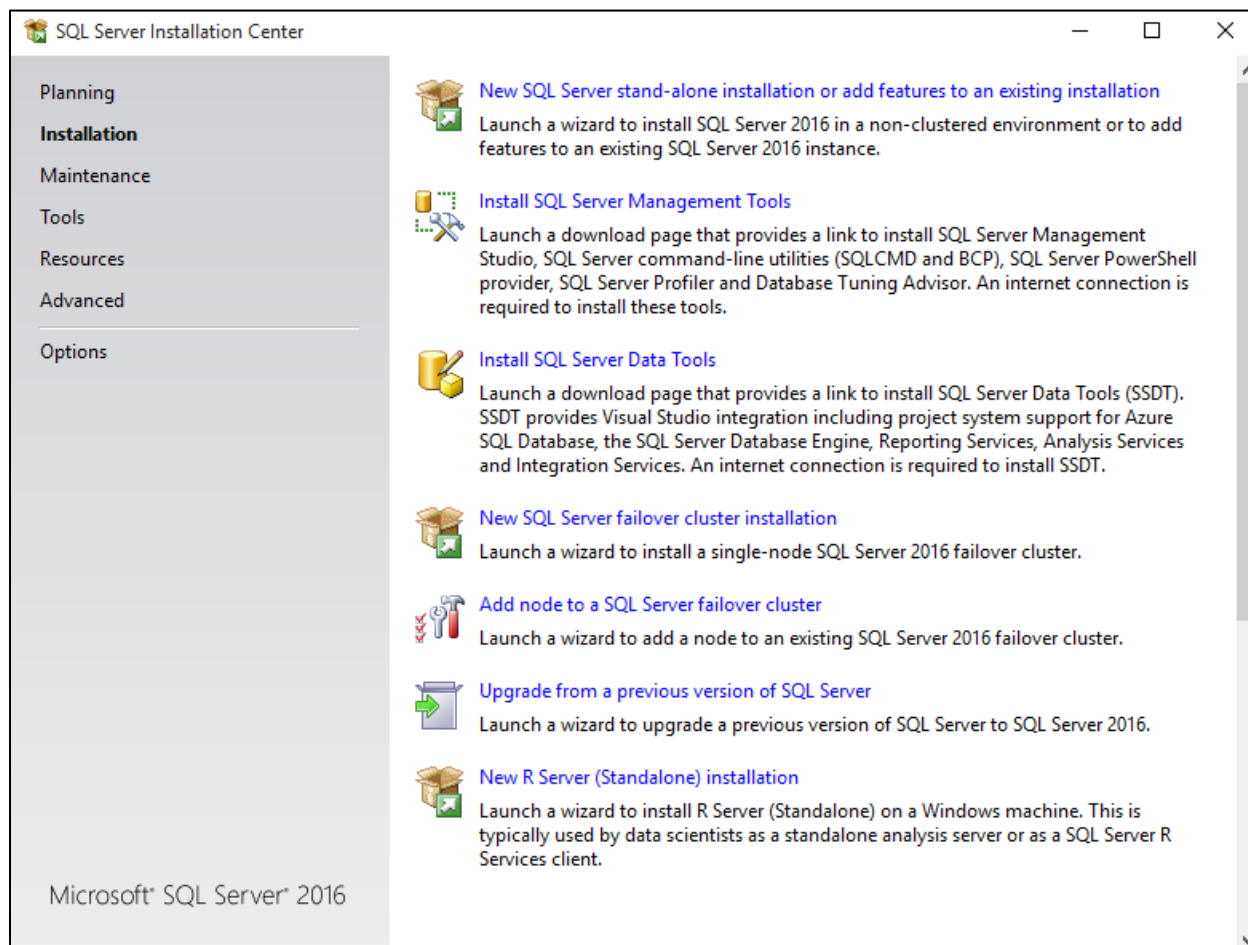
3.2 Install Enterprise Edition



These are generic instructions designed to get you up and running in a minimum of time. Consult your database experts if you wish to apply other configurations or tighten the security roles and privileges.

The following steps summaries the installation process and highlight any specific configuration items required:

1. Run **Setup.exe** to launch the SQL Server installer.
2. The SQL Server 2016 Installation Center will run. Select the first option for a **“New SQL Server stand-alone installation”**. Click the **OK** button to continue.



3. The next step is to provide the **license key** for the software and click the **Next** button to continue.
4. The next step is to review and accept the license terms. Read the license terms, then click on the **“I accept the license terms”** check box and click the **Next** button to continue. Once that process is completed click on the **Install** button on **Install Setup File**.
5. The next step is to select which SQL Server features to install. Select the **“SQL Server feature installation”** choice and click the **Next** button.
6. The Feature selection screen will appear next. **Click** on the check boxes to install some or all of the features you are interested in. To install SQL Server 2016 Management Studio, select **“Management Tools – Basic”** in the **Feature Selection** page. Then click the **Next** button.

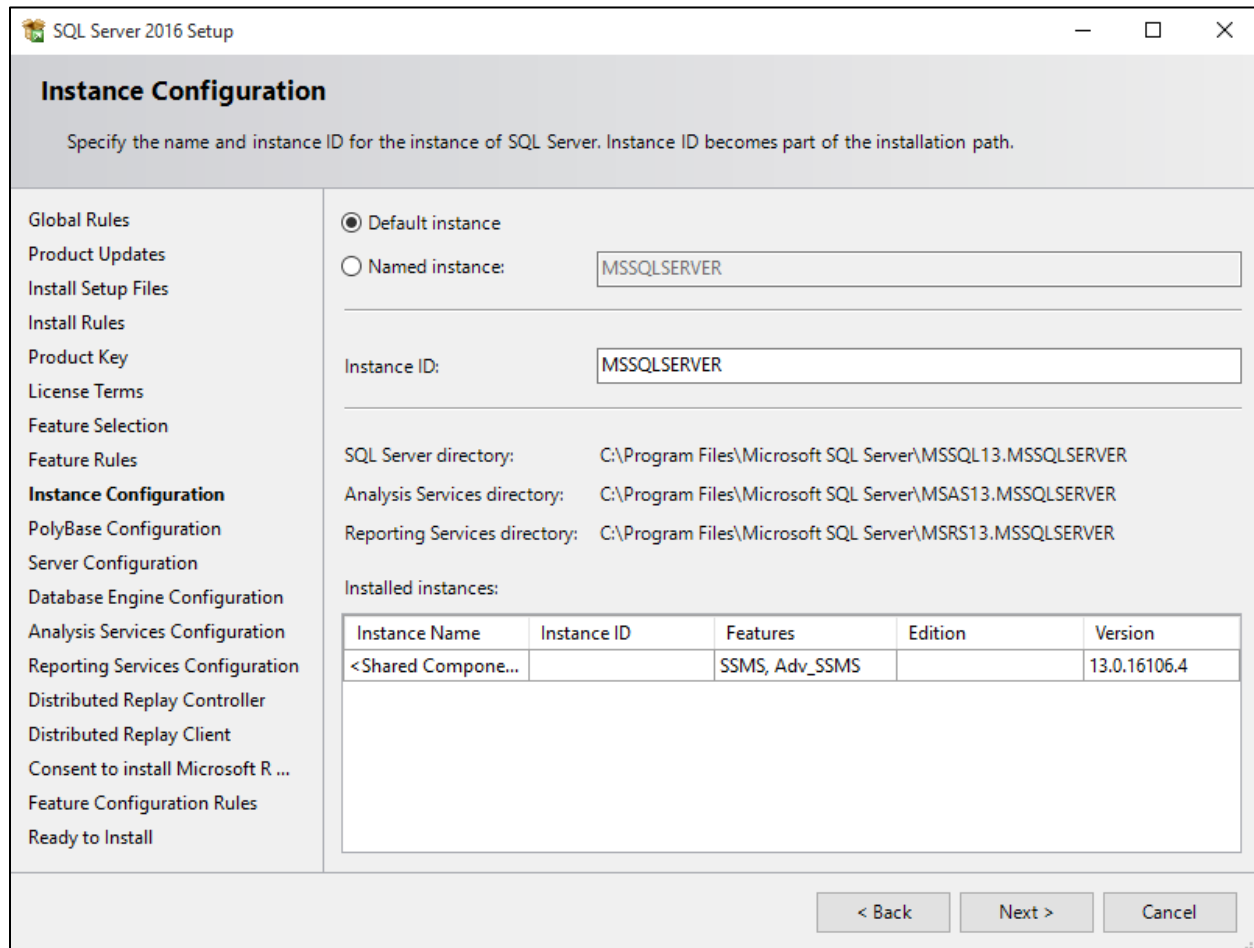
SQL Server 2016 Setup

Feature Selection

Select the Enterprise features to install.

Global Rules	Features:	Feature description:
<ul style="list-style-type: none"> Product Updates Install Setup Files Install Rules Installation Type Product Key License Terms Feature Selection Feature Rules Instance Configuration PolyBase Configuration Server Configuration Database Engine Configuration Analysis Services Configuration Reporting Services Configuration Distributed Replay Controller Distributed Replay Client Consent to install Microsoft R ... Feature Configuration Rules 	<p>Instance Features</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Database Engine Services <ul style="list-style-type: none"> <input checked="" type="checkbox"/> SQL Server Replication <input checked="" type="checkbox"/> R Services (In-Database) <input checked="" type="checkbox"/> Full-Text and Semantic Extractions for Sea <input checked="" type="checkbox"/> Data Quality Services <input checked="" type="checkbox"/> PolyBase Query Service for External Data <input checked="" type="checkbox"/> Analysis Services <input checked="" type="checkbox"/> Reporting Services - Native <p>Shared Features</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> R Server (Standalone) <input checked="" type="checkbox"/> Reporting Services - SharePoint <input checked="" type="checkbox"/> Reporting Services Add-in for SharePoint Proc <p>Select All Unselect All</p>	<p>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</p> <p>Prerequisites for selected features:</p> <p>Already installed:</p> <ul style="list-style-type: none"> Windows PowerShell 3.0 or higher Oracle SF Java Runtime Environment Versio <p>Disk Space Requirements</p> <p>Drive C: 7692 MB required, 7006 MB available</p>
<p>Instance root directory: C:\Program Files\Microsoft SQL Server\</p> <p>Shared feature directory: C:\Program Files\Microsoft SQL Server\</p> <p>Shared feature directory (x86): C:\Program Files (x86)\Microsoft SQL Server\</p>		<p>< Back Next > Cancel</p>

- In the Instance Configuration page, specify **MSSQLSERVER** in both the “**Named instance**” and “**Instance ID**” fields, this will force SQL Server 2016 Enterprise to install as the Default instance. If you want to install as a named instance, specify a name other than MSSQLSERVER.



SQL Server 2016 Setup

Instance Configuration

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

☒ Default instance

☐ Named instance:

Instance ID:

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL13.MSSQLSERVER

Analysis Services directory: C:\Program Files\Microsoft SQL Server\MSAS13.MSSQLSERVER

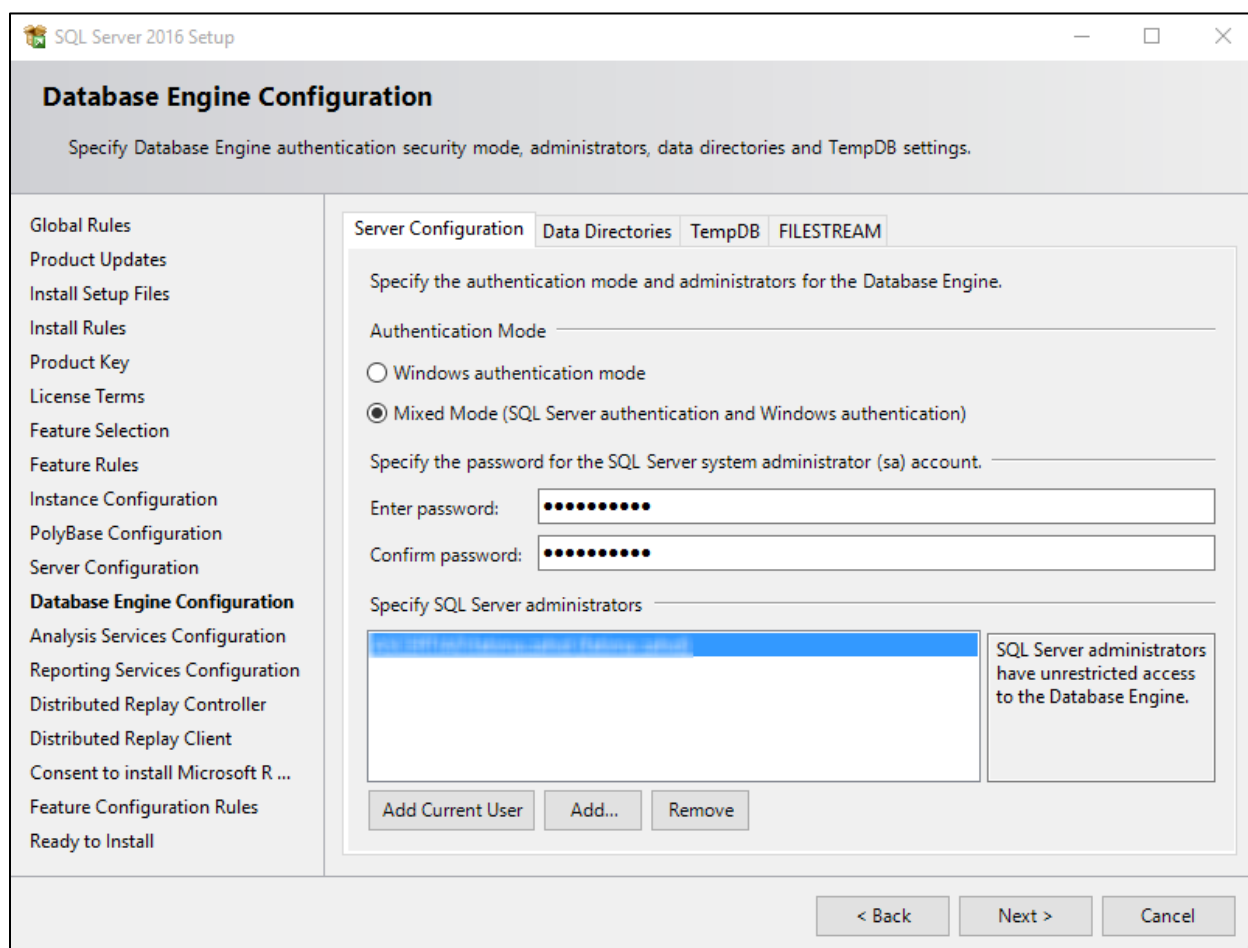
Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS13.MSSQLSERVER

Installed instances:

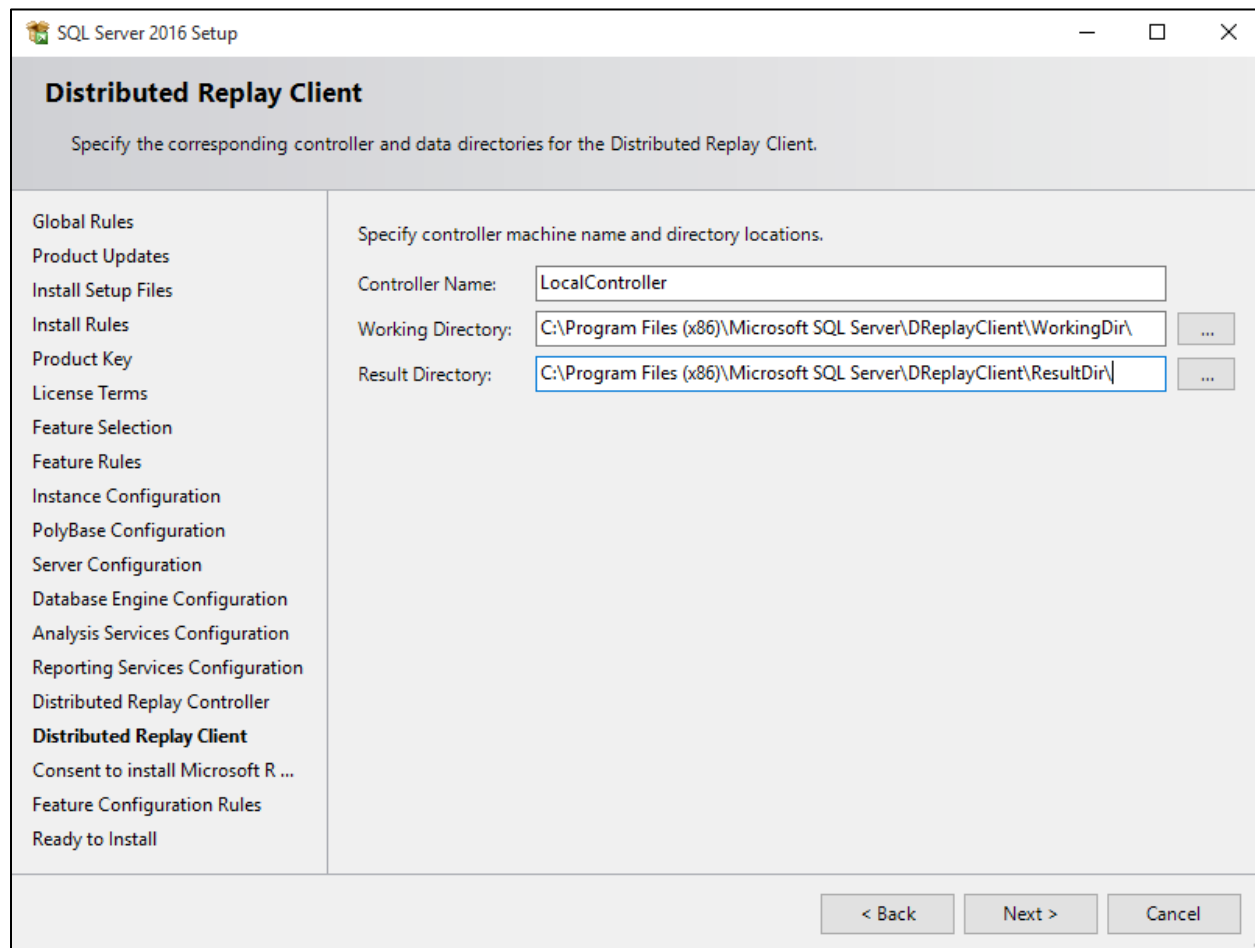
Instance Name	Instance ID	Features	Edition	Version
<Shared Compone...		SSMS, Adv_SSMS		13.0.16106.4

< Back Next > Cancel

8. The next step is **PolyBase** Configuration. Let the default option be selected and click **Next**.



9. The next step is the Server Configurations, click **Next** and provide details for the Database Engine. On the **Authentication Mode** page select **"Mixed Mode Authentication"**. Enter and confirm a strong **sa** logon password (remember this well it will be needed in the future). Click on **"Add Current User"** to specify SQL Server administrator.
10. If you selected **SQL Server Analysis Services** to be included in the install, the next screen will prompt for the **Analysis Services Server Mode**. To use **regular SQL (relational) schemas** for Analysis services specify the **Tabular Mode**. To use the **Multidimensional data structures**, select **Multidimensional and Data Mining Mode**.
11. The next screen gives an option of whether or not to provide error reports to Microsoft or not. Make your selection and then click the **Next** button to continue.
12. If **Distributed Replay Services** were selected to be installed, the next screen will prompt for the Users and/or Groups who have the rights to use Distributed Replay Services. Provide these user and groups and then click the **Next** button to continue.



13. If you selected the option to install the **Distributed Replay Client**, the next screen will prompt for a **Controller Name**, **Working Directory** and **Results Directory**. The default names should be sufficient for this install. Click the **Next** button to continue.
14. Next step is the Consent to install Microsoft R Open, click **Accept** and then **Next**.
15. A final set of configuration rules are checked. Next page is **Ready to install**, click the **Install** button to start the installation and configuration process.
16. To complete the SQL Server Installation Wizard, click **Close**.
17. Now follow the section [Database Configurations](#).
18. Optionally you can follow the section [Install SQL Server 2016 Management Studio](#).

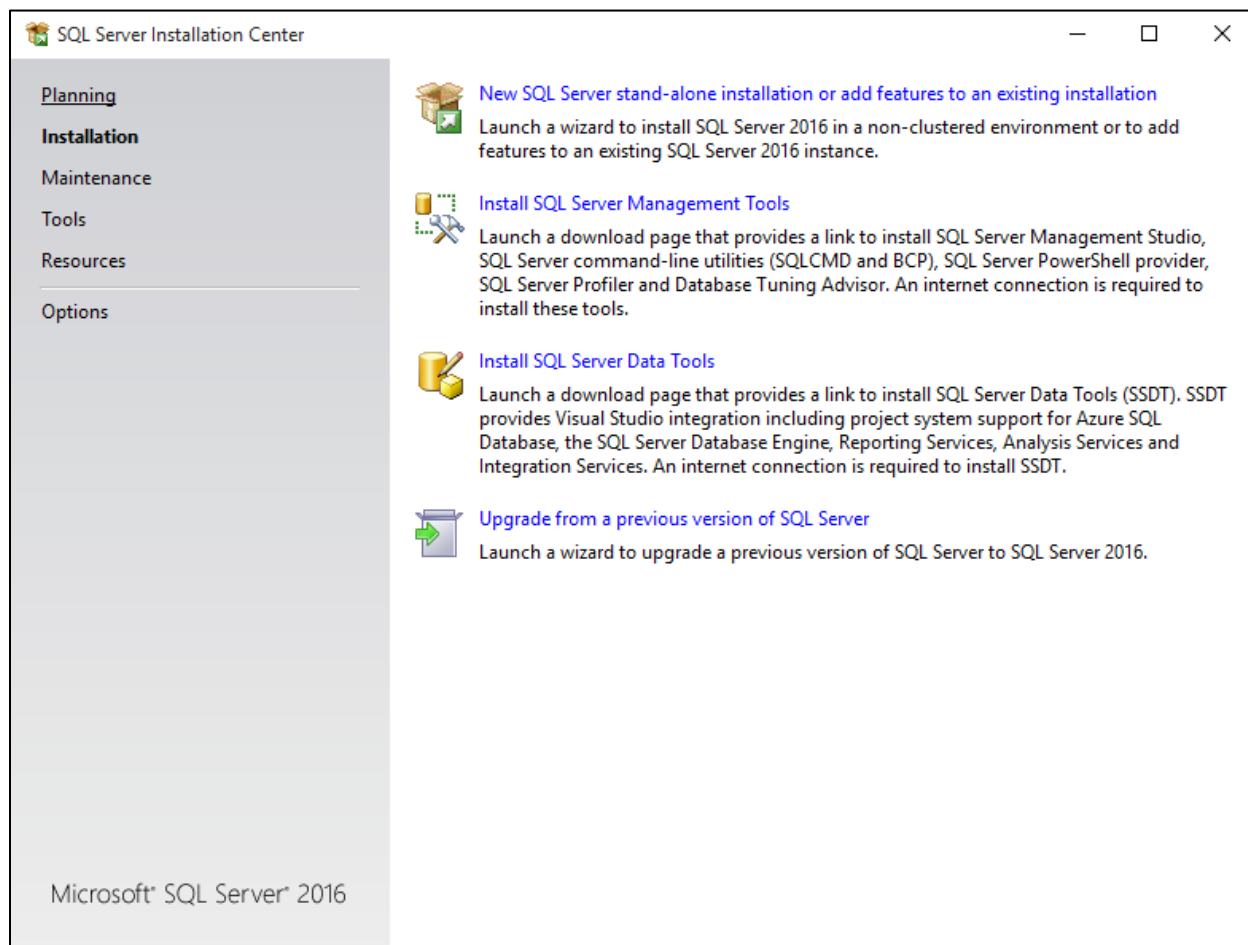
3.3 Install Express Edition



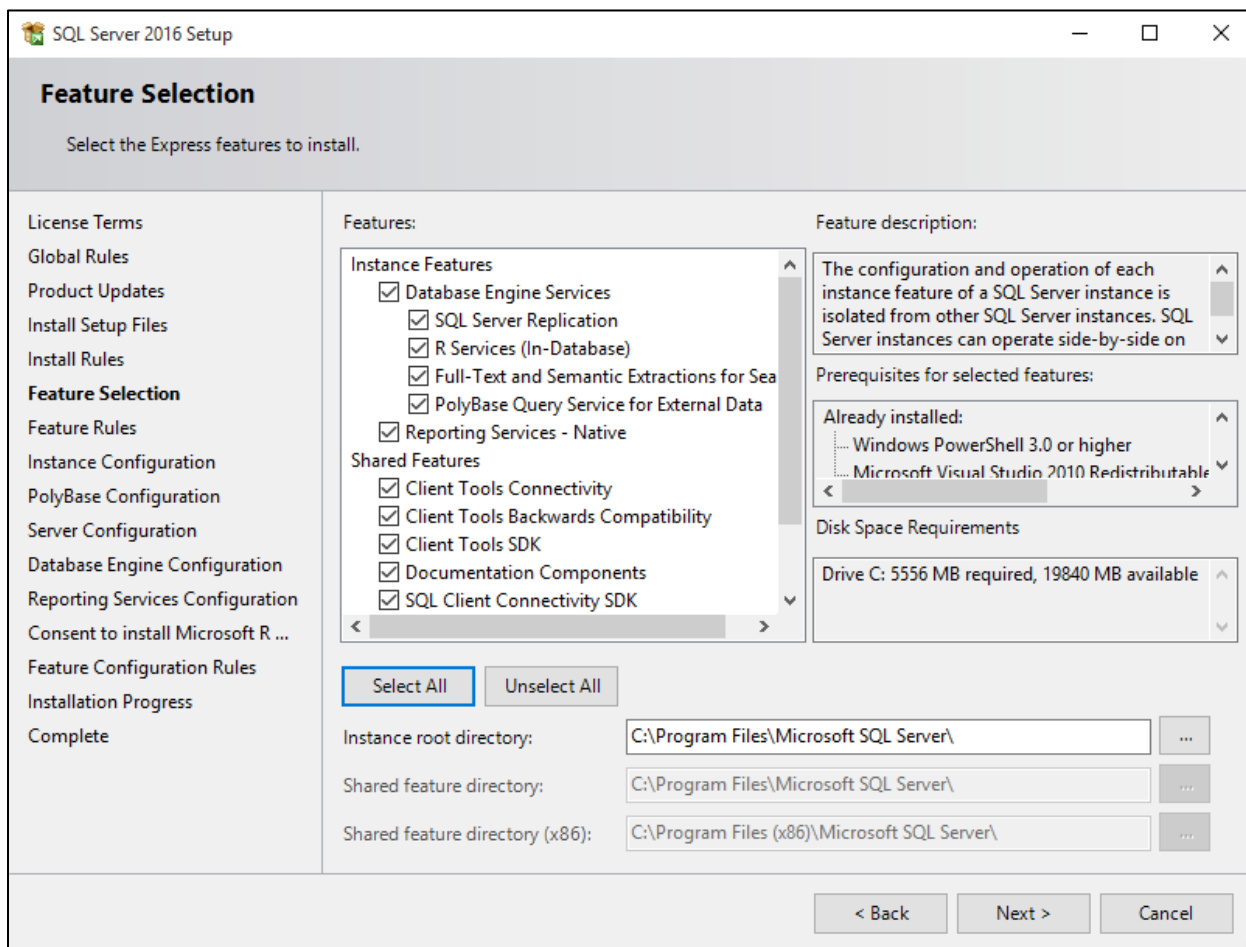
These are generic instructions designed to get you up and running in a minimum of time. Consult your database experts if you wish to apply other configurations or tighten the security roles and privileges.

The following steps summaries the installation process and highlight any specific configuration items required:

1. Run **Setup.exe** to launch the SQL Server installer.
2. The SQL Server 2016 Installation Center will run. Select the first option for a **“New SQL Server stand-alone installation”**. Click the **OK** button to continue.



3. The next step is to provide the **license key** for the software and click the **Next** button to continue.
4. The next step is to review and accept the license terms. Read the license terms, then click on the **“I accept the license terms”** check box and click the **Next** button to continue.
5. A screen the Global Setup Rules is shown, click the **Next** button to continue.
6. The next step is to select which SQL Server features to install. Select the **“SQL Server feature installation”** choice and click the **Next** button.
7. The Feature selection screen will appear next. **Click** on the check boxes to install some or all of the features you are interested in.



SQL Server 2016 Setup

Feature Selection

Select the Express features to install.

License Terms

Global Rules

Product Updates

Install Setup Files

Install Rules

Feature Selection

Feature Rules

Instance Configuration

PolyBase Configuration

Server Configuration

Database Engine Configuration

Reporting Services Configuration

Consent to install Microsoft R ...

Feature Configuration Rules

Installation Progress

Complete

Features:

Instance Features

- ☒ Database Engine Services
 - ☒ SQL Server Replication
 - ☒ R Services (In-Database)
 - ☒ Full-Text and Semantic Extractions for Search
 - ☒ PolyBase Query Service for External Data
- ☒ Reporting Services - Native

Shared Features

- ☒ Client Tools Connectivity
- ☒ Client Tools Backwards Compatibility
- ☒ Client Tools SDK
- ☒ Documentation Components
- ☒ SQL Client Connectivity SDK

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
- Microsoft Visual Studio 2010 Redistributable

Disk Space Requirements

Drive C: 5556 MB required, 19840 MB available

Select All **Unselect All**

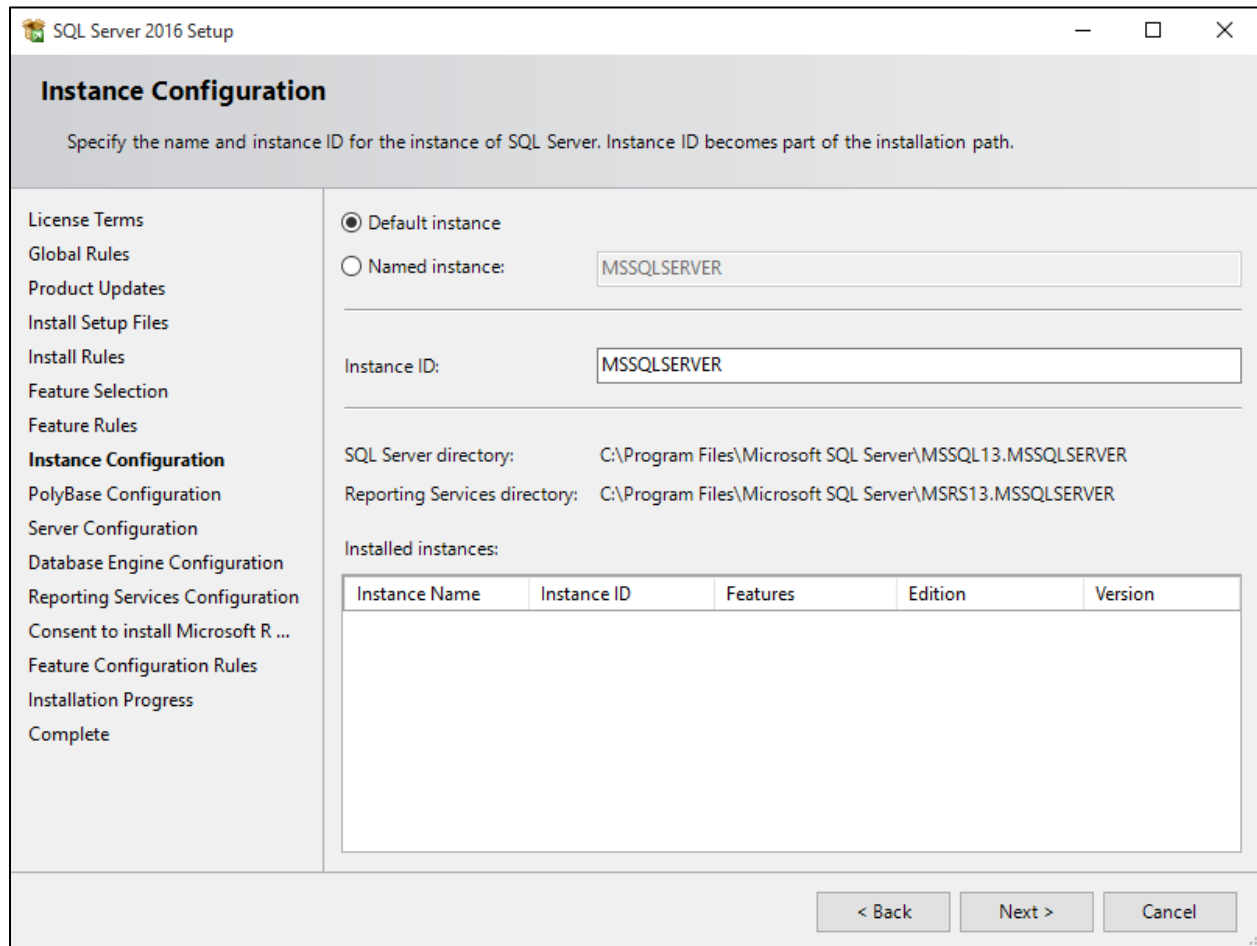
Instance root directory: C:\Program Files\Microsoft SQL Server\

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

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

< Back **Next >** **Cancel**

- In the Instance Configuration page, specify **MSSQLSERVER** in both the “**Named instance**” and “**Instance ID**” fields, this will force SQL Server 2016 Express Edition to install as the Default instance. If you want to install as a named instance, specify a name other than MSSQLSERVER.



SQL Server 2016 Setup

Instance Configuration

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

License Terms
Global Rules
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
PolyBase Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Consent to install Microsoft R ...
Feature Configuration Rules
Installation Progress
Complete

☒ Default instance
☐ Named instance: MSSQLSERVER

Instance ID: MSSQLSERVER

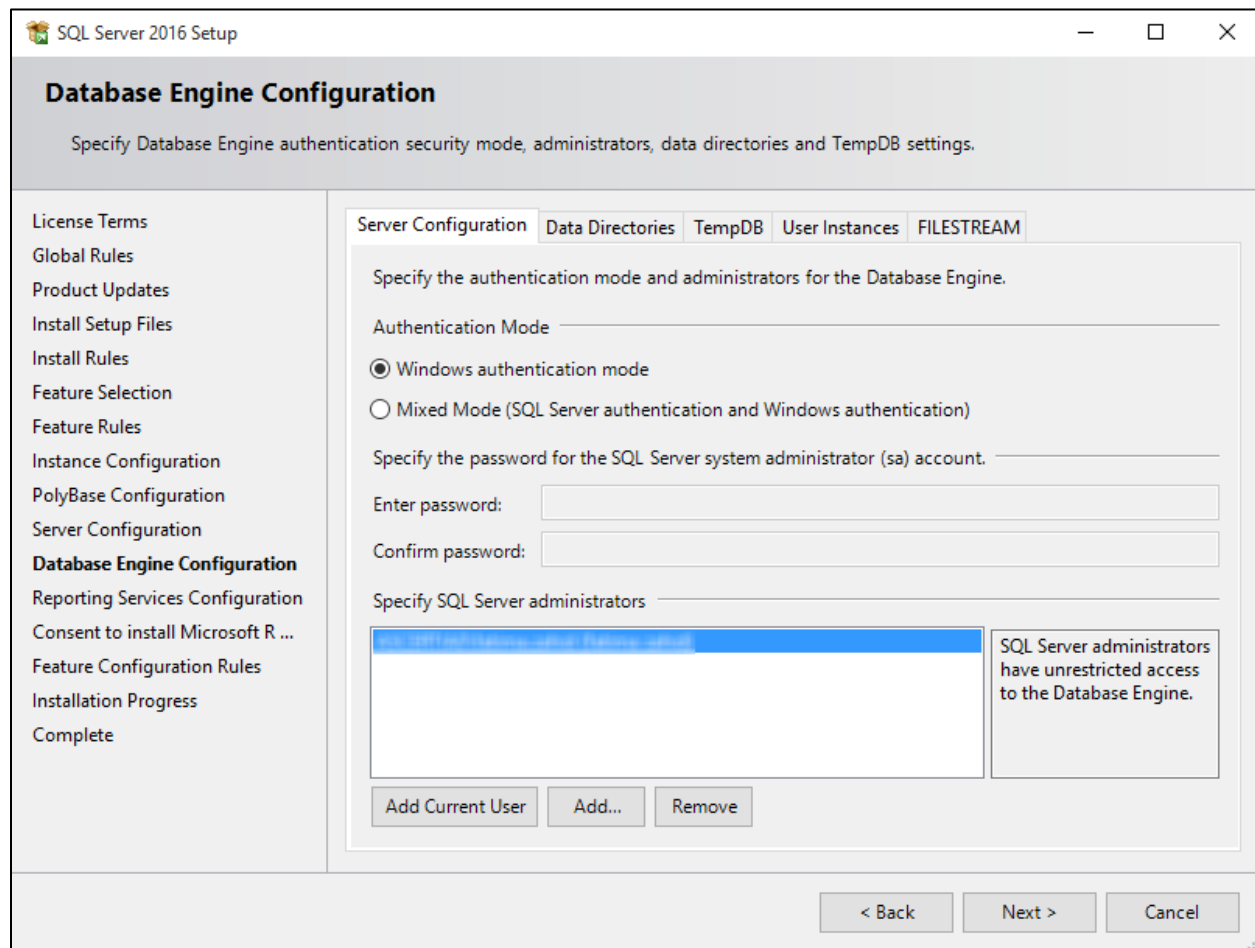
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL13.MSSQLSERVER
Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS13.MSSQLSERVER

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
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< Back Next > Cancel

9. The next step is **PolyBase** Configuration. Let the default option be selected and click **Next**.
10. The next step is the Server Configurations, click **Next** and provide details for the Database Engine. On the **Authentication Mode** page select "**Windows authentication mode**" and click **Next**.

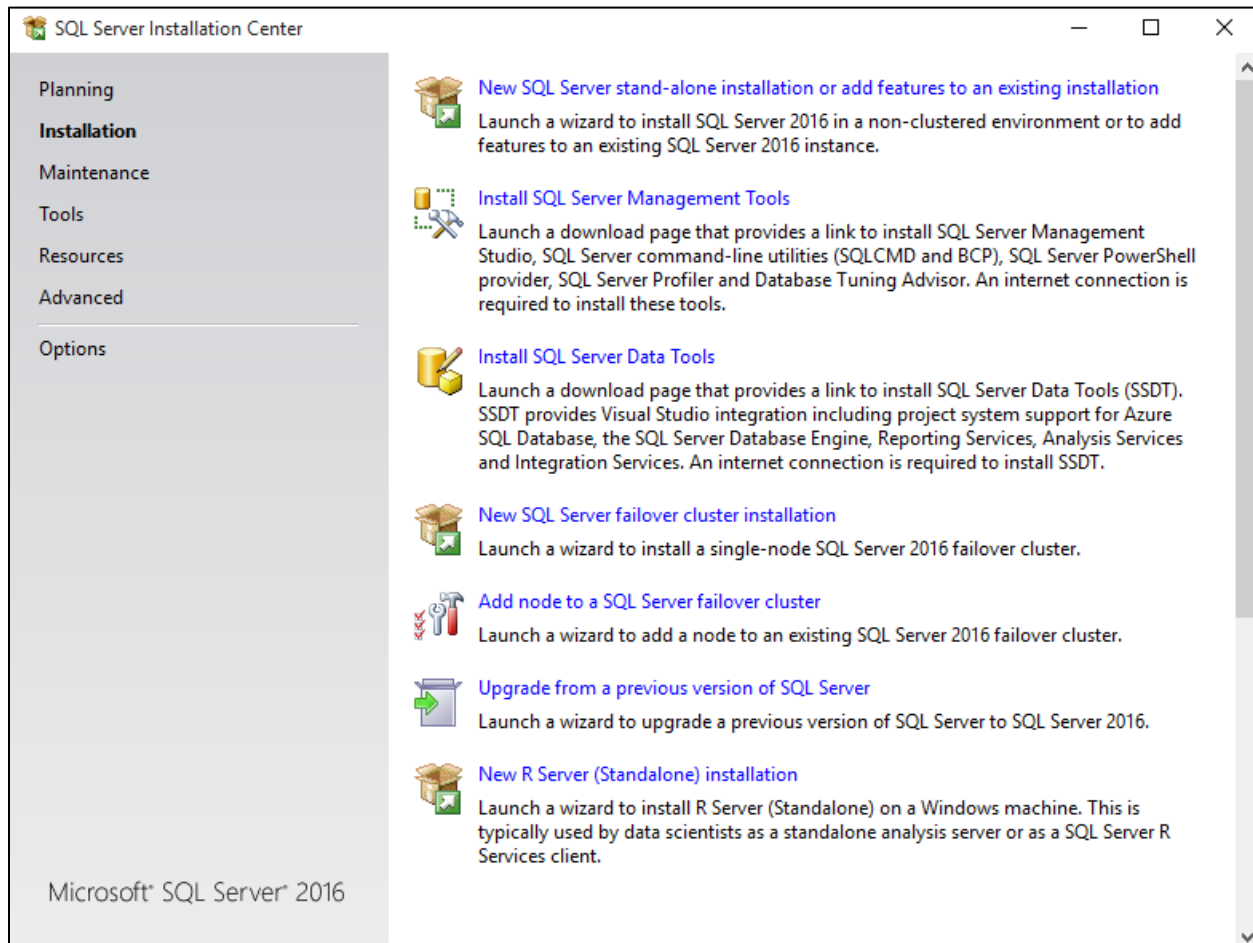


11. The next screen gives an option of whether or not to provide error reports to Microsoft or not. Make your selection and then click the **Next** button to continue.
12. Next step is the Consent to install Microsoft R Open, click **Accept** and then **Next**.
13. A final set of configuration rules are checked. Next page is **installation Progress**. Once the installation is completed the next page will be **Complete**.
14. To complete the SQL Server Installation Wizard, click **Close**.
15. Now follow the section [Database Configurations](#).
16. Optionally you can follow the section [Install SQL Server 2016 Management Studio](#).

3.4 Install SQL Server 2016 Management Studio

The following steps summaries the installation process and highlight any specific configuration items required:

1. Run **Setup.exe** to launch the SQL Server installer.
2. The SQL Server 2016 Installation Center will run. Select the second option “**Install SQL Server Management Tool**”. Click the **OK** button to continue.



3. Installer wizard will brought you to a web page to download the latest release of SQL Server Management Studio. Click on the link to download the latest release, and save the file to a location you can remember

Download SQL Server Management Studio (SSMS)

Updated: August 15, 2016

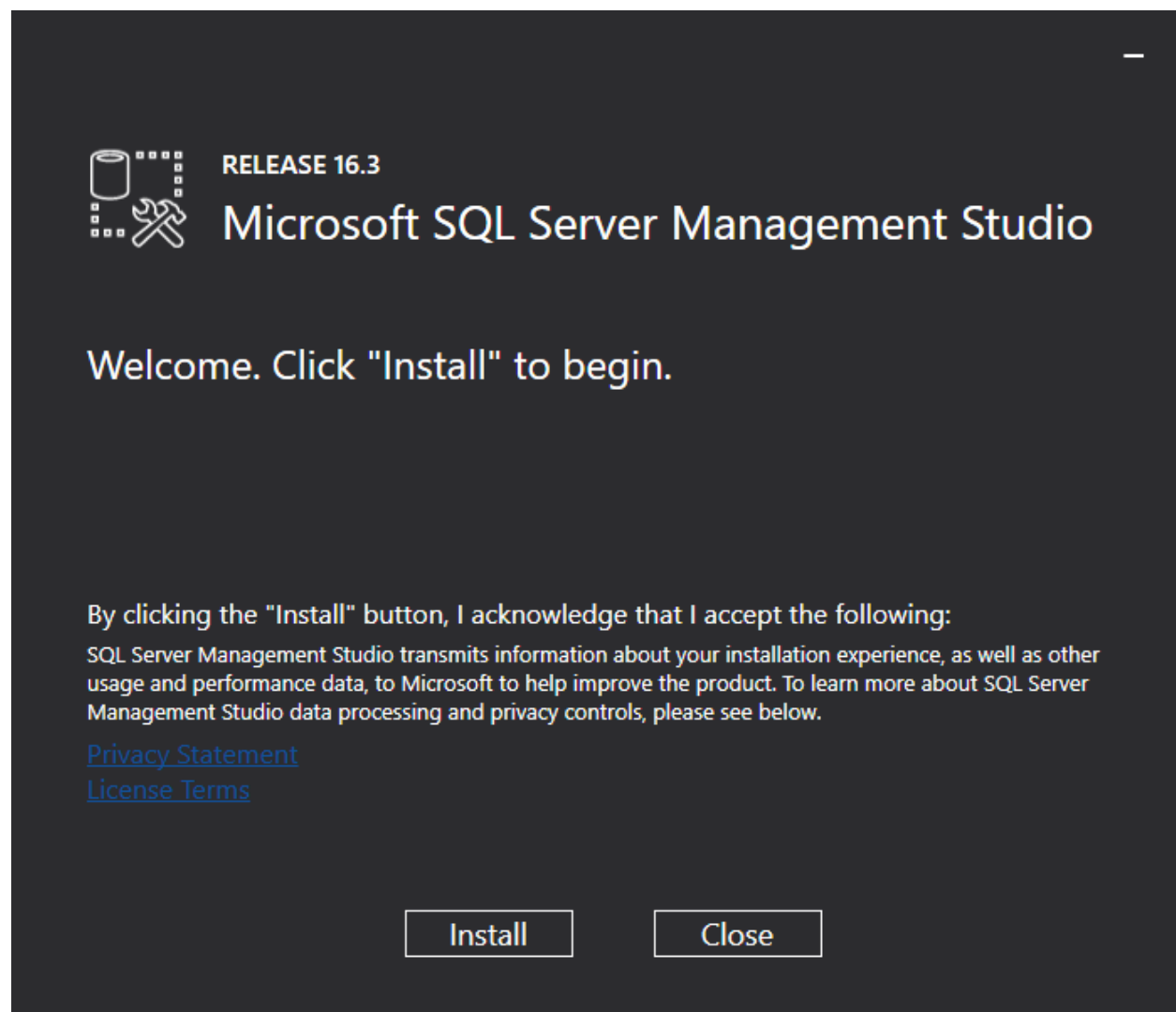
SQL Server Management Studio (SSMS) is an integrated environment for accessing, configuring, managing, administering, and developing all components of SQL Server. SSMS combines a broad group of graphical tools with a number of rich script editors to provide developers and administrators of all skill levels access to SQL Server. This release features improved compatibility with previous versions of SQL Server, a stand-alone web installer, and toast notifications within SSMS when new releases become available.



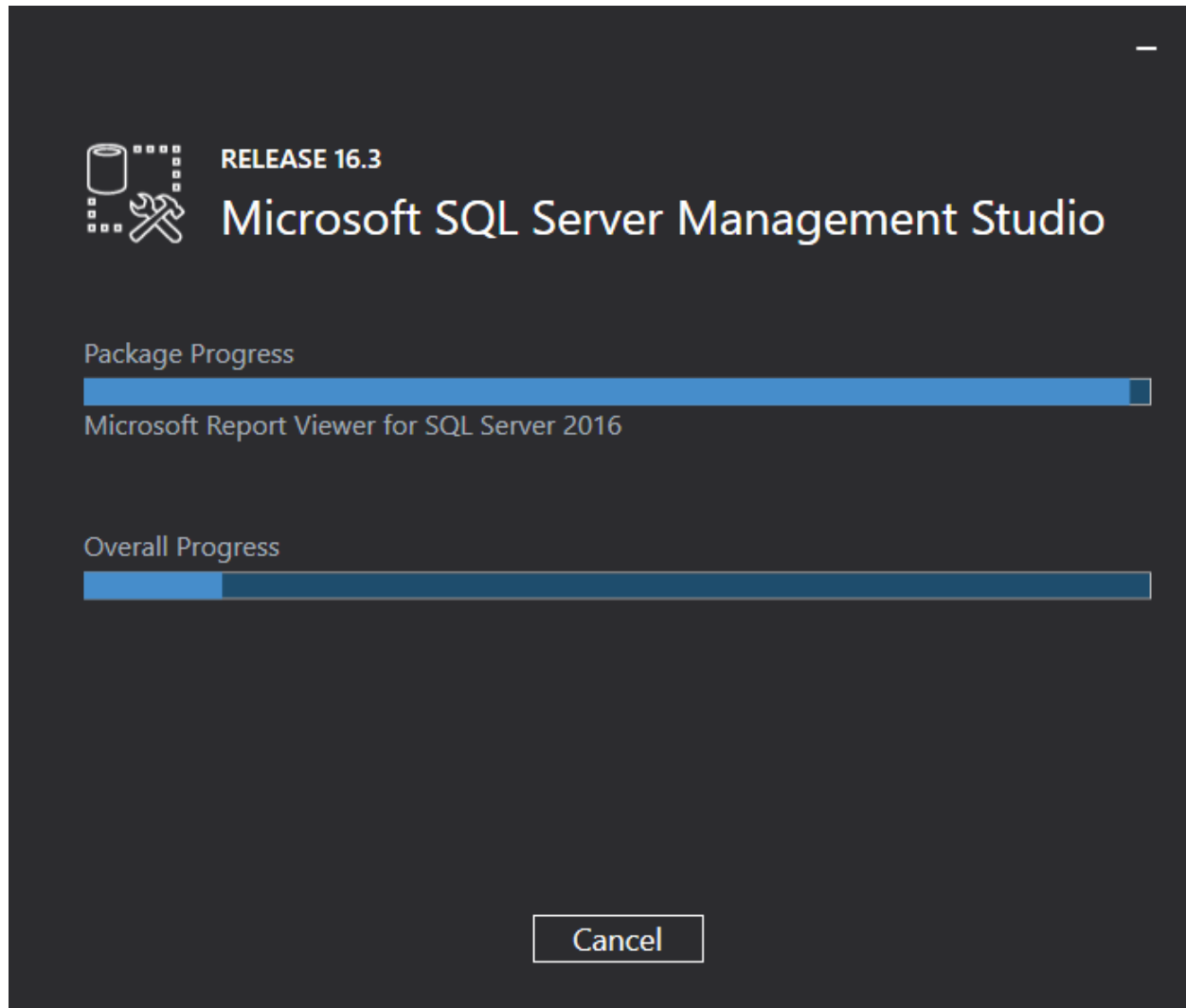
Download SQL Server Management Studio (SSMS)

[Download SQL Server Management Studio 16.3 release](#)

4. Once downloaded, run the SSMS installer from your browser, or directly by double clicking it in Windows Explorer. The first screen that appear is shown below:



5. Click the “Install” button to begin. A progress screen will appear similar to the following:



6. Let it progress through until completion, then you will see a screen indicating successful setup, click close. SSMS is now installed.

4 SQL Server 2014

4.1 System Requirements

The system should meet the following requirements prior to installation:

<ul style="list-style-type: none">• .NET Framework 3.5 SP1• Microsoft Windows Installer 4.5 or a later version (SQL Server will install this if necessary)• Windows PowerShell 2.0• Internet Explorer 7 or a later version is required for Microsoft Management Console (MMC), SQL Server Data Tools (SSDT), the Report Designer component of Reporting Services, and HTML Help.• TCP/IP networking	
RAM	Minimum: 1 GB Recommended: 4 GB or higher
Hard Disk space	10 GB free space
Processor (x64)	AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support Minimum: 1.4 GHz Recommended: 2.0 GHz or higher
Operating System	Windows 7 Windows 7 Service Pack 1 Windows 8 Windows 8.1 Windows Server 2008 R2 Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2

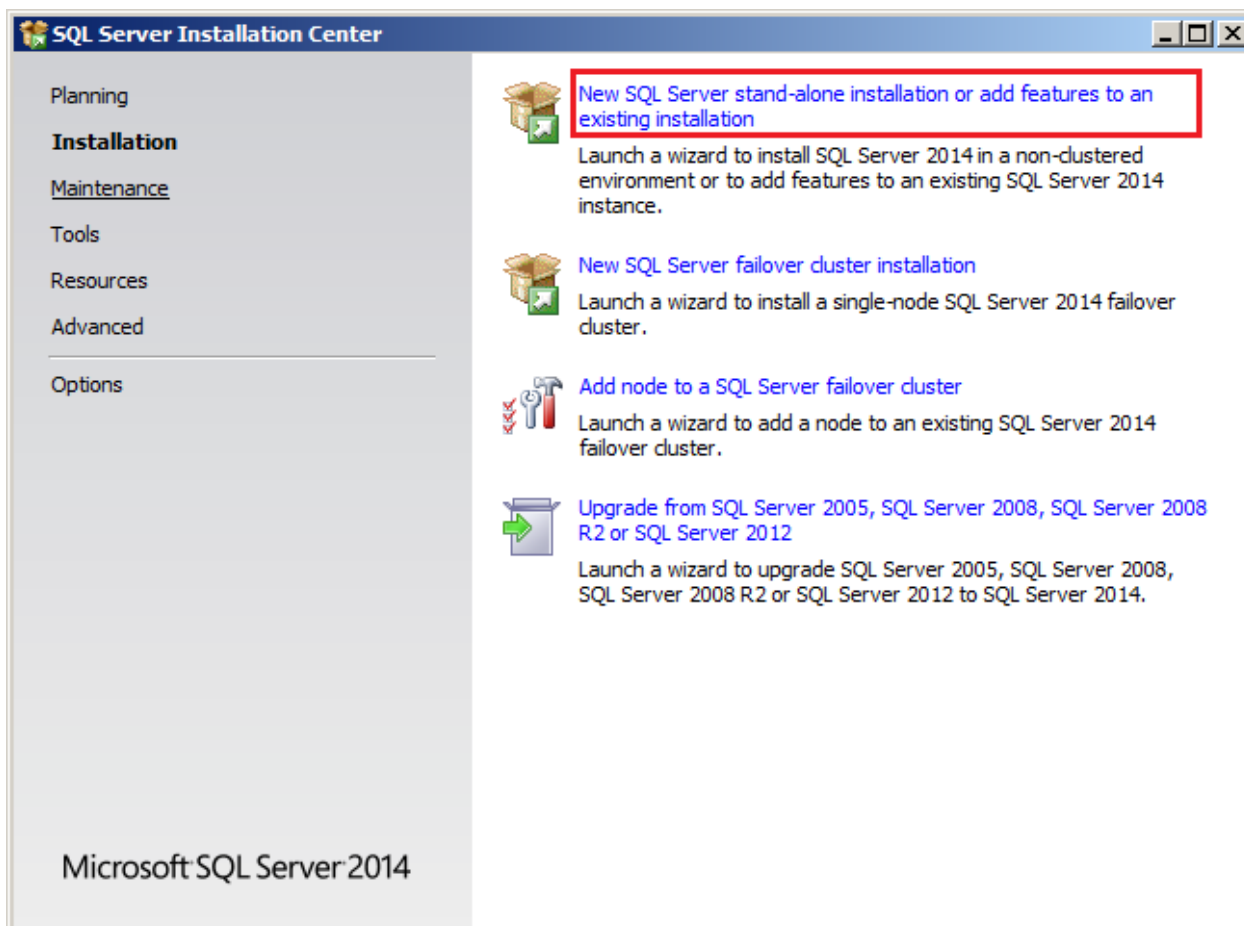
4.2 Install Enterprise Edition



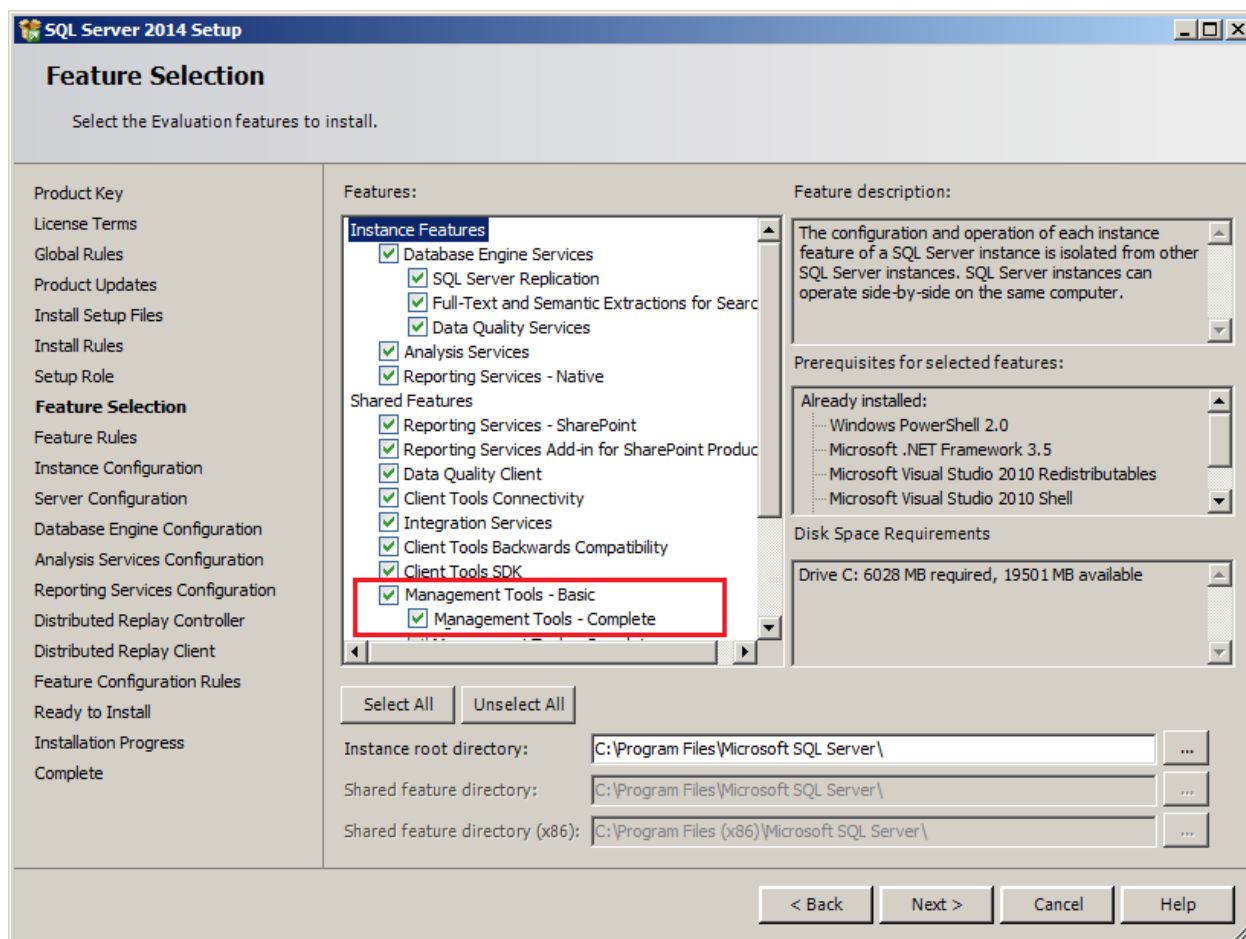
These are generic instructions designed to get you up and running in a minimum of time. Consult your database experts if you wish to apply other configurations or tighten the security roles and privileges.

The following steps summaries the installation process and highlight any specific configuration items required:

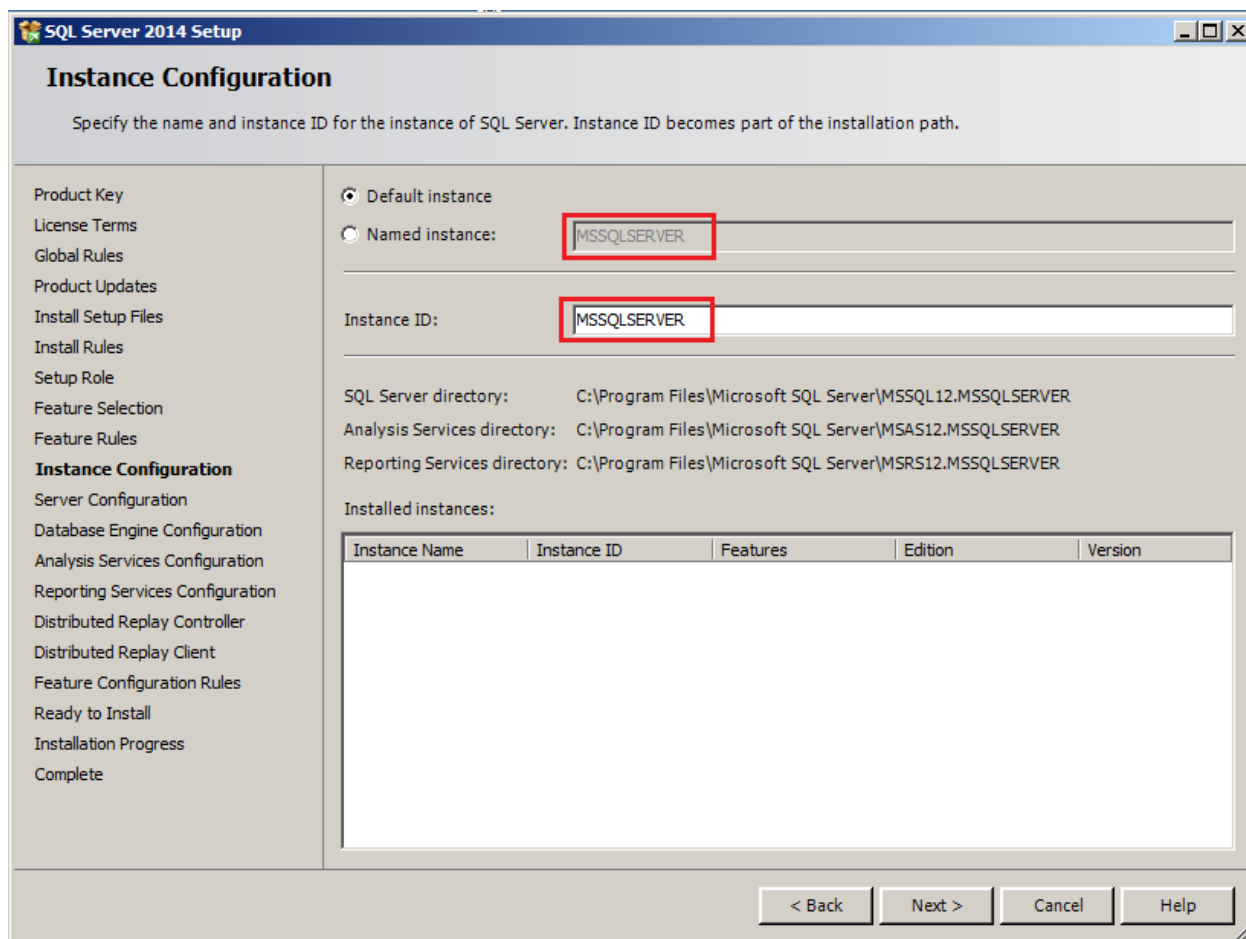
1. Run **Setup.exe** to launch the SQL Server installer.
2. The SQL Server 2014 Installation Center will run. Select the first option for a “**New SQL Server stand-alone installation**”. Click the **OK** button to continue.



3. The next step is to provide the **license key** for the software and click the **Next** button to continue.
4. The next step is to review and accept the license terms. Read the license terms, then click on the “**I accept the license terms**” check box and click the **Next** button to continue. Once that process is completed click on the **Install** button on **Install Setup File**.
5. A screen showing the Setup Support Rules is shown, click the **Next** button to continue.
6. The next step is to select which SQL Server features to install. Select the “**SQL Server feature installation**” choice and click the **Next** button.
7. The Feature selection screen will appear next. **Click** on the check boxes to install some or all of the features you are interested in. To install SQL Server 2014 Management Studio, select “**Management Tools – Basic**” in the **Feature Selection** page. Then click the **Next** button.



8. In the Instance Configuration page, specify **MSSQLSERVER** in both the “**Named instance**” and “**Instance ID**” fields, this will force SQL Server 2014 Enterprise to install as the Default instance. If you want to install as a named instance, specify a name other than MSSQLSERVER.



SQL Server 2014 Setup

Instance Configuration

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

Product Key
License Terms
Global Rules
Product Updates
Install Setup Files
Install Rules
Setup Role
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Analysis Services Configuration
Reporting Services Configuration
Distributed Replay Controller
Distributed Replay Client
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

☒ Default instance
☐ Named instance:

Instance ID:

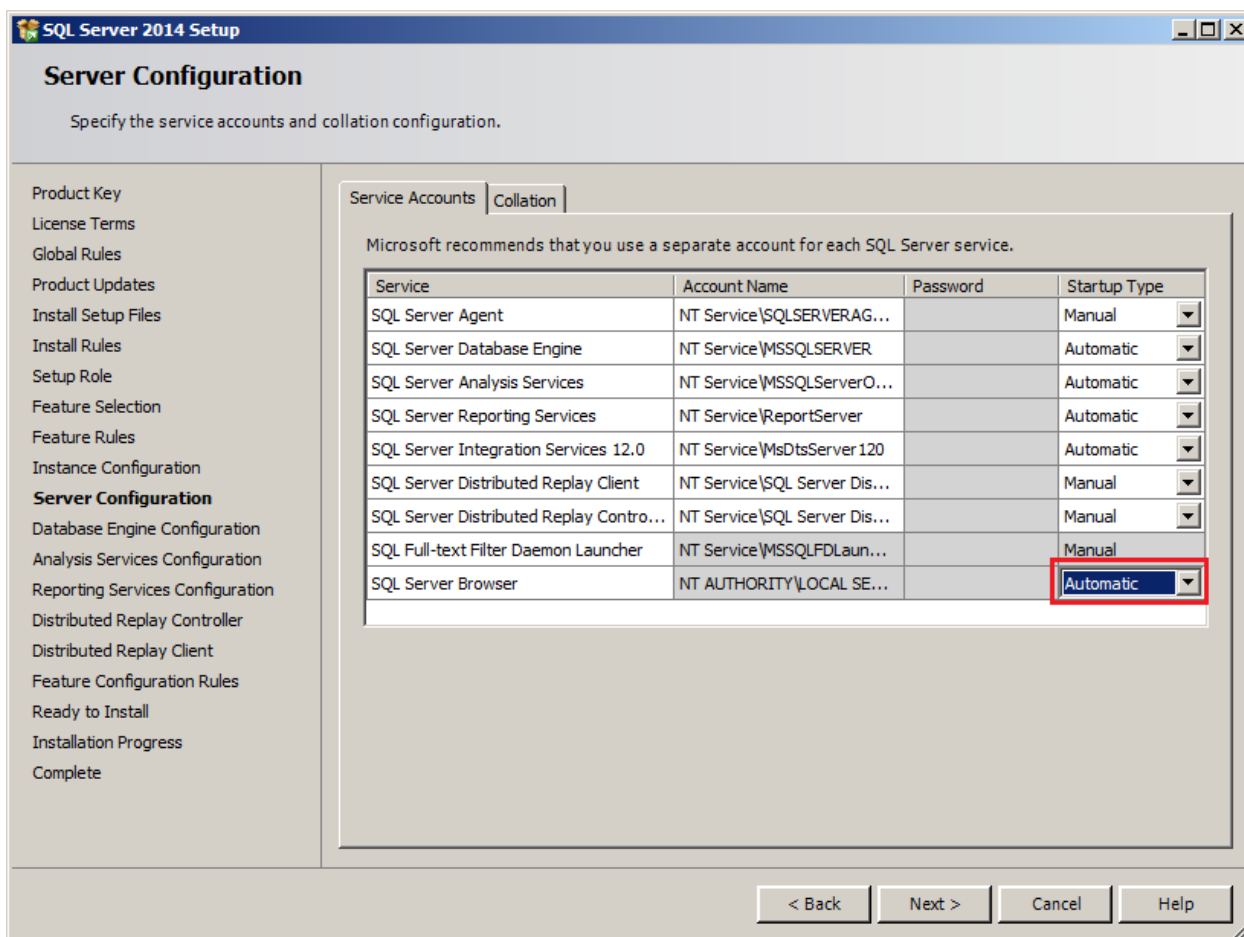
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER
Analysis Services directory: C:\Program Files\Microsoft SQL Server\MSAS12.MSSQLSERVER
Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS12.MSSQLSERVER

Installed instances:

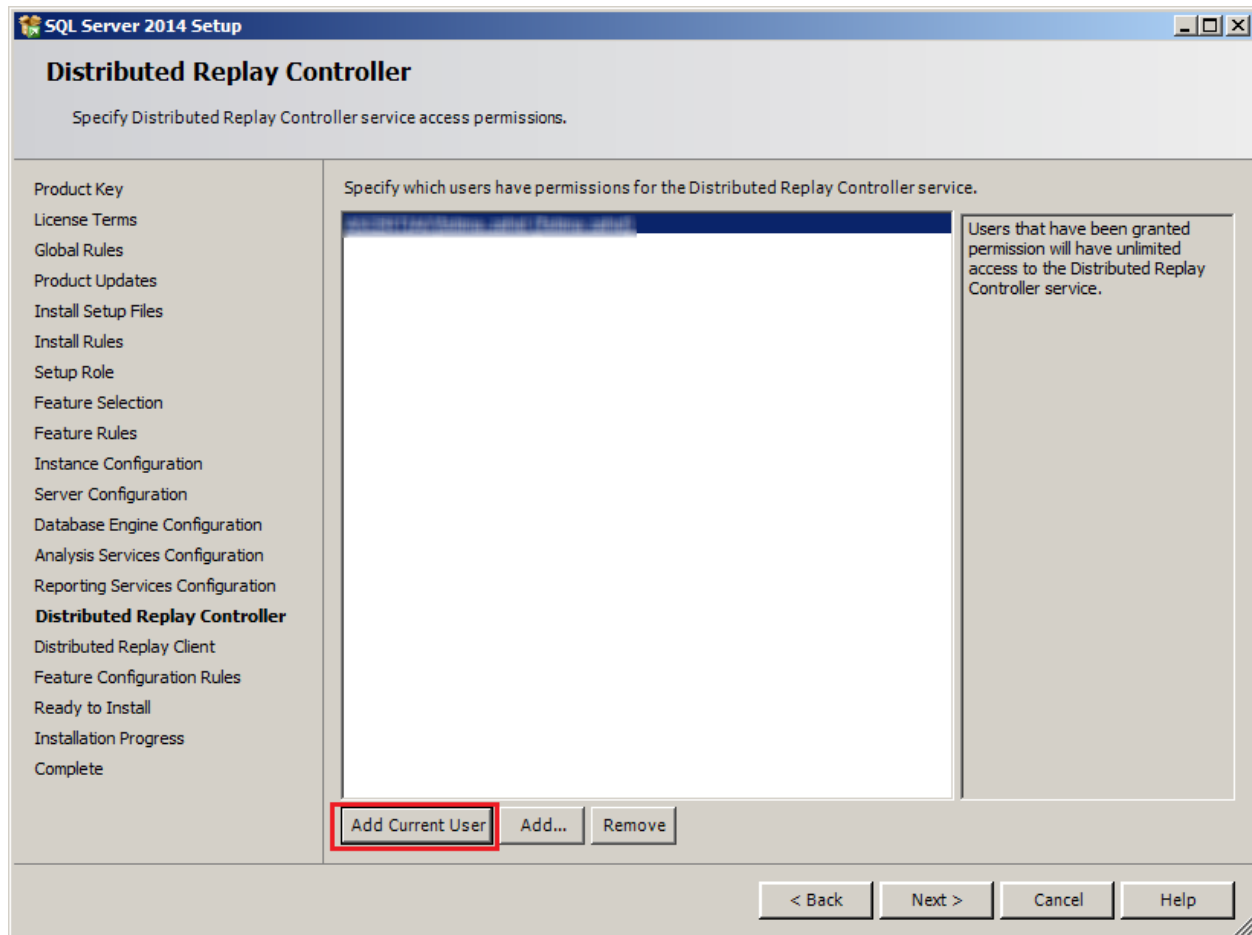
Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back Next > Cancel Help

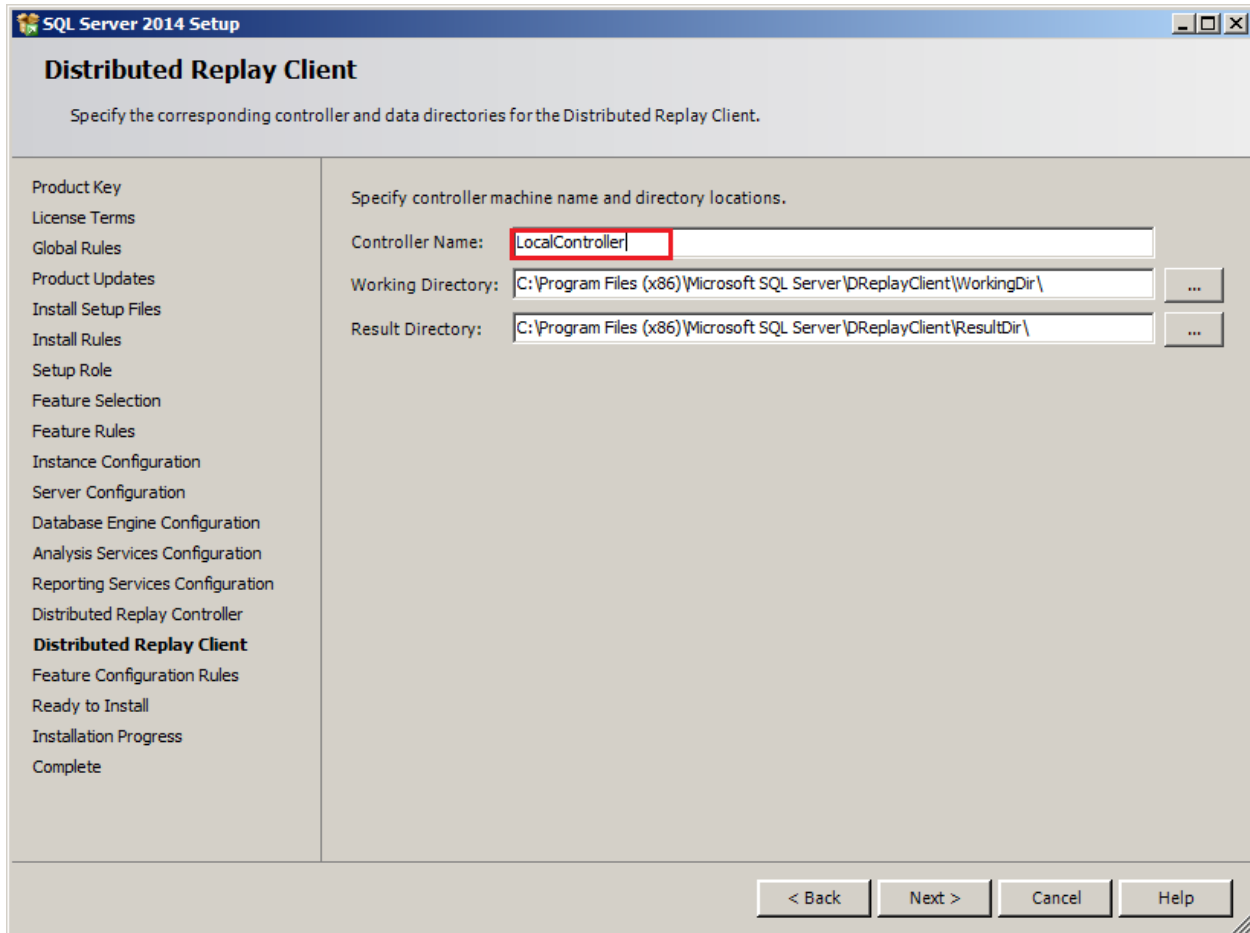
- The next step is the Server Configurations, click **Next** and provide details for the Database Engine. On the **Authentication Mode** page select **"Mixed Mode Authentication"**. Enter and confirm a strong **"sa"** logon password (remember this well it will be needed in the future). Click on **"Add Current User"** to specify SQL Server administrator.



10. If you selected **SQL Server Analysis Services** to be included in the install, the next screen will prompt for the **Analysis Services Server Mode**. To use **regular SQL (relational) schemas** for Analysis services specify the **Tabular Mode**. To use the **Multidimensional data structures**, select **Multidimensional and Data Mining Mode**.
11. The next screen gives an option of whether or not to provide error reports to Microsoft or not. Make your selection and then click the **Next** button to continue.
12. If **Distributed Replay Services** were selected to be installed, the next screen will prompt for the Users and/or Groups who have the rights to use Distributed Replay Services. Provide these user and groups and then click the **Next** button to continue



13. If you selected the option to install the **Distributed Replay Client**, the next screen will prompt for a **Controller Name**, **Working Directory** and **Results Directory**. The default names should be sufficient for this install. Click the **Next** button to continue.



14. A final set of configuration rules are checked. Next page is **Ready to install**, click the **Install** button to start the installation and configuration process.
15. To complete the SQL Server Installation Wizard, click **Close**.
16. Now follow the section [Database Configurations](#).

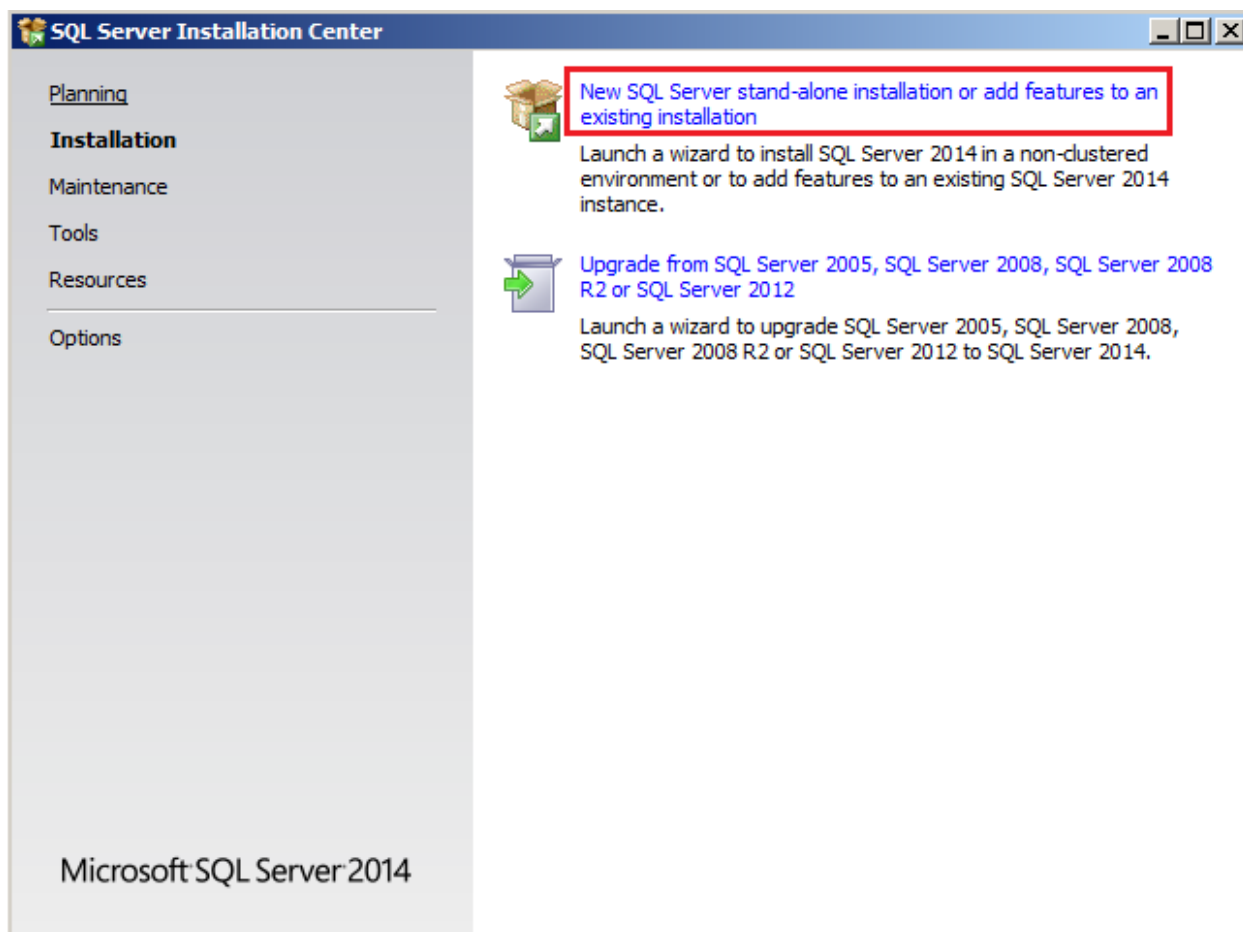
4.3 Install Express Edition



These are generic instructions designed to get you up and running in a minimum of time. Consult your database experts if you wish to apply other configurations or tighten the security roles and privileges.

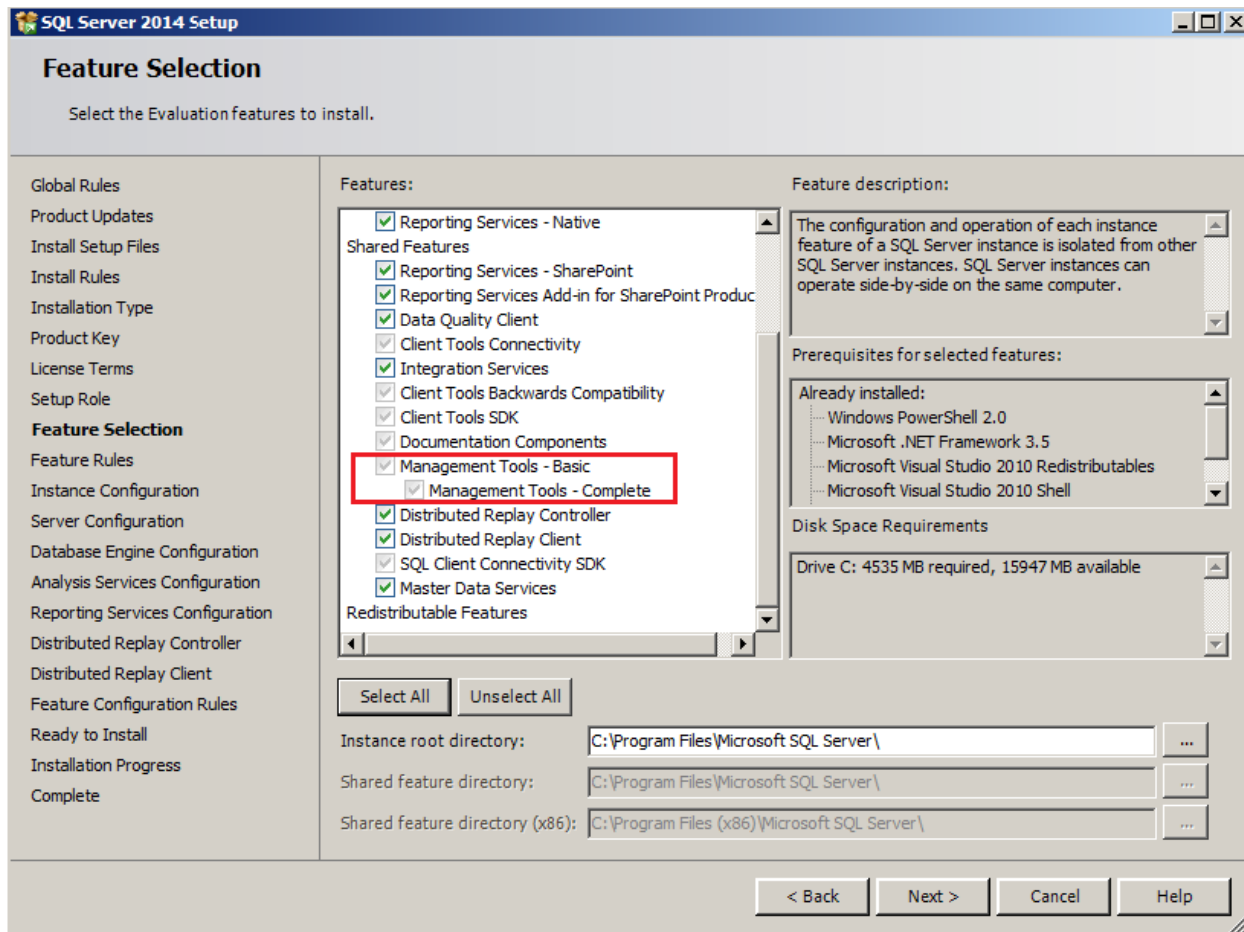
The following steps summaries the installation process and highlight any specific configuration items required:

1. Run **SQLEXPRADV_x64_ENU-2012.EXE** to launch the SQL Server 2014 Express installer.
2. At the SQL Server Installation Centre click on **Planning** from the left side and choose "**System Configuration Checker**" to make sure you are ready to install SQL 2014 Express.
3. When the System Configuration Checker has validated that you are ready to install SQL 2014 Express, return to the SQL Server Installation Centre and click on the word "**Installation**" on the left menu.
4. Select the option "**New SQL Server stand-alone installation or add features to an existing installation**".

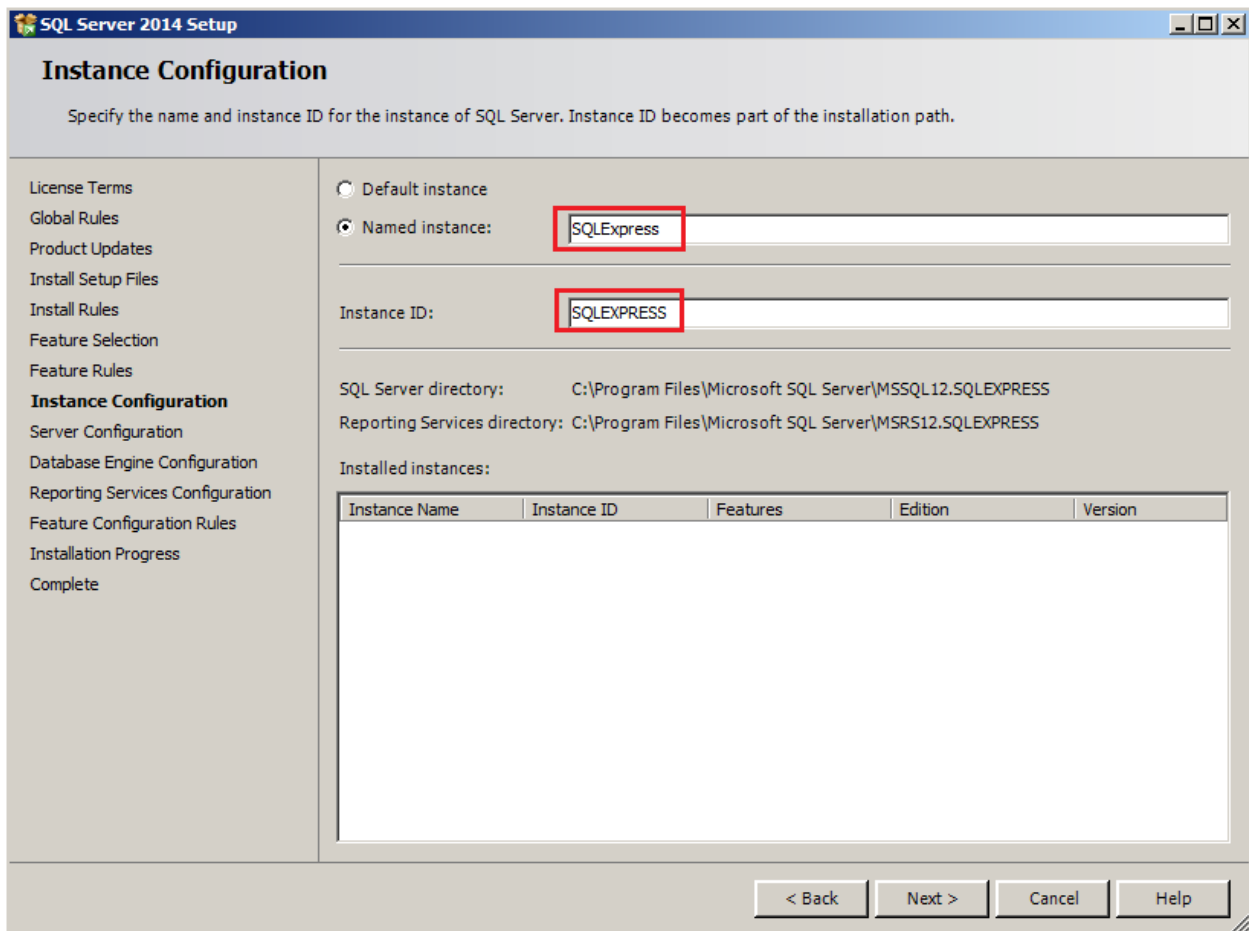


5. A setup support check will run. Make sure there are no errors or warnings, press **Next**.
6. The "**SQL Server 2014**" Setup will now appear, select "**Perform a new installation of SQL Server 2014**" and click **Next**.
7. The next step is to review and accept the license terms. Read the license terms, then click on the "**I accept the license terms**" check box and click the **Next** button to continue.

8. The Feature selection screen will appear next. Click on the check boxes to install some or all of the features you are interested in. To install SQL Server 2014 Management Studio, select “**Management Tools – Basic**” in the **Feature Selection** page. Click on **Select All** and then click **Next** button.



9. In the Instance Configuration page, specify **SQLEXPRESS** in both the “**Named instance**” and “**Instance ID**” fields, this will force SQL Server 2014 Express to install as the Default instance. If you want to install as a named instance, specify a name other than SQLEXPRESS.



SQL Server 2014 Setup

Instance Configuration

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

License Terms
Global Rules
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Feature Configuration Rules
Installation Progress
Complete

☐ Default instance
☒ Named instance:

Instance ID:

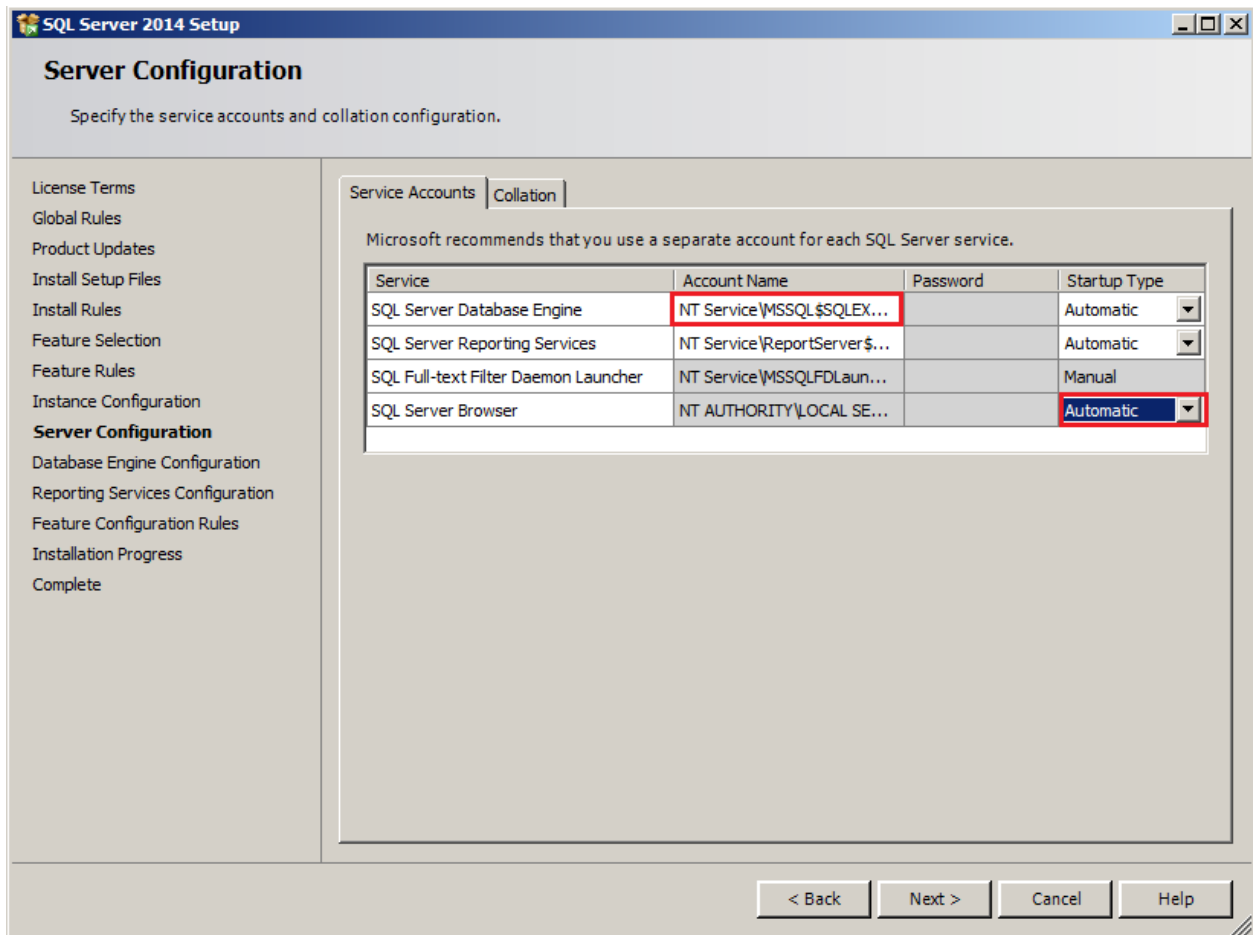
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL12.SQLEXPRESS
Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS12.SQLEXPRESS

Installed instances:

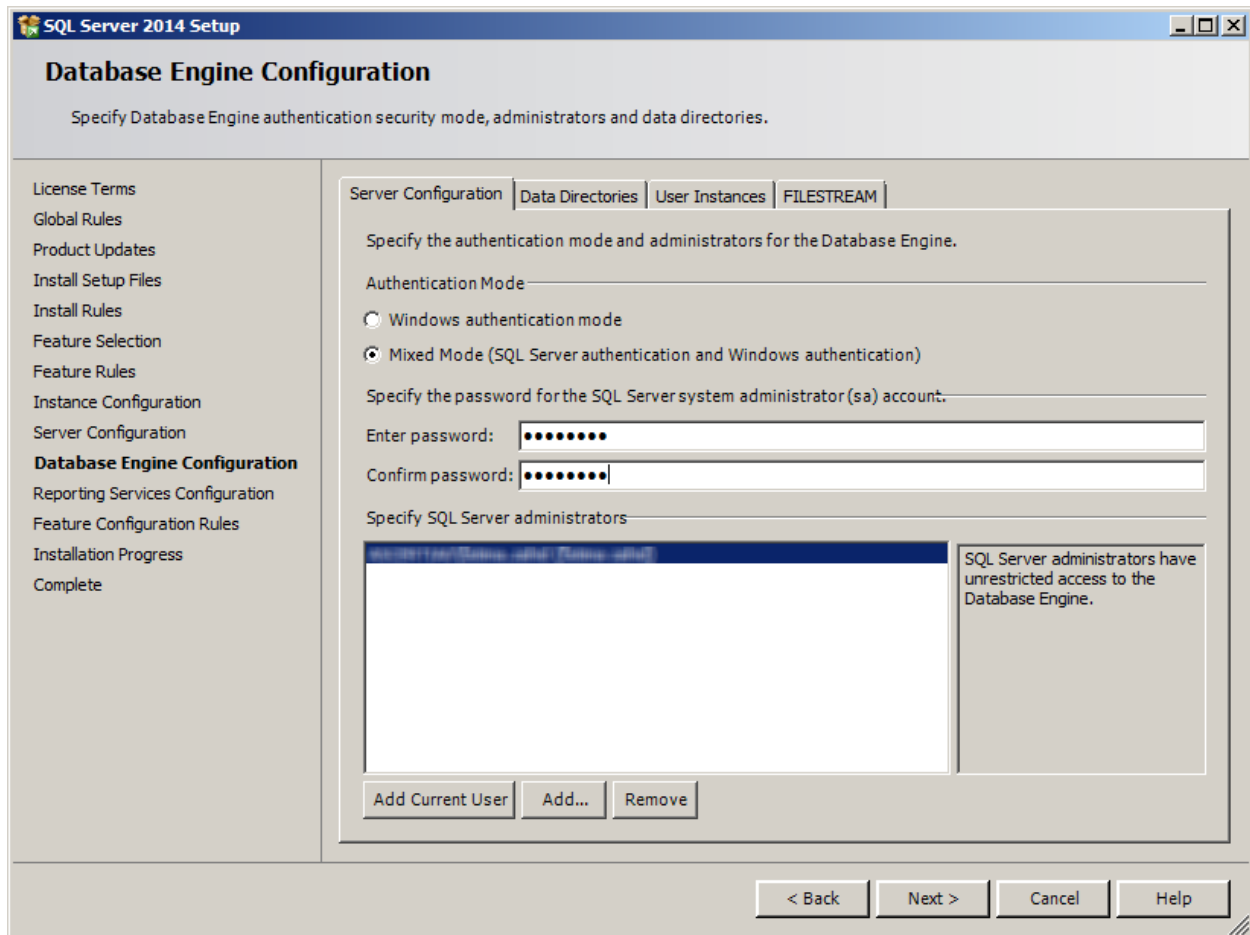
Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back Next > Cancel Help

10. The next step is the Server Configurations, click **Next** and provide details for the Database Engine. Make sure that SQL Server Database Engine's Account Name is set to "**NT Service\MSSQL\$SQLEXPRESS**" and SQL Server Browser's Startup Type to **Automatic**, then click **Next**.



11. The next step is to provide details for the Database Engine. On the **Authentication Mode** page select **"Mixed Mode Authentication"**. Enter and confirm a strong **"sa"** logon password (remember this well it will be needed in the future). Click **Next**.



12. The next screen gives an option of whether or not to provide error reports to Microsoft or not. Make your selection and then click the **Next** button to continue.
13. When the installer completes, click **Close**.
14. Now follow the section [Database Configurations](#).

5 SQL Server 2012

5.1 System Requirements

The system should meet the following requirements prior to installation:

<ul style="list-style-type: none"> • .NET Framework 3.5 SP1 • Microsoft Windows Installer 4.5 or a later version (SQL Server will install this if necessary) • Windows PowerShell 2.0 • Internet Explorer 7 or a later version is required for Microsoft Management Console (MMC), SQL Server Data Tools (SSDT), the Report Designer component of Reporting Services, and HTML Help. • TCP/IP networking 	
RAM	Minimum: 512 MB Recommended: 2 GB or higher
Hard Disk space	10 GB free space
Processor (x64)	AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support Minimum: 1.4 GHz Recommended: 2.0 GHz or higher
Operating System	Windows Server 2008 R2 Windows Server 2008 SP2 Windows Vista SP2 Windows Server 2012 Windows 7 Windows 8.1 Windows Server 2012 R2

5.2 Install Enterprise Edition



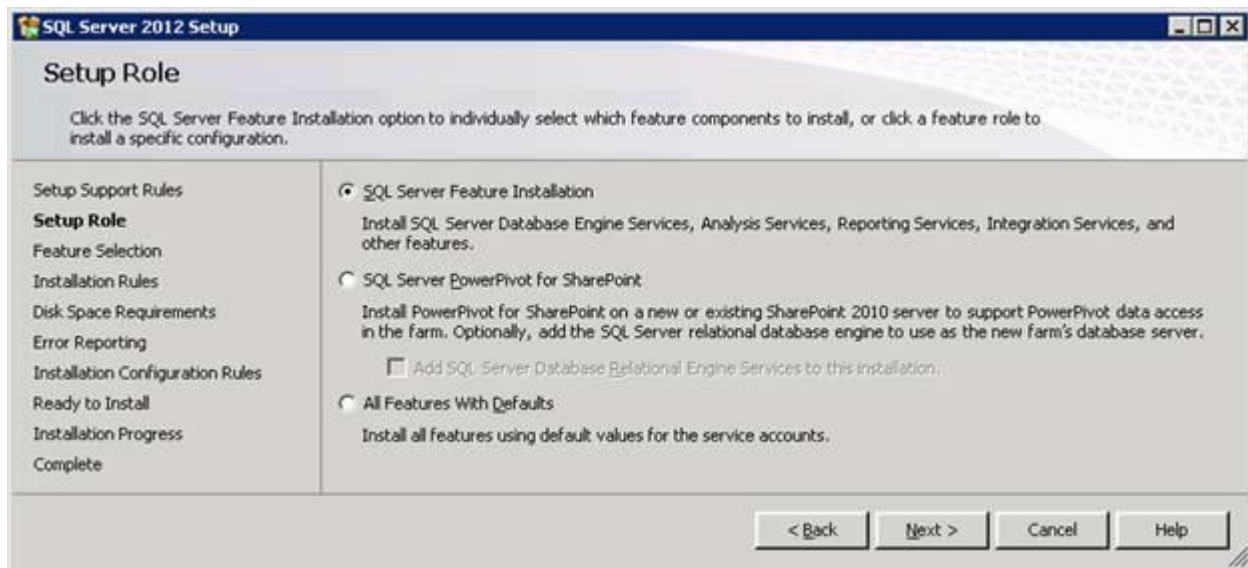
These are generic instructions designed to get you up and running in a minimum of time. Consult your database experts if you wish to apply other configurations or tighten the security roles and privileges.

The following steps summaries the installation process and highlight any specific configuration items required:

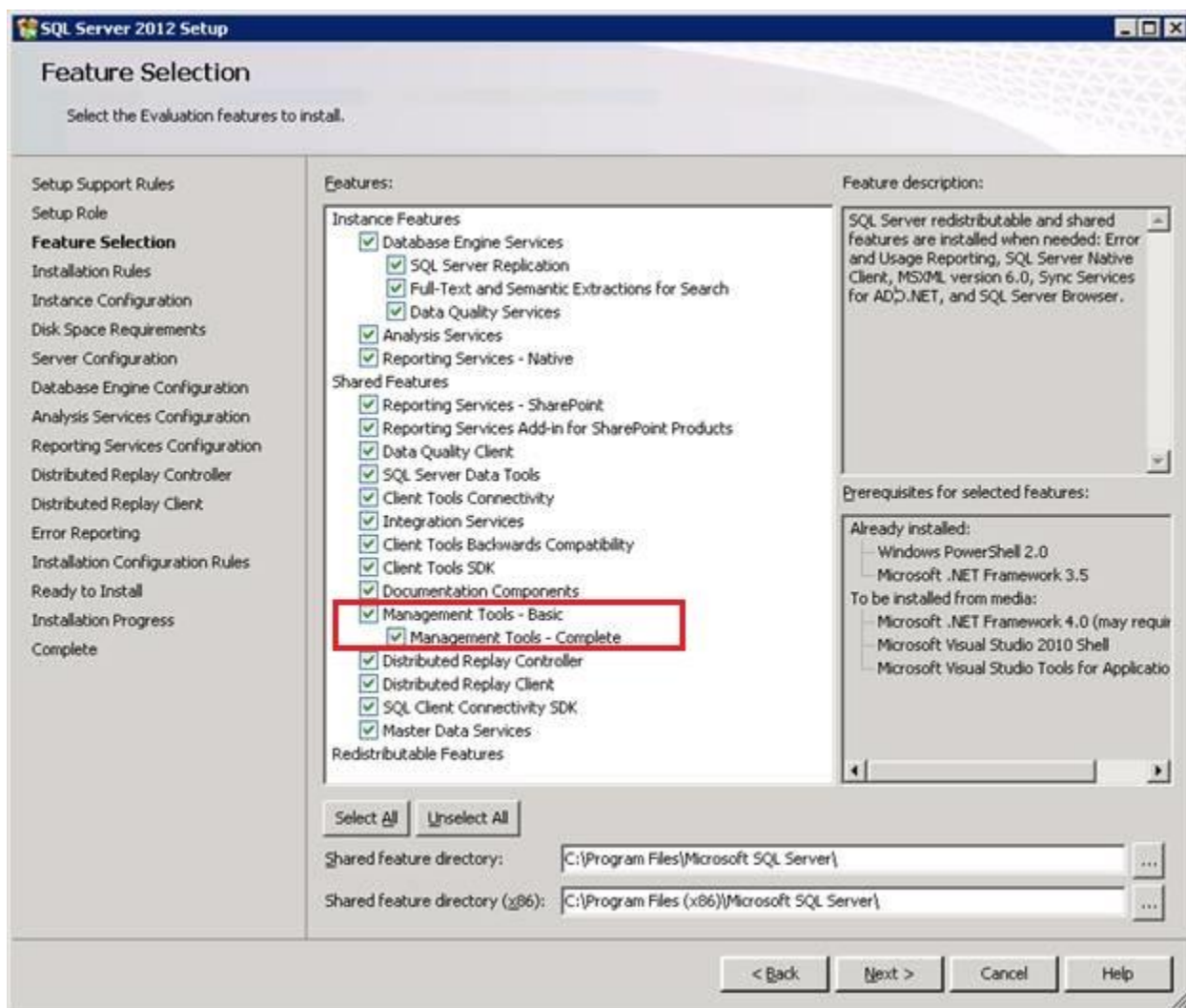
1. Run **Setup.exe** to launch the SQL Server installer.
2. The SQL Server 2012 Installation Center will run. Select the first option for a **“New SQL Server stand-alone installation or add features to an existing installation”**. Click the **OK** button to continue.



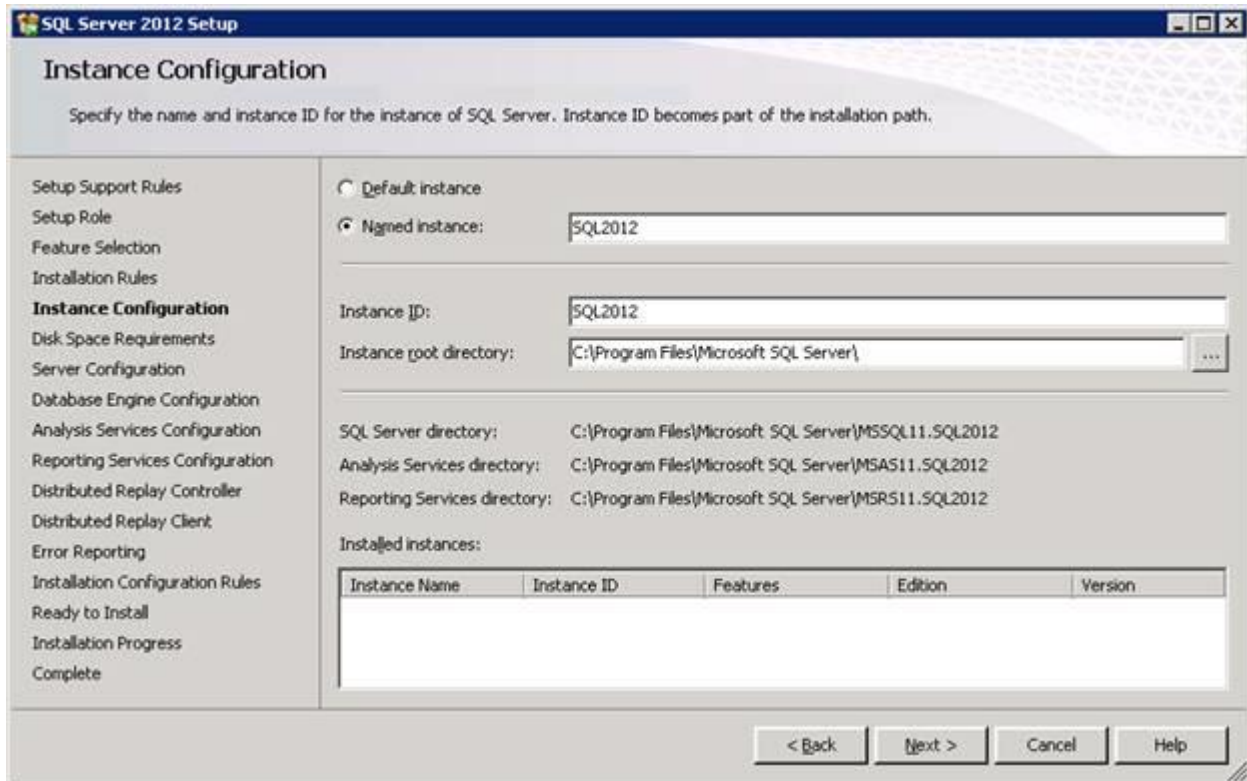
3. The next step is to provide the **license key** for the software and click the **Next** button to continue.
4. The next step is to review and accept the license terms. Read the license terms, then click on the **“I accept the license terms”** check box and click the **Next** button to continue. Once that process is completed click on the **Install** button on **Install Setup File**.
5. A screen showing the Setup Support Rules is shown, click the **Next** button to continue.
6. The next step is to select which SQL Server features to install. Select the **“SQL Server feature installation”** choice and click the **Next** button.



7. The Feature selection screen will appear next. **Click** on the check boxes to install some or all of the features you are interested in. To install SQL Server 2012 Management Studio, select “**Management Tools – Basic**” in the **Feature Selection** page. Then click the **Next** button.



8. In the Instance Configuration page, specify **MSSQLSERVER** in both the “**Named instance**” and “**Instance ID**” fields, this will force SQL Server 2014 Enterprise to install as the Default instance. If you want to install as a named instance, specify a name other than MSSQLSERVER.



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
Setup Role
Feature Selection
Installation Rules
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Analysis Services Configuration
Reporting Services Configuration
Distributed Replay Controller
Distributed Replay Client
Error Reporting
Installation Configuration Rules
Ready to Install
Installation Progress
Complete

☐ Default instance
☒ Named instance:

Instance ID: SQL2012

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

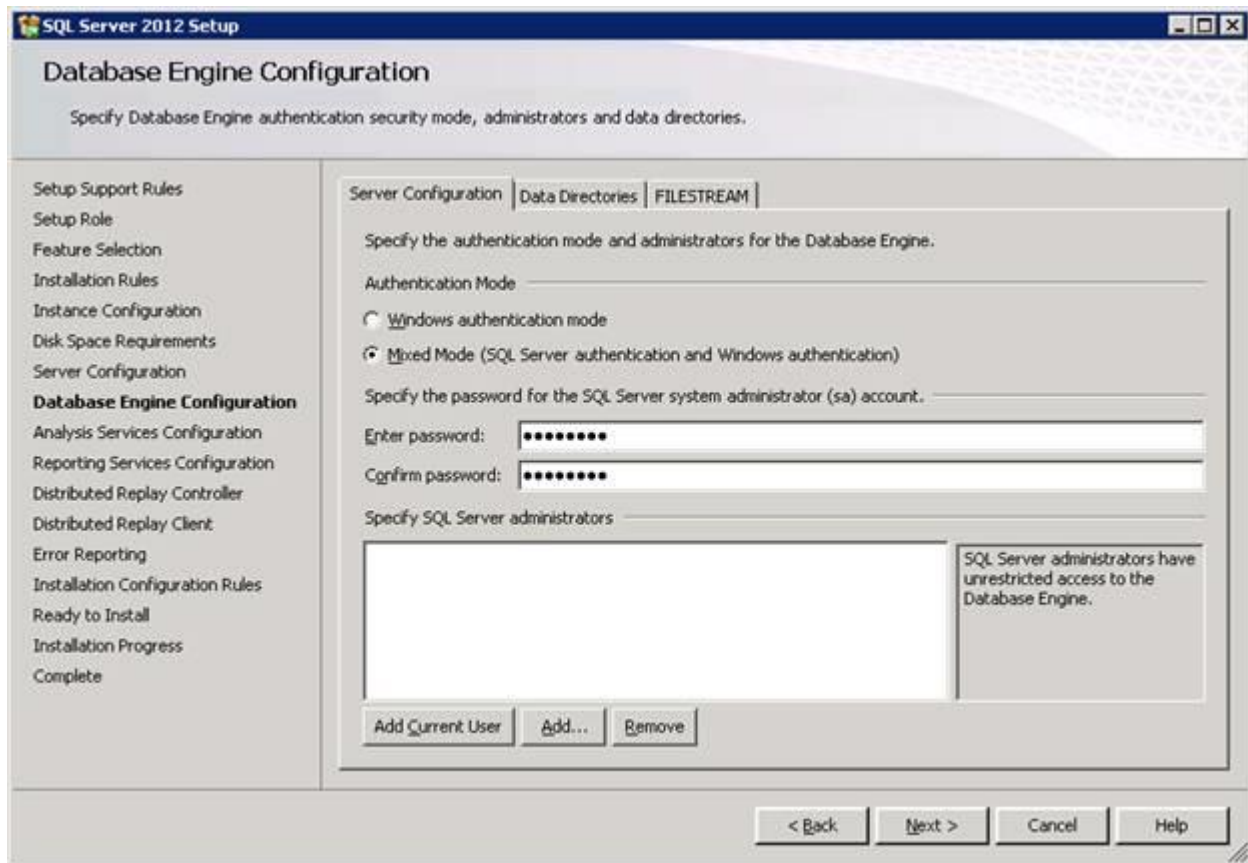
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL11.SQL2012
Analysis Services directory: C:\Program Files\Microsoft SQL Server\MSAS11.SQL2012
Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS11.SQL2012

Installed instances:

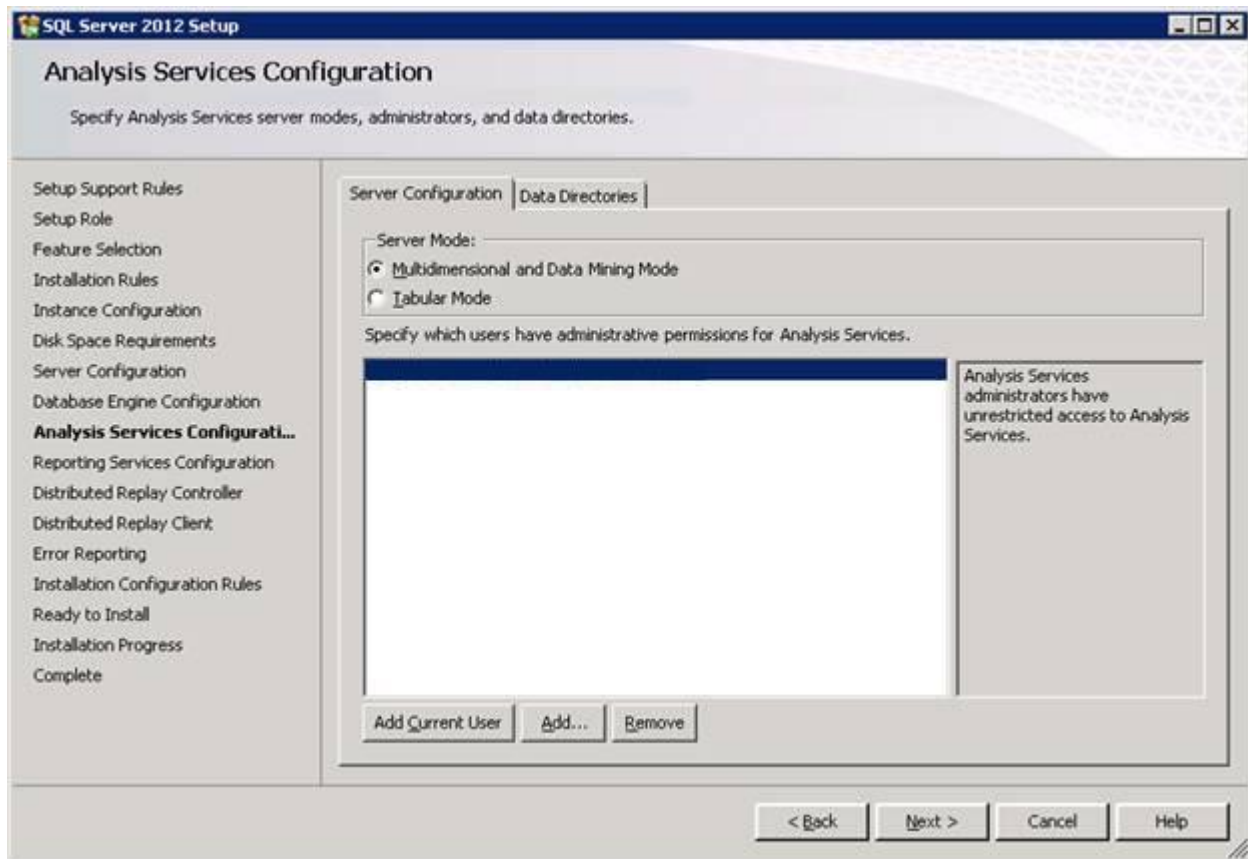
Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back Next > Cancel Help

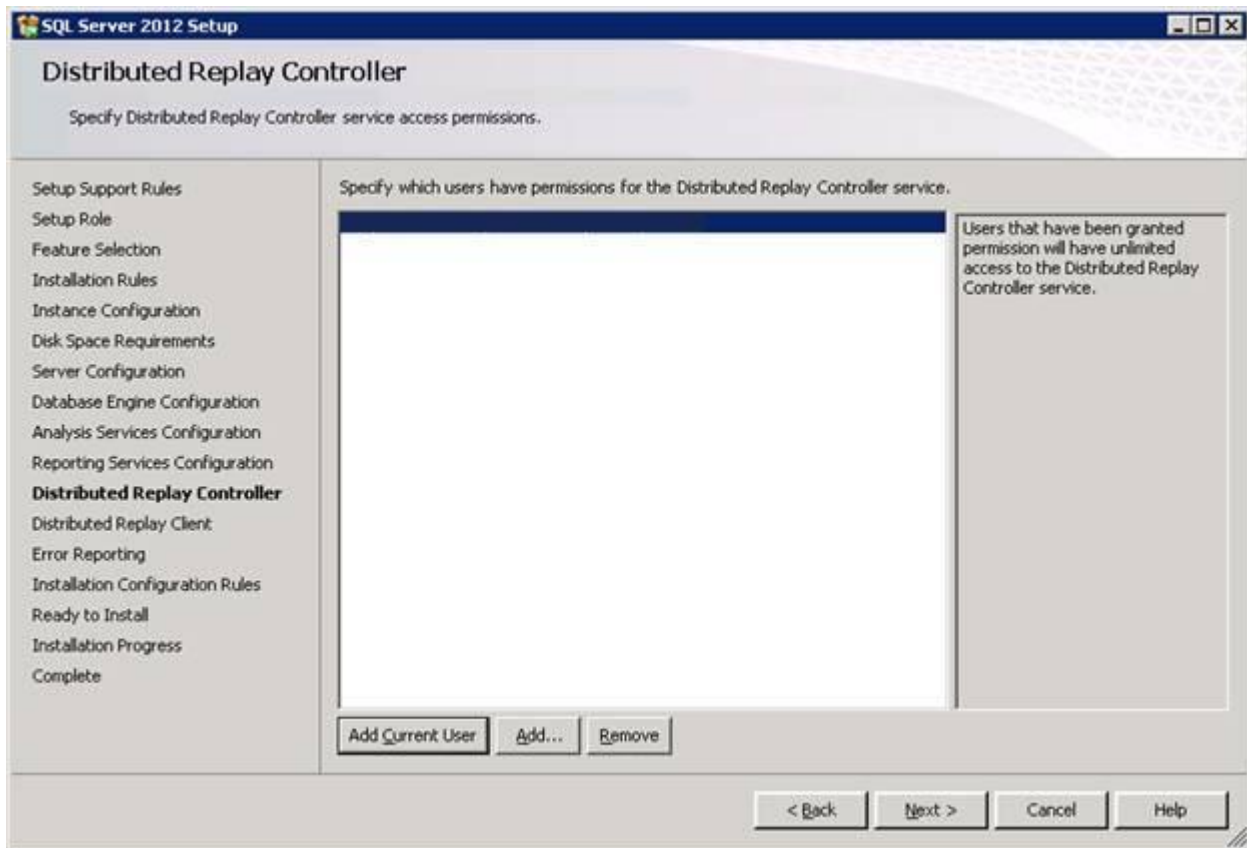
- The next step is the Server Configurations, click **Next** and provide details for the Database Engine. On the **Authentication Mode** page select **"Mixed Mode Authentication"**. Enter and confirm a strong **"sa"** logon password (remember this well it will be needed in the future). Click on **"Add Current User"** to specify SQL Server administrator.



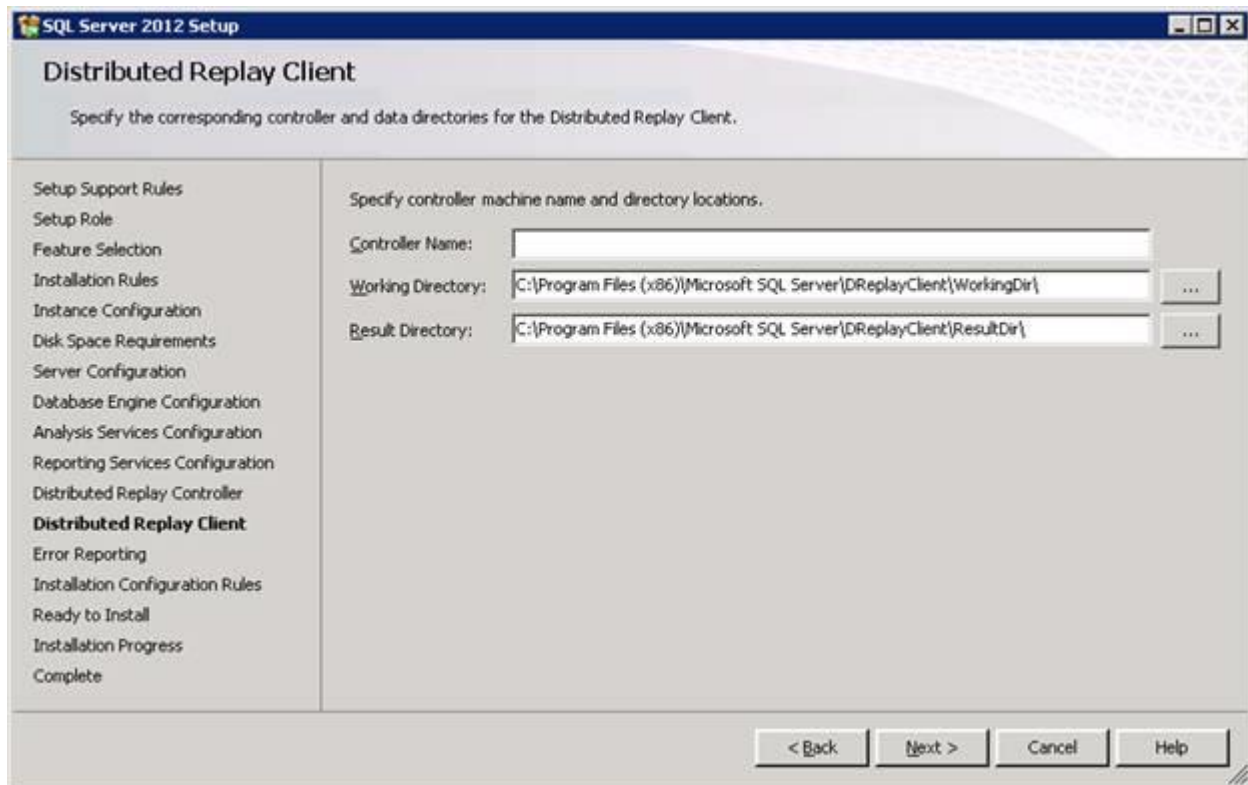
10. If you selected **SQL Server Analysis Services** to be included in the install, the next screen will prompt for the **Analysis Services Server Mode**. To use **regular SQL (relational) schemas** for Analysis services specify the **Tabular Mode**. To use the **Multidimensional data structures**, select **Multidimensional and Data Mining Mode**.



11. The next screen gives an option of whether or not to provide error reports to Microsoft or not. Make your selection and then click the **Next** button to continue.
12. If **Distributed Replay Services** were selected to be installed, the next screen will prompt for the Users and/or Groups who have the rights to use Distributed Replay Services. Provide these user and groups and then click the **Next** button to continue



13. If you selected the option to install the **Distributed Replay Client**, the next screen will prompt for a **Controller Name**, **Working Directory** and **Results Directory**. The default names should be sufficient for this install. Click the **Next** button to continue.



14. A final set of configuration rules are checked. Next page is **Ready to install**, click the **Install** button to start the installation and configuration process.
15. To complete the SQL Server Installation Wizard, click **Close**.
16. Now follow the section [Database Configurations](#).

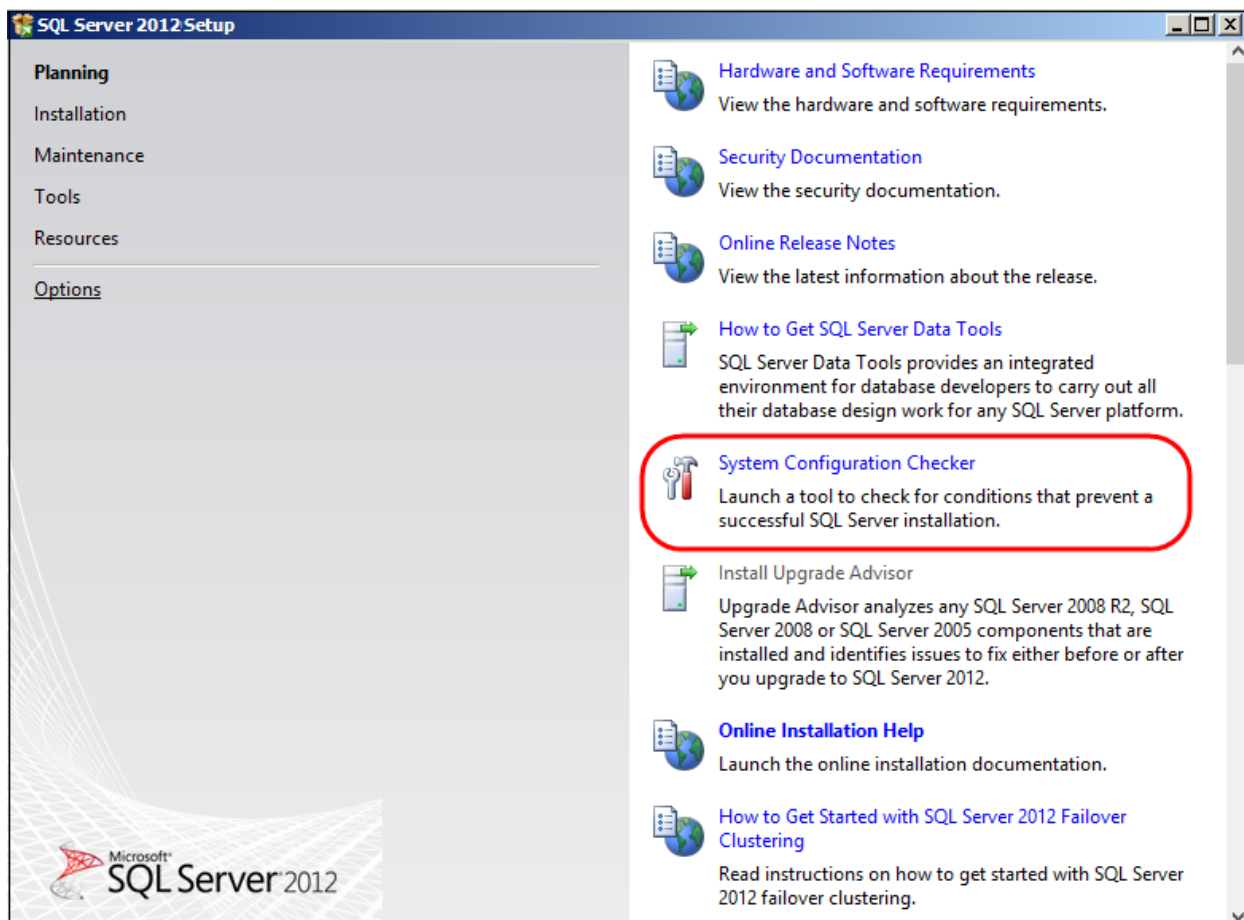
5.3 Install Express Edition



These are generic instructions designed to get you up and running in a minimum of time. Consult your database experts if you wish to apply other configurations or tighten the security roles and privileges.

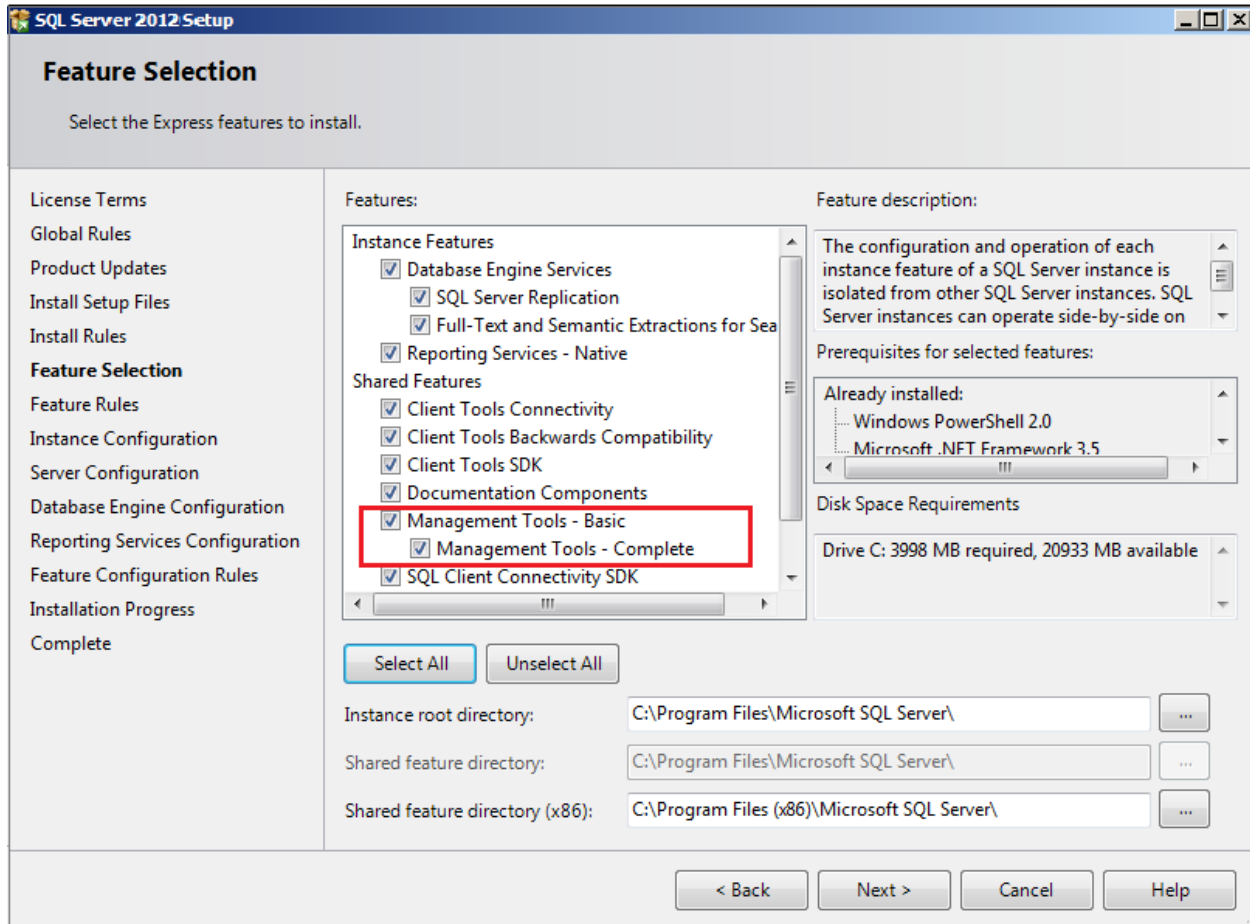
The following steps summaries the installation process and highlight any specific configuration items required:

1. Run **SQLEXPADV_x64_ENU-2012.EXE** to launch the SQL Server 2012 Express installer.
2. At the SQL Server Installation Centre click on **Planning** from the left side and choose "**System Configuration Checker**" to make sure you are ready to install SQL 2012 Express.

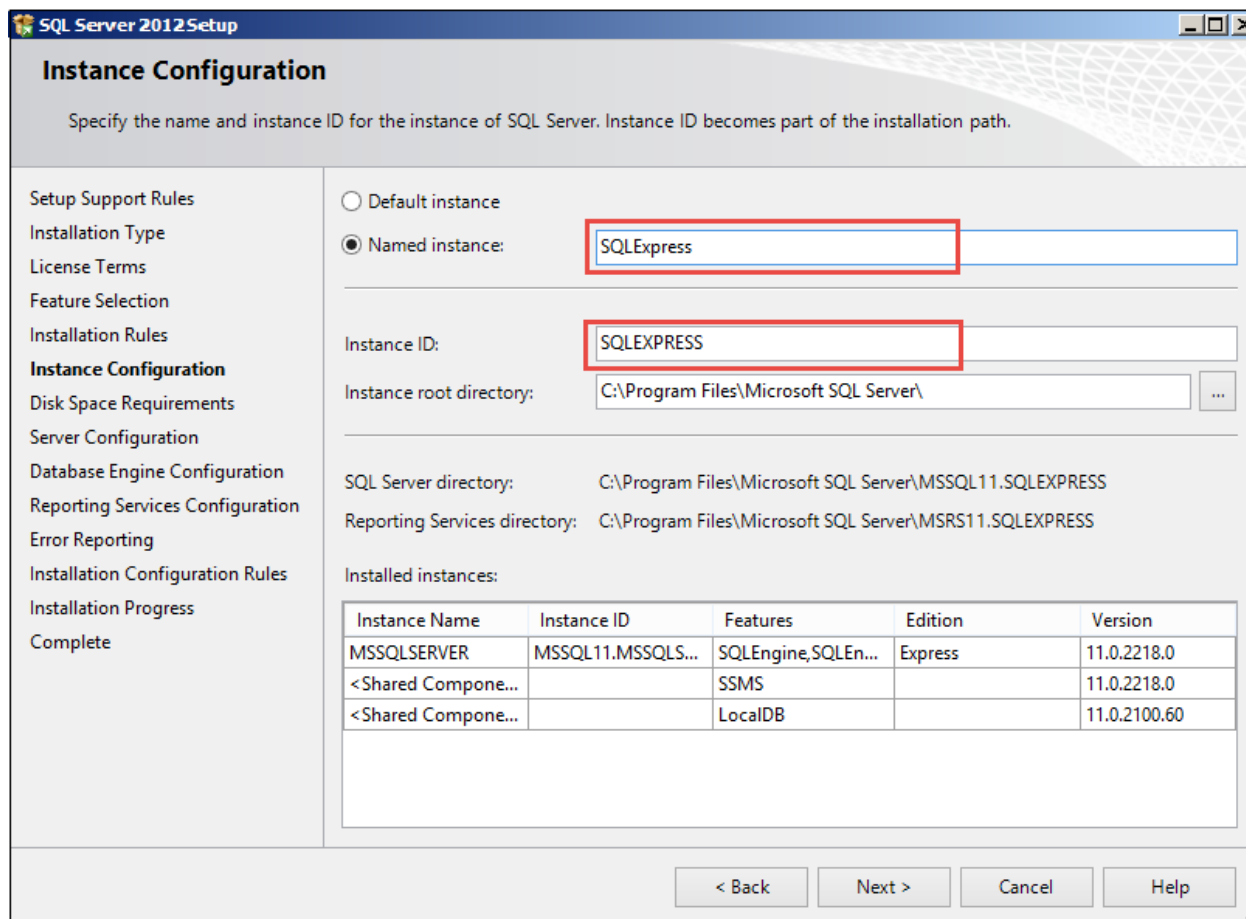


3. When the System Configuration Checker has validated that you are ready to install SQL 2012 Express, return to the SQL Server Installation Centre and click on the word "**Installation**" on the left menu.
4. Select the option "**New SQL Server stand-alone installation or add features to an existing installation**". A setup support check will run. Make sure there are no errors or warnings, press **Next**.
5. The "**SQL Server 2012**" Setup will now appear, select "**Perform a new installation of SQL Server 2012**" and click **Next**.
6. The next step is to review and accept the license terms. Read the license terms, then click on the "**I accept the license terms**" check box and click the **Next** button to continue.

7. The Feature selection screen will appear next. Click on the check boxes to install some or all of the features you are interested in. To install SQL Server 2012 Management Studio, select **“Management Tools – Basic”** in the **Feature Selection** page. Click on **Select All** and then click **Next** button.



8. In the Instance Configuration page, specify **SQLEXPRESS** in both the **“Named instance”** and **“Instance ID”** fields, this will force SQL Server 2012 Express to install as the Default instance. If you want to install as a named instance, specify a name other than SQLEXPRESS.



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
Installation Type
License Terms
Feature Selection
Installation Rules
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Error Reporting
Installation Configuration Rules
Installation Progress
Complete

☐ Default instance
☒ Named instance:

Instance ID:

Instance root directory: ...

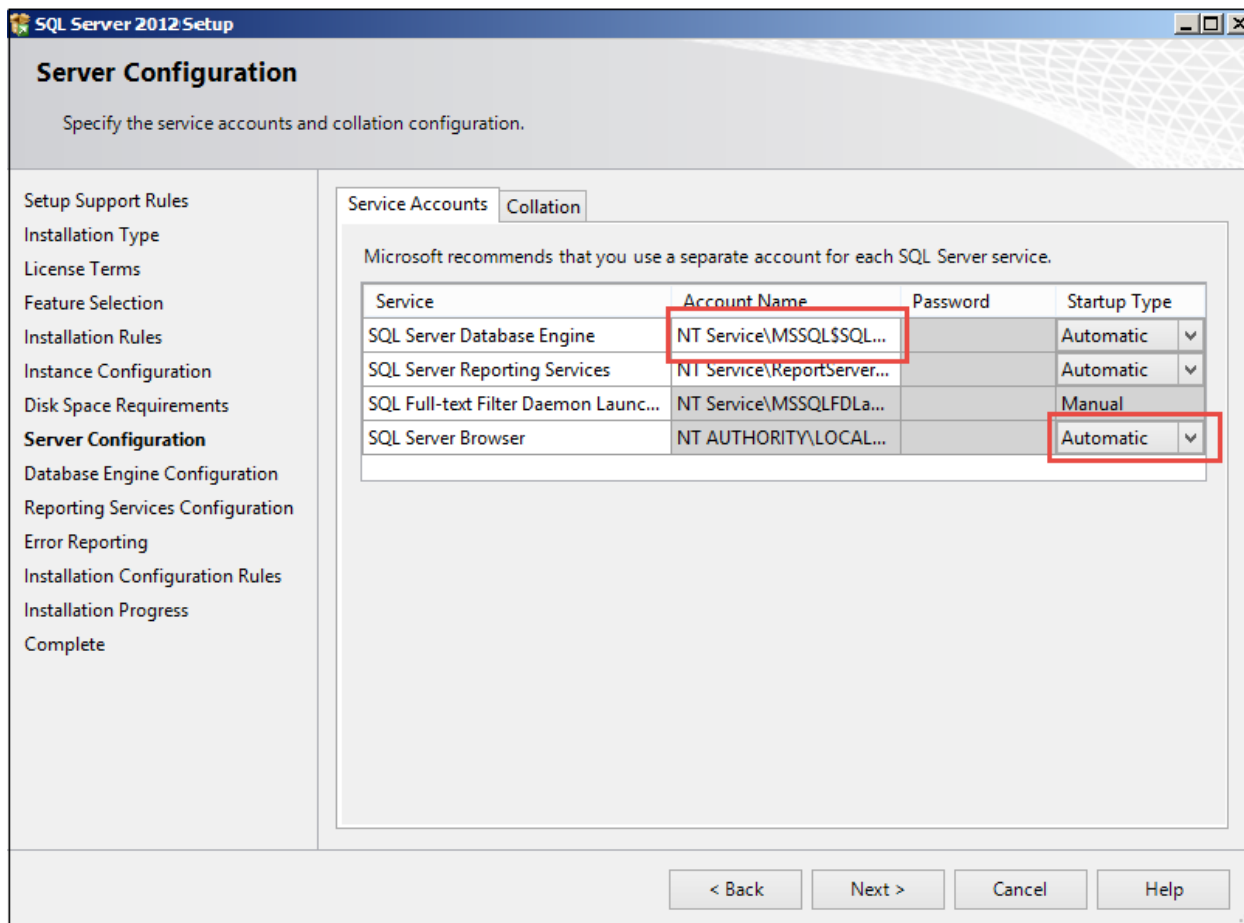
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL11.SQLEXPRESS
Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS11.SQLEXPRESS

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
MSSQLSERVER	MSSQL11.MSSQLS...	SQLEngine, SQLEn...	Express	11.0.2218.0
<Shared Compone...		SSMS		11.0.2218.0
<Shared Compone...		LocalDB		11.0.2100.60

< Back Next > Cancel Help

- The next step is the Server Configurations, click **Next** and provide details for the Database Engine. Make sure that SQL Server Database Engine's Account Name is set to "**NT Service\MSSQL\$SQLEXPRESS**" and SQL Server Browser's Startup Type to **Automatic**, then click **Next**.



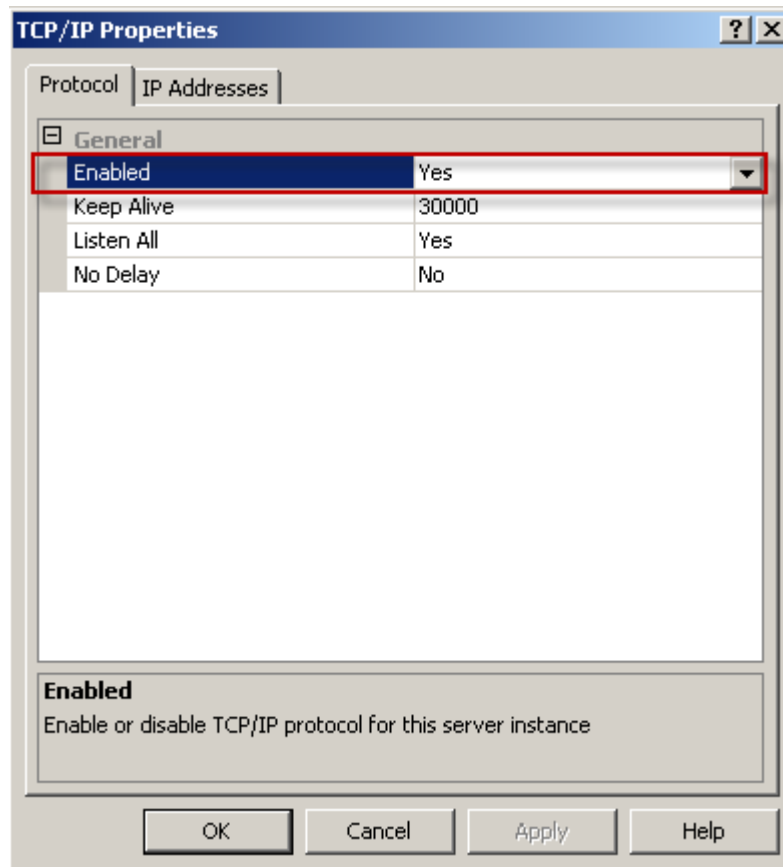
10. The next step is to provide details for the Database Engine, select “**Mixed Mode Authentication**”. Enter and confirm a strong “sa” logon password (remember this well it will be needed in the future). Click **Next**.
11. The next screen gives an option of whether or not to provide error reports to Microsoft or not. Make your selection and then click the **Next** button to continue.
12. When the installer completes, click **Close**.
13. Now follow the section [Database Configurations](#).

6 Database Configurations

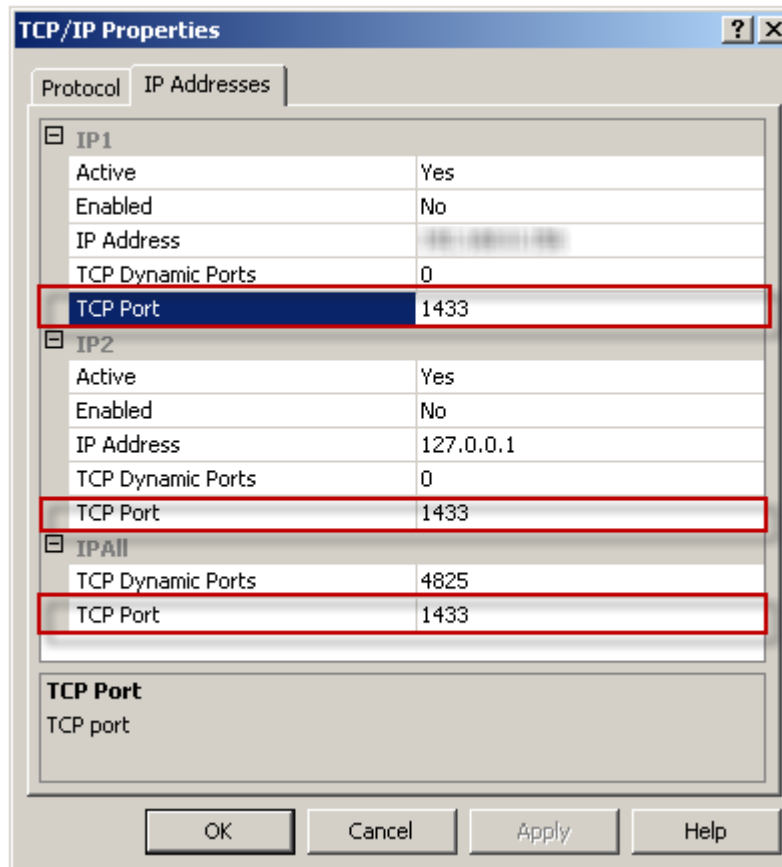
6.1 Enable TCP/IP

Once SQL Server is installed these Network options need to be enabled:

1. Go to Start Menu > Programs > Microsoft SQL Server > SQL Server Configuration Manager
2. Expand SQL Server Network Configuration and select Protocols.
 - a. Enable TCP/IP. If you need Named Pipes, then you can enable them here as well.



- b. Ensure that TCP ports are set to 1433 for IP1, IP2 and IP All.



IP Address	Active	Enabled	TCP Dynamic Ports	TCP Port
127.0.0.1	Yes	No	0	1433
127.0.0.1	Yes	No	0	1433
127.0.0.1	Yes	No	0	1433

TCP Port
TCP port

3. Close the SQL Server Configuration Manager.



Ensure you type **1433** into the **TCP Port** and not TCP Dynamic Port Fields.



If you are installing SQL Server and ADSS Server on the same system, it is highly recommended to only enable IP address 127.0.0.1 for better security and use **127.0.0.1** or the **"localhost"** URL in your ADSS Server database configuration.

6.2 Configuring Windows Firewall for Database Access

If you have software firewall installed on your server, you will need to add exceptions for the SQL Server. The principal steps to allow access are:

1. Configure the Database Engine to use a specific TCP/IP port. The default instance of the Database Engine uses port 1433, but that can be changed.
2. Configure the firewall to allow access to that port for authorized users or computers.



Opening ports in your firewall can leave your server exposed to malicious attacks. Make sure that you understand firewall systems before you open ports. For more information, see [Security Considerations for a SQL Server Installation](#).

The following procedures configure the Windows Firewall by using the Windows Firewall with Advanced Security Microsoft Management Console (MMC) snap-in. The Windows Firewall with Advanced Security only configures the current profile. For more information about the Windows Firewall with Advanced Security, see [Configure the Windows Firewall to Allow SQL Server Access](#)

To open a port in the Windows firewall for TCP access:

1. On the **Start** menu, click **Run**, type **WF.msc**, and then click **OK**.
2. In the **Windows Firewall with Advanced Security**, in the left pane, right-click **Inbound Rules**, and then click **New Rule** in the action pane.
3. In the **Rule Type** dialog box, select **Port**, and then click **Next**.
4. In the **Protocol and Ports** dialog box, select **TCP**. Select **Specific local ports**, and then type the port number of the instance of the Database Engine, such as **1433** for the default instance. Click **Next**.
5. In the **Action** dialog box, select **Allow the connection**, and then click **Next**.
6. In the **Profile** dialog box, select any profiles that describe the computer connection environment when you want to connect to the Database Engine, and then click **Next**.
7. In the **Name** dialog box, type a name and description for this rule, and then click **Finish**.

To open access to SQL Server when using dynamic ports:

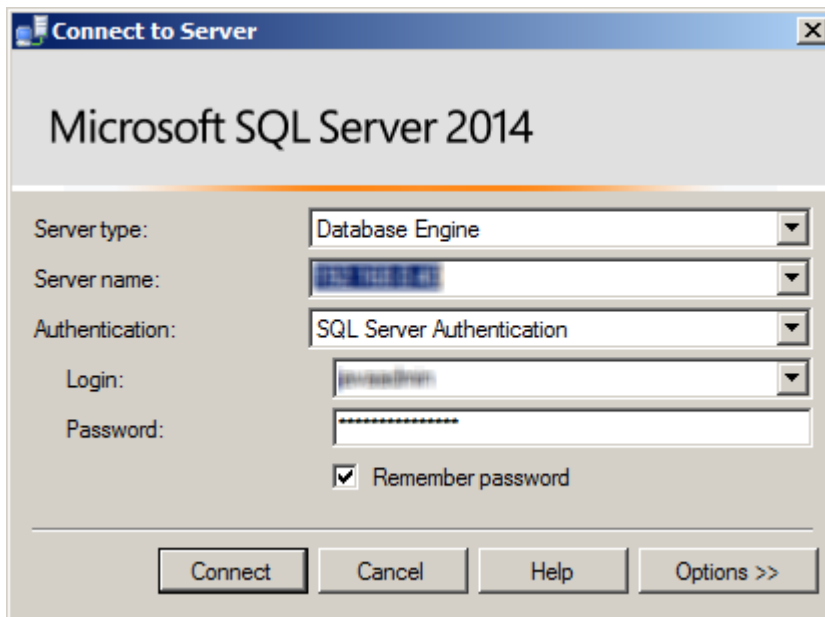
1. On the **Start** menu, click **Run**, type **WF.msc**, and then click **OK**.
2. In the **Windows Firewall with Advanced Security**, in the left pane, right-click **Inbound Rules**, and then click **New Rule** in the action pane.
3. In the **Rule Type** dialog box, select **Program**, and then click **Next**.
4. In the **Program** dialog box, select **This program path**. Click **Browse**, and navigate to the instance of SQL Server that you want to access through the firewall, and then click **Open**. By default, SQL Server is at:
 - SQL Server 2014
C:\Program Files\Microsoft SQL Server\MSSQL12.MSSQLSERVER\MSSQL\Binn\Sqllservr.exe
 - SQL Server 2012
C:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER\MSSQL\Binn\Sqllservr.exe

- SQL Server 2008
C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\Binn\Sqllservr.exe
 - SQL Server 2005
C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Binn\Sqllservr.exe
5. Click **Next**.
 6. In the **Action** dialog box, select **Allow the connection**, and then click **Next**.
 7. In the **Profile** dialog box, select any profiles that describe the computer connection environment when you want to connect to the Database Engine, and then click **Next**.
 8. In the **Name** dialog box, type a name and description for this rule, and then click **Finish**.

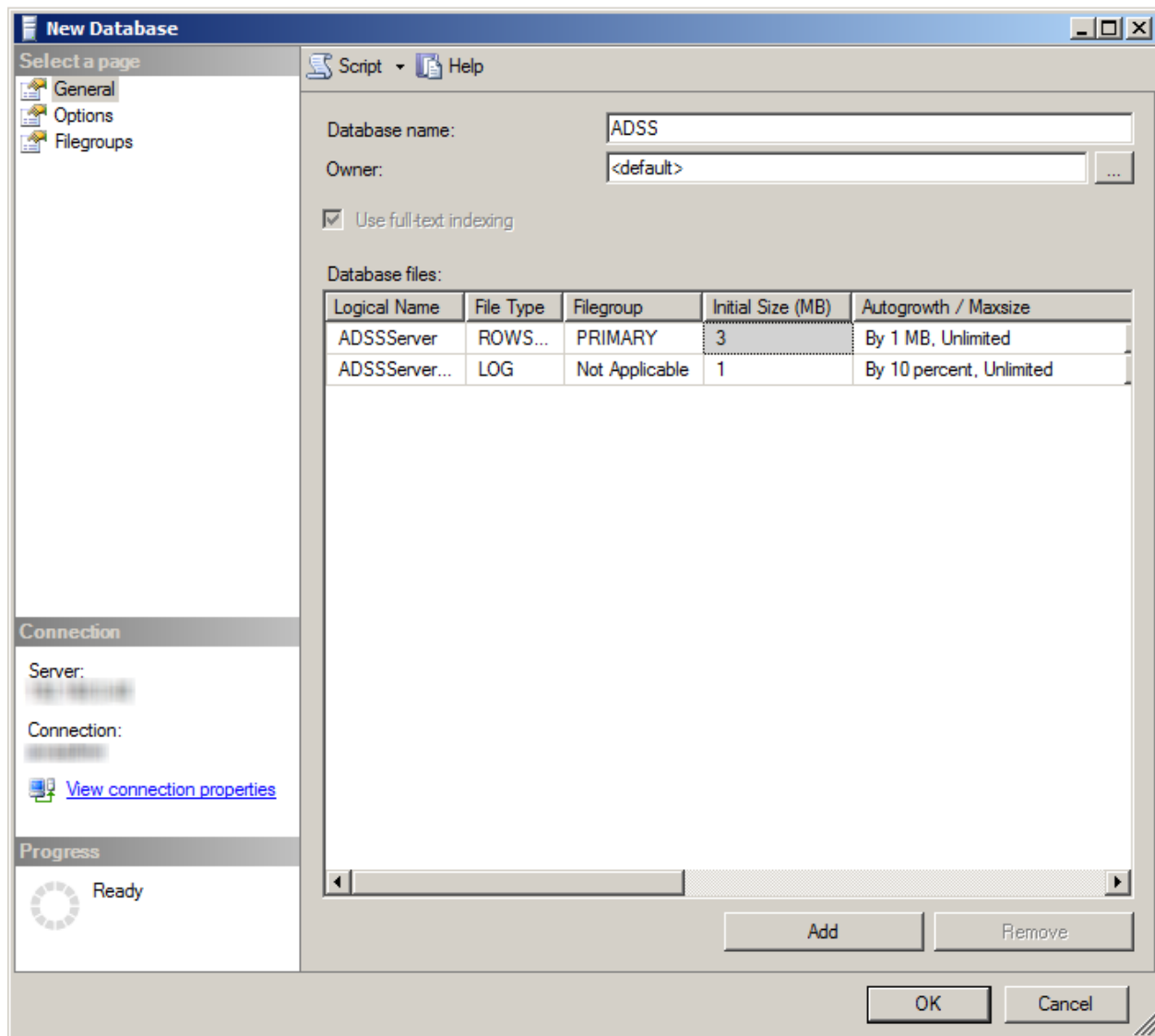
6.3 Creating ADSS Server Database

To create a database for the ADSS Server follow these steps.

1. Click Start-> Programs -> Microsoft SQL server -> SQL Server Management Studio
2. In server name type the name of the machine
3. In Authentication Choose **SQL Server Authentication**.
4. In user name type the username you have created or "sa" if you wish and the relevant password.
5. Now click **Connect**.



6. In the left panel where the machine name or the Database server name is shown, expand this and click on **Databases** and right click to **create new Database**. A new Database window will appear. In the database name textbox type **ADSS (or another name of your choice)** and in the owner Box click on the [...] button to select other than default user for this database.



7. Click **Ok** to create new database, you have created a database called **ADSS** for ADSS Server to use.

6.4 Setting up the ADSS Server Database User account

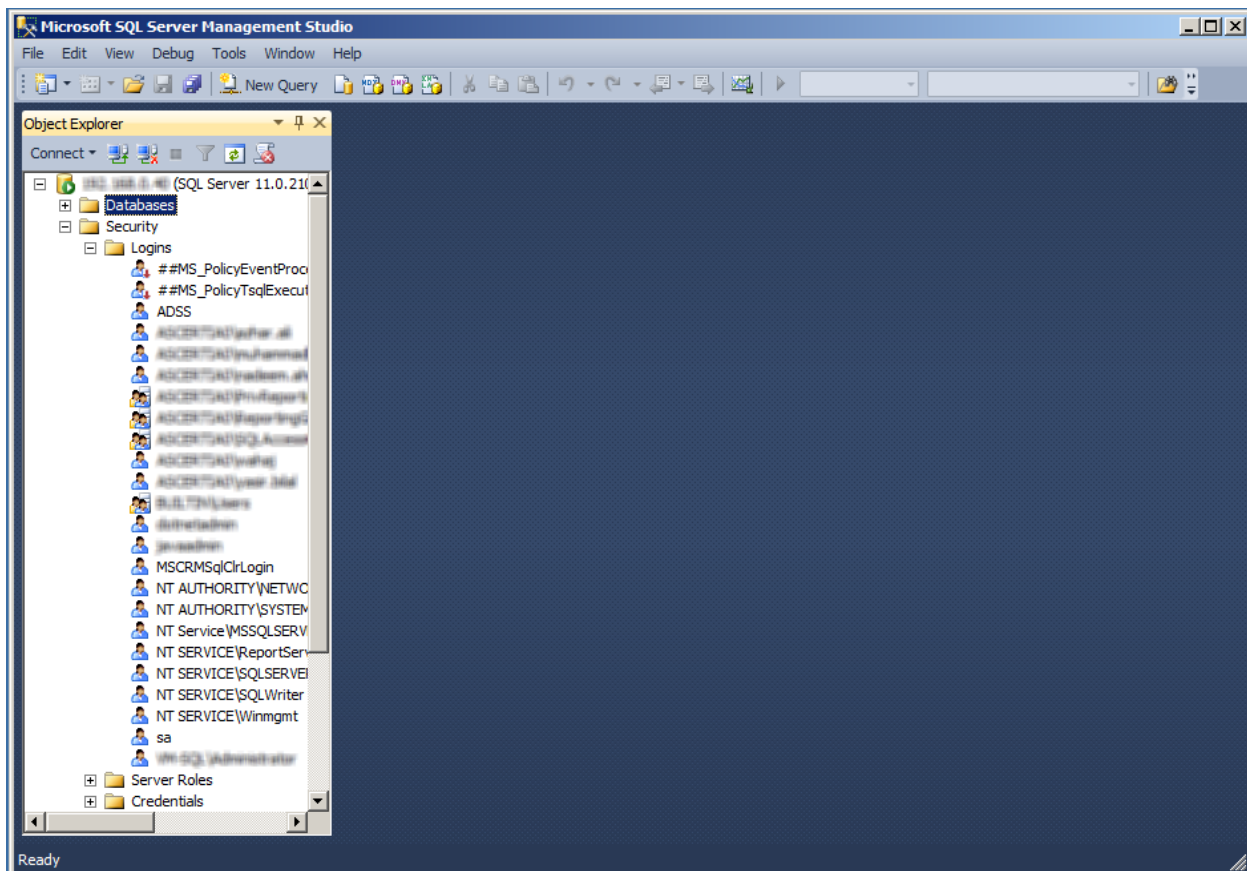
This section describes how to create a user account. An account is required to be able to connect ADSS Server to the database and it is not good practice to use the “sa” account.

When creating a user account name ensure that it obeys the following restrictions:

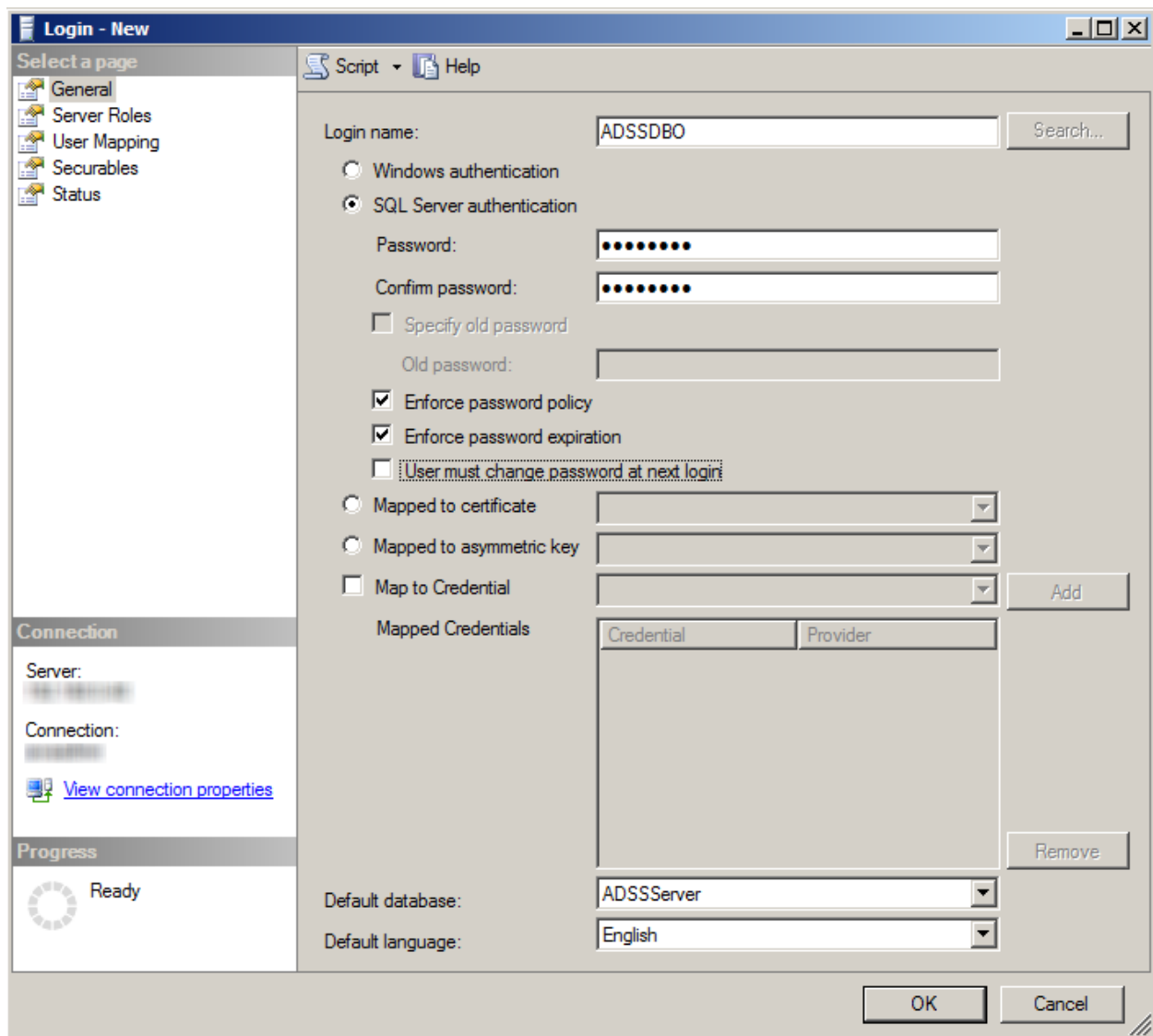
1. Do not use names longer than 30 characters
2. Do not use spaces, hyphens or periods
3. Do not start the name with a number

To create the account in SQL Express, follow these steps:

1. Run Start/Programs/Microsoft SQLServer/ SQL Server Management Studio
2. In the server name textbox type the Name/IP of machine and in the Authentication tab choose **SQL Server Authentication**, type the user name and password accordingly and click on **Connect**.



3. In the left panel where the machine name or Database Server name is shown expand it, click on **Security** and then right click to create new user.
4. A new User window will appear. In Login Name type **ADSSDBO** or the database user name you wish to use and choose the SQL Server Authentication option and allocate a strong password and also remember to select **English** as the default language (THIS IS VERY IMPORTANT – the system will not work if another database language option is selected).



Login - New

Select a page: General, Server Roles, User Mapping, Securables, Status

Script Help

Login name: Search...

☐ Windows authentication

☒ SQL Server authentication

Password:

Confirm password:

☐ Specify old password

Old password:

☒ Enforce password policy

☒ Enforce password expiration

☐ User must change password at next login

☐ Mapped to certificate

☐ Mapped to asymmetric key

☐ Map to Credential Add

Mapped Credentials

Credential	Provider
------------	----------

Remove

Default database:

Default language:

OK Cancel

Connection

Server:

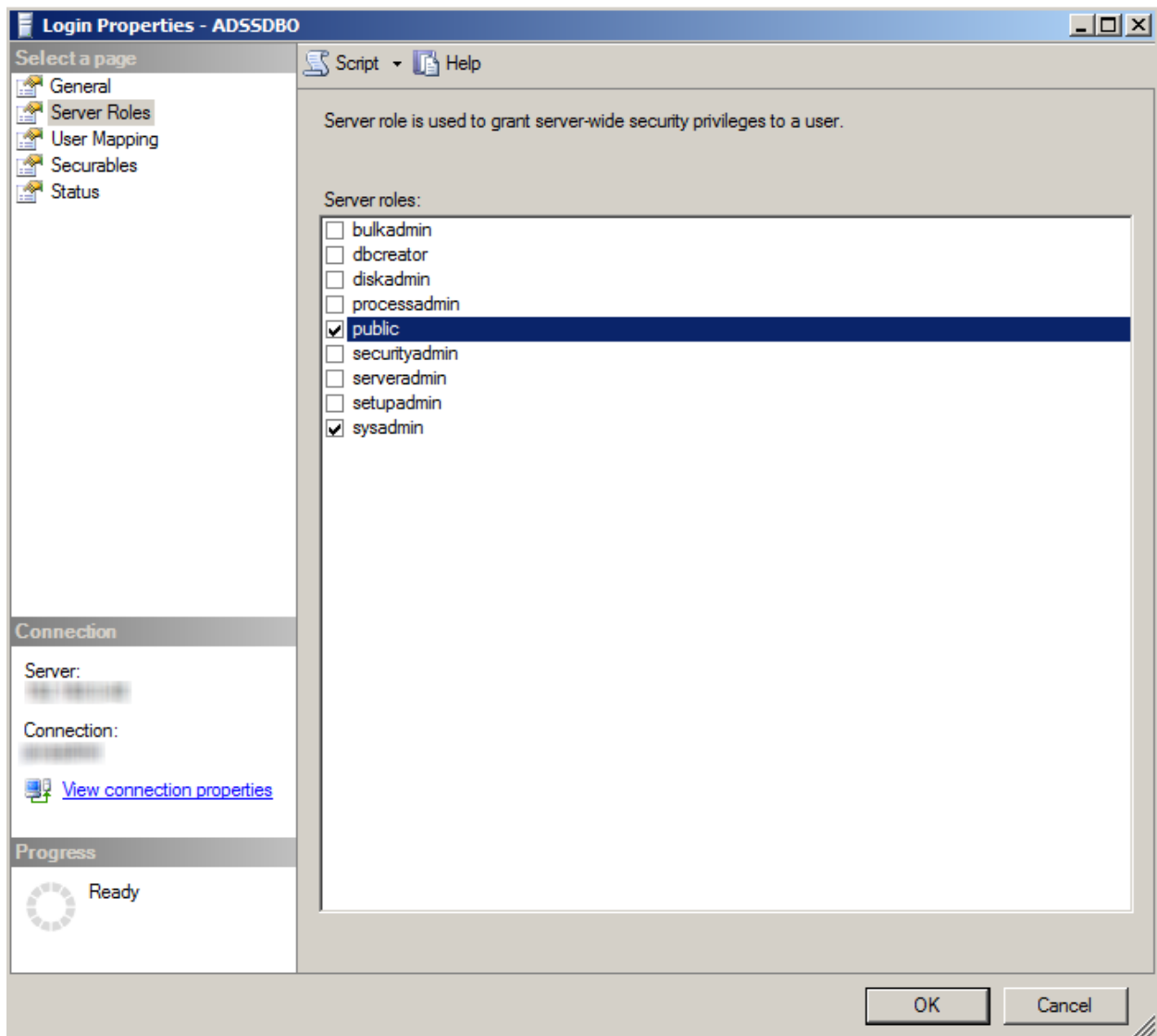
Connection:

[View connection properties](#)

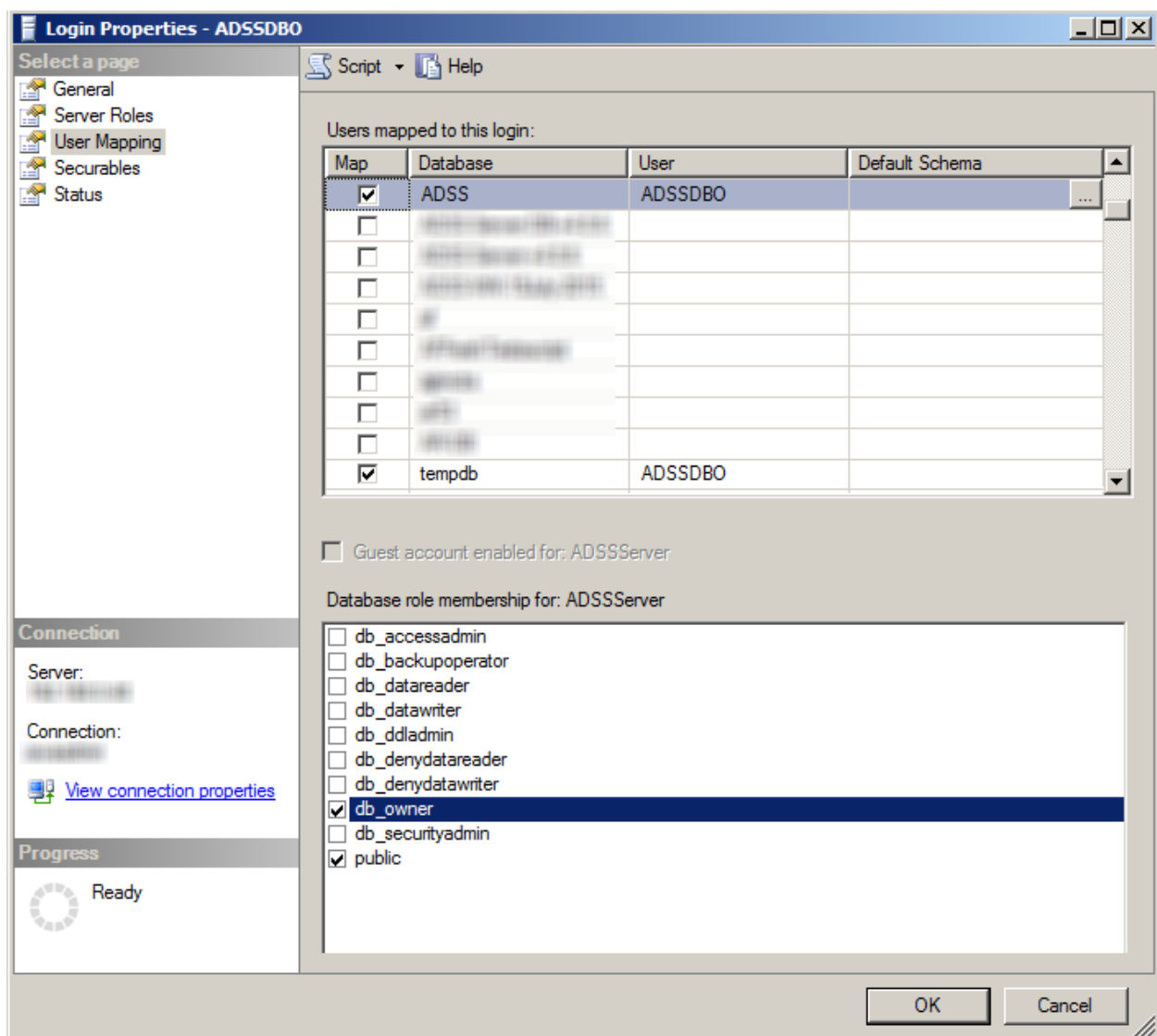
Progress

Ready

5. In Default Database enter **ADSS** or another name of your choice.
6. Click on Server Roles and give the user a role as a **sysadmin** for ease.



7. Click on User Mapping and then Click **ADSS** and **Tempdb** and then click **Ok** to create user.



8. You have now created a user for the ADSS Server database.

7 Knowledge base Articles

Ascertia has maintained a set of online FAQs for customer ease. You can follow these link for more details:

- <https://ascertia.force.com/partners/s/article/Configuring-SQL-Server-to-use-correct-auto-increment-for-identity-columns>
- <https://ascertia.force.com/partners/s/article/How-to-change-the-ADSS-Server-database-authentication-scheme-from-SQL-authentication-to-Windows-authentication-and-vice-versa>

*** End of document ***