

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:

- .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 R2 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.
- 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.



髋 SQL Server 2016 Setup			- 0	×			
Feature Selection							
Select the Enterprise features to	install.						
Global Rules Product Updates	Features:	^	Feature description:	^			
Install Setup Files	SQL Services	1 :e)	instance feature of a SQL Server instance is isolated from other SQL Server instances. So Server instances can operate side-by-side o	QL n ∀			
Installation Type Product Key	✓ Full-Text and Semanti ✓ Data Quality Services	c Extractions for Sea	Prerequisites for selected features:				
License Terms Feature Selection	PolyBase Query Service	e for External Data	Windows PowerShell 3.0 or higher Oracle SF Java Runtime Environment Versio Solution Disk Space Requirements				
Feature Rules Instance Configuration	Reporting Services - Native Shared Features R Server (Standalone)	/e					
PolyBase Configuration Server Configuration	Reporting Services - Share Reporting Services Add-ir	ePoint n for SharePoint Proc ❤	Drive C: 7692 MB required, 7006 MB available				
Database Engine Configuration Analysis Services Configuration	Select All	>		~			
Reporting Services Configuration Distributed Replay Controller	Instance root directory:	C:\Program Files\Mic	rosoft SQL Server\				
Distributed Replay Client Consent to install Microsoft R	Shared feature directory:	C:\Program Files\Mic	rosoft SQL Server\				
Feature Configuration Rules	Shared feature directory (x86):	C:\Program Files (x86)	36)\Microsoft SQL Server\				
			< Back Next > Cano	el			

7. 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								_		Х
Instance Configuration	ı									
Specify the name and instance	Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.									
Global Rules	Default instance									
Product Updates Install Setup Files	O Named instance:		MSSQLSERVE	R						
Install Rules										
Product Key License Terms	Instance ID:		MSSQLSERVER							
Feature Selection										
Feature Rules	SQL Server directory:		C:\Program Files\Microsoft SQL Server\MSSQL13.MSSQLSERVER							
Instance Configuration	Analysis Services directory:		C:\Program Files\Microsoft SQL Server\MSAS13.MSSQLSERVER							
PolyBase Configuration	Reporting Services dire	Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS13.MSSQLSE					3.MSSQLSE	RVER		
Server Configuration	last Und Sector and									
Database Engine Configuration	installed instances:									
Analysis Services Configuration	Instance Name	Instar	nce ID	Features		Edition		Vers	ion	_
Reporting Services Configuration	<shared compone<="" td=""><td></td><td></td><td>SSMS, Adv_SS</td><td>SMS</td><td></td><td></td><td>13.0.</td><td>16106.4</td><td></td></shared>			SSMS, Adv_SS	SMS			13.0.	16106.4	
Distributed Replay Controller										
Distributed Replay Client										
Consent to install Microsoft R										
Feature Configuration Rules										
Ready to Install										
					< Ba	ck	Next >		Cance	I

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



🏗 SQL Server 2016 Setup		- 🗆 X
Database Engine Config Specify Database Engine authent	juration tication security mode, administrators, data directories and TempDB settings.	
Global Rules Product Updates Install Setup Files Install Rules 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 Controller Distributed Replay Client Consent to install Microsoft R Feature Configuration Rules Ready to Install	Server Configuration Data Directories TempDB FILESTREAM Specify the authentication mode and administrators for the Database Engle Authentication Mode O Windows authentication mode Image: Configuration of the SQL Server authentication and Windows authentication) Specify the password for the SQL Server system administrator (sa) account Enter password: Image: Confirm password: Specify SQL Server administrators Specify SQL Server administrators	t. SQL Server administrators have unrestricted access to the Database Engine.
	< Back	Next > Cancel

- 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.



髋 SQL Server 2016 Setup				_		×	
Distributed Replay Clie	ent						
Specify the corresponding controller and data directories for the Distributed Replay Client.							
Global Rules Product Updates Install Setup Files Install Rules 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	Specify controller ma Controller Name: Working Directory: Result Directory:	achine name and directory locations LocalController C:\Program Files (x86)\Microsoft S C:\Program Files (x86)\Microsoft S	s. SQL Server\DReplay(Client\WorkingDir\ Client\ResultDir\			
Ready to Install			< Back	Next >	Cance	I	

- 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.

🏗 SQL Server Installation Center		– 🗆 X
<u>Planning</u> Installation Maintenance	F	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2016 in a non-clustered environment or to add features to an existing SQL Server 2016 instance.
Tools Resources Options		Install SQL Server Management Tools Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.
	K	Install SQL Server Data Tools Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.
		Upgrade from a previous version of SQL Server Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2016.
Microsoft" SQL Server" 2016		

- 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			- 🗆 X	
Feature Selection Select the Express features to in	stall.			
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-Databas Full-Text and Semanti PolyBase Query Servic Reporting Services - Nation Shared Features Client Tools Connectivity Client Tools Backwards C Client Tools Backwards C Client Tools SDK Documentation Compon SQL Client Connectivity S Client Connectivity S Select All Unselect All Instance root directory: Shared feature directory (x86):	n se) c Extractions for Sea se for External Data ve ompatibility ents DK C:\Program Files\Mid C:\Program Files\Mid C:\Program Files\Mid	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 V Disk Space Requirements Drive C: 5556 MB required, 19840 MB available	
			< Back Next > Cancel]

8. 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	Default instance Named instance:		MSSQLSERVER					
Install Setup Files Install Rules Feature Selection	Instance ID:		MSSQLSERVE	R				
Feature Rules Instance Configuration PolyBase Configuration Server Configuration Database Engine Configuration	SQL Server directory: Reporting Services di Installed instances:	irectory:	C:\Program F C:\Program F	iles\Microsof iles\Microsof	ft SQL Server\MSSC ft SQL Server\MSRS	L13.MSSQLSEF	RVER /ER	
Reporting Services Configuration Consent to install Microsoft R Feature Configuration Rules Installation Progress Complete	Instance Name	Instar	nce ID	Features	Edition		Version	
					< Back	Next >	Cano	el

- 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**.



髋 SQL Server 2016 Setup						_		\times
Database Engine Config Specify Database Engine authen	juration	administrators, data	a directorie	es and TempDB	settings.			
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	Server Configuration Specify the authenti Authentication Mod Windows authenti Mixed Mode (SQ) Specify the password Enter password: Confirm password: Specify SQL Server a Add Current User	Data Directories cation mode and a e tication mode J Server authentication d for the SQL Server dministrators	TempDB dministrat tion and W r system a move	User Instances ors for the Data Vindows authen dministrator (sa	FILESTREAN base Engine. tication)) account	QL Server adr ave unrestrict o the Databas	ninistrato ted acces e Engine.	DITS S
				< Bac	:k I	Vext >	Cance	el

- 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.

髕 SQL Server Installation Center		- 0	\times
Planning Installation	ŧ	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2016 in a non-clustered environment or to add	^
Maintenance		features to an existing SQL Server 2016 instance.	
Tools		Install SQL Server Management Tools	
Resources	X.	Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell	
Advanced		provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.	
Options	K	Install SQL Server Data Tools Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.	
	ŧ	New SQL Server failover cluster installation Launch a wizard to install a single-node SQL Server 2016 failover cluster.	
	ŗĨ	Add node to a SQL Server failover cluster Launch a wizard to add a node to an existing SQL Server 2016 failover cluster.	
		Upgrade from a previous version of SQL Server Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2016.	
	ŧ	New R Server (Standalone) installation Launch a wizard to install R Server (Standalone) on a Windows machine. This is typically used by data scientists as a standalone analysis server or as a SQL Server R Services client.	
Microsoft" SQL Server" 2016			~

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:

		-
	RELEASE 16.3 Microsoft SQL Server Management Studio	
Package Pro	ogress	
Microsoft R	eport Viewer for SQL Server 2016	
Overall Pro	aracc	
	Cancel	

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:

- .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.

🍀 SQL Server Installation Center	
Planning Installation Maintenance Tools	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2014 in a non-clustered environment or to add features to an existing SQL Server 2014 instance.
Resources Advanced	New SQL Server failover cluster installation Launch a wizard to install a single-node SQL Server 2014 failover cluster.
Options	Add node to a SQL Server failover cluster Launch a wizard to add a node to an existing SQL Server 2014 failover cluster.
	Upgrade from SQL Server 2005, SQL Server 2008, SQL Server 2008 R2 or SQL Server 2012 Launch a wizard to upgrade SQL Server 2005, SQL Server 2008, SQL Server 2008 R2 or SQL Server 2012 to SQL Server 2014.
Microsoft SQL Server 2014	

- 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.
- 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.



🚼 SQL Server 2014 Setup

Feature Selection

Select the Evaluation features to install.

Product Key	Features:	Feature description:
License Terms	Instance Features	The configuration and operation of each instance
Global Rules	✓ Database Engine Services	feature of a SQL Server instance is isolated from other
Product Updates	SQL Server Replication	SQL Server instances. SQL Server instances can
Install Setup Files	Full-Text and Semantic Extractions for Searc Data Quality Services	operate side-by-side on the same computer.
Install Rules		
Setup Role	Reporting Services - Native	Prerequisites for selected features:
Feature Selection	Shared Features	Already installed:
Feature Pules	Reporting Services - SharePoint	···· Windows PowerShell 2.0
	Reporting Services Add-in for SharePoint Produc	Microsoft .NET Framework 3.5
Instance Configuration	✓ Data Quality Client	Microsoft Visual Studio 2010 Redistributables
Server Configuration	✓ Client Tools Connectivity	Microsoft Visual Studio 2010 Shell
Database Engine Configuration	✓ Integration Services	Disk Space Requirements
Analysis Services Configuration	Client Tools Backwards Compatibility	
Reporting Services Configuration	Management Tools - Basic	Drive C: 6028 MB required, 19501 MB available
Distributed Peplay Controller	Management Tools - Complete	
Distributed Replay Client		
Distributed Replay Client		
Feature Configuration Rules		
Ready to Install	Select All Unselect All	
Installation Progress	Instance root directory: C:\Program Files\Microsof	ft SQL Server\
Complete		
	Shared feature directory: C: Program Files Wicrosof	ft SQL Server\
	Shared feature directory (x86): C:\Program Files (x86)\Wi	icrosoft SOL Server\
		< Back Next Cancel Help
	_	Calcel Help

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	O Default instance				
License Terms	C Named instance:	MSSOLSER VER			
Global Rules		1			
Product Updates					
Install Setup Files	Instance ID:	MSSQLSERVER			
Install Rules		<u>,</u>			
Setup Role					
Feature Selection	SQL Server directory:	C:\Program Files\	Microsoft SQL Server\M	ISSQL12.MSSQLSERVER	
Feature Rules	Analysis Services direct	ory: C:\Program Files\	Microsoft SQL Server\M	ISAS12.MSSQLSERVER	
Instance Configuration	Reporting Services dire	ctory: C:\Program Files\	Microsoft SQL Server\M	ISRS12.MSSQLSERVER	
Server Configuration	Installed instances:				
Database Engine Configuration					
Analysis Services Configuration	Instance Name	Instance ID	Features	Edition	Version
Reporting Services Configuration					
Distributed Replay Controller					
Distributed Replay Client					
Feature Configuration Rules					
Ready to Install					
Installation Progress					
Complete					
			< Back	Next > Cance	Help
			- Duck	Conce	

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.



- 🗆 🗵

體 SQL Server 2014 Setup

Server Configuration

Specify the service accounts and collation configuration.

roduct Key	Service Accounts Collation			
icense Terms	Microsoft recommende that you use a c	an arata account for each 501	Convergentice	
ilobal Rules	Microsoft recommends that you use a s	separate account for each SQL	Server service.	
roduct Updates	Service	Account Name	Password	Startup Type
nstall Setup Files	SQL Server Agent	NT Service \SQLSERVERAG		Manual 💌
nstall Rules	SQL Server Database Engine	NT Service MSSQLSERVER		Automatic 💌
etup Role	SQL Server Analysis Services	NT Service MSSQLServerO		Automatic 💌
eature Selection	SQL Server Reporting Services	NT Service ReportServer		Automatic 💌
eature Rules	SQL Server Integration Services 12.0	NT Service MsDtsServer 120		Automatic 💌
nstance Configuration	SOL Server Distributed Replay Client	NT Service\SOL Server Dis		Manual 💌
erver Configuration	SQL Server Distributed Replay Contro	NT Service\SQL Server Dis		Manual 💌
atabase Engine Configuration	SQL Sull-text Eilter Daemen Launcher	NT Service MSSOLEDLaup		Manual
nalysis Services Configuration	SQL Puil-text Pitter Daemon Launcher	INT Service WISSQLPDLaum		Mariua
eporting Services Configuration	SQL Server Browser	NT AUTHORITY/LOCAL SE		Automatic
istributed Replay Controller				
istributed Replay Client				
eature Configuration Rules				
eady to Install				
stallation Progress				
omplete				
		< Back	Next > Ca	ncel Help

- 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



🎇 SQL Server 2014 Setup	
Distributed Replay Co	ntroller
Specify Distributed Replay Cont	roller service access permissions.
Product Key License Terms	Specify which users have permissions for the Distributed Replay Controller service.
Global Rules Product Updates Install Setup Files	access to the Distributed Replay Controller service.
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	
	Add Current User Add Remove
	< Back Next > Cancel Help

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.



🍀 SQL Server 2014 Setup

Distributed Replay Client

Specify the corresponding controller and data directories for the Distributed Replay Client.

Product Key License Terms	Specify controller m	achine name and direct	tory locations.					
Global Rules	Controller Name:	LocalController						
Product Updates	Working Directory:	C:\Program Files (x86) Microsoft SQL Se	rver\DRepla	yClient\Workir	ngDir\		.
Install Setup Files	Desult Diserteeu	Cul Brogram Filos (v26	Microsoft COL Fo	ruor\DDopla	vCliont\Rocult	+Die\		-
Install Rules	Result Directory:	C: Program Files (Xoo) Microsoft SQL Se	гуег ркера	yclientycesun	uur (
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								
			< B	Back	Next >	Cancel	Help	

- 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.



 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.

🍀 SQL Server 2014 Setup		
Feature Selection Select the Evaluation features to	install.	
Global Rules Product Updates Install Setup Files Install Rules Installation Type Product Key License Terms 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	Features: Reporting Services - Native Shared Features Reporting Services - SharePoint Reporting Services Add-in for SharePoint Produc Data Quality Client Client Tools Connectivity Integration Services Client Tools Backwards Compatibility Client Tools Backwards Compatibility Client Tools SDK Documentation Components Management Tools - Complete Management Tools - Complete Øistributed Replay Controller Distributed Replay Controller SQL Client Connectivity SDK Master Data Services Redistributable Features Master Data Services Select All Unselect All Instance root directory: C: Program Files Microsof Shared feature directory (x86): C: Program Files (x86) Microsof	Feature description: The configuration and operation of each instance feature of a SQL Server instances 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: Windows PowerShell 2.0 Microsoft NET Framework 3.5 Microsoft Visual Studio 2010 Redistributables Windows PowerShell 2.0 Windows PowerShell 2.0 Microsoft Visual Studio 2010 Redistributables Windrosoft Visual Studio 2010 Shell Disk Space Requirements Drive C: 4535 MB required, 15947 MB available Ift SQL Server\ microsoft SQL Server\
		< Back Next > Cancel Help

 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.



髂 SQL Server 2014 Setup					
Instance Configuration Specify the name and instance ID) for the instance of SQL S	erver. Instance ID becor	nes part of the installa	tion 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: Reporting Services dire Installed instances: Instance Name 	SQLExpress SQLEXPRESS C:\Program Files\ ctory: C:\Program Files\ Instance ID	Microsoft SQL Server Microsoft SQL Server Features	MSSQL12.SQLEXPRESS MSRS12.SQLEXPRESS	Version
			< Back	Next > Cano	el 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**.



🍀 SQL Server 2014 Setup Server Configuration Specify the service accounts and collation configuration. License Terms Service Accounts Collation Global Rules Microsoft recommends that you use a separate account for each SQL Server service. Product Updates Install Setup Files Service Account Name Password Startup Type Install Rules SQL Server Database Engine NT Service MSSQL \$SQLEX... Automatic • Feature Selection Automatic NT Service ReportServer\$... SQL Server Reporting Services Ŧ Feature Rules SQL Full-text Filter Daemon Launcher NT Service MSSQLFDLaun... Manual Instance Configuration NT AUTHORITY/LOCAL SE ... SQL Server Browser Automatic Server Configuration Database Engine Configuration Reporting Services Configuration Feature Configuration Rules Installation Progress Complete < Back Next > Cancel Help

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**.

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🍀 SQL Server 2014 Setup	
Database Engine Confi Specify Database Engine authenti	guration cation security mode, administrators and data directories.
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	Server Configuration Data Directories User Instances FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Windows 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 Specify SQL Server administrators SQL Server administrators have unrestricted access to the Database Engine. Add Current User Add Remove
	< Back Next > Cancel Help

- 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:

- .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.
- 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.

🚼 SQL Server Installation Center		
Planning Installation Maintenance	ŧ	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2012 in a non-clustered environment or to add features to an existing SQL Server 2012 instance.
Resources Advanced	ار	New SQL Server failover cluster installation Launch a wizard to install a single-node SQL Server 2012 failover cluster.
Options	; îÎ	Add node to a SQL Server failover cluster Launch a wizard to add a node to an existing SQL Server 2012 failover cluster.
SQL Server 2012	1	Upgrade from SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2 Launch a wizard to upgrade SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2 to SQL Server 2012.

- 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.



SQL Server 2012 Setup	
Setup Role	
Click the SQL Server Feature I install a specific configuration.	installation option to individually select which feature components to install, or click a feature role to.
Setup Support Rules	€ SQL Server Feature Installation
Setup Role	Install SQL Server Database Engine Services, Analysis Services, Reporting Services, Integration Services, and other features.
Feature Selection Installation Rules	C SQL Server PowerPivot for SharePoint
Disk Space Requirements Error Reporting	Install PowerPivot for SharePoint on a new or existing SharePoint 2010 server to support PowerPivot data access in the farm. Optionally, add the SQL Server relational database engine to use as the new farm's database server.
Installation Configuration Rules	Add SQL Server Database Betational Engine Services to this installation.
Ready to Install	C All Features With Defaults
Installation Progress	Install all features using default values for the service accounts.
Complete	

 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.



SQL Server 2012 Setup - 🗆 × Feature Selection Select the Evaluation features to install. Features: Feature description: Setup Support Rules Setup Role Instance Features SQL Server redistributable and shared features are installed when needed: Error Feature Selection Database Engine Services and Usage Reporting, SQL Server Native SQL Server Replication Installation Rules Client, MSXML version 6.0, Sync Services Full-Text and Semantic Extractions for Search for ADD.NET, and SQL Server Browser. Instance Configuration Data Quality Services **Disk Space Requirements** Analysis Services Reporting Services - Native Server Configuration Shared Features Database Engine Configuration Reporting Services - SharePoint Analysis Services Configuration Reporting Services Add-in for SharePoint Products **Reporting Services Configuration** Data Quality Client * **Distributed Replay Controller** SQL Server Data Tools Prerequisites for selected features: Client Tools Connectivity **Distributed Replay Client** Integration Services Already installed: Error Reporting Client Tools Backwards Compatibility Windows PowerShell 2.0 Installation Configuration Rules Client Tools SDK Microsoft .NET Framework 3.5 Documentation Components Ready to Install To be installed from media: Management Tools - Basic Installation Progress Microsoft .NET Framework 4.0 (may requir Management Tools - Complete Microsoft Visual Studio 2010 Shell Complete Distributed Replay Controller Microsoft Visual Studio Tools for Applicatio Distributed Replay Client SQL Client Connectivity SDK Master Data Services Redistributable Features . Unselect All Select All C:\Program Files\Microsoft SQL Server\ Shared feature directory: Shared feature directory (x86): C:\Program Files (x86)\Microsoft SQL Server\ < Back Next > Cancel Help

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	DN ID for the instance of SQL Server.	Instance ID be	ecomes part of the insta	allation path.	
Setup Support Rules Setup Role Peature Selection	C Default instance R Ngmed instance:	5QL2012			
Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Analysis Services Configuration Reporting Services Configuration Distributed Replay Controller Distributed Replay Client	Instance ID: Instance goot directory:	SQL2012 [C:\Program Files\Microsoft SQL Server\			
	SQL Server directory: Analysis Services directory: Reporting Services directory: Installed instances:	C:\Program F C:\Program F C:\Program F	iles(Microsoft SQL Servi iles(Microsoft SQL Servi iles(Microsoft SQL Servi	#VM5SQL11.SQL2012 #VM5A511.SQL2012 #VM5R511.SQL2012	
Installation Configuration Rules Ready to Install Installation Progress Complete	Instance Name Inst	tance ID	Features	Edition	Version
			< <u>B</u> ack	Next >	Cancel Help

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.



SQL Server 2012 Setup				
Database Engine Confi Specify Database Engine authenti	iguration	dministrators and data directori	15.	
etup Support Rules etup Role eature Selection istallation Rules istance Configuration isk Space Requirements erver Configuration ratabase Engine Configuration nalysis Services Configuration eporting Services Configuration istributed Replay Controller istributed Replay Client	Server Configuration Specify the auther Authentication Mod	Data Directories FILESTRE Trication mode and administrato de entication mode QL Server authentication and V iord for the SQL Server system enticestore enticestore	WM rs for the Database Engin findows authentication) administrator (sa) account	æ.
Distributed Replay Client Error Reporting Installation Configuration Rules Ready to Install Installation Progress Complete	Add <u>C</u> urrent User	r <u>Add</u> <u>Remove</u>		SQL Server administrators have unrestricted access to the Database Engine.
	<u></u>		< <u>B</u> ack №	ext > Cancel Help

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**.



SQL Server 2012 Setup		_ 1
Analysis Services Conf Specify Analysis Services server in	iguration	
etup Support Rules etup Role eature Selection nstallation Rules nstance Configuration	Server Configuration Data Directories	-
Nisk Space Requirements ierver Configuration Natabase Engine Configuration Analysis Services Configuration Astributed Replay Controller Nistributed Replay Client Stributed Replay Client Stror Reporting Installation Configuration Rules Ready to Install Installation Progress Complete	Specify which users have administrative permissions for Analysi	Analysis Services administrators have unrestricted access to Analysis Services.
	Add <u>Current User</u> <u>A</u> dd <u>Bemove</u>	k Next > Cancel Help

- 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



SQL Server 2012 Setup				
Distributed Replay Co Specify Distributed Replay Control	ontroller oller service access per	missions.		
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	Specify which user	rs have permissions for the	Distributed Replay Controlle	r service. Users that have been granted permission will have unlimited access to the Distributed Replay Controller service.
	Add <u>C</u> urrent User	Add <u>R</u> emove	< Back	Next > Cancel Help

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.



🚼 SQL Server 2012 Setup			
Distributed Replay Cli Specify the corresponding control	ient aller and data directories f	for the Distributed Replay Client.	
Setup Support Rules Setup Role Peature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Analysis Services Configuration Reporting Services Configuration Distributed Replay Controller Distributed Replay Controller Distributed Replay Controller Distributed Replay Client Error Reporting Installation Configuration Rules Ready to Install Installation Progress Complete	Specify controller ma Gontroller Name: Working Directory: Result Directory:	achine name and directory locations. C:\Program Files (x86)\Microsoft SQL Server\DReplayClient\WorkingDir\ C:\Program Files (x86)\Microsoft SQL Server\DReplayClient\ResultDir\	
		< Back Next > Cancel	Help

- 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

0

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 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.

Hardware and Software Requirements View the hardware and software requirements.	Â
Security Documentation View the security documentation.	
Online Release Notes View the latest information about the release.	
How to Get SQL Server Data Tools SQL Server Data Tools provides an integrated environment for database developers to carry out all their database design work for any SQL Server platform.	
System Configuration Checker Launch a tool to check for conditions that prevent a successful SQL Server installation.)
Install Upgrade Advisor Upgrade Advisor analyzes any SQL Server 2008 R2, SQL Server 2008 or SQL Server 2005 components that are installed and identifies issues to fix either before or after you upgrade to SQL Server 2012.	
Online Installation Help Launch the online installation documentation.	
How to Get Started with SQL Server 2012 Failover Clustering Read instructions on how to get started with SQL Server	
	Image: Security Documentation View the hardware and software requirements. Image: Security Documentation View the security documentation. Image: Security Documentation about the release. Image: Security Documentation about the release. Image: Security Document for database developers to carry out all their database design work for any SQL Server platform. Image: System Configuration Checker Launch a tool to check for conditions that prevent a successful SQL Server installation. Image: Secure 2008 or SQL Server 2005 components that are installed and identifies issues to fix either before or after you upgrade to SQL Server 2012. Image: Online Installation Help Launch the online installation documentation. Image: Planch 2012 Failover Clustering Read instructions on how to get started with SQL Server 2012 failover clustering.

- 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.

 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.

🚼 SQL Server 2012/Setup			
Feature Selection Select the Express features to in	stall.		
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	Features: Instance Features Database Engine Services SQL Server Replication Full-Text and Semanti Reporting Services - Nation Shared Features Client Tools Connectivity Client Tools Backwards Co Client Tools Backwards Co Client Tools SDK Documentation Compon Management Tools - Basi SQL Client Connectivity S SQL Client Connectivity S SQL Client Connectivity S Select All Unselect All Instance root directory: Shared feature directory (x86):	c Extractions for Sea re ompatibility ents c Complete DK C:\Program Files\Mic C:\Program Files\Mic C:\Program Files\Mic	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 2.0 Microsoft .NFT Framework 3.5 Microsoft SQL Server\ trosoft SQL Serve
		< Back	Next > Cancel Help

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.



🍀 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 Installation Type	 Default instance Named instance: 	1	SQLExpress						
License Terms Feature Selection									
Installation Rules Instance Configuration	Instance ID:		SQLEXPRESS						
Disk Space Requirements Server Configuration	Instance root directory	/:	C:\Program Files\Microsoft SQL Server\						
Database Engine Configuration Reporting Services Configuration Error Reporting Installation Configuration Rules	SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL11.SQLEXPRESS Reporting Services directory: C:\Program Files\Microsoft SQL Server\MSRS11.SQLEXPRESS Installed instances: Installed instances:								
Installation Progress	Instance Name	Instan	ce ID	Features		Edition	1	Version	
Complete	MSSQLSERVER	MSSQL	11.MSSQLS	SQLEngine,S	QLEn	Express		11.0.2218.0	
	<shared compone<="" td=""><td></td><td></td><td>SSMS</td><td></td><td></td><td></td><td>11.0.2218.0</td><td></td></shared>			SSMS				11.0.2218.0	
	<shared compone<="" td=""><td></td><td></td><td>LOCAIDB</td><td></td><td></td><td></td><td>11.0.2100.60</td><td></td></shared>			LOCAIDB				11.0.2100.60	
				< Back	Next	t >	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.



SQL Server 2012 Setup					_
Server Configuration					
Specify the service accounts and	l collation configuration.				
Setup Support Rules Installation Type	Service Accounts Collation	a separate account for each	SOL Server serv	ice.	
License Terms Feature Selection	Service	Account Name	Password	Startup Typ	e
Installation Rules	SQL Server Database Engine	NT Service\MSSQL\$SQL		Automatic	V
Instance Configuration	SQL Server Reporting Services	NI Service\ReportServer	1	Automatic	~
Disk Space Requirements	SQL Full-text Filter Daemon Launc	NT Service\MSSQLFDLa		Manual	
Server Configuration	SQL Server Browser	NT AUTHORITY\LOCAL		Automatic	~
Reporting Services Configuration Error Reporting Installation Configuration Rules Installation Progress Complete					
		< Back Next	> Can	cel He	elp

- 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.

TCP/IP Properties	<u>? ×</u>					
Protocol IP Addresses						
General						
Enabled	Yes					
Keep Alive	30000					
Listen All	Yes					
No Delay	No					
Enabled Enable or disable TCP/IP protocol for this server instance						
OK Cancel	Apply Help					

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



TCP/IP Properties	? ×
Protocol IP Addresses	
IP1	
Active	Yes
Enabled	No
IP Address	- 2 Mil + (2 Mil + 1 + 2 Mil)
TCP Dynamic Ports	0
TCP Port	1433
E IP2	
Active	Yes
Enabled	No
IP Address	127.0.0.1
TCP Dynamic Ports	0
TCP Port	1433
IPAll	
TCP Dynamic Ports	4825
TCP Port	1433
TCP Port TCP port	
OK Cano	el Apply Help

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 <u>Security Considerations for a SQL Server Installation</u>.

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 <u>Configure the Windows Firewall to Allow SQL Server Access</u>

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\Sqlservr.exe
 - SQL Server 2012
 C:\Program Files\Microsoft SQL
 Server\MSSQL11.MSSQLSERVER\MSSQL\Binn\Sqlservr.exe



- SQL Server 2008
 C:\Program Files\Microsoft SQL
 Server\MSSQL10.MSSQLSERVER\MSSQL\Binn\Sqlservr.exe
- SQL Server 2005
 C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Binn\Sqlservr.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**.

Connect to Server		×
Microsoft SQ	L Server 2014	
Server type:	Database Engine	•
Server name:	1722 F122 - H2	•
Authentication:	SQL Server Authentication	•
Login:	processed in the	•
Password:	•••••	
	Remember password	
Connect	Cancel Help Options	>>

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.



🚪 New Database						
Select a page	🔄 Script 👻 📑 Help					
General Options Filegroups	Database name:		ADSS			
	Owner:		<default></default>			
	Use full-text indexing					
	Database files:					
	Logical Name Fi	le Type Fil	egroup	Initial Size (MB)	Autogrowth / Maxsize	_
	ADSSServer H	OWS P		3	By 1 MB, Unlimited	
	ADSSServer L	OG N	ot Applicable	I	By Tu percent, Unlimited	
Connection						
Server:						
Connection:						
View connection properties						
Progress						
Ready	•					▶
				Add	Remove	
					OK Canc	

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	🔄 Script 👻 📑 Help		
General	Login name:	ADSSDBO	Search
Securables	 Windows authentication 		
🚰 Status	SQL Server authentication		
	Password:	•••••	
	Confirm password:	•••••	
	Specify old password		
	Old password:		
	Enforce password policy	y	
	Enforce password expira	ation	
	User must change pass	word at next logini	
	Mapped to certificate	×	
	O Mapped to asymmetric key		
	Map to Credential	<u> </u>	Add
Connection	Mapped Credentials	Credential Provider	
Server:			
Connection:			
View connection properties			
Progress			Remove
Ready	Default database:	ADSSServer	
	Default language:	English	
		ОК	Cancel

- 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.



Login Properties - ADSSDBC		
Select a page	Script - 🖪 Help	
General Server Roles User Mapping	Server role is used to grant server-wide security privileges to a user.	
Status	Server roles: bulkadmin dbcreator diskadmin processadmin v public securityadmin setupadmin v sysadmin	
Connection		
Server: Connection:		
Progress Ready		
	ОК Са	ancel

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



Login Properties - ADSSDBO						
Select a page	Script -	Help				
General -	<u> </u>					
Server Roles	Users manned to this login:					
User Mapping	ecurables Map Database User Default Schema					
Statue				Deradic Schema		
		ND33	A033060			
		ALC STREET, ST				
		100001-100101-0-10000				
		All the set of the set				
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		States - States - States				
		and the second s				
		1000				
		And a second sec	4000000			
		tempab	ADSSDBO			
Connection Server: Connection: Connection: View connection properties Progress Ready	Database Database db_ac db_ba db_da db_da db_da db_da db_de db_de db_ee db_ee db_se public	account enabled for: ADSS role membership for: ADSS cessadmin ickupoperator tareader tawriter ladmin mydatareader mydatawriter vner curityadmin	Server			
0						
				ОК	Cancel	

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:

- <u>https://ascertia.force.com/partners/s/article/Configuring-SQL-Server-to-use-correct-auto-increment-for-identity-columns</u>
- <u>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</u>

*** End of document ***