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Test Lab Guide: Install SQL Server 2012 Enterprise

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Test Lab Guide: Install SQL Server 2012 Enterprise

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Summary: This paper contains a brief introduction to SQL Server 2012 Enterprise and step-by-step instructions for installing SQL Server 2012 Enterprise on the APP1 computer in the base configuration test lab.

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Introduction

SQL Server 2012 delivers several breakthrough capabilities that enable your organization to scale database operations with confidence, improve IT and developer efficiency, and enable highly scalable and well managed business intelligence on a self-service basis for your users.

These capabilities include the following:

- **Trusted, Scalable Platform** - Supporting data consistency across heterogeneous systems through SQL Server Master Data Services, enabling high-scale complex event-stream processing through SQL Server StreamInsight™, and supporting scale-up scenarios for the largest available x64 and Itanium hardware (up to 256 logical processors).
- **IT & Developer Efficiency** - Enabling administrators to centrally monitor and manage multiple database applications, instances or servers, accelerating the development and deployment of applications and providing improved support for virtualization through Hyper-V with Live Migration in Windows Server 2008 R2.
- **Managed Self-Service BI** - Expanding powerful BI tools to all users with SQL Server PowerPivot for Excel and empowering a new class of business users to build and share

powerful BI solutions with little or no IT support, while still enabling IT to monitor and manage user-generated BI solutions.

For more information about SQL Server 2012, see the [SQL Server Product Information site](#).

In this guide

This paper contains instructions for setting up a test lab based on the [Base Configuration test lab guide](#) and configuring SQL Server 2012 Enterprise on a pre-existing server computer. The resulting test lab can be used to build out other test lab configurations that need a SQL server.

Important

The following instructions are for configuring SQL Server 2012 Enterprise in a test lab using the minimum number of computers. Individual computers are needed to separate the services provided on the network and to clearly show the desired functionality. This configuration is neither designed to reflect best practices nor does it reflect a desired or recommended configuration for a production network. The configuration, including IP addresses and all other configuration parameters, is designed only to work on a separate test lab network.

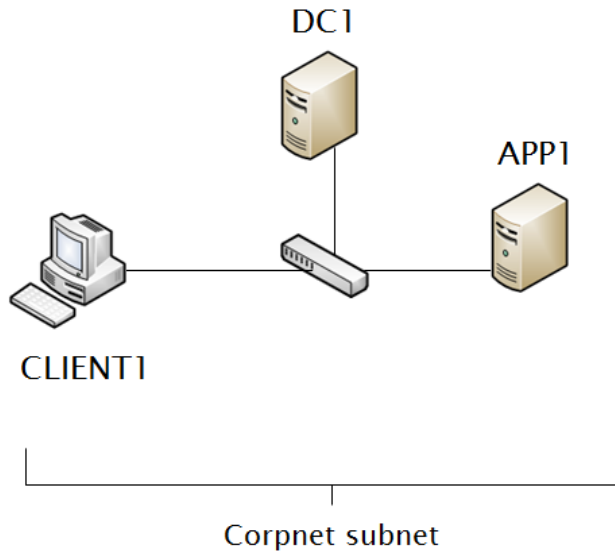
Attempting to adapt this SQL Server 2012 Enterprise test lab configuration to a pilot or production deployment can result in configuration or functionality issues. To ensure proper configuration and operation for your pilot or production SQL Server 2012 Enterprise deployment, use the information in [Installation for SQL Server 2012](#).

Test lab overview

In this test lab, SQL Server 2012 Enterprise is deployed with:

- One computer, named DC1, that runs Windows® Server® 2008 R2 Enterprise Edition and that is configured as an intranet domain controller, Domain Name System (DNS) server, DHCP server, and enterprise root certification authority (CA).
- One intranet member server, named APP1, which runs SQL Server 2012 Enterprise. Note that the instructions in this paper can also be used to install SQL Server 2012 Enterprise on a different intranet member server.
- One member client computer, named CLIENT1, which runs Windows 7 Enterprise or Ultimate.

The test lab consists of a single subnet named Corpnet (10.0.0.0/24) that simulates a private intranet. Computers on the Corpnet subnet connect by using a hub or switch. See the following figure.



Note that this figure does not include a different intranet member server in your test lab on which SQL Server 2012 Enterprise could be installed.

Hardware and software requirements

The following are required components of the test lab:

- The product disc or files for Windows Server 2008 R2.
- The product disc or files for Windows 7.
- The product disc or files for SQL Server 2012 Enterprise. See [Microsoft SQL Server 2012 Evaluation - 64-bit](#) a trial version.
- Two computers that meet the minimum hardware requirements for Windows Server 2008 R2 Enterprise Edition. For more information, see [Windows Server 2008 System Requirements](#).
- One computer that meets the minimum hardware requirements for Windows 7 Enterprise or Ultimate. For more information, see [Windows 7 system requirements](#).

Steps for Installing SQL Server 2012 Enterprise

There are four steps to follow when installing SQL Server 2012 Enterprise.

1. Set up the Base Configuration test lab.
2. Install SQL Server prerequisites.
3. Install SQL Server 2012 Enterprise.
4. Verify the installation.



Note

You must be logged on as a member of the Domain Admins group or a member of the Administrators group on each computer to complete the tasks described in this guide. If you cannot complete a task while you are logged on with an account that is a member of the

Administrators group, try performing the task while you are logged on with an account that is a member of the Domain Admins group.

The following sections provide details about how to perform these steps.

Step 1: Set up the Base Configuration Test Lab

Set up the Base Configuration test lab for the Corpnet subnet by using the procedures in the “Steps for Configuring the Corpnet Subnet” section of the [Test Lab Guide: Base Configuration](#).

Step 2: Install SQL Server Prerequisites

In this procedure, you create an organizational unit in the corp.contoso.com domain named ServiceAccounts and then create two service accounts that will be used by SQL Server 2012.

► To create the ServiceAccounts organizational unit and the service accounts

1. On DC1, log on with the User1 account.
2. Click **Start**, click **Administrative Tools**, and click **Active Directory Users and Computers**.
3. In the tree pane of **Active Directory Users and Computers**, right-click **corp.contoso.com**, select **New**, and then **Organizational Unit**.
4. In **Name**, type **ServiceAccounts**, and then click **OK**.
5. Right-click **ServiceAccounts**, select **New**, and then select **User**.
6. In **New Object – User**, in the **Full Name** box, type **SQL Server Agent**.
7. In **User logon name**, type **SQLAgent**, and click **Next**.
8. In **Password** and **Confirm Password**, type **Pass1word\$**.
9. Clear **User must change password at next logon**, select **Password never expires**, and click **Next**.
10. Click **Finish**.
11. Right-click **ServiceAccounts**, select **New**, and then select **User**.
12. In **New Object – User**, in the **Full Name** box, type **SQL Server Database Engine**.
13. In **User logon name**, type **SQLDatabase** and click **Next**.
14. In **Password** and **Confirm Password**, type **Pass1word\$**.
15. Clear **User must change password at next logon**, select **Password never expires**, and click **Next**.
16. Click **Finish**.

In this procedure, you install the .NET 3.5 Framework.

► To install the .NET Framework 3.5

1. On APP1 (or the computer on which SQL Server 2012 Enterprise is being installed), log on with the User1 account.
2. In **Server Manager**, click **Features**, and then click **Add Features**. This will launch the **Add Features Wizard** and you will see the **Select Features** screen.
3. Select **.NET Framework 3.5.1 Features**. This will bring up a box that asks states: **You cannot install .NET Framework 3.5.1 Features unless the required role services**

and features are also installed. Click **Add Required Features.** The box will disappear. On the Select Features screen, click **Next.**

4. On the Web Server (IIS) screen, click **Next.**
5. On the Role Services screen, click **Next.**
6. On the Confirm Installation Selections screen, click **Install.** This will begin the installation.
7. On the Installation Results screen, click **Close.**

Step 3: Install SQL Server 2012 Enterprise

In this procedure, you install SQL Server 2012 Enterprise.

► To install SQL Server 2012 Enterprise

1. On APP1 (or the computer on which SQL Server 2012 Enterprise is being installed), navigate to the directory that contains the SQL Server 2012 Enterprise binaries and double-click **Setup.EXE.** This will launch the SQL Server Installation Center.
2. On the **SQL Server Installation Center,** on the left, click **Installation.**
3. On the right, click **New SQL Server stand-alone installation or add features to an existing installation.** This will launch the SQL Server 2012 Setup.
4. On the **Setup Support Rules** screen, click **OK.** This will close the Setup Support Rules screen and will bring up the **Product Key** screen. From **Specify a free version,** select **Evaluation.** Click **Next.**
5. On the **License Terms** screen, read the Licensing terms, place a check in the box next to **I accept the license terms** and click **Next.**
6. On the **Product Updates** screen, click **Next.**
7. On the **Install Setup Files** screen, click **Install.** This will take a few moments to complete. Once this completes the **Setup Support Rules** screen will appear again.
8. On the **Setup Support Rules** screen, click **Next.**
9. On the **Setup Role** screen, select **SQL Server Feature Installation** and click **Next.**
10. On the **Feature Selection** screen, under **Instance Features** place a check in **Database Engine Services,** under **Shared Features** place a check in **Management Tools – Basic** and **Management Tools – Complete.** Click **Next.**
11. On the **Installation Rules** screen, click **Next.**
12. On the **Instance Configuration** screen, click **Next.**
13. On the **Disk Space Requirements** screen, click **Next.**
14. On the **Server Configuration** screen, next to **SQL Server Agent** under **Account Name,** enter **CORP\SQLAgent,** under **Password,** enter **Pass1word\$.**
15. On the **Server Configuration** screen, next to **SQL Server Database Engine** under **Account Name,** enter **CORP\SQLDatabase,** under **Password,** enter **Pass1word\$.**
16. Click **Next.**
17. On the **Database Engine Configuration** screen, click **Add Current User** and click **Next.**
18. On the **Error Reporting** screen, click **Next.**
19. On the **Installation Configuration Rules** screen, click **Next.**

20. On the **Ready to Install** screen, click **Install**.
21. On the **Installation Progress** screen, wait until the installation completes.
22. On the **Complete** screen, click **Close**.
23. Close the **SQL Server Installation Center**.

Step 4: Verify the installation

In this procedure, you verify that installed SQL Server services are running.

▶ To verify installed SQL Server services are running

1. Click **Start**, select **Administrative Tools**, and click **Services**.
2. Scroll down to **SQL Server (MSSQLSERVER)** and verify that it has a status of **Started**.
3. In **Services**, right-click **SQL Server Agent (MSSQLSERVER)**, and click **Start**. This will start the SQL Server Agent.
4. When this completes, verify the SQL Server Agent (MSSQLSERVER) has a status of **Started**.
5. Close **Services**.

In this procedure, you verify the SQL Server 2012 Enterprise installation by connecting to the database server using SQL Server Management Studio.

▶ To connect to SQL Server 2012 Enterprise using SQL Server Management Studio

1. Click **Start**, click **All Programs**, click **Microsoft SQL Server 2012**, and click **SQL Server Management Studio**.
2. On the **Connect to Server** dialog box, under **Server Type:** select **Database Engine**.
3. On the **Connect to Server** dialog box, under **Server name:** select **APP1** (or the computer on which SQL Server 2012 Enterprise is being installed).
4. On the **Connect to Server** dialog box, under **Authentication:** select **Windows Authentication**.
5. Click **Connect**. This should be successful and the database information will be displayed on the left. The SQL Server Agent should have a green arrow.
6. Close **Microsoft SQL Server Management Studio**.

Snapshot the Configuration

This completes the installation of SQL Server 2012 Enterprise. To save this configuration so that you can quickly return to a working configuration from which you can test other TLGs or test lab extensions or for your own experimentation and learning, do the following:

1. On all physical computers or virtual machines in the test lab, close all windows and then perform a graceful shutdown.
2. If your lab is based on virtual machines, save a snapshot of each virtual machine and name the snapshots **TestLabSQLServer**. If your lab uses physical computers, create disk images to save the test lab configuration.

Additional Resources

For more information about SQL Server 2012, see the [Microsoft SQL Server product information web page](#).

Microsoft strongly encourages you to develop and publish your own TLG content for SQL Server 2012, either in the TechNet Wiki (example: [Test Lab Guide: Demonstrate Remote Access VPNs](#)) or in your own publishing forum (example: [Test Lab Guide \(Part 1\) - Demonstrate TMG PPTP, L2TP/IPsec and SSTP Remote Access VPN Server](#)). If you want to publish your TLG content in the TechNet wiki, see the [How to contribute series of TLG blog posts](#) for information about the types of content you can create and for links to templates and guidance.

For a list of additional Microsoft TLGs, see [Test Lab Guides](#) in the TechNet Wiki.