

MIGRATION GUIDE

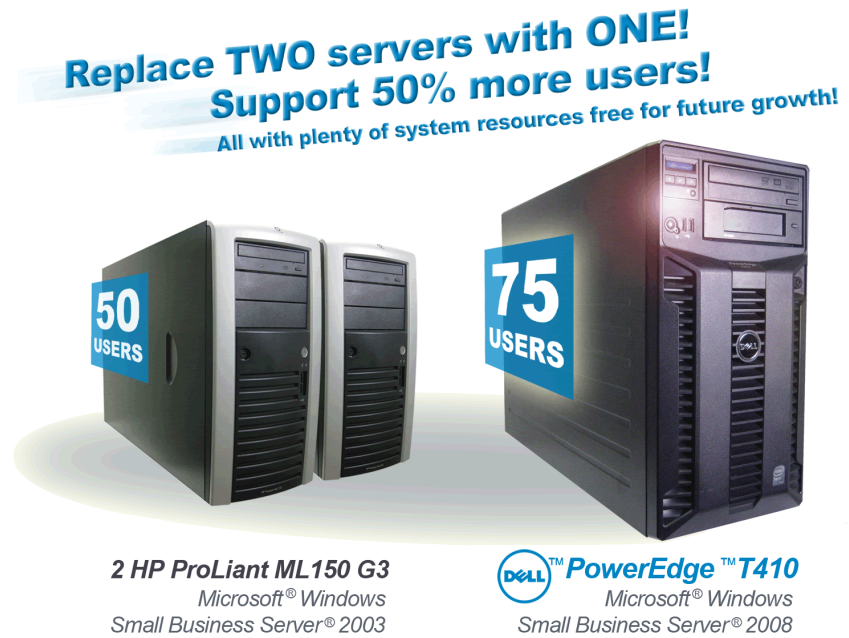


MIGRATING TWO SERVERS
TO ONE DELL™ POWEREDGE™ T410
RUNNING MICROSOFT® WINDOWS
SMALL BUSINESS SERVER® 2008

Table of contents

Table of contents	2
Introduction	3
Why consider migrating to Microsoft Windows Small Business Server 2008 on a Dell PowerEdge T410?	4
Migration overview.....	6
Preparing for your migration.....	7
Backing up your current configuration.....	7
Preparing your network	8
Modifying your user directory	12
Running the Migration Preparation Tool.....	15
Creating a new administrator account.....	16
Creating the migration Answer File	19
Final considerations.....	20
Configuring the new server in Migration Mode	22
Configuring Windows Small Business Server 2008	22
Running the Migration Wizard	24
Installing the Exchange Service Pack	27
Migrating SQL Server	28
Removing specific SQL Server 2005 components.....	28
Installing SQL Server 2008 Standard	29
Installing Service Pack 1 for SQL Server 2008.....	32
Using the SQL Server 2008 Upgrade Advisor.....	33
Implementing the migration	35
Summing up	41
Appendix A. Configuring Backups	42
Appendix B. Reconfiguring Networks.....	43
Appendix C. Creating the Answer File worksheet	45
Appendix D. Installing network adapter drivers	46
Appendix E. Migration Wizard	47
Appendix F. Installing the Exchange Service Pack	51
Appendix G. SQL Server migration steps	53
About Principled Technologies.....	55

Introduction



Advances in server and software technologies enable small businesses to reduce costs by consolidating multiple older servers onto a single new one. The next-generation Dell™ PowerEdge™ T410 and the new features in Microsoft Windows Small Business Server 2008 Premium offer a clear win to businesses seeking to lower IT expenses and increase performance. The new Migration Wizards help make such a move easier than ever before.

Organizations with legacy servers, such as older HP ProLiant ML150 systems, often find themselves running out of capacity and at a decision point: do they scale out and add more similar servers, or do they scale up to a smaller number of more powerful servers? As the results from our tests show, by scaling up to the more powerful Dell PowerEdge T410, such organizations can accommodate more users, get more computing power, and thus have the potential to significantly reduce both systems management costs and energy consumption.

This Principled Technologies® (PT) Guide explains the process for consolidating an existing two-server installation onto a single Dell PowerEdge T410 and upgrading Microsoft Windows Small Business Server 2003 R2 to the 2008 version. We will explain how to migrate user accounts (Active Directory), email software, and a database application.

We have actually performed this procedure and consolidated two legacy servers, a primary server running Windows Small Business Server 2003 R2 and a member server running Windows Server 2003 R2 Standard with SQL Server 2005 Workgroup Edition, onto a single new Dell PowerEdge T410. The companion performance report,

http://www.principledtechnologies.com/clients/reports/Dell/T410_SBSmigrate.pdf shows that this one Dell PowerEdge T410 running Windows Small Business Server 2008 performed the work of two older HP ProLiant ML150 G3 servers, delivered better performance in both applications, and left room for future growth.

This Guide documents some best practices and can help you simplify operations and take advantage of new features in Windows Small Business Server 2008 Premium.

In the sections that follow, we discuss some of the new features of the servers and software, give an overview of the consolidation and migration process, and discuss things to be aware of after the migration is complete. The appendices to the Guide give detailed, step-by-step information on how to do the migration.



NOTE: Those with more complex configurations, special requirements, or the desire to avoid doing the migration themselves may wish to investigate the consulting services Microsoft and Dell offer.

Why consider migrating to Microsoft Windows Small Business Server 2008 on a Dell PowerEdge T410?

Because any migration requires an investment of time, it should deliver clear benefits. In this section, we present just a few of the benefits from migrating to Microsoft Windows Small Business Server 2008 on a Dell PowerEdge T410.

Features of Microsoft Windows Small Business Server 2008

A small business is not necessarily a simple business. Business needs, regulatory requirements, and other factors place an increasing strain on IT resources that are frequently quite limited. Microsoft Windows Small Business Server 2008 addresses many of these issues. For more information about Microsoft Windows Small Business Server 2008 see

<http://www.microsoft.com/sbs/en/us/default.aspx>

Simplified setup. Much of the setup is wizard based, and the installation and setup process is considerably simpler.

Updated components. When you upgrade to Microsoft Windows Small Business Server 2008 Premium, you

automatically upgrade its key components, including Active Directory, Windows Server, Microsoft Exchange, Microsoft SQL Server, Windows SharePoint, and more.

Management. Microsoft Windows Small Business Server 2008 includes a revamped management console organized by business functions.

Virtualization. Microsoft Windows Small Business Server 2008 Premium supports Microsoft Hyper-V, which you can use to create virtual servers. You can use the virtual servers to run legacy applications without fear that other applications on the same physical server will create any problems for each other. Virtual servers also allow you to isolate business functions for security or regulatory reasons.

Licensing costs. Microsoft Windows Small Business Server 2008 Client Access Licenses (CALs) are priced for small businesses and available in 1-, 5-, and 20-pack quantities. A maximum of 75 CALs are supported.

Features of the Dell PowerEdge T410

The Dell PowerEdge T410 offers many compelling new features, including the following. For more information, see <http://www.dell.com/us/en/enterprise/servers/server-poweredge-t410/pd.aspx?refid=server-poweredge-t410&cs=555&s=biz>

Storage. The Dell PowerEdge T410 holds up to 6 terabytes (6000 Gigabytes) of internal storage, giving you 25 percent to 50 percent more internal storage than many common small business servers.

Memory. The Dell PowerEdge T410 holds up to 64 GB of RAM. That's eight times the capacity of many older small business servers, which hold a maximum of 8 GB of RAM.

Power. The Dell PowerEdge T410 includes enhancements that let it use less energy than many older servers. Because our goal is to consolidate two legacy servers onto a single Dell PowerEdge T410, the potential power savings are dramatic.

Processor. The Dell PowerEdge T410 uses Intel Xeon 5500 series processors. These processors automatically adjust their speed and energy usage to meet the requirements of your applications, improving performance and saving power. For more information, see http://www.intel.com/p/en_US/products/server/processor/xeon5000

Management. The Dell PowerEdge T410, like all late-model Dell servers, comes with the Dell Lifecycle Controller. This tool simplifies management by providing a single interface for management functions and by storing critical system information in the system itself. No need to keep track of floppy disks or USB keys for drivers or firmware.

Migration overview

The migration process includes the following key steps. We explain each of them in detail in subsequent sections:

- Preparing for the migration
 - Backing up your current configuration
 - Preparing your network
 - Modifying your user directory
 - Running the server Migration Preparation Tool
 - Creating a new administrator account
 - Creating the migration Answer File
 - Final considerations
- Configuring the new server in Migration Mode
 - Configuring Windows Small Business Server 2008
 - Running the Migration Wizard
 - Installing the Exchange Service Pack
- Migrating SQL Server
 - Removing specific SQL Server components
 - Installing SQL Server 2008 Standard
 - Using the SQL Server 2008 Upgrade Advisor
 - Implementing the migration
- Summing up

Before you begin, please note that you will need the following items to successfully complete this migration:

- USB flash drive or external hard drive
- Windows Small Business Server 2008 installation DVDs
- Router/firewall device (if you do not already have one installed)

Preparing for your migration



To ensure a smooth migration to Windows Small Business Server 2008, you will need to make some changes to your current network and server configuration. This section reviews the steps you need to complete before performing the migration. Some of these steps require more manual input, and others are as simple and automated as completing a guided wizard, but you can accomplish all of them with a little planning.



NOTE: Before you begin, verify that you have the latest updates installed on the servers you will be migrating from by running the Microsoft Windows Small Business Server 2003 Best Practices Analyzer, please see <http://support.microsoft.com/kb/940439>.

This section addresses the following:

- Backing up your current configuration
- Preparing your network
- Modifying your user directory
- Running the server Migration Preparation Tool
- Creating a new administrator account
- Creating the migration Answer File
- Final considerations

Backing up your current configuration

Prior to completing any preparatory changes to your current configuration, we recommend that you create a backup. The migration process makes irreversible changes to your Windows Small Business Server 2003 R2 server, which we will refer to as the source server.

Chances are that you already have a software solution or other method in place to create backups on a regular basis to prevent

data loss. As long as your current backup solution can perform a full system restoration, it is perfectly suitable for this purpose.

If you are using the backup solution that is included with Windows Small Business Server 2003 R2 for your regular system backups, you can also use this to create a manual backup. Just be sure that it is configured to create a backup of the entire system. To begin a manual backup follow these steps:

1. Click Start, and then click Server Management.
2. In the left pane, click Backup. A series of backup-related options appears in the right pane.
3. Click Backup now. This brings up a Backup Utility screen.
4. Click Start Backup to begin.



NOTE: Depending on the amount of information you are backing up and the backup method of your software, this procedure could take several hours to complete. You may want to consider starting a backup and letting it run overnight.

If you currently do not have any backup method configured or you need to reconfigure the SBS backup agent to create a full system backup, refer to [Appendix A](#) for step-by-step instructions.

Additionally, if any member servers are running applications that you wish to migrate to your new server, you will also want to create backups of those. The Windows Server 2003 R2 operating systems also have integrated backup software. See [Appendix A](#) for additional information on using this backup software.

Preparing your network

Windows Small Business Server 2003 R2 and Windows Small Business Server 2008 operate differently in terms of how they run within a network. To prepare for a successful migration, you may need to make some changes to your internal network and the way it connects to the Internet.

If your network is set up based on Windows Small Business Server 2003 R2 best practices, it should look similar to Figure 1.

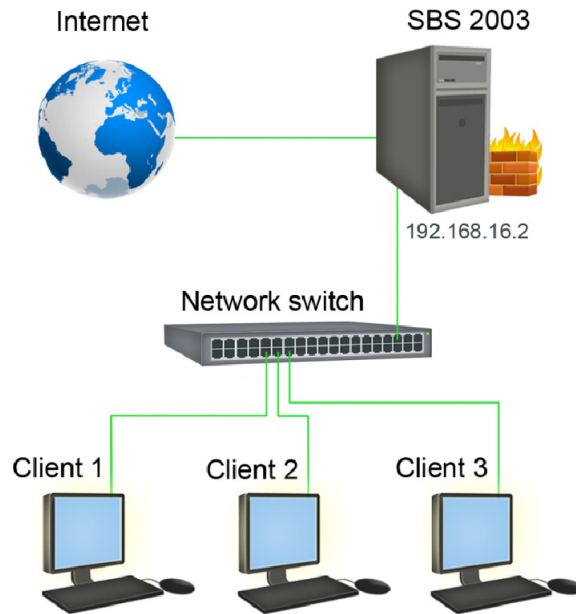


Figure 1. Typical Windows Small Business Server 2003 R2 network.

The primary difference between the recommended network setup for Windows Small Business Server 2003 R2 and Windows Small Business Server 2008 is that the server is no longer acting as the primary gateway to the Internet nor does it act as a firewall for the internal network. Instead, the network needs to be configured with an independent router and firewall between the network switch and the Internet.

A firewall is simply a protective barrier intended to keep unauthorized users from accessing your private network, and a router is a device that manages network traffic between two different networks. In the case of a typical small business network like the one in Figure 2, the router and firewall are on the same device. The device manages traffic between the network leading to the Internet and your private network while keeping them separated from each other.

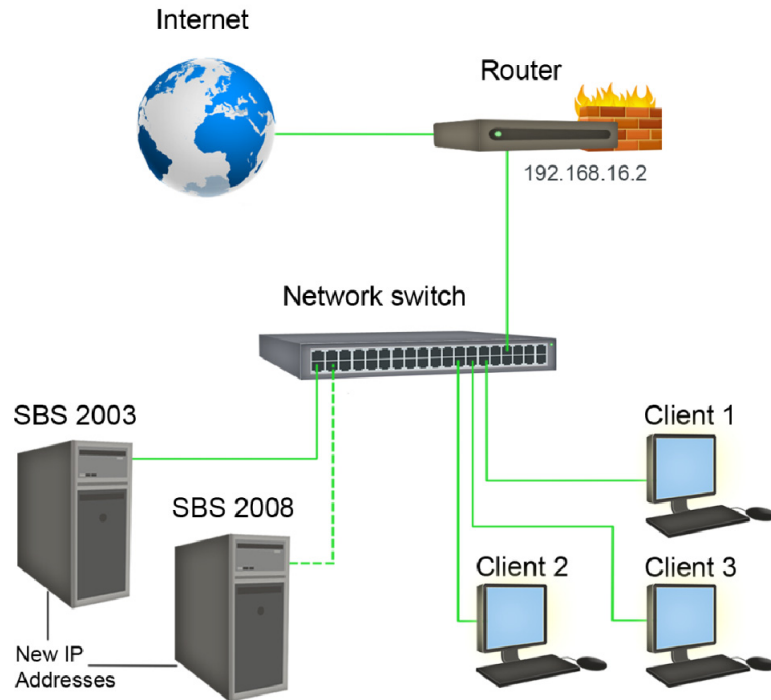


Figure 2. Migration-ready network.

Figure 2 displays how your network should be configured for the migration, with a dotted line indicating the connection that you will set up before you perform the actual migration to your new Dell PowerEdge T410. If your current network is set up like Figure 1, we have devised a method of introducing a router and defining the IP address of your new server in a way that prevents you from having to make changes to every system on the network. If your current network setup already matches Figure 2, you may skip down to the next section.

Below we provide an overview of the steps needed to seamlessly introduce a router/firewall and reconfigure your Windows Small Business Server 2003 R2 network. Note that your users will temporarily lose access to the Internet during this process.

1. **Connect your router.** Generally speaking, there are two types of connections on a typical router, a wide area network (WAN) port, and usually several local area network (LAN) ports. For now, once you have powered on your router, plug in an Ethernet cable from your network switch into one of the LAN ports on the router.

2. **Disable or remove the Internet-facing network adapter in your Windows Small Business Server 2003 R2 server.** You may do this either by physically taking out the network adapter card or by disabling it within Windows. For specific steps on how to disable the network adapter, see [Appendix B](#).
3. **Change the IP address of your Windows Small Business Server 2003 R2 server internal network adapter.** By default, the self-assigned static IP address of your Windows Small Business Server 2003 R2 server is 192.168.16.2, and every other member server or client will be assigned an IP address of 192.168.16.# (where # is unique for each system in the network). Change the IP address of Windows Small Business Server 2003 R2 server to another static address that is not currently being used in your network. For example, if you have DHCP set to not give any IP address higher than 192.168.16.200, you could assign your Windows Small Business Server 2003 R2 server the IP address of 192.168.16.254. You will also soon need to determine a static IP address for your new Dell PowerEdge T410 server, so it would be wise to go ahead and also write down what IP address you plan on giving the new server. For specific steps on how to change the IP address, see [Appendix B](#).
4. **Assign the internal IP address and subnet mask of your router to match the former IP address of your Windows Small Business Server 2003 R2 internal network adapter.** By doing this, we take advantage of the fact that the Windows Small Business Server 2003 R2 server's former IP address was the default gateway to access the Internet, thus avoiding having to change the default gateway for every other system in the network. Because every router is different, check the router user's manual for instructions on how to configure the IP address of your internal network.
5. **Disable DHCP on your router.** Currently, your Windows Small Business Server 2003 R2 server already has the DHCP service running, and that role will be transferred to the new server running Windows Small Business Server 2003 R2. See the router user's manual for specific instructions on disabling DHCP.
6. **Remove the Ethernet cable that leads to your Internet service provider's (ISP) modem or similar device from the back of the Windows Small Business Server 2003 R2 server, and plug it into the WAN port of your router.** Depending on your Internet connection, you may

need to configure the WAN port settings in the router with a specific IP address as provided by your ISP. This will re-establish a physical connection to the Internet.

7. **Run the Configure E-mail and Internet Connectivity Wizard to reconfigure your Windows Small Business Server 2003 R2 server's network settings.** This wizard is located in Server Management within Windows Small Business Server 2003 R2. See [Appendix B](#) for a step-by-step guide of how to reconfigure your Windows Small Business Server 2003 R2 server to work with a single network adapter and successfully connect to the router.

Modifying your user directory

You must make two simple but important modifications to your old user directory (Active Directory) before attempting to configure Windows Small Business Server 2008 in Migration Mode. You must raise the functional level of both your Windows Small Business Server 2003 R2 Active Directory domain and forest from Windows 2000 to Windows Server 2003. This is a relatively simple requirement that is one of the first things that Migration Mode will verify before allowing you to start the migration process.

1. Click Start→Administrator Tools→Active Directory Domains and Trusts. This will bring up the Active Directory Domains and Trusts screen (Figure 3).

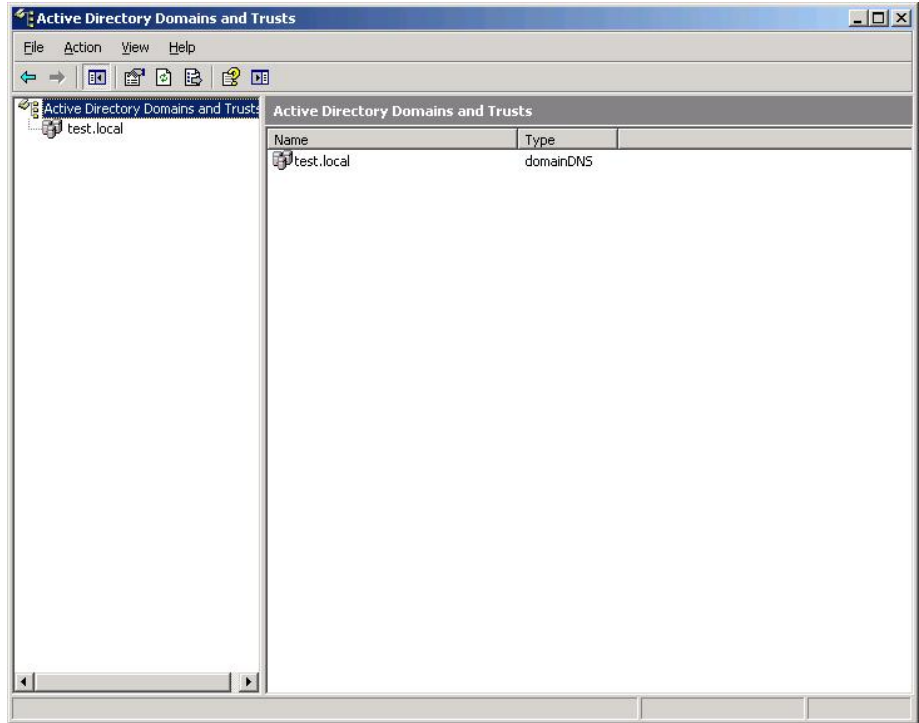


Figure 3. Active Directory Domains and Trusts screen.

2. To raise the domain functional level, right-click your domain name in the left pane, and select Raise Domain Functional Level.
3. An additional Raise Domain Functional Level screen will pop up (Figure 4). Select Windows Server 2003 from the drop-down menu, and then click Raise. If a confirmation pop-up screen appears, click OK.

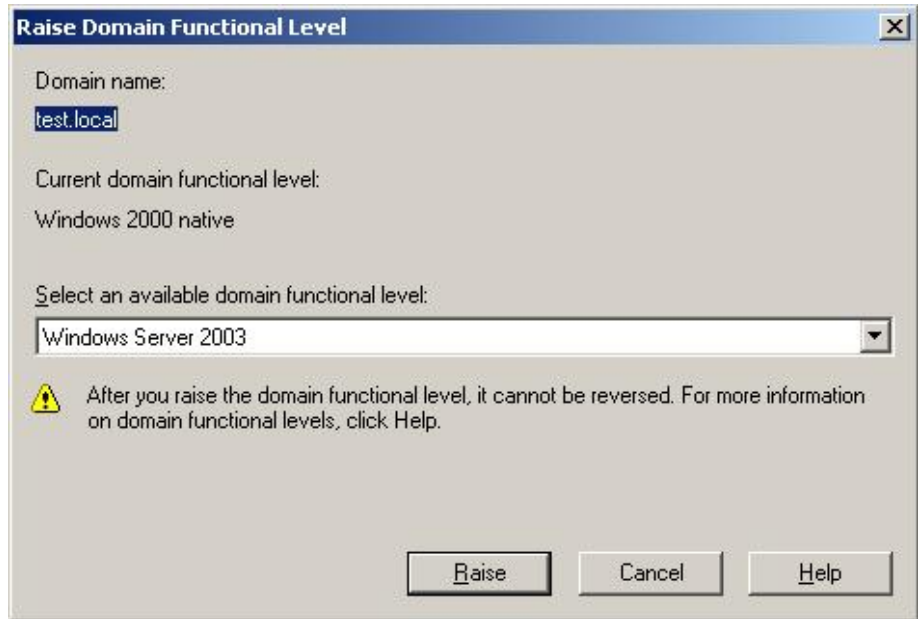


Figure 4. Raise Domain Functional Level pop-up screen.

4. If the operation succeeds, you will see an additional notification pop-up screen. Click OK to return to the Active Directory Domains and Trusts.
5. To raise the forest functional level, right-click Active Directory Domains and Trusts just above your domain name in the left pane, and select Raise Forest Functional Level.
6. An additional Raise Forest Functional Level screen will pop up. As before, select Windows Server 2003 from the drop-down menu and click Raise. If a confirmation pop-up screen appears, click OK.
7. If the operation succeeds, you will see an additional notification pop up screen. Click OK to return to the Active Directory Domains and Trusts screen, and then close that screen.

Running the Migration Preparation Tool

The Migration Preparation Tool is a handy application provided in the Windows Small Business Server 2008 DVD. You will need to run this application on your Windows Small Business Server 2003 R2 server. It is relatively quick and automated step to complete.

If your legacy server has a DVD drive or you have a USB external DVD drive, you can run the tool directly off of the DVD. If not, you can also insert the installation DVD into another computer with a DVD drive and transfer the necessary files from the DVD onto a USB flash drive by copying the entire Tools folder. The folder itself is less than 10 MB in size, so nearly any USB flash drive available today will work.

To access the Tools folder in the installation DVD, insert the Windows Small Business Server 2008 DVD, and click Tools when the installation screen appears (Figure 5).



Figure 5. Windows Small Business Server 2008 installation screen.

Once you are ready to run the Migration Preparation Tool either from your USB flash drive or the installation DVD, complete the following steps:

1. In the tools folder, double-click the file SourceTool.exe. A Prepare your Source Server for migration screen will appear.
2. Check the I have a backup and am ready to proceed checkbox, and click Next.
3. The application will run an automated series of processes, and then notify you that the server has been prepared successfully. Click Finish.
4. You will be prompted to reboot the server, click Yes.

Creating a new administrator account

As an added security feature, Windows Small Business Server 2008 disables the primary administrator account by default. To complete this migration, you will need to create an additional administrator account in your Windows Small Business Server 2003 R2 server.

The simplest way to ensure that this new administrator account has the necessary privileges to complete the migration is to create a copy of the administrator account as outlined in the steps below. Be sure to write down your new logon name and password as you will need this information again later.

1. Click Start→Administrative Tools→Active Directory Users and Computers.
2. In the Active Directory Users and Computers screen, click Users in the left pane. A list of users appears in the right pane (Figure 6).

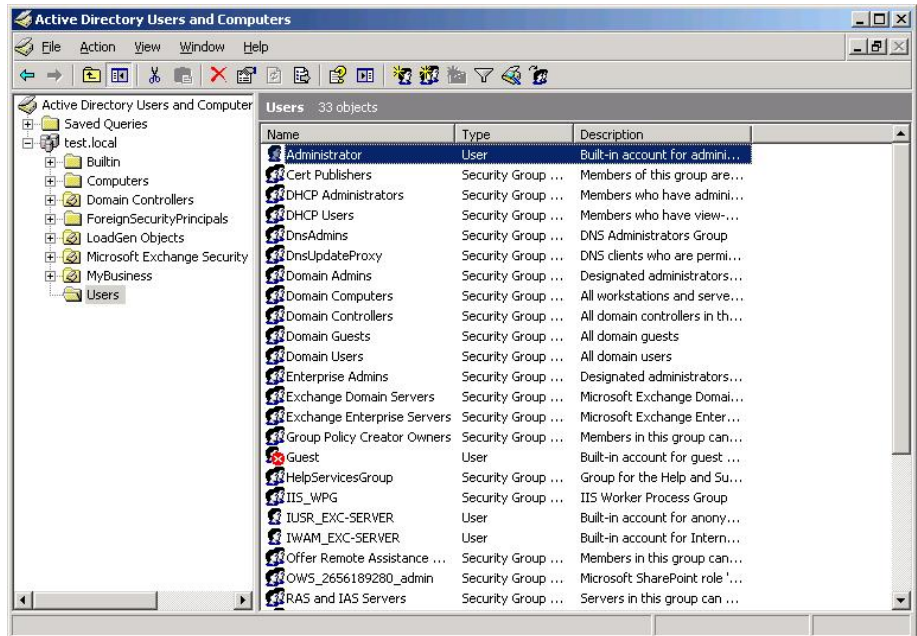
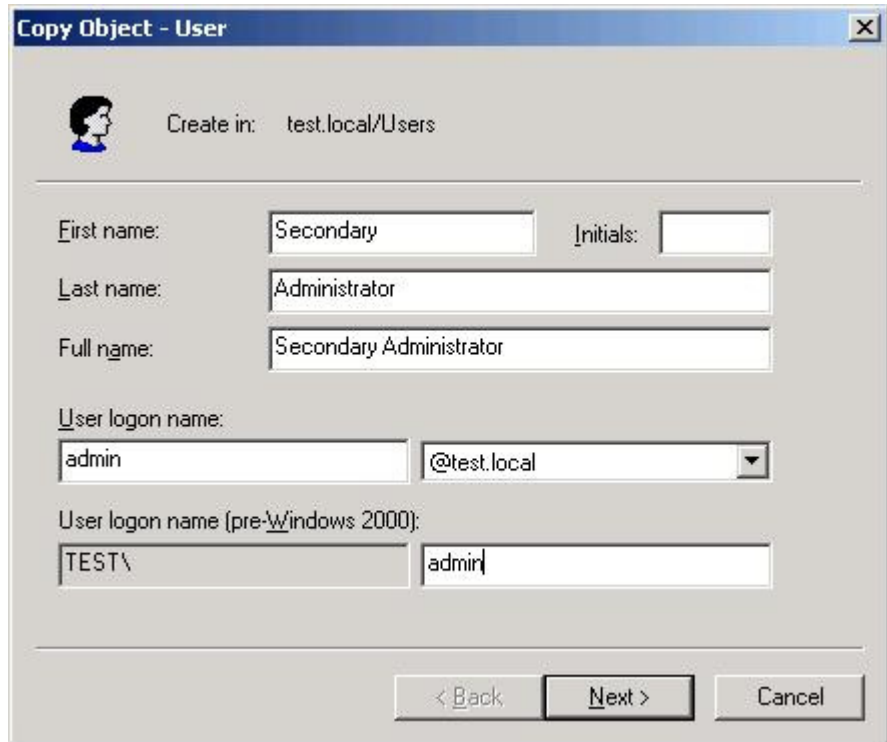


Figure 6. Active Directory Users and Computers screen.

3. In the listed users, right-click Administrator, and select Copy.
4. At the Copy Object – User screen, enter the information you have selected for your new administrator users and click Next (Figure 7).



The screenshot shows a 'Copy Object - User' dialog box. At the top, it says 'Create in: test.local/Users'. Below that, there are several input fields: 'First name:' with 'Secondary', 'Initials:' (empty), 'Last name:' with 'Administrator', and 'Full name:' with 'Secondary Administrator'. Underneath, 'User logon name:' has 'admin' in the text box and '@test.local' in the dropdown menu. Below that, 'User logon name (pre-Windows 2000):' has 'TEST\' in the text box and 'admin' in the text box. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Figure 7. Creating an additional administrator account

5. At the password screen, enter an appropriate password, check the Password never expires checkbox, and click Next.

NOTE: When you select a password, verify that it meets SBS 2008 password criteria. It should be at least eight characters, which include a combination of uppercase and lowercase letters, special characters (i.e., #, \$, !, etc), and numbers.

6. At the Exchange mailbox screen, verify that the Create an Exchange mailbox checkbox is selected. You may leave the default selections for Alias, Server, and Mailbox Store, and click Next.
7. At the Summary screen, click Finish to create the account.

This procedure places your newly created administrator in the Users container. You will need to drag it into the SBSUsers container. To do so, complete these final steps:

8. Return to the Active Directory Users and Computers screen and in the left pane, expand the MyBusiness organizational unit (OU), and then expand Users to reveal the SBSUsers container.

9. Click the Users container where your new administrator account is, and drag it into the SBSUsers container (Figure 8). When the Active Directory pop-up screen appears, click Yes.

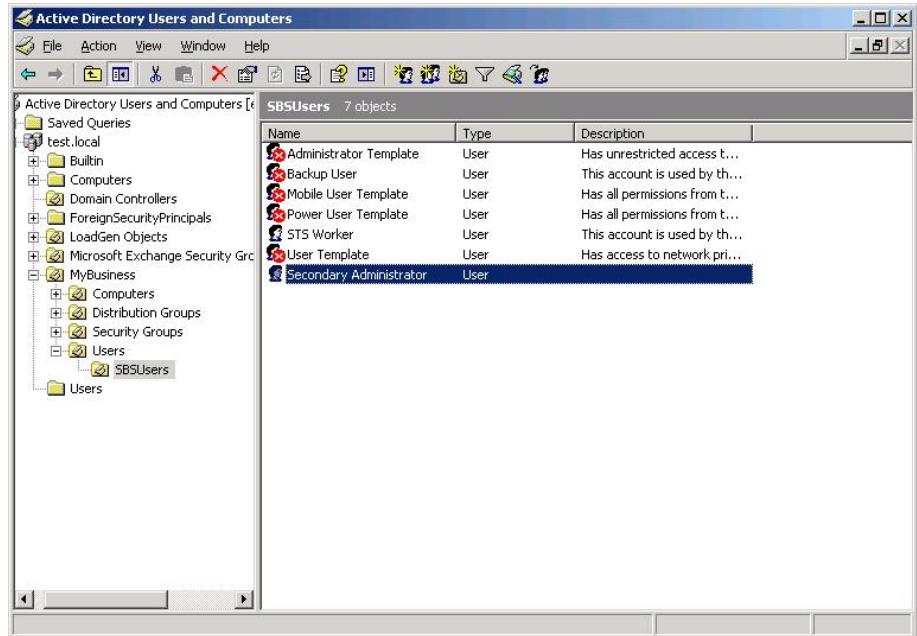


Figure 8. Moving the newly created administrator account into the SBSUsers container.

Creating the migration Answer File

Next, we will create a migration Answer File that your new server can use to locate the source server as well as automate much of the configuration process for Windows Small Business Server 2008 in Migration Mode.

We have provided a chart in [Appendix C](#) with all of the information that you will need to have to successfully create the Answer File using the Answer File Tool.

The Answer File Tool is in the Windows Small Business Server 2008 Installation DVD in the Tools folder, the same folder as the Migration Preparation Tool that you've already completed. As we note earlier, to access this folder, insert the installation DVD into a computer with a DVD drive, and click Tools at the main installation screen to view the folder contents. You can create the Answer File on any system, but you will need to transfer it to the root folder of a USB flash drive.

Creating the Answer File is very easy. Just follow these steps:

1. Once you have located the Tools folder in the installation DVD, double click the SBSAfg.exe file. The migration Answer File too appears (Figure 9).

The screenshot shows the 'Windows Small Business Server 2008 Answer File Tool' dialog box. It is divided into several sections for data entry. The top section is for business details, including 'Sample Business', 'Street address 1', 'Sample Address Drive', 'Street address 2', and 'Certificate authority name'. The middle section, 'Source (existing) server information', includes fields for 'Domain administrator account name' (Admin), 'Password', 'Source Server name' (EXC-SERVER), 'Source domain name' (test.local), 'Default gateway' (192.168.16.1), and 'Source Server IP address' (192.168.16.2). A checkbox for 'DHCP is running on the Source Server' is checked. The bottom section, 'Destination (new) server information', has fields for 'Destination Server name' (SERVER) and 'Destination Server IP address' (192.168.16.3). At the bottom of the dialog, there is a link 'How do I use an answer file?' and buttons for 'Print', 'Open', 'Save As', and 'Cancel'.

Figure 9. The migration Answer File Tool.

2. Using the worksheet we provide in [Appendix C](#), enter the appropriate information, and click Save As. Leave the default file name of SBSAnswerFile.xml, and save it onto the root folder of your USB flash drive.
3. Click Cancel to close the Answer File Tool.

You must plug the USB flash drive into your new server when you power it up for the first time to configure Windows Small Business Server 2008 in Migration Mode.

Final considerations

You are almost ready to begin the migration to your new Dell PowerEdge T410. There are just a few final things to consider before we proceed to the next section.

Verify that your source server has the correct date, time, and time zone. Your source and destination server must have the

same date and time zone, and the clock must be set with no greater than 5 minutes difference between the two servers.

Encourage your users to delete any unnecessary emails, save important attachments, and archive any older mail.

This helps reduce the time it takes to migrate the mailboxes to the new server. If you plan on enabling Microsoft Forefront Security for Exchange Server (FSE) on your new server, your users should save any important email attachments. FSE automatically scans and blocks attachments with certain file types. This step is a safeguard to prevent any loss of email data.


Plan your migration method for any other important programs and applications.

Verify compatibility of your software applications with Windows Server 2008-based operating systems. Migrating these additional applications is beyond the scope of this Migration Guide.

Configuring the new server in Migration Mode



In this section, we focus on configuring your new Dell PowerEdge T410 with Windows Small Business Server 2008 and migrating critical components such as Active Directory, DNS, and your Exchange Server mailboxes. We also address installing Service Pack 2 for Exchange Server 2007.

 **NOTE:** It is important to remember that once you begin Migration Mode, you have 21 days to complete the migration process.

This section addresses the following:

- Configuring Windows Small Business Server 2008
- Running the Migration Wizard
- Installing Service Pack 2 for Exchange Server 2007

Configuring Windows Small Business Server 2008

Beginning with this section, we will be performing most steps on your destination server, the new Dell PowerEdge T410 server. If you selected to run an unattended migration in the Answer File, the migration process will actually be automated once you fill out any requested information in the beginning of the configuration process. Depending on your server, this part of the migration can take anywhere from 30 minutes to a couple of hours. In our case, this part took approximately 1.5 hours.

The following steps outline how to successfully kick off a Windows Small Business Server 2008 installation in Migration Mode:

1. Connect your keyboard, mouse, and monitor to your new server, and connect a power source to your server and monitor. If your Dell PowerEdge T410 has two power connections in the back, plug both of them into your power source. This means that you have redundancy in your power supply so that if one power supply were to fail, your server

- would still remain fully functional until you can obtain a replacement.
2. Connect your network switch to your new server using an Ethernet cable. This is important as your destination server will need to establish a connection with your source server in order to migrate data off of it.
 3. Connect the USB flash drive with the Answer File into your new server. During the beginning stages of the configuration process, your destination server will detect whether an Answer File is present on the root folder of removable media, such as a USB flash drive, and will use that to begin Migration Mode.
 4. Make sure that your source server is powered on and connected to the network, and then power on your destination server. Once it is finished booting, it detects your Answer File and begins the migration process.
 5. Verify the clock and time zone settings. If prompted, click Open Date and Time to verify that the date, time, and time zone settings are accurate and match your source server with less than 5 minutes difference between the two servers. When you are finished, click OK, and then click Next to continue the installation. If you selected a time zone when you created the Answer File rather than selecting the option to input the data manually, you will not encounter this step.


Following these steps, the operating system attempts to detect your network adapter. If you receive an error message that says that a network adapter was not found, it just means that you need to install the driver for the network adapter. For step-by-step instructions for installing your Dell network adapter drivers, see [Appendix D](#).



NOTE: You can obtain the most recent drivers at the Dell support Web site:


<http://support.dell.com/support/downloads/index.aspx?c=us&l=en&s=gen>

At this point, the Answer File should provide the remainder of the information to complete an unattended Migration Mode configuration. Installation will pause and request input for any required information that was left blank on the Answer File. When it is finished, the server reboots and prompts you to log in using the additional administrator account you created earlier.

 **NOTE:** Once you have logged in, you may see a pop up stating This Program has known compatibility issues, referring to Windows Small Business Server 2003 R2 on the source server within the network. Because we will be decommissioning the source server after completing migration, you may ignore this warning and click Cancel.

Running the Migration Wizard

Now that your new server is configured, you need to run the Migration Wizard to transfer the various components of Windows Small Business Server 2003 R2 as well as your user and email accounts.

 **NOTE:** If you have a single source server that also runs SQL Server, you should complete the section titled Installing, configuring, and migrating to SQL Server 2008 first, and then come back to complete this wizard.

To open the Migration Wizard, open the Windows SBS console, select the Home tab, and click Migrate to Windows SBS. Once the welcome screen appears, click Next to continue. This takes you to the Migration Wizard Home screen, which displays all of the various data and settings you can transfer using this wizard (Figure 10).

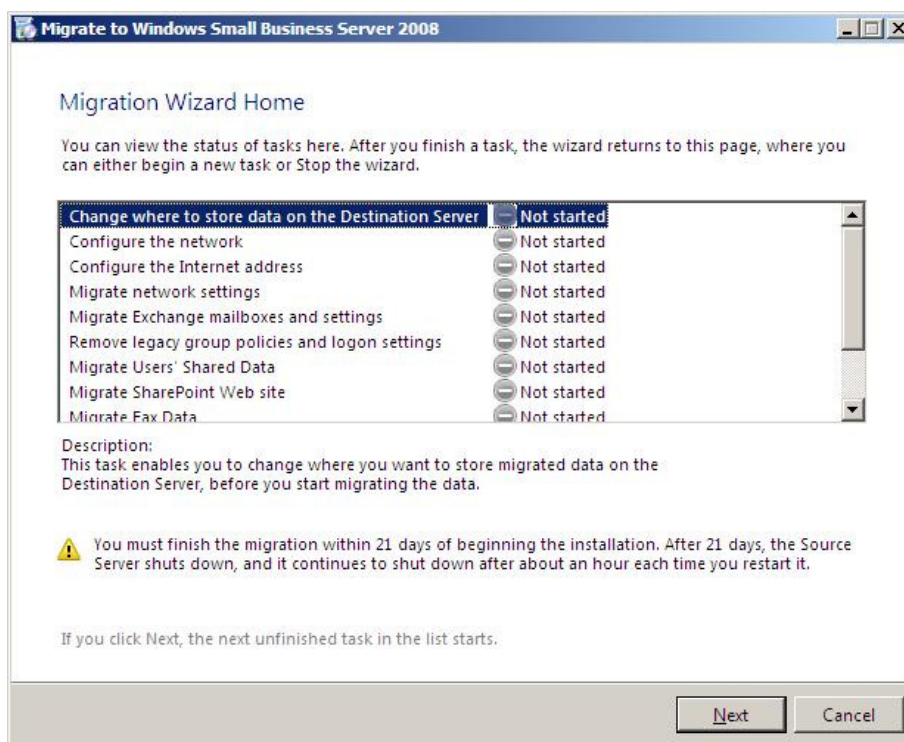


Figure 10. Migration Wizard Home screen.

Looking at all of these tasks can appear daunting, but realize that the wizard is intended to give you as many options as possible, and you may actually need to complete only some of these tasks to transfer the data you need.

Below we summarize the purpose of each task to help you determine which of these you will need to complete. For detailed instructions for working through these steps, see [Appendix E](#).

Change where to store data on the destination server. This task allows you to customize the locations for various types of data, such as your Exchange mailboxes, and users' shared data, before transferring them onto the destination server. This is not a required step, as the data will be migrated to the default locations if you choose to skip this task.

Configure the network. This required task will set up the new server's connection to the Internet and will verify that your new server is the only DHCP server in your private network. In order to complete this step, you will need to verify the Router IP address and verify that you have correctly assigned the IP address of your new server. See [Appendix E](#) for step-by-step instructions on how to complete this task.

Configure the Internet address. This required task allows you to register your already existing public Internet address, or purchase a new one and configure this address with your server. You will need to complete this task in order to migrate your Exchange mailboxes or SharePoint Server data. See [Appendix E](#) for step-by-step instructions on how to complete this task.

Migrate network settings. This optional task allows you to migrate DNS as well as other network settings. Two wizards within this task allow you to migrate DNS forwarders as well as any mobile users group.

Migrate Exchange mailboxes and settings. If you have Exchange running on your source server, this is a required task. See [Appendix E](#) for specific instructions on accessing the appropriate help documentation to complete the Move Mailbox Wizard. Depending on the number of users you have and the mailbox sizes, this may be a lengthy process that takes several hours.

Remove legacy group policies and logon settings. This optional task helps you remove Group Policy objects and logon scripts that no longer apply in Small Business Server 2008. This

task points you to a help document that provides step-by-step instructions on how to remove these policies and settings.

Migrate users' shared data. This optional task provides you with a help document describing how to migrate users' shared folders onto your new server. The document will guide you through the process of creating a shared volume on your new server and copying any shared folders from your source server. From there, you would have to manually reset the sharing permissions for your users.

Migrate SharePoint Web site. If your company has a highly customized Windows Small Business Server 2003 R2 internal Web site with important data in it, this task will equip you with a step-by-step guide demonstrating how to migrate the internal Web site into your destination server.

Migrate fax data. If you used your source server for sending and receiving faxes, this optional task will migrate any saved data from your source folder to your destination folder. Note that you must have the fax service installed and configured on your destination server before you can use this task to migrate the fax data from your source server.

Migrate users and groups. This required task guides you through the process of making your previously migrated users and security groups visible in the Windows SBS Console, as well as allowing you to edit the roles of any users. See [Appendix E](#) for an alternative Microsoft-provided tool to automatically assign the necessary attributes to your users and security groups.

Finish migration. Once you have completed the necessary tasks for your migration, this final step will guide you through the process of decommissioning your Windows Small Business Server 2003 R2 server, namely by showing you how to demote it as a domain controller. For step-by-step instructions on how to demote your Windows Small Business Server 2003 R2 server as a domain controller, see [Appendix E](#).



NOTE: If you created any new users after migrating the Exchange mailboxes and settings, but before you have decommissioned your source server, you will need to repeat the task to migrate your new users onto the destination server.

Installing the Exchange Service Pack

Service Pack 2 is the latest available update package for Exchange 2007 and offers new features and improved functionality. Installing Service Pack 2 for Exchange 2007 is a threefold process that involves:

- Extracting Service Pack 2 from your installation media.
- Downloading and installing the Exchange Server 2007 SP2 Install Tool for Small Business Server 2008
- Installing Service Pack 2 using the Install Tool.

You can download Service Pack 2 for Exchange 2007 from this link:



<http://www.microsoft.com/downloads/details.aspx?FamilyID=4C4BD2A3-5E50-42B0-8BBB-2CC9AFE3216A&displaylang=en>

You can download the Exchange Server 2007 SP2 Install Tool for Small Business Server 2008 from this link:



<http://www.microsoft.com/downloads/details.aspx?familyid=FFD2FE61-9278-489E-9B96-3816394C9CB6&displaylang=en>

For step-by-step instructions on extracting and installing Service Pack 2 using the Install Tool, see [Appendix F](#).

Migrating SQL Server



In this section, we provide specific details about migrating user databases from SQL Server 2005 to SQL Server 2008. SQL Server 2008 Standard edition is generally not part of the base Windows Small Business Server 2008 installation, but instead is a component that needs to be installed. For that reason, this section begins with installing SQL Server 2008 and covers the entire process until you have successfully migrated your databases.

Microsoft recommends that you install SQL Server 2008 on a member server rather than your domain controller, in this case also your primary server. Windows Small Business Server 2008 Premium includes an additional Windows Server 2008 Standard license that you can use if you decide you would like to purchase or add an additional server. For the purposes of this Migration Guide, we will install all Windows Small Business Server 2008 Premium components on a single server.

This section addresses the following:

- Removing SQL Server 2005 Express Tools
- Installing SQL Server 2008 Standard
- Using the SQL Server 2008 Upgrade Advisor to analyze databases
- Implementing side-by-side migration

Removing specific SQL Server 2005 components

Before you install SQL Server 2008 on your new server, you must remove the SQL Server 2005 Express Tools from your Windows Small Business Server 2008 installation.

1. Click Start→Control Panel→Programs and Features.
2. When the Uninstall or change a program screen opens, click Microsoft SQL Server Management Studio Express, and then click Uninstall. Click Yes to confirm the uninstall.
3. At the Microsoft SQL Server Management Studio Express Warning pop up screen, click Yes.

Installing SQL Server 2008 Standard

1. Insert the SQL 2008 Standard DVD and if prompted, run setup.exe.
2. If prompted to install Microsoft .NET Framework and an updated Windows Installer, click OK and follow these steps:
 - a. At the Welcome to Setup window, click the I have read and ACCEPT the terms of the License Agreement radio button and click Install.
 - b. At the Setup Complete window, click Exit.
 - c. When notified that one of the Prerequisites requires you to restart the computer, click OK.
 - d. Restart the server.
 - e. Navigate to the DVD drive by clicking Start→Computer and double clicking the DVD drive icon, and continue with Step 3.
3. At the SQL Server installation Center screen, click Installation in the left pane, and then click New SQL Server stand-alone installation or add features to an existing installation (Figure 11).

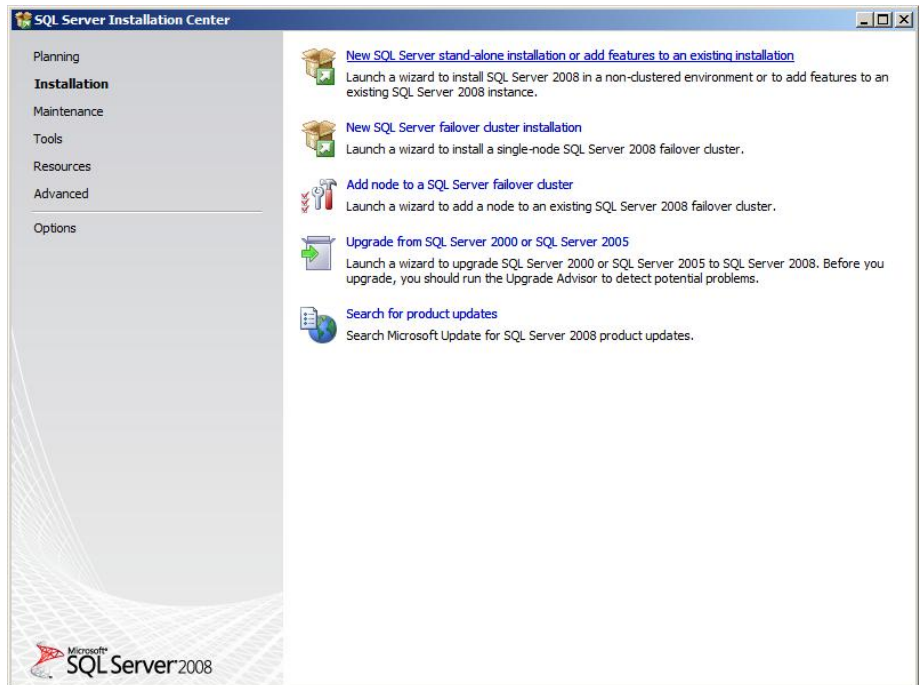


Figure 11. SQL Server 2008 Installation.

4. A Setup Support Rules screen opens and runs a quick check to identify any potential problems. Once the operation finishes, click OK to continue.

5. Enter your product key in the Product Key screen, and click Next.
6. At the License Terms screen, you are prompted to read and accept the license terms. When you have done so, click Next to continue.
7. At the Setup Support Files screen, the installer runs another series of checks and warns of any issues you may encounter with your installation. Read these to make any necessary corrections, and click Install when you're ready.



NOTE: You will likely see a domain controller warning in this check. This is because Microsoft recommends installing SQL Server 2008 on a member server rather than your primary domain controller server. For our purposes, you can ignore this warning.

8. At the Feature Selection screen, check the features that you would like to install (Figure 12). A typical SQL Server 2008 installation includes Database Engine Services, Full-Text Search, Client Tools Connectivity, Client Tools Backwards Compatibility, and Management Tools Basic and Complete.

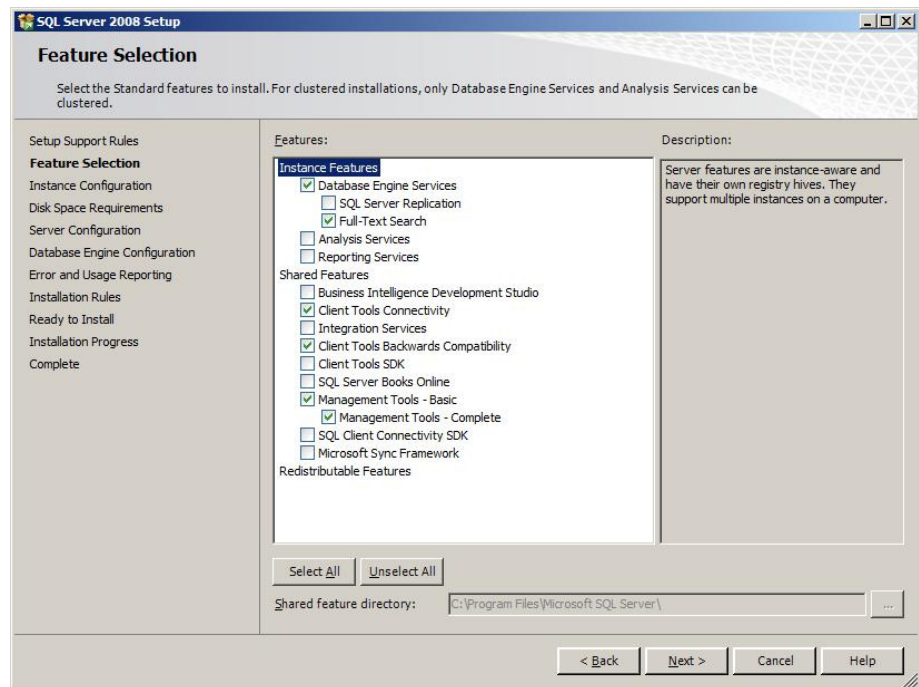


Figure 12. Selecting your instance features in SQL Server 2008 Setup.

9. At the Instance Configuration screen, the installer will suggest a name in the Named instance field. You may accept the default selections in this screen, and click Next.
10. At the Disk Space Requirements screen, click Next.
11. At the Server Configuration screen, do the following:
 - a. On the Service accounts tab, enter the account name and password you want to use. You must qualify the account name with the domain name: <domain>\<account>. If you want to use a single account for all SQL services, enter the account and password in the Use the same account for all section, and click Use the same account for all SQL Server services.
 - b. On the Collation tab, accept the defaults unless you have a specific requirement for other collations, and click Next to continue.
12. On the Account Provisioning tab of the Database Engine Configuration screen, select whether you want to run SQL Server 2008 in mixed mode or Windows Authentication only. We recommend leveraging Active Directory security and selecting Windows Authentication. However, if you have to migrate SQL Server logins, you must select mixed mode. You must specify at least one SQL Server administrator. We clicked Add Current User. If you run SQL Server 2008 in mixed mode, you must enter a password for the "sa" account here
13. On the Error and Usage Reporting screen, SQL Server provides two options for participating in Microsoft's data collection program: Send error reports to Microsoft or your corporate report server, and Send anonymous feature usage data to Microsoft. Leave these unchecked if you do not want to participate in Microsoft's data collection program. Click Next to continue.
14. The Installation Rules screen runs a check to see if the installation will be blocked. When it is finished, click Next.
15. The Ready to install screen offers one last chance to review your choices. After you do so, click Install.
16. At the Installation Progress screen, wait until Setup is complete, and then click Next.
17. The next screen notifies you that your installation was completed successfully. Click Close to exit.

To enable instant file initialization, you must give the SE_MANAGE_VOLUME_NAME permission to the Windows account under which you run the SQL Server 2008 service:

1. Click Start→Administrative Tools→Local Security Policy.

2. At the Local Security Policy screen, expand the Local Policies folder in the left pane, and click User Rights Assignment (Figure 13).

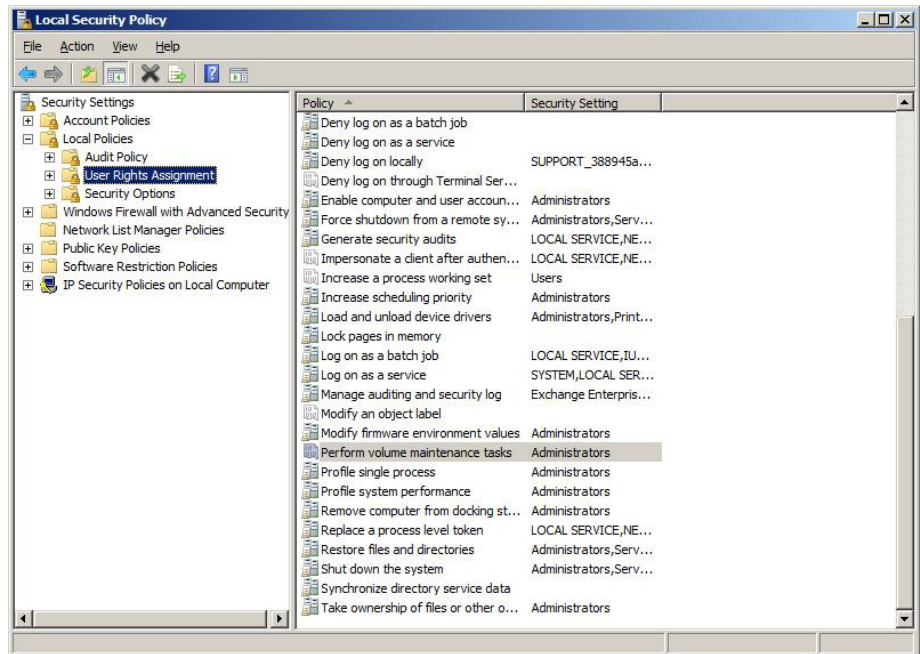


Figure 13. Local Security Policy screen.

3. In the right pane, right-click Perform volume maintenance tasks, and click Properties. Then click Add User or Group.
4. At the Select users, Computers, or Groups screen, type `system` in the Enter the object names to select field, then click Check Names.
5. At the Multiple Names Found screen, click SYSTEM, and then click OK.
6. Click OK twice to return to the Local Security Policy screen, and close the window.

Installing Service Pack 1 for SQL Server 2008

Service Pack 1 is the latest upgrade package available for SQL Server 2008. In this section, we provide detailed instructions on how to install this service pack.



Service Pack 1 for SQL Server 2008 can be downloaded at the following link:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=66ab3dbb-bf3e-4f46-9559-ccc6a4f9dc19&displaylang=en>

You will need to download the 64-bit service pack. The correct file is named `SQLServer2008SP1-KB968369-x64-ENU.exe`

To install the service pack, follow these steps:

1. Insert or download the SQL Server 2008 Service Pack 1 media. Navigate to the location of the application, and double-click it.
2. At the Welcome screen, allow the pre-installation check to finish, and click Next.
3. Read the license terms and when you are ready, accept the license terms, and click Next.
4. At the Select Features screen, leave the default selections, and click Next.
5. At Check Files in Use screen, allow the check to complete, and click Next.
6. At the Ready to Update screen, review the Summary, and click Update.
7. At the Update Progress screen, wait until updating is complete, and then click Next.
8. At the Complete screen, click Close.

Using the SQL Server 2008 Upgrade Advisor

The SQL Server 2008 Upgrade Advisor is a major aid in migration research. This utility scans old databases and SQL Server components for compatibility issues, features, and syntax the newer database management system does not support, and many other critical components. The utility lets you view reports quickly in the Upgrade Advisor interface or save reports for later review.

You can install and execute the Upgrade Advisor on machines running Windows XP SP2, Windows Vista, Windows Server 2003 SP1 or later, or Windows Server 2008. The Microsoft .NET 2.0 framework is also a requirement.

To install the Upgrade Advisor, complete the following steps on your legacy server running SQL Server 2005server:

1. Insert the SQL Server 2008 DVD if your Windows Small Business Server 2003 R2 server has a DVD drive, or download the Upgrade Advisor from <http://www.microsoft.com/downloads/details.aspx?FamilyID=f5a6c5e9-4cd9-4e42-a21c-7291e7f0f852&displaylang=en>
2. If you are prompted to install Microsoft .NET Framework when beginning the installation process, click OK and follow these instructions:
 - a. In the Welcome to Setup window, click I have read and ACCEPT the terms of the License Agreement radio button and click Install.

- b. In the Setup Complete window, click Exit.
 - c. A Software Update Installation Wizard appears for Hotfix for Windows Server 2003 (KB942288-v4) appears. Click Next.
 - d. In the License Agreement window, when you are read, click the I Agree radio button and click Next.
 - e. In the KB942288-v4 Setup pop up window, click Continue.
 - f. When the installation is complete, click Finish.
 - g. When notified that one of the Prerequisites requires you to restart the computer, click OK.
 - h. Restart the server if it does not restart automatically.
 - i. Navigate to the location of your installation, and double-click it to continue onto step 3.
3. On the splash screen, click Install SQL Server Upgrade Advisor.
 4. Click Next to begin the installation wizard, accept the licensing terms, and click Next.
 5. Click Next to accept the default Registration information, click Next to accept the default installation path, and finally click Next to begin the installation.
 6. When the installation is complete, click Finish.

Once you have installed the SQL Server 2008 Upgrade Advisor, you can use this software to scan your SQL Server 2005 instances for potential migration issues. This section provides a brief walkthrough.

1. Select Start→All Programs→Microsoft SQL Server 2008→SQL Server 2008 Upgrade Advisor.
2. Click the Launch Upgrade Advisor Analysis Wizard link, and then click Next to begin.
3. Enter the SQL Server 2005 instance name, and select the features you want the Upgrade Advisor to analyze. Alternatively, click Detect to have the Upgrade Advisor remotely scan the SQL Server 2005 instance and detect which components are running on the SQL Server 2005 instance.
4. Select the Instance name and provide proper authentication to SQL Server 2005, and select the database you want to analyze.
5. Select the Databases you want to analyze. If you want to analyze trace files or SQL batch files, you may specify their location here. Click Next to continue.
6. Click Run to begin the analysis. Run times vary.

NOTE: You may have legacy DTS packages on the SQL Server 2005 server. The packages for Data Transformation Services may be present in the file system or in the database itself. If you selected DTS, or if the Upgrade Advisor automatically detected the presence of DTS packages, you must now select the DTS location you want to analyze.

Following the analysis of your SQL Server 2005 server, you can view the Upgrade Advisor report, which lists warnings and errors (Figure 14).

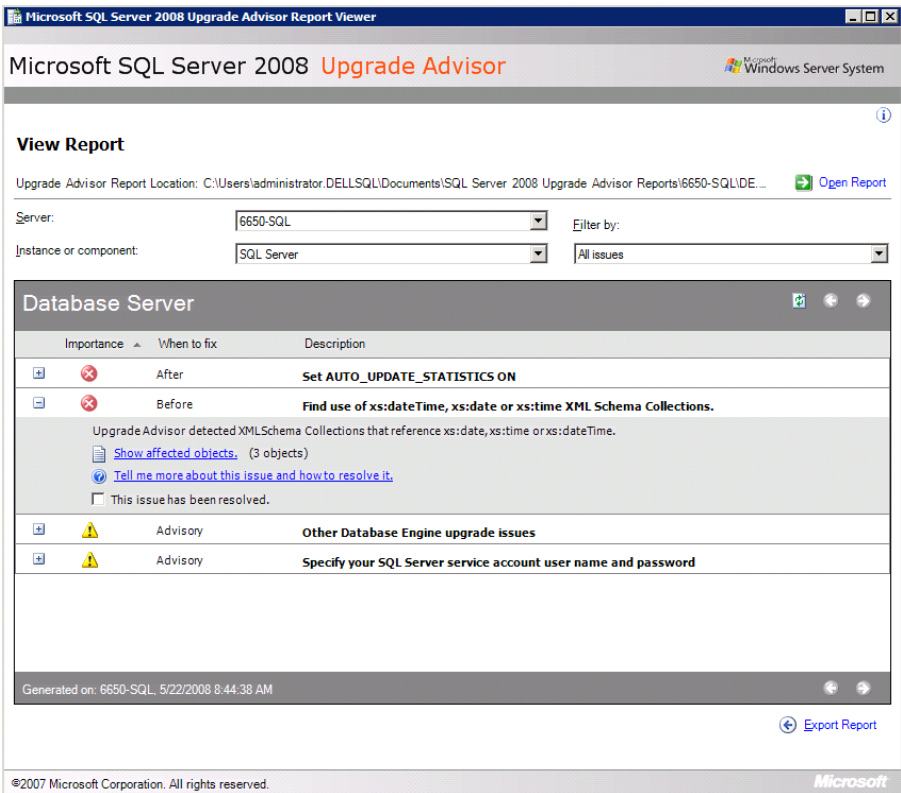


Figure 14. Sample Upgrade Advisor output report.

Implementing the migration

This section features detailed information on how to migrate a SQL Server 2005 database and users on a source server to SQL Server 2008 on your new server. Be aware that various methods exist for migrating databases between instances and versions of SQL Server, including detach/attach, backup/restore, and the copy database wizard. We chose to use the backup/restore method for its simplicity and relative ease.

Here is an overview of the migration process using the backup/restore method:

1. Create a backup of your database on your source server.
2. Transfer the database to your new server using a network shared folder.
3. Transfer your user logins.
4. Restore your database on the destination server.
5. Transfer your SQL Server Agent jobs.

To keep users from issuing updates during the migration process, you can either set the database to read only mode, or set the access property to SINGLE_USER. Both choices will mean that the database will be unavailable to users during the migration. We chose to set the database to SINGLE_USER mode. Be aware that in SQL Server Management Studio, it may be necessary to close the Object Explorer Details pane, the Summary pane, and any other parts of the user interface that you may have active. These panes open database connections to the relevant database, and may cause your SINGLE_USER operation to fail. See [Appendix G](#) for details on setting the database to single user mode.

Setting the database to single-user mode immediately disconnects all users, causing them to lose any work in progress. You must notify your users well in advance of setting the database to single-user mode.

Creating a backup of your SQL Server 2005 database

Creating a backup of your database is a relatively easy process that you can complete using the following steps on your source server:

1. Open SQL Management Studio by clicking Start→Microsoft SQL Server 2005→SQL Server Management Studio.
2. At the Connect to Server screen, log onto the SQL server with Windows Authentication, and click Connect.
3. At the Microsoft SQL Server Management Studio, expand the server and Databases, and right-click the database you wish to move, select Tasks, and then select Back Up...
4. This brings up a Back Up Database screen (Figure 15). Select the following options under General:
 - Under Backup type, choose Full from the drop-down menu.
 - Under Backup set, give your database backup a name.
 - Under Destination, you may leave the default destination. This will save your database backup to C:\Program Files\Microsoft SQL Server\MSSQL\Backup where you can copy it onto the network shared folder.

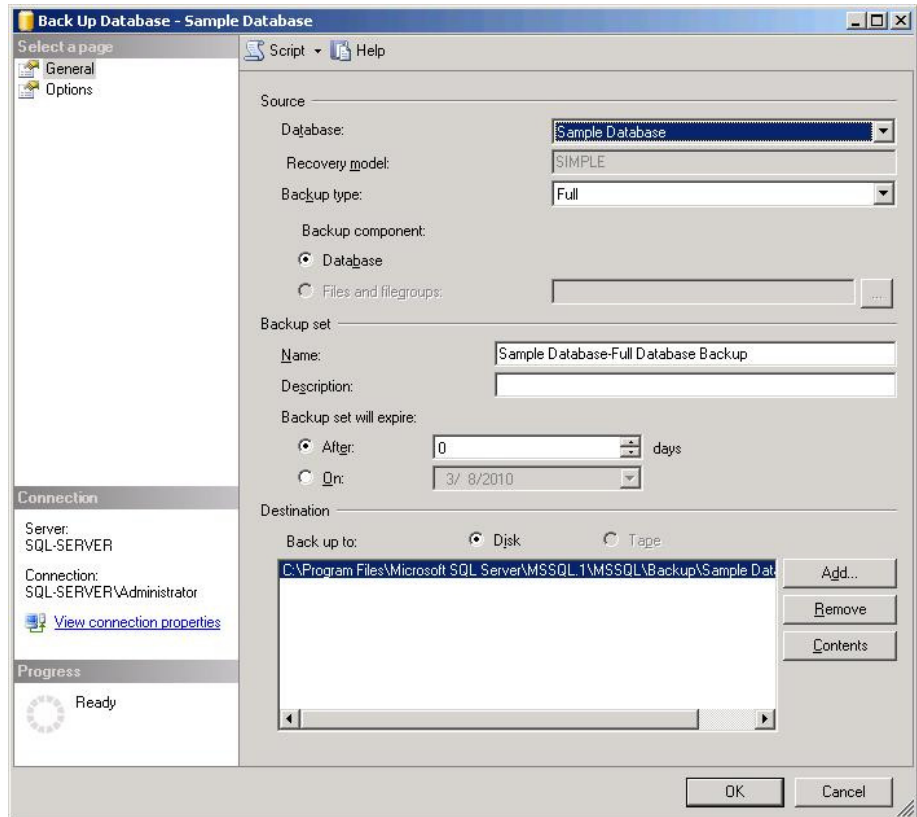


Figure 15. Backing up your SQL Server 2005 database.

6. Optionally, on the Options tab, select the checkbox to Verify your database backup upon completion.



NOTE: This option increases backup time but checks the integrity of the backup file.

7. Click OK to begin your backup creation. When the backup process completes successfully, a pop-up screen appears.

Transferring the database to your new server using a network shared folder

Because your servers are all now on the same network, you can take advantage of shared folders across a network to transfer your SQL Server databases from the source server to the destination server.

In the following steps, you create a new folder on the C:\ drive of your source server and enable sharing the folder temporarily on the network.

1. Navigate to the C:\ drive of your source server. The easiest way to access this is by clicking Start→My Computer, and then double-clicking on C:\

2. Right-click in the white space of the C:\ drive screen, select New, and then click Folder.
3. Select an appropriate name for the folder.
4. Right-click your newly created folder, and select Sharing and Security.
5. At the new folder Properties screen, click the Sharing tab.
6. Click the Share this folder radio button, and then click Permissions.
7. At the Permissions screen, highlight the user Everyone, and select the Allow checkboxes for Full Control and click OK (Figure 16).

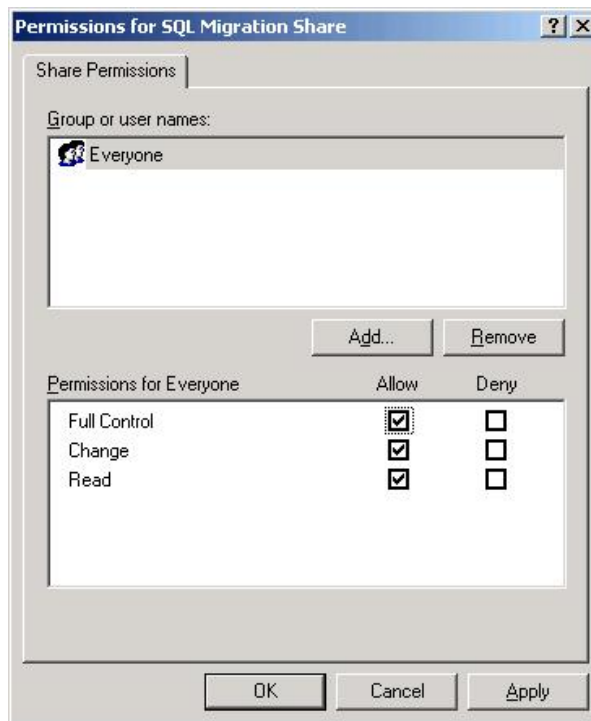


Figure 16. Sharing permissions of your new folder.

8. Click OK to close your new folder Properties.
9. Once you have created the network shared folder, copy your SQL Server 2005 database backup into the shared folder. By default, your database backup can be found in C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Backup.
10. Once your database is finished copying over to the shared folder, go to your destination server, open any Windows Explorer window, and enter

\\<sourceservername>\c\$\<sharedfoldername>\

where <sourceservername> is the name of the server you are transferring your database from, and <sharedfoldername> is the name of the shared folder you created.

Example: \\SQL-SERVER\c\$\SQL Migration Share\

You should then see your database backup file in the folder contents. Copy this file into C:\Microsoft SQL Server\MSSQL 10.MSSQLSERVER\MSSQL\Backup, the default SQL database backup location on your destination server. If a Destination Folder Access Denied warning window pops up, click Continue.

Transferring your user logins

Before you restore your database, it is important to transfer your SQL User Logins so that your users will be able to access any relevant databases after the migration.



Microsoft support provides an excellent guide to transferring your logins, available at <http://support.microsoft.com/kb/918992>

For step-by-step instructions on how to transfer your user logins using the Microsoft knowledge base article above, see [Appendix G](#).

Restoring your database on the destination server

The database restoration process is just as simple as the database backup process.

1. Open a Microsoft SQL Server Management Studio window, and connect to your default instance. Generally, the default instance is your server name.
2. Right-click Database in the object explorer pane, and select Restore Database.
3. At the Restore Database screen, select the following options:
 - a. In the To database field, enter the name of the database you wish to restore.



NOTE: It is critical to use the same database name as on your SQL Server 2005 server. If the database name does not match, applications that depend on the database name may break.

- b. Under Specify the source and location of backup sets to restore, select the From device radio button and click the ... button to the left of the field.
- c. At the Specify Backup screen, select File as your Backup media, and click Add.
- d. Navigate to C:\Program Files\Microsoft SQL Server\MSSQL 10.MSSQLSERVER\MSSQL\Backup and select the name of the backup file (Figure 17). Click OK.

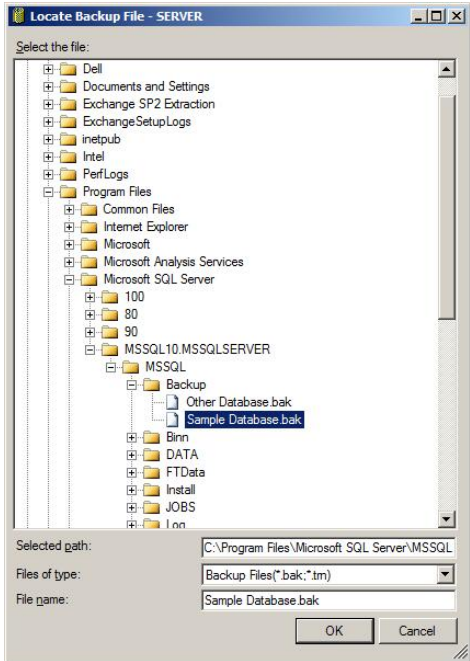


Figure 17. Selecting the database to restore.

- e. Click OK again to return to the Restore Database screen (Figure 18). Check the Restore checkbox, then click OK.

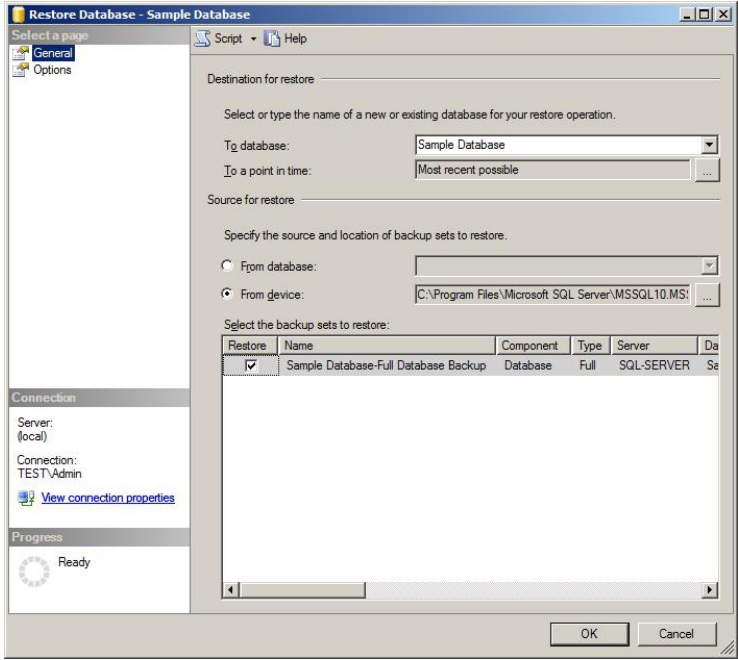


Figure 18. Restoring your selected database.

4. When the restore of database completed successfully screen appears, click OK.
5. While in SQL Server Management Studio, reset the database access property to multi-user. See [Appendix G](#) for details.

Transferring SQL Server Agent jobs

Almost all installations schedule SQL Server Agent jobs that run against their databases. You must migrate these jobs to your new SQL Server 2008 server. Locate the jobs you need to migrate in SQL Server Management Studio (on your SQL Server 2005 server) under the SQL Server Agent, right-click each one, and select Script Job As→Create To→New Query Window. Connect to the SQL Server 2008 server, and run the resulting script in a query window.

Summing up

Windows Small Business Server 2008 Premium running on a Dell PowerEdge T410 server introduces many new features and performance enhancements to your small business network. As this Guide has explained, the SBS Team designed migration to be more straightforward and easier than ever before. With some up-front time spent preparing and planning, you can complete this migration with minimal downtime.

THIS WHITE PAPER IS FOR INFORMATIONAL PURPOSES ONLY, AND MAY CONTAIN TYPOGRAPHICAL ERRORS AND TECHNICAL INACCURACIES. THE CONTENT IS PROVIDED AS IS, WITHOUT EXPRESS OR IMPLIED WARRANTIES OF ANY KIND. Microsoft, Windows Server, SQL Server, Active Directory, and Windows are registered trademarks and BitLocker, Hyper-V, and Windows PowerShell are trademarks of Microsoft Corporation. Intel and Xeon are registered trademarks of Intel Corp. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims proprietary interest in the marks and names of others.

For more information, contact Dell.

Information in this document is subject to change without notice.

Appendix A. Configuring Backups

Configuring Windows Small Business Server 2003 R2

Backup for a manual backup

1. Click Start→Server Management.
2. Click Backup, then click Configure Backup.
3. At the Welcome to the Windows Small Business Server Backup Configuration Wizard screen, click Next.
4. At the Backup Location screen, select the media type where you wish to save your backup, browse to it if applicable, and click Next.
5. At the Backup Data Summary screen, click Next.
6. At the Define Backup Schedule screen leave defaults, and click Next.
7. At the Storage Allocation for Deleted Files and E-mail screen, verify that both checkboxes are selected, and click Next.
8. At the Completing the Windows Small Business Server Backup Configuration Wizard screen, click Finish.
9. At the Backup Configuration Wizard screen, click Close.

Backing up a member server running Windows Server 2003 R2

1. Click Start→All Programs→Accessories→System Tools→Backup.
2. At the Welcome to Backup or Restore Wizard screen, click Next.
3. At the Backup or Restore screen, click the Back up files and settings radio button, and click Next.
4. At the What to Back Up screen, click the All information on this computer radio button, and click Next.
5. At the Backup Type, Destination, and Name screen, enter the desired location for your backup in the Choose a place to save your backup field, and enter a name in the Type a name for this backup field. Click Next.
6. At the Completing the Backup or Restore Wizard screen, click Finish.



NOTE: Using this backup software to create a full system backup requires a floppy disk. This floppy disk will be formatted as a bootable disk in case of a system crash.

Appendix B. Reconfiguring Networks

Disabling the second network adapter in your source server

1. Click Start→Control Panel.
2. Right-click Network Connections, and select Open.
3. Right-click the Local Area Connection that is connected to the Internet, and select Disable.
4. Close the Network Connections window.

Changing the IP address of your Windows Small Business Server 2003 R2 server internal network adapter

1. Click Start→Control Panel.
2. Right-click Network Connections, and select Open.
3. Double-click Server Local Area Connection.
4. Click Internet Protocol (TCP/IP) and click Properties.
5. In the IP address field enter the new IP address.
6. Click OK.
7. Click OK.
8. Close the Network Connections window.

Running the Connect to the Internet wizard

1. Start→Server Management.
2. Click Internet and E-mail, then Connect to the Internet.
3. At the Welcome to the Configure E-mail and Internet Connection Wizard screen, click Next.
4. At the Connection Type screen, click the Broadband radio button, and click Next.
5. At the Broadband Connection screen, select A local router device with an IP address from the My server uses drop-down menu. Click Next.
6. At the Router Connection screen, enter the preferred DNS server and the Local IP address in the appropriate fields. Check the My server uses a single network connection for both Internet access and the local network checkbox, and click Next.
7. If a warning pops up about configuring an external firewall device, click Yes to view additional information or click No to continue.
8. When the network adapter warning pops up, click No.
9. At the Web Serviced Configuration screen, leave default selections, and click Next.
10. At the Web Server Certificate screen select the appropriate radio button if you have an existing certificate, or create a new one, and click Next.
11. At the Internet E-mail screen, click Do not change Internet e-mail configuration, and click Next.
12. At the E-mail Delivery Method screen, click the use DNS to route e-mail radio button, then click Next.
13. At the E-mail Retrieval Method screen, select the appropriate settings. In our case, we checked the Use Exchange checkbox, and then click the E-mail is delivered directly to my server radio button. Click Next.

14. At the E-mail Domain Name screen, enter your domain name in the E-mail domain name field, and click Next.
15. At the Remove E-mail Attachments screen, accept defaults, and click Next.
16. At the Completing the Configure E-mail and Internet Connection Wizard, review the settings, and click Finish.
17. When the wizard finishes, click Close.
18. If you are prompted to create password policies when the configuration is complete, you may click No because you will be decommissioning this server after the migration.

Appendix C. Creating the Answer File worksheet

Use the following worksheet to help you collect the information you will need to create the Answer File for your migration.

General Information	
Installation type	Select the Migration from existing server (Join existing domain) radio button.
Installation settings	Get Installation Updates - Yes Run unattended - Yes
Clock and time zone settings	If you wish to select a time zone now, click the Use the following time zone radio button and select the appropriate time zone, or select manual if you wish to enter it before beginning Migration Mode.
Trial security services	These are at your discretion. For our migration, we unselected both.
Company information	In this optional section, enter your Business Name, Street Address, City, State/Province, Zip/Postal Code, and Country/Region in the appropriate fields.
Certificate authority name	You may leave this field blank.
Source (existing) server information	
Domain administrator account name	Enter the user logon name of the additional administrator account you created.
Password	Enter the additional administrator account password.
Source domain name	Example: test.local (see Figure 6)
Default gateway	Enter the router IP address Example: 192.168.16.2
DHCP is running on the Source Server	Yes (Check the box)
Source server name	Enter the computer name of your Windows Small Business Server 2003 R2 system.
Source server IP address	Enter the current IP address of your Windows Small Business Server 2003 R2 system. Example: 192.168.16.254
Destination (new) server information	
Destination server name	Enter an appropriate computer name for your new server. Example: SBS2008-T410
Destination server IP address	Enter an available IP address that fits your current IP address scheme. Example: 192.168.16.253

Appendix D. Installing network adapter drivers

After you have downloaded the appropriate network adapter drivers, transfer them to a USB flash drive and then insert the USB flash drive into the PowerEdge T410. Then follow these steps:

1. Click Browse.
2. Navigate to your USB flash drive where the driver is located.
3. Double-click the appropriate driver file and follow the on-screen instructions to install your network adapter driver.
4. When you have finished installing the network adapter driver, click Test network adapter to continue.

Appendix E. Migration Wizard

General information

Windows Small Business Server 2008 has an excellent step-by-step help document that you will be directed towards during various tasks in the Migration Wizard. You may refer back to it by navigating in Windows Explorer to the folder below and double-clicking the SBS_MigrationCHM.chm file.

C:\Program Files\Windows Small Business
Server\Bin\SBS_MigrationCHM.chm

Additionally, the most up-to-date version of the migration documentation can be found online in the Windows Small Business Server TechNet Library, [http://technet.microsoft.com/en-us/library/sbs-2008-2003-migration\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/sbs-2008-2003-migration(WS.10).aspx).

To skip any of the optional tasks, follow these steps:

1. Highlight the optional task you wish to skip and click Next.
2. At the next screen, click the Skip task radio button.
3. Click Next to return to the Migration Wizard Home.

Configure the network

1. At the Migration Wizard Home screen, highlight Configure the network, and click Next.
2. At the Set up the network screen, click Start the Connect to the Internet Wizard.
3. At the Connect to the Internet screen, click Next.
4. If you receive a pop-up about an Existing Network Found, go to the source server and complete the following steps. Otherwise, skip to step 5.
 - a. Click Start→Administrative Tools→DHCP.
 - b. Right-click the source server name under DHCP, highlight All Tasks, and select Stop.
 - c. A Cannot find the DHCP Server warning should appear in the right pane if the operation was successful.
5. At the Type the IP address of your router screen, enter the Router IP Address and the Server IP Address in the appropriate fields and click Next.
6. At the Detecting the router and configuring your network screen, click Next.
7. At the Your network is now connected to the Internet screen, click Finish.

Configure the Internet address

1. At the Migration Wizard Home screen, select Configure the Internet address, and click Next.
2. At the Configure the Internet address screen, click Start the Internet Address Management Wizard.
3. At the Before you begin screen, review the information, and click Next when you are ready.
4. At the Do you want to register a new domain name screen, if applicable, click the I already have a domain name that I want to use radio button, and click Next. Otherwise, you may purchase a new domain name.
5. At the How do you want to manage your domain name screen, click the I want to manage the domain name myself radio button if you are already managing your own domain and do not wish to change this setting. Click Next.
6. At the Store your domain name information screen, type the desired domain name in the Domain name and extension field. Click Configure.
7. At the Congratulations screen, click View Warning Details if the option exists. If you receive a warning that Windows Small Business Server 2008 cannot open ports 25, 80, 443, and 987 to the IP of the server, consult your router user guide to manually open these ports. Then, click Close.
8. Upon returning to the Configure the Internet address screen, click the Task complete radio button, and click Next.

Migrate Exchange mailboxes and settings

1. At the Migration Wizard Home screen, select Migrate Exchange mailboxes and settings, and click Next.
2. At the Migrate Exchange mailboxes and settings screen, click Migrate Exchange Server mailboxes and public folders.
3. The Small Business Server 2008 Setup and Migration help guide appears with detailed steps on how to migrate your mailboxes and settings. Follow these instructions to complete this step of the Migration Wizard.
4. At the Migrate Exchange mailboxes and settings screen, click the Task complete radio button, and click Next.

Migrate users and groups: Using Windows Small Business Server 2008 Active Directory Group Converter

An alternative to manually editing the migrated security groups during the first part of this task is to use the Windows Small Business Server 2008 Active Directory Group Converter from Microsoft.

The Active Directory Group Converter can be downloaded from this site: <http://go.microsoft.com/fwlink/?LinkID=141892>

To complete this task using the Active Directory Group Converter, follow these steps:

1. At the Migration Wizard Home screen, select Migrate users and groups, and click Next.
2. At the Migrate groups screen, minimize the window, and run the Active Directory Group Converter tool.
3. After the tool has run, expand the Migrate groups window, and click Next.
4. Click Run the Change User Role Wizard.
5. At the Select new user role screen, highlight the role you want to assign to a user, click Replace user permissions or settings, and click Next.
6. At the Select user accounts screen, select the users whose roles you want to change, and click Add. If no user accounts are displayed, check the Display all user accounts in the Active Directory.
7. Click Change user role.
8. At the User roles have been changed successfully screen, click Finish.
9. Repeat steps 4 through 8 until you are finished migrating your user roles for each user.
10. At the Migrate user accounts screen, click the Task complete radio button, and click Next.

Finish the migration

In this section, we address how to finalize the migration process and review a few options of what to do with your source server.

If you are planning to repurpose your old server, you may want to uninstall Exchange Server 2003 and remove the source server from Active Directory Domain Services. Refer to page 71 of the downloadable version of the migration documentation at <http://go.microsoft.com/fwlink/?LinkId=123547> for more details on removing these components.

If you are simply decommissioning the server, as we did in this guide, follow these steps to complete the Migration Wizard process:

1. At the Migration Wizard Home screen, select Finish Migration, and click Next.
2. Click the Finish the migration radio button, and click Next.
3. At the Finish the migration screen, go to the source server, and begin with step 4.
4. On the source server, complete the following steps:
 - a. Click Start→Run.
 - b. Type `dcpromo` in the Open field, and click OK.
 - c. At the Welcome to the Active Directory Installation Wizard screen, click Next.
 - d. At the Global Catalog warning, click OK.
 - e. At the Remove Active Directory screen, verify that the This server is the last domain controller in the domain checkbox is not checked, and click Next.
 - f. At the Administrator Password screen, enter your administrator account password twice, and click Next.
 - g. At the Summary screen, click Next.
 - h. At the Completing the Active Directory Installation Wizard screen, click Finish.
 - i. Click Restart Now when prompted.
5. On the Destination Server, at the Finish the migration screen, check the box beside The Source Server is no longer a domain controller, and click Next.
6. At the Finished the migration successfully screen, click Finish.
7. Unplug the Ethernet cable from source server to the network switch to physically disconnect the decommissioned server from the network.

In two of our test migration runs, we received a NETLOGON timeout error while attempting to demote the source server as a domain controller. We were able to successfully bypass this error in both instances by connecting to the DHCP of the destination server using the following steps:

1. Click Start→Administrative Tools→DHCP.
2. In the console tree, click DHCP.
3. On the Action menu, click Add Server.
4. In the Add Server screen, click This authorized DHCP server.
5. Select the new server as the DHCP server, and click OK.
6. Re-run step 4 from the Finish Migration steps above.

Appendix F. Installing the Exchange Service Pack



NOTE: The Service Pack 2 installation requires that you first install Microsoft Windows Installer 4.5. To do this, download the file Windows6.0-KB942288-v2-x64.msu at the following link:
<http://www.microsoft.com/downloads/details.aspx?FamilyId=5A58B56F-60B6-4412-95B9-54D056D6F9F4&displaylang=en>

After downloading the file, follow these steps to complete the installation:

1. Double-click the installer file.
2. Click OK when prompted.
3. Restart your system when prompted by clicking Restart Now.

You will first need to create an empty folder on the C:\ drive to extract the installation files for this service pack. Choose a recognizable name for the folder, such as Exchange SP2 Extraction. Once you have created a folder, follow the steps below to install Service Pack 2 for Exchange 2007 using the Install Tool for Small Business.

1. Double-click the downloaded Exchange Server 2007 Service Pack 2 x64 file.
2. At the Choose Directory For Extracted Files screen, enter C:\<newemptyfolder>, where <newemptyfolder> is the name of the folder you created for the extracted files. For example, C:\Exchange SP2 Extraction
3. At the Extraction Complete screen, click OK.
4. Double-click the downloaded Exchange SP2 Install Tool for SBS 2008.
5. At the Do you want to run this file window, click Run.
6. Read the License Agreement, check the I accept the terms in the License Agreement checkbox when you are ready, and click Next.
7. At the Change destination folder screen, leave the default Folder name, and click Next.
8. At the Completed the Microsoft Exchange Server 2007 SP2 Installation Tool Setup Wizard, verify that the Install Microsoft Exchange Server 2007 SP2 checkbox is selected, and click Finish. If you have not yet installed the Windows Installer 4.5, you will receive a setup warning that will cancel the SP2 installation.

9. When prompted, browse to C:\<newemptyfolder> (See step 2) and click OK.
10. At the Install Service Pack 2 for Microsoft Exchange Server 2007 screen, click Next.
11. At the Prepare the server environment screen, wait for the tool to finished preparing the installation, then click Next. The Microsoft Exchange 2007 Service Pack 2 window remains open in the background and an Exchange Server 2007 installation window appears in the foreground.
12. Click Install Microsoft Exchange Service Pack 2.
13. At the Introduction screen, click Next.
14. Read the license agreement, and click the I accept the terms in the license agreement radio button when you're ready. Click Next.
15. At the Readiness screen, wait for the check to finish and click Upgrade.
16. At the Completion screen, click Finish.
17. Click Close.
18. At the Installing Microsoft Exchange 2007 Service Pack 2 screen, click Next.
19. At the Setup finished successfully screen, click Finish.

Appendix G. SQL Server migration steps

Setting the access property of a database to single user or multi user

1. Start SQL Server Management Studio by selecting Start→All Programs→Microsoft SQL Server 2005→SQL Server Management Studio.
2. Enter your server name, select Windows Authentication, and click Connect.
3. To set the database to single-user mode to ensure no updates occur, close any query window, Object Explorer details window, or summary windows that may be open. Leave Object Explorer open. If Object Explorer is not visible, you can invoke it by pressing F8.
4. Expand Databases, then right-click the database in Object Explorer, and select Properties.
5. On the left side of Database Properties screen, click Options.
6. Scroll down to the last option on the Database Options screen.
7. Change the Restrict Access option from MULTI_USER to SINGLE_USER, or vice versa, by selecting it from the drop-down menu.
8. Click OK.
9. If prompted, click Yes to agree to shutting down other connections.

Transferring SQL logins and passwords between SQL Server 2005 and 2008 instances using Microsoft Knowledge Base article 918992

To transfer your SQL logins and passwords, complete the following steps on your SQL source server:

1. Open a Internet Explorer window, and navigate to <http://support/microsoft.com/kb/918992>.
2. Scroll down the Knowledge Base article to step 2 under More Information, and highlight all of the text within the blue box, beginning with the words USE master, and ending with the words RETURN 0 GO. Right-click the highlighted text and select Copy.
3. Minimize the Internet Explorer window.
4. Click Start→Microsoft SQL Server 2005→SQL Server Management Studio, and connect to the default instance.
5. Select the default instance you are connected to, then click New Query.
6. In the blank right pane, right-click, and click Paste.

7. Ensure that the entire block of text copied successfully, and click Execute.
8. If the query execution is successful, the following message will appear in the Messages window: Command(s) completed successfully.
9. Click New Query, and type `EXEC sp_help_revlogin` in the New Query window.
10. Click Execute.
11. When the command completes, view the Messages pane and highlight all of the users you wish to transfer to SQL Server 2008. As a general guideline, the user logins you need to transfer do not include the default system accounts. Each user will have two lines, the first stating their login name, and the second line beginning with the words `CREATE LOGIN`. Once you have highlighted all of the users you want to transfer, right-click and select Copy.
12. Click Start→Accessories→Notepad.
13. Right-click in the Notepad window, and click Paste.
14. Click File, then Save As.
15. Save the file as `SQLUsersscript.sql` in the File name field, and click Save.

You must transfer the `SQLUsersscript.sql` file to the destination (new) server using either a network shared folder or a USB flash drive.

To complete the transfer process, follow these steps on the destination server:

1. Click Start→All Programs→Microsoft SQL Server 2008→SQL Server Management Studio, and connect to the default instance. Generally, the default instance is your server name.
2. Navigate to the location where you have transferred the `SQLUsersscript.sql` file, and double-click it to open it as a new query window in SQL Server 2008.
3. When the file opens in Microsoft SQL Server Management Studio, click Execute.
4. If the query execution is successful, the following message appears: Command(s) completed successfully

About Principled Technologies



Principled Technologies, Inc.
1007 Slater Road, Suite 250
Durham, NC, 27703
www.principledtechnologies.com

We provide industry-leading fact-based marketing and technology assessment services. We bring to every assignment extensive experience with and expertise in all aspects of technology testing and analysis, from researching new technologies, to developing new methodologies, to testing with existing and new tools.

When the assessment is complete, we know how to present the results to a broad range of target audiences. We provide our clients with the materials they need, from market-focused data to use in their own collateral to custom sales aids, such as test reports, performance assessments, and white papers. Every document reflects the results of our trusted independent analysis.

We provide customized services that focus on our clients' individual requirements. Whether the technology involves hardware, software, Web sites, or services, we offer the experience, expertise, and tools to help you assess how it will fare against its competition, its performance, whether it's ready to go to market, and its quality and reliability.

Our founders, Mark L. Van Name and Bill Catchings, have worked together in technology assessment for 25 years. As journalists they published over a thousand articles on a wide array of technology subjects. They created and led the Ziff-Davis Benchmark Operation, which developed such industry-standard benchmarks as Ziff Davis Media's Winstone and WebBench. They founded and led eTesting Labs, and after the acquisition of that company by Lionbridge Technologies were the head and CTO of VeriTest.

Principled Technologies is a registered trademark of Principled Technologies, Inc.
All other product names are the trademarks of their respective owners.

Disclaimer of Warranties; Limitation of Liability:

PRINCIPLED TECHNOLOGIES, INC. HAS MADE REASONABLE EFFORTS TO ENSURE THE ACCURACY AND VALIDITY OF ITS TESTING, HOWEVER, PRINCIPLED TECHNOLOGIES, INC. SPECIFICALLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, RELATING TO THE TEST RESULTS AND ANALYSIS, THEIR ACCURACY, COMPLETENESS OR QUALITY, INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE. ALL PERSONS OR ENTITIES RELYING ON THE RESULTS OF ANY TESTING DO SO AT THEIR OWN RISK, AND AGREE THAT PRINCIPLED TECHNOLOGIES, INC., ITS EMPLOYEES AND ITS SUBCONTRACTORS SHALL HAVE NO LIABILITY WHATSOEVER FROM ANY CLAIM OF LOSS OR DAMAGE ON ACCOUNT OF ANY ALLEGED ERROR OR DEFECT IN ANY TESTING PROCEDURE OR RESULT.

IN NO EVENT SHALL PRINCIPLED TECHNOLOGIES, INC. BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH ITS TESTING, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL PRINCIPLED TECHNOLOGIES, INC.'S LIABILITY, INCLUDING FOR DIRECT DAMAGES, EXCEED THE AMOUNTS PAID IN CONNECTION WITH PRINCIPLED TECHNOLOGIES, INC.'S TESTING. CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES ARE AS SET FORTH HEREIN.