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# (MCTS): Microsoft Windows Small Business Server 2011 Standard, Configuring (70-169) Certification Guide

A compact certification guide to help you prepare for and pass the Microsoft Windows Small Business Server 2011 Standard, Configuring (70-169) exam

Robert Crane

Drew Hills

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BIRMINGHAM - MUMBAI

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Apart from resolving client technical issues, Robert continues to present seminars locally and internationally, as well as write on a number of topics for the Computer Information Agency. He also develops and presents technology courses on a regular basis on topics including SharePoint and Office 365. Robert is committed to a process of ongoing business and technical education to continue developing the skills required to assist clients with their business challenges.

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---

I'd like to firstly thank my co-author Drew, who has toiled long and hard with me on creating this piece. I appreciate all your assistance, support, and friendship during this process. Next, I'd like to thank Susan Bradley (SBS-MVP) for providing me with the resources to run a Windows SBS 2011 Standard test system. I'd also say thanks to the reviewers, who graciously went through what we had written and provided their valuable feedback. Your contributions have made this book a much better product. I'd also like to thank people like Susan, the reviewers and all the other community members out there, MVPs, IT Professionals, resellers, and end users who continue to provide so much valuable information about the product through so many different mediums. Without them, Windows SBS 2011 would not be the vibrant and successful product it is today. Last, but not least, I must thank Microsoft for not only taking a chance and creating the SBS product all those years ago but for continuing to support, improve, and enhance the product over the years, without which I would not have had the pleasure of journeying to this point in my career. To one and all, a heartfelt thanks.

---

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Drew was an owner of a successful ICT company, which ran for seven years before he sold the company. Since then, he has been working as an Operations Manager or as a Senior Systems Engineer for a number of Managed Services based support companies, while enjoying a greater work life balance. Drew describes himself as a quiet achiever; however, he is an active contributor to the SMB IT Professional community in Australia.

In the 13 plus years that Drew has worked in IT, his primary focus has always been on the SMB client base, with the majority being based on the Microsoft SBS product range. Drew divides his passion equally between the SMB client base and the Microsoft technologies that support these clients.

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I would like to thank my wife and son, for allowing me the time and space to complete this book, and Robert Crane for asking me to co-author. Also, thanks to all the current and future Microsoft Small Business Specialists for allowing me to be part of a worldwide community of amazing people.

---

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# Preface

This book is primarily designed to help those who are looking to pass the Microsoft Certification Exam 70-169—Windows Small Business Server 2011 Standard, Configuring. The major benefit of achieving this is the ability to qualify for some of the Microsoft competencies that are available. However, it should also be of benefit to any Windows Small Business Server (SBS) 2011 Standard network administrators in that it covers all the basics from setting up a new Windows SBS 2011 Standard server, through migration from previous versions of SBS, to configuring and maintaining not only the server, but also the workstations and user accounts.

Even after the exam is completed, the book can still be used as a standards and best practice reference for anyone working with Windows SBS 2011 Standard.

## Small Business Server versions

For those new to the world of Microsoft Small Business Server (SBS), you may be surprised to find that the SBS product has been around since October 1997 when it was released as BackOffice Small Business Server 4.0. Since then it has progressed through the following releases:

- BackOffice Small Business Server 4.5 (May, 1999)
- Microsoft Small Business Server 2000 (February, 2001)
- Windows Small Business Server 2003 (October, 2003)
- Windows Small Business Server 2003 R2 (July, 2006)
- Windows Small Business Server 2008 (August, 2008)
- Windows Small Business Server 2011 (December, 2010)

As you can see SBS is a product with a long and distinguished heritage.

In recent years there has also been a number of different versions of SBS with each release. This continues to this day with two major offerings around the 2011 product. The first, and the one not covered in the book, is Windows SBS 2011 Essentials which is a product without the traditional inclusion of Exchange or SharePoint servers and is designed to be connected to Microsoft's cloud based offering of these products, Office 365.

The second, and the one covered exclusively by this book is Windows SBS 2011 Standard which is the traditional infrastructure version that includes on-premise versions of SharePoint and Exchange.

## **Microsoft Certified Professional program**

Microsoft certifications are available for most Microsoft products, including Windows SBS 2011 Standard. They are designed to test your knowledge of the product to provide you with relevant skills that both employers and customers respect and recognize. Being a **Microsoft Certified Professional (MCP)** also gives you access to the community of other certified professionals around the world.

Becoming an MCP provides you with valuable resources and benefits from Microsoft, such as access to a member website, career building tools, and training.

## **Small Business Specialist Community**

Completing the Windows Small Business Server 2011 Standard, Configuring exam also puts you on the road to becoming a Small Business Specialist. This qualification is a unique recognition of businesses that support the SBS product range.

The Small Business Specialist community is spread all over the world and is well known for its passion around the product and the solutions it provides customers. There are many resources available to Small Business Specialists including access to **Not For Resale (NFR)** software from Microsoft, e-mail list, and in many cases regular get-togethers where Small Business Specialists meet and share their knowledge, experience, and work together as a group to improve what they know about the product and their businesses.

The best way to get involved in the Small Business Specialist Community is to join a local group and start participating. To find out more information about a group near you visit <http://www.sbsgroups.com>.

## What this book covers

*Chapter 1, Installing and Setting Up Windows Small Business Server (SBS) 2011 Standard*, takes you through the process of installing a Windows SBS 2011 Standard server, including migration if required.

*Chapter 2, Configuring Remote Access*, covers the configuration of various methods of remote access for Windows SBS 2011 Standard.

*Chapter 3, Configuring and Managing Messaging and Collaboration*, shows you how to share information with Windows SBS 2011 Standard via such things as e-mail, network folders, and the built-in intranet.

*Chapter 4, Managing Users, Computers, and Printers*, covers the creation of user and group accounts as well as the management of shared resources such as computers and printers.

*Chapter 5, Managing Health and Security*, examines what resources are available in Windows SBS 2011 Standard to ensure that the network continues to run smoothly.

*Chapter 6, Advanced Configuration*, will show you how to take Windows SBS 2011 Standard beyond the basic installation with options such as additional servers.

*Appendix A, Resources*, contains a range of valuable resources for Windows SBS 2011 Standard including websites, mailing lists, blogs, and more.

*Appendix B, Test your Knowledge Answers*, contains answers and explanations to the questions found at the end of each chapter.

## What this book does not cover

This book covers the basics of Windows SBS 2011 Standard. It covers most of the default Windows SBS 2011 Standard options and configurations simply because this is the material that Microsoft is most likely to test in any certification exam. Given the focus of this book which is the Microsoft Certification exam, the text will not cover the Windows SBS 2011 Essentials product as this is not currently part of the examination curriculum.

There is simply not enough room to cover all the permutations that are possible with Windows SBS 2011 Standard. This book also only scratches the surface of what can be done with Windows SBS 2011 Standard and how it can be configured. Things such as group policy, SharePoint, and other customizations can really take Windows SBS 2011 Standard from the plain vanilla to something that is highly customized and optimized for any business.

If you are an experienced Windows SBS 2011 Standard administrator, then this book is probably not for you. If you are looking for a deep dive into all the configurations that are available with Windows SBS 2011 Standard, then this book is also probably not for you. However, if you are primarily looking to pass the Microsoft Certification exam and secondly looking for an introduction into the world of Windows SBS 2011, then this book is for you.

## **What you need for this book**

This book is based on the Microsoft Windows Small Business Server (SBS) 2011 Standard product. It also covers the Premium Add-On pack for the product. To get the most from this book, you should have access to both software products as well as standard Windows desktop software such as Windows 7 Professional.

It is strongly recommended that you look to establish a test environment so you can follow along with each chapter of the book. Utilizing virtualization technology to run your software on will provide you with a significant amount of flexibility during run up, configuration, and testing. Importantly, it will also give you portability to move between hardware systems if required.

Aside from the hardware and software, you will also generally need a router and a connection to the Internet.

## **Who this book is for**

This book is aimed at the IT Professional looking to learn more about Windows SBS 2011 Standard. This typically means they are either a network administrator for a business that already has Windows SBS 2011 Standard or they are a reseller that is supporting customers with the product.

More than this, the book is specifically targeted at those seeking to complete the Microsoft Certification Exam 70-169 – Windows Small Business Server 2011 Standard, Configuring. That said, the book should also be seen as a good technical resource about Windows SBS 2011 Standard and includes best practices as well as a number of important resources.

If you are an IT Professional who is working with Windows SBS 2011 Standard and potentially looking to become Microsoft Certified on the product, then this book is for you.

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## Test taking tips

Once you have read this book, completed all of the example questions at the end of each chapter, and understood the explanation to achieve the correct answer, what else should you do to help you pass the certification exam?

1. Read through the information on the Microsoft website about this exam:  
<http://www.microsoft.com/learning/en/us/Exam.aspx?ID=70-169&Locale=en-us>.

Even though the outline of this book is closely related to the **Skills Measured** tab on this website, take the time to read them again and make sure you have the knowledge in each topic.

2. Install and use Windows SBS 2011 Standard. Although a server in a live environment is preferred, if this isn't possible a test lab server is a great advantage to help pass this certification.
3. Become a member of your local SBS users' group or online community. These communities are worldwide and once you have become a member you have access to people who work with the SBS and related products.
4. Create a login to Prometric. It is the only place at this time you can book your Microsoft Certification, and thus you must have a login.



As can be expected the guidelines on what you are required to bring, and what is not allowed in a test centre are very controlled. Ensure you read the about the **Test Center Experience** found at: <http://www.prometric.com/TestTakers/FAQs/Test+Center.htm>.


Best of luck!

## Conventions

In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles, and an explanation of their meaning.

**New terms** and **important words** are shown in bold. Words that you see on the screen, in menus or dialog boxes for example, appear in the text like this: "Click **Configure the internet address**, and then click **Next**".

 Warnings or important notes appear in a box like this. 

 Tips and tricks appear like this. 

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# 1

## Installing and Setting Up Windows Small Business Server (SBS) 2011 Standard

One of the key elements in the certification process is knowing how to correctly install Windows Small Business Server (SBS) 2011 Standard. There are many issues here that need to be considered and correctly addressed, and any exam will test these issues extensively in order to ensure that you can demonstrate your knowledge in this area. You should expect to see a significant amount of installation questions during the certification exam.

Knowing how to install Windows SBS 2011 Standard is the first step in learning more about the product. The key to a successful installation is preparation and following a standard process. This chapter will take you through the preparation requirements as well as walk you through the installation process.

In this chapter we shall cover the following topics:

- Preparing for a Windows SBS 2011 Standard installation
- Installing Windows SBS 2011 Standard
- Preparing for a migration
- Installing and migrating to Windows SBS 2011 Standard
- Configuring the network infrastructure
- Test your knowledge

## **Preparing for a Windows SBS 2011 Standard installation**

Before you can start installing your software, you first need to ensure that you have completed the preparation. This will typically involve:

- Obtaining the appropriate hardware
- Configuring the hardware for the installation
- Determining the settings for your installation
- Preparing the installation media
- Determining the type of installation you'll be doing

## **Basic installation**

The most likely place that you will start when working with Windows SBS 2011 Standard will be completing a basic installation. Such an installation is usually onto new hardware and simply follows the default options. It provides you with a base from which you can build your knowledge of the more complex methods of installing SBS.

## **Components of Windows SBS 2011**

Windows SBS 2011 Standard is composed of a number of standard Microsoft technologies:

- Windows Server 2008 R2 Standard
- Exchange Server 2010 Standard SP1
- SharePoint Foundation 2010
- Windows Software Update Services 3.0 SP2
- Remote Web Access
- Windows SBS Console
- Microsoft SQL Server 2008 R2 Express

However, Windows SBS 2011 Standard is not just a collection of these standard elements, it is the tight integration of all of these components together on a single server using wizards to greatly reduce the workload required to maintain the system.

A Windows SBS 2011 Standard server is managed through a special console that permits easy access to many of the most common management features of the environment. Yet, there will be cases where you need to dive under the hood to make changes.

To extend the functionality of the Windows SBS network, you can purchase Windows SBS 2011 Premium Add-on packs. Each add-on pack contains a license for Windows Server 2008 R2 Standard Edition as well as a license for SQL Server 2008 R2 Standard for Small Business Edition. This allows the implementation of all Windows Server 2008 R2 Standard technologies including Hyper-V and Remote Desktop Services.

You can purchase as many Windows SBS 2011 Premium Add-on packs as you require for your network.

## Hardware requirements

Windows SBS 2011 Standard requires hardware to operate. Being a server-based operating system, it requires a certain level of hardware to adequately serve the network and its users. Given that this hardware will be the heart of your network, it is critical that it meet (and hopefully exceed) a minimum level of requirement. Anything below this level will impact the reliability and performance of the whole network and reduce the productivity of users.

## Obtaining the appropriate hardware

The recommended minimum specifications for Windows SBS 2011 Standard are:

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<b>Hardware</b>	<b>Minimum requirement</b>
Processor	Quad core 2 GHz 64-bit (x64) or faster. 1 socket (4 sockets maximum).
Physical memory (RAM)	8 GB. 10 GB recommended (32 GB maximum).
Storage capacity	120 GB.
DVD ROM drive	DVD ROM drive.
Network adapter	One 10/100 Ethernet adapter.
Monitor and video adapter	Super VGA (SVGA) monitor and video adapter with 1024 x 768 or higher resolution.
Network devices	A router or firewall device that supports IPv4 NAT.
Internet connection	Windows SBS 2011 Standard requires that you connect the server to the Internet.

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<b>Hardware</b>	<b>Minimum requirement</b>
Optional network devices	Device required by your Internet service provider (ISP) to connect to the Internet.  One or more switches to connect computers and other devices to the local network.
Fax modem	Fax services require a fax modem.

It is also important to note the following that are not supported by Windows SBS 2011 Standard:

- Multiple Network Interface card (NIC)
- Tape drive

## Software requirements

There are limitations to Windows SBS 2011 Standard and it is important to note the following:

- There is only support for a single server running Windows SBS in a domain. Additional servers are supported as domain controllers or member servers
- Windows SBS 2011 Standard cannot be licensed for more than a total of 75 clients – including users and devices
- The Windows SBS 2011 Standard Server must be the root of the Active Directory forest and can't have trusts with other domains or forests
- You cannot run Windows SBS 2011 Standard as a Remote Desktop Services Session host server
- Windows SBS 2011 Standard doesn't support the use of tape drives
- Windows SBS 2011 Standard does not include any additional firewall apart from that which is part of Windows Server 2008 R2



**Additional aspects you will have to consider:**

Windows SBS 2011 Standard does not come with any inbuilt anti-virus or anti-malware protection. There are a range of third-party solutions that can be considered.

## Firewall requirements

Some previous versions of Windows SBS included a software firewall (typically **Microsoft Internet Security and Accelerator (ISA) Server**). Windows SBS 2011 Standard, like Windows SBS 2008, does not include any independent firewall software except for the inbuilt firewall that comes with Windows Server 2008 R2. It is Microsoft's expectation that a separate firewall device will be installed separately from the Windows SBS 2011 Standard Server.

In most cases, this firewall device will be a hardware appliance that also incorporates a broadband router. Because Windows SBS 2011 Standard can utilize remote access and SMTP e-mails, it is important that this appliance supports the ability to port forward to the Windows SBS 2011 Standard server. It is also recommended that this device be a "business grade" device that not only supports filtering and reporting but also **Active Directory (AD)** integration.

## Configuring hardware for the installation

The base of any network is the hardware that it is installed on and it is therefore always recommended that you take the time to ensure it is properly configured prior to the installation of any software.

It is strongly recommended that you update all firmware of hardware peripherals. You should also download the latest software drivers for your hardware and have these ready during the installation.

If you want to configure remote access and e-mail access to your network, you will need to create the following minimum port forwarding rules in your router:

- Port 25 for e-mail
- Port 443 for Remote access
- Port 987 for SharePoint access

Although it is not recommended, you may also want to configure other remote port access to the server. However, the previously mentioned ports are the typical minimum you require for a Windows SBS 2011 Standard installation.

Even though Windows SBS 2011 Standard has the ability to function as a public web server, accessible directly from the Internet, it is not recommended that it be configured this way. This is for two simple reasons, firstly it reduces the security of your server, given that port 80 is commonly attacked by hackers and secondly it can reduce the bandwidth available, as well as reducing the amount of server resources available to users on your network as anonymous external requests compete with internal requests for network bandwidth. In the end, it is much easier to host any public facing website with a third-party hosting provider. Most have plans that are very cost effective.

If you are planning to use RAID array configuration on your server, then this should be configured and built prior to any software being installed on the server. There are many different ways of configuring RAID and each has its advantages and disadvantages; however, it is not within the scope of the book to go into these.

Once the installation is complete, you'll probably want to configure remote access as well as update your server with the latest patches. To do this, you'll need an active Internet connection.

One of the topics that will be covered at a later stage is that of virtualization. This basically allows you to run a number of virtualized "guest" machines on a single "host" machine. In this way you are able to reduce the number of physical machines required and improve the flexibility of the installation. However, virtualization requires a level of expertise that will not be detailed here directly. What is important to remember is that Windows SBS 2011 Standard supports the ability to be a "virtualized" guest on a host machine, it does not however support being the host machine and running "virtualized" guests. The assumption here will be that if you wish to use Windows SBS 2011 Standard as a "virtualized" guest, then this will already have been set up and configured prior to the installation.

## **Installing Windows SBS 2011 Standard**

Once you have all the hardware and software prepared for an installation, you have to choose between two methods of installation:

1. If you are planning to install Windows SBS 2011 Standard and use a new Active Directory, then you should complete the manual installation option.
2. If however, you need to maintain an existing Active Directory (users, contacts, and so on), then you should complete the migration method.

It is very important to decide up front which installation method you'll use because once you start with one method you can't revert to the other method.



## Manual installation

The most common method of installing Windows SBS 2011 Standard is by interactively following along with the prompts as the software is being installed. This requires your presence in front of the server to make the appropriate selections and enter any information that is required during the installation process.

## Determining the settings for your installation

You need to consider a few things before ploughing into your Windows SBS 2011 Standard installation:

- What is going to be the IP scheme for your network?
- What is the domain name going to be?
- What do you want to call the administrator account?
- Who the domain users are and what rights they will have?
- What network shares need to be created and how they will be configured and secured.
- What disk partition sizes do you plan to use? By default, Windows SBS 2011 Standard will install everything onto the first disk in your system. It is recommended that you allocate at least 120 GB for this initial partition. However, 150 GB is probably a better allocation given the size of hard disk storage these days. Beyond the initial drive, it is good practice to have other partitions available on your system for data storage to provide separation from your program files and the Windows system files.

It is recommended that you make sure to document all this information before you commence the installation of Windows SBS 2011 Standard.

## Preparing the installation media

How do you plan to install the Windows SBS 2011 Standard software? From a DVD or an ISO file? It is always recommended that you create a backup copy of your installation media.

Normally, along with your media will come a set of installation keys. You won't need these during the installation process, but once the software has been installed you should activate the installation using these keys.

Before you commence the installation, you need to determine the following:

- Whether you'll be performing a migration or standard installation?
- How any data will be migrated onto the server?
- Are you planning to automate the process using an answer file?

Although both installation methods require the Windows SBS 2011 Standard software, the process through which the installation is completed can vary markedly.

## Standard installation

In the situation where you do not have an existing Active Directory domain controller or you do not wish to retain the information in an existing Active Directory, you can perform a standard installation of Windows SBS 2011 Standard.

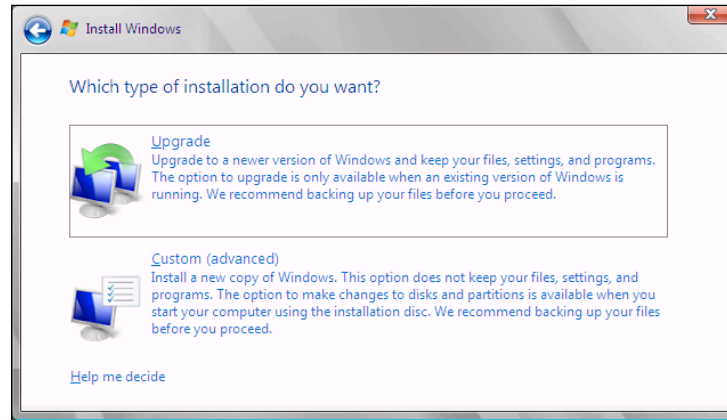
Commence the installation by booting from bootable media. If you are using a DVD, then you will need to ensure that your server is set to boot from the DVD drive.

At the initial screen you will need to set the localization settings for your installation by selecting the **Language to install**, **Time and currency format**, and **Keyboard or input method**. Once these have been selected, click the **Next** button. You will be presented with an **Install now** option. Click this to proceed:

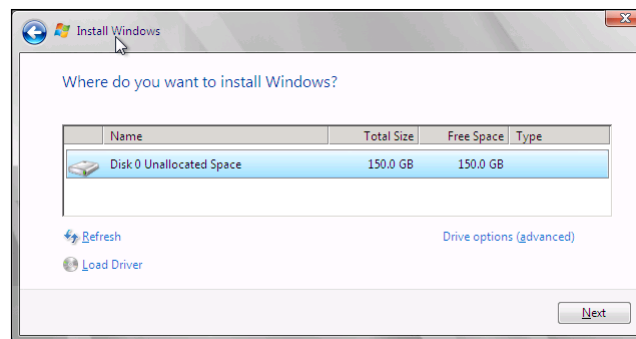


You will then need to accept the **Software License Terms** and then click **Next** to continue.

Next, you'll be asked whether you want to perform an **Upgrade** or a **Custom (advanced)** installation. Select **Custom (advanced)**:



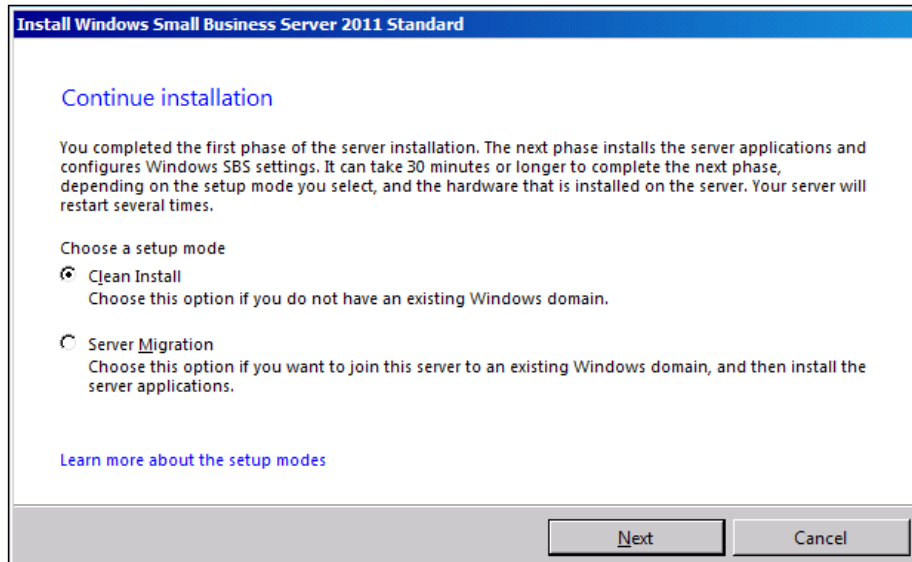
You will then be presented with a list of drives onto which to install Windows SBS 2011 Standard. If your drive isn't displayed, you may need to select the **Load Driver** option to install the driver for your hardware:



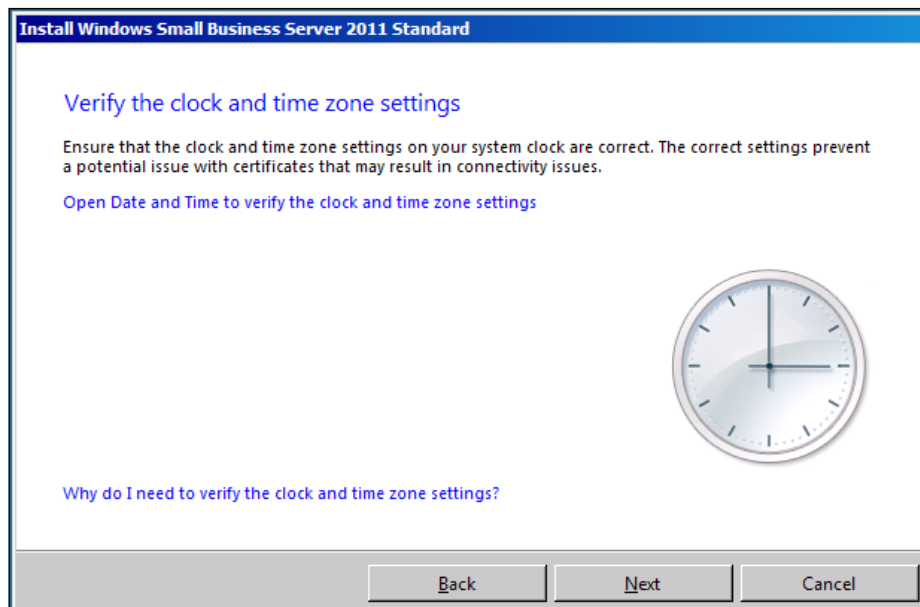
Click **Next** to commence the installation. You will not be prompted further as the installation files are first copied to the drive, expanded, and then installed.

Once the base Windows Server installation has completed, the Windows SBS 2011 Standard portion will commence. To commence the Windows SBS 2011 Standard installation, there will need to be a functional Network Interface Card (NIC) in the system. You will have a chance to install any required networking drivers if Windows doesn't load a built-in driver for your network card.

At the next screen you will select whether you wish to perform a **Clean Install** or a **Server Migration**. In this case select **Clean Install** to proceed:



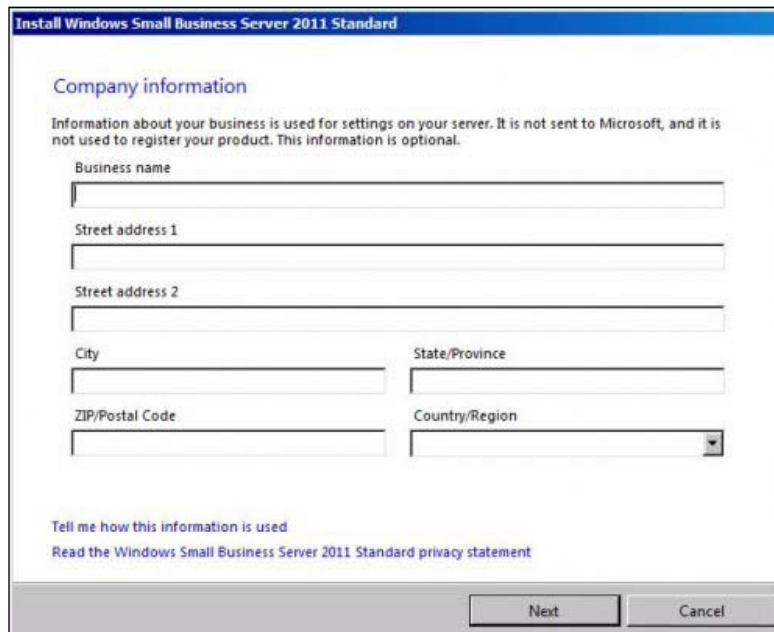
You will next have to verify the **clock and time zone settings**:



Next will be the server network configuration screen where you will select how you want the server to detect the network settings. You can choose from **Automatically detect the network settings** or **Manually choose the network settings as follows** where you can specify the IP address for the server. Automatically detect the network settings is not recommended.

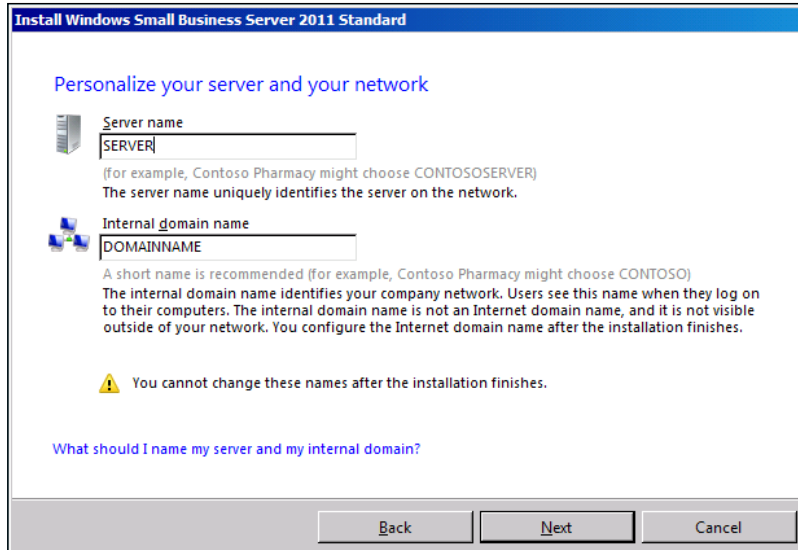
You will then be prompted to either **Go online and get the most recent updates (recommended)** or **Do not get the most recent installation updates**. It is generally not recommended that you install any updates as it may cause issues with the installation process in the case where newer files are downloaded that conflict with other installation files. It is generally recommended that you update the server after the installation has completed.

You will now be prompted to enter the **Company information**. Even though you are not required to complete the fields here, it is generally recommended that you complete this screen as the information is utilized in a variety of locations on Windows SBS 2011 Standard:



The screenshot shows the 'Company information' screen from the 'Install Windows Small Business Server 2011 Standard' wizard. The title bar reads 'Install Windows Small Business Server 2011 Standard'. The main heading is 'Company information'. Below the heading, a note states: 'Information about your business is used for settings on your server. It is not sent to Microsoft, and it is not used to register your product. This information is optional.' The form contains several input fields: 'Business name', 'Street address 1', 'Street address 2', 'City', 'State/Province', 'ZIP/Postal Code', and 'Country/Region' (a dropdown menu). At the bottom, there are two buttons: 'Next' and 'Cancel'. Below the form, there are two links: 'Tell me how this information is used' and 'Read the Windows Small Business Server 2011 Standard privacy statement'.

Continuing on will present you with the **Personalize your server and your network** screen. Here you will need to insert a **Server name** and an **Internal domain name**. Best practice here is to keep the names as short and descriptive as possible, while also avoiding special characters (such as %, ^, &, and so on).



You will then need to **Add a network administrator account** for the network. You will notice that any password you enter must conform to the complexity standard set by Windows SBS 2011 Standard. This means the password must be at least eight characters long and contain at least three of the following four types of characters: A-Z, a-z, 0-9, and symbols:

**Install Windows Small Business Server 2011 Standard**

### Add a network administrator account

Use the network administrator account to manage your server and your network. When the installation finishes, you will be logged on automatically using this account.

**First name**  **Last name**

**Administrator user name**

**Administrator password**  **Confirm administrator password**

**Password requirements**

- The password must be at least 8 characters long.
- A password must contain at least 3 of the following 4 types of characters: A-Z, a-z, 0-9, and symbols.

[What is a network administrator account?](#)

You should now see the confirmation page displayed with all of the configuration information you just entered. Once you click the **Next** button, you cannot make any changes to these values. If you do need to make a change, click the **Back** button to return to that location.

**Install Windows Small Business Server 2011 Standard**

### That is all the information needed

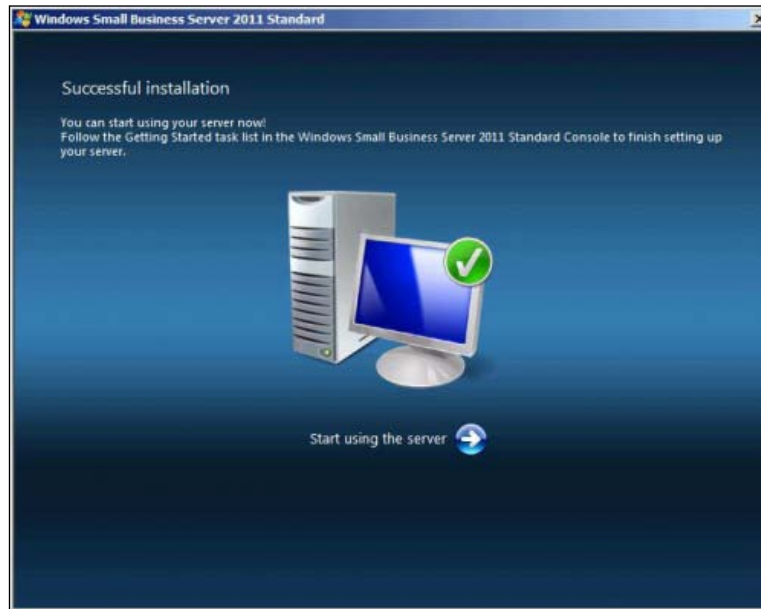
Please review the settings:

- Server name:** SERVER
- Internal domain name:** DOMAINNAME
- Network administrator account name:** sbsadmin  
After the installation finishes, use this account to logon on to the server to perform administrative tasks.
- Company name:** Dummy Corporation

After you click Next, you cannot change the server name or internal domain name.

[Why can't I change the server name or internal domain name later?](#)

If you click the **Next** button, the installation will proceed and when complete, the server will reboot and you will be returned to a splash screen indicating the process has completed:



## **Automated installation—answer file**

The answer file was first used with Windows SBS 2003 and continues with Windows SBS 2011 Standard. It is a required item when you are performing a migration from an existing domain, but it's optional for a clean installation. There are some advantages in using an answer file when doing a clean installation as it provides the customization of some portions of the installation that aren't available during the manual process that was previously detailed.

The answer file is generated via an SBS 2011 Answer File Generator tool (`sbsafg.exe`) which is located in the `\tools` directory on the Windows SBS 2011 Standard Installation Disc 1.

Simply copy this file (`sbsafg.exe`) to a local hard disk and double click it to run the tool.

When the tool is run, you will see that you need to select whether the installation is new or a migration, whether you want to get installation updates, or run the installation unattended.



You can also set the time zone, server name, domain name, full DNS name, and company details.

If you leave any of the fields blank then you will be prompted for this information during the installation process.

When complete, simply click the **Save As** button to save the answer file. The name of the file should be `sbsanswerfile.xml`:

The screenshot shows the 'Windows Small Business Server 2011 Standard Answer File Tool' window. It contains several sections for configuring the installation:

- Installation type:** Radio buttons for 'New installation' (selected) and 'Migration from existing server (Join existing domain)'.
- Installation settings:** Checkboxes for 'Get installation updates' and 'Run unattended'.
- Clock and time zone settings:** Radio buttons for 'Manually set the clock and the time zone for the server' (selected) and 'Use the following time zone:' with a dropdown menu.
- NOTES:** A list of instructions regarding system clock settings.
- Server information:** Text boxes for 'Server name', 'Internal domain name', and 'Full DNS name'.
- Company information:** Text boxes for 'Business name', 'City', 'Street address 1', 'State / Province', 'Street address 2', 'Zip / Postal code', and a 'Country / Region' dropdown menu.
- Network administrator account:** Text boxes for 'First name', 'Last name', 'Administrator user name', and 'Administrator password'.
- Network settings for the server:** Radio buttons for 'Automatically detect the network settings' (selected) and 'Manually choose the network settings as follows:' with text boxes for 'IP Address' and 'Default gateway'.

At the bottom right, there are buttons for 'Print', 'Open', 'Save As', and 'Cancel'. A link 'How do I use an answer file?' is located at the bottom left.

To use the answer file, it must reside in the root directory of a storage device connected to the server during installation. The easiest way to facilitate this is to copy the answer file to a USB flash drive and insert that drive into the server. If the installation begins, with the USB flash drive in place, the installation process will automatically locate the answer file and proceed to use it during the installation.

If you are installing Windows SBS 2011 Standard on a Hyper-V guest machine, which has no USB available to it, simply use the virtual floppy disk or mount a removable drive, for that Hyper-V machine.

## Preparing for a migration

In many circumstances, you will be upgrading existing networks that already include a Windows Server running Active Directory. In a majority of cases these will probably be older versions of SBS. In this situation, the business already has a significant investment in users, contacts, computers, among others, that are already managed through an existing Active Directory. Using the migration method, the information in the existing Active Directory can be migrated to the new server environment.

Using the migration method will avoid the need to recreate all these objects in the Active Directory; however, it does bring with it a different set of challenges and a slightly different method of installation.

## Overview: Migrating defined

There are a number of reasons you need to consider the migration process as something very different from the default installation. It is important that you understand these differences and the additional information that may be required. Also remember, any migration involves not only the Windows SBS 2011 Standard machine, but also the source server from which you are migrating.

## Migration

In situations where there are already existing domain controllers in the network (whether it is an SBS or Windows Server), if you wish to retain the information in the current Active Directory (that is the user names and details), then you will need to perform a migration.

You can migrate to Windows SBS 2011 Standard from the following:

- Windows SBS 2008
- Windows SBS 2003

- Windows Server 2008
- Windows Server 2003

## **Preparing the source server for migration**

It is important that the server you wish to move information from is ready for this process. In most cases this will mean that work has to be performed on the source server prior to any migration effort. Spending the time completing a few basics will ensure that the source server is in the best condition for the migration process. This will go a long way to ensuring a smooth and painless migration.

## **Backing up your source server**

It cannot be stressed enough, back up your source server before you begin the migration process. If anything goes wrong anywhere during the migration you know you have all your data and you can recover your server.

## **Installing the most recent service packs and updates**

It is a must that the latest service packs be installed on the source server before you start the migration process. If any of the latest service packs are missing, the Migration Preparation Tool will report the problem and ask you to install the appropriate update before proceeding with the migration.

## **Verifying network configuration**

In preparation for the migration, the network must have a router that is the gateway to the Internet. The router must have DHCP disabled and it must also be a firewall device, or have a firewall device installed on the Internet side of it. If you are using SBS 2003 as the source server you must reconfigure the network to use one network card only. If ISA 2004 is installed this will have to be uninstalled before starting the migration process.

## **Evaluating the health of the source server**

If your source server is SBS 2003 or SBS 2008, you can run the Windows SBS Best Practices Analyzer to verify that there are no outstanding issues with your server, network, or domain before you start the migration.

## **Windows SBS Best Practice Analyzer (BPA)**

You run the Windows SBS BPA to verify that there are no issues on the source server, network, or domain before you start the migration.

If the source server is SBS 2003 you should download and run the Windows SBS 2003 BPA, which is located at: <http://www.microsoft.com/download/en/details.aspx?id=5334>.

If the source server is SBS 2008 you should download and run the Windows SBS 2008 BPA, which is located at: <http://www.microsoft.com/download/en/details.aspx?id=6231>.

After the BPA scan is completed, it presents a list of issues in order of severity. The BPA describes each issue it has encountered, and suggests a solution. Not every issue that is reported by the BPA will affect migration; however, it is important that you solve as many of the issues as possible to ensure a successful migration.

## **Running the Preparation Tool**

The Migration Preparation Tool makes changes to the source server that are necessary to enable the migration to Windows SBS 2011 Standard.

What does the Migration Preparation Tool do to the source server?

For Windows SBS 2003 and Windows Server 2003, it raises the domain and forest functional level of the Active Directory domain and forest. When Windows SBS 2003 is installed, the AD DS domain and forest have the functional level of Microsoft Windows 2000.

Run `adprep.exe`, which extends the AD DS schema and updates permissions as required, to prepare a forest and domain for a domain controller that is running Windows SBS 2011 Standard. The AD DS schema in Windows SBS 2011 Standard is not the same as the AD DS schema in the previous versions of Windows Servers, including previous versions of the SBS product.

In normal circumstances only one server running Windows SBS is allowed on the network. For Windows SBS 2003 and Windows Server 2003, an update is installed that allows two Windows SBS servers to be on the same network for a maximum of 21 days. This is the time period in which you must complete the migration.

For Windows Server SBS 2008 and Windows Server 2008 only, you must successfully complete a run of the Migration Preparation Tool on the source server within two weeks of installing the Windows SBS 2011 Standard on the destination server. If this is not done, installation in migration mode of Windows SBS 2011 Standard will be blocked.

For Windows SBS 2003 and Windows Server 2003 only, Exchange 2003 is prepared for migration. Exchange server must be converted from mixed mode to native mode for the migration to succeed.

Run the Migration Preparation Tool by completing the following steps:

1. Insert Windows SBS 2011 Standard DVD1 into the DVD drive of the source server.
2. After the Windows installation wizard starts, click **Tools** and double click **SourceTool**.
3. At the Windows SBS 2011 Standard installation wizard, click **Install the Migration Preparation Tool**. A wizard then installs the Migration Preparation Tool of the source server. Once the wizard has completed the installation, it automatically runs and installs the latest updates.
4. In the Migration Preparation Tool, click **I have a backup and am ready to proceed** and then click **Next**.
5. The Migration Preparation Tool prepares the source domain for the migration by extending the Active Directory Schema. Click **Next** when the task is complete.
6. Once the Migration Preparation tool has finished preparing the source domain, it scans the source server to identify potential issues. The two types of issues that can be identified are:
  - **Errors:** These are issues found on the source server that may stop the migration from proceeding, or cause the migration to fail. These issues must be fixed, following the steps in the description. Then click **Scan Again** to restart the scan.
  - **Warnings:** These are issues found on the source server that might cause functional problems during the migration. It is highly recommended that these warnings be fixed, following the steps in the description. Then click **Scan Again** to restart the scan.
7. If you haven't already created a migration answer file yet, click **Create an Answer File**, and complete the instructions one by one.
8. Click **Finish**.
9. When the Migration Preparation Tool finishes, you have to restart the source server before you can start the migration process.

## Creating an answer file for migration

What is the purpose of a migration answer file?

- The answer file starts the migration process to Windows SBS 2011Standard. In fact you have to use an answer file if you wish to have a migration installation to Windows SBS 2011Standard.
- The answer file provides the information that is automatically entered into the Windows SBS 2011 Standard installation pages.
- The answer file allows an IT Professional to start the build of the destination server before taking it to the customer's site, for non-migration installations only.

The first step in the process of creating an answer file is to collect the required information:

Information to provide	Description
<b>Clock and time zone settings</b>	If you select <b>Manually set the clock and time zone</b> for the server, the migration will pause, and you will be prompted to enter the correct information.  If you select <b>Use the following time zone</b> , you must manually set the time and date in the server BIOS to the correct settings.
<b>Company Information</b> (optional)	Enter the name and address of the business. This information is entered into your server. You can edit this information at a later time in the SBS Console by clicking <b>Help</b> and then click <b>Edit company Information</b> .
<b>Domain administrator account name</b>	This is the user account name of the domain administrator of the source server. The account must be a member of the Domain Admins, Enterprise Admins, and Schema Admins groups. Note the default security group for the account cannot be one of these three groups. By default the Primary Group is Domain Users
<b>Password</b>	Password of the source server's administrator account name that was previously provided.
<b>Source Server name</b>	Name of the source server, the one you are migrating from.
<b>Source domain name</b>	This is the full DNS name of the business' internal domain. For example, <code>example.local</code> .

Information to provide	Description
Source Server IP address	The IP address currently assigned to the Source server.
Default Gateway	The IP address of the router on the network.
The DHCP Server service is running on the Source Server	Tick this box if the DHCP Server service is running on the Source server. It is recommended that the DHCP server service runs on the destination server. If the DHCP Server service is running on the source server, the service will be moved automatically to the destination server. All other devices running DHCP Server service must be manually disabled.
Destination Server name	Name of the destination server, the one you are migration to. You are installing SBS 2011 on this server. Note the source and destination server names must be different.
Destination Server IP address	The IP address currently assigned to the destination server.

To run the Answer File Tool to create the migration answer file, complete the following steps:

1. On a computer or a server, insert the Windows SBS 2011 Standard DVD1, and at the first screen choose **Create an answer file**. This will run the Answer File Tool.
2. Click **Migration from existing server (Join existing domain)**.
3. Enter the information you have collected for the answer file.
4. Save the answer file as `sbsanswerfile.xml` to the root of a removable media device.

## Installing and migrating to Windows SBS 2011 Standard

Now that you have prepared both the source and destination server as well as having created an appropriate answer file, you are ready to begin the migration.

## **Migrating to Windows SBS 2011 Standard**

With the Answer File now created we are ready to commence the migration process. This process will differ slightly, depending on the operating system of the source server. The most typical migration will be from existing Windows SBS 2003 and Windows SBS 2008 systems.

### **Migration Wizard tasks**

The Migration Wizard is the tool that will guide you through the migration process. Some of the tasks will be automated; however, you will have to manually complete the remaining tasks. For the manual tasks, you are provided a link to the step-by-step instructions.

To run the Migration wizard, complete the following steps:

1. Open the Windows SBS 2011 Standard Console, and in **Getting Started Tasks**, click **Migrate to Windows SBS**.
2. Click **Next**, after you have read the welcome page information about the migration wizard.
3. Click **Next** again to start migrating data and settings from the source server to the destination server. The migration wizard home page appears.
4. Click **Next** to begin the first migration task. The following is a list of the procedures that are required to complete the migration:
  - Change the data storage location on the destination server.
  - Configure the Network.
  - Configure the Internet address.
  - Move Network settings.
  - Move Certificates (SBS2003).
  - Migrate Exchange Mailboxes.
  - Remove legacy Active Directory Group Policy objects and logon settings for SBS 2011 migration (SBS 2003).
  - Migrate users' shared data.
  - Migrate the internal website for Windows SBS 2011 Standard migration.
  - Move fax data for Windows SBS 2011 Standard migration.
  - Move user Accounts and groups from Windows SBS 2011 Standard migration (SBS 2003).
  - Enable folder redirection on the Destination Server for Windows SBS 2011 Standard migration.



- Move Terminal Services Licensing for Windows SBS 2011 Standard migration.
- Move SQL Server data.
- Finish Windows SBS 2011 Standard migration.

The migration wizard is now complete. The Windows SBS 2011 Standard is now the Domain Controller for your network and all applications and data have been transferred. All that is remaining is for you to transfer your line of business software, uninstall Exchange Server from the source server, and the decommissioning of the source server if it is a Windows SBS server from the network. If your source server is Windows Server 2003 or 2008 decommissioning is not required, however you have the option to do so.

## DNS clean-up

Once you have decommissioned the source server, the DNS server on the destination server still contains entries that point to the source server. It is a good idea to delete these DNS entries.

To delete DNS entries for the source server, from the destination server, complete the following:

1. Click **Start | Administration Tools | DNS**.
2. Click **Continue** in the **User Account Control** dialog if prompted.
3. Once the DNS Manager opens, expand server name, and then expand **Forward Lookup Zones**.
4. Right click the first zone, click **Properties**, and then click the **Name Servers** tab.
5. Click the entry in the **Name Servers** textbox that points to the source server, click **Remove**, and then click **OK**.
6. If more entries point at the source server, repeat step 5 until they are all removed.
7. Close the **Properties** window by clicking **OK**.
8. Still in the DNS Manager, expand **Reverse Lookup Zones**.
9. Repeat what you have done in steps 4 to 7, removing all of the Reverse Lookup Zones that point to the source server.

All references for the source server have now been removed from your network's DNS.

## Domain clean-up

For the domain clean-up, make sure that there is only one DC, and that the `sysvol` and `netlogon` shares are present. Also check for File Replication Services event log to see if it is journal wrapping.

## Configuring an Internet domain

Configuring an Internet domain is a required task to complete the migration process. To configure an Internet address, complete the following steps:

1. On the Migration Wizard Home page, in the migration wizard, click **Next**.
2. Click **Configure the internet address**, and then click **Next**.
3. On the **Configure Internet Address** page, click **Start the Internet Address Management Wizard**.
4. Complete the **Internet Address Management Wizard**.
5. Once the wizard is finished, click **Task Complete** on the **Configure the Internet Address** page, and then click **Next**. This returns you to the Migration Wizard Home page, and the task is marked **Completed**.

## Configuring DNS name resolution (internal and external)

Configuring the DNS name resolution is a required task to complete the migration process. To configure the network, complete the following:

1. On the **Migration Wizard Home** page, in the migration wizard, click **Next**.
2. Click **Start the Connect to the Internet Wizard**.
3. Once the wizard is finished, it returns to the **Migration Wizard Home** page, and the task is marked **Completed**.

## Configuring the network infrastructure

Once the server has completed the installation, you should check that it has connectivity to the Internet. You can do this by simply opening the browser on the server and navigating to a website. Given that the server has yet to fully patch and may potentially be without security software installed, it is recommended that you only navigate to a known and trusted site.

Once Internet connectivity to the server has been established, you need to ensure that the appropriate ports are forwarded from the router to the server's IP address.

## Ports, protocols

As some routers do not support UPnP framework, or if you have chosen to disable UPnP on the router, you may have to manually configure your router to port forward the following ports directly to the IP of the destination server.

- Port 25: SMTP – Email
- Port 443: HTTPS SSL – RWA, OWA, Outlook Mobile Access
- Port 987: HTTPS SSL – SharePoint Foundation 2010 via RWA

Additional Ports:

- Port 1723 PPTP VPN – VPN connections
- Port 80 HTTP – website. Note by default port 80 is redirected to port 443.
- Port 3389 RDP – terminal services client

## Test your knowledge

1. You have been asked to migrate to Windows SBS 2011 Standard from SBS 2003 Premium R2. What is the first thing that you should do on the SBS 2003 machine?
  - a. Run the SBS Best Practices Analyzer.
  - b. Uninstall ISA 2004.
  - c. Backup the server.
  - d. Remove the second network card.
2. You have been asked to use virtualization when configuring the new Windows SBS 2011 server. Can you:
  - a. Add the Hyper-V role to Windows SBS 2011 Standard after the initial installation.
  - b. Install Windows Server 2008 R2 as a host onto which you can install Windows SBS 2011 Standard as a guest.
  - c. Install Windows Server 2008 R2 as a member server to the Windows SBS 2011 Standard domain and use that as a host for virtualization.
  - d. Install VMware on Windows SBS 2011 Standard after the initial installation.

3. What is the minimum amount of RAM required to install Windows SBS 2011 Standard?
  - a. 4 GB.
  - b. 6 GB.
  - c. 8 GB.
  - d. 12 GB.
  
4. What is the maximum number of clients that Windows SBS 2011 Standard can support?
  - a. 25.
  - b. 50.
  - c. 75.
  - d. 100.
  
5. You are migrating from Windows SBS 2008 to Windows SBS 2011 Standard, how many days do you have to decommission the Windows SBS 2008 from the network once you start the migration?
  - a. 7.
  - b. 14.
  - c. 21.
  - d. 30.

## Summary

This chapter has taken you through the process of installing a Windows SBS 2011 Standard server from preparation, to installing the software, and post configuration tasks. You should now have a fully operational Windows SBS 2011 Standard server.

There is still a lot of work that needs to be completed before the network is fully ready for production, including the installation of third-party software; however, you should now be confident that the Windows SBS 2011 Standard server is ready to use. The secret to a successful installation is always planning and preparation. The Windows SBS 2011 Standard migration wizard now also greatly simplifies the migration of most existing networks to Windows SBS 2011 Standard. In general, it is recommended that you have completed both a fresh installation and a migration prior to taking the certification exam.

In the next chapter, we will look at how to configure Remote Access.

# 2

## Configuring Remote Access

One of the most important factors for any business will be the ability to remotely access their information. This may include data as well as third-party applications from the desktop. Any certification will not only test the ability to configure these, but also the ability to maintain security. It is therefore important that you not only know how to do this, but also how to do it in the most secure manner.

With the growing demands of mobile workers, the ability to gain remote access to a Windows Small Business Server (SBS) 2011 Standard system is critical. Just as critical is the need to provide this access securely. Windows SBS has been extremely strong in meeting both of these requirements and this does not change with Windows SBS 2011 Standard. This chapter will show you how to configure your Windows SBS 2011 Standard system for remote access via a variety of methods.

In this chapter we shall examine the configuration of various methods of remote access including:

- Configuring remote client access to internal resources
- Configuring Remote Web Access
- Configuring Remote Desktop Services
- Test your knowledge

## Configuring remote client access to internal resources

As today's workforce becomes more and more mobile there is a growing demand for access to information anywhere and everywhere. Luckily Windows SBS 2011 Standard has been built with this in mind from the start.

There are a variety of methods through which users can gain access to a Windows SBS 2011 Standard system; each has advantages and disadvantages and these will be covered here. It is important to remember that configuring remote access to your system may require configuration of both your Windows SBS 2011 Standard system as well as your router.

### Virtual Private Network (VPN)

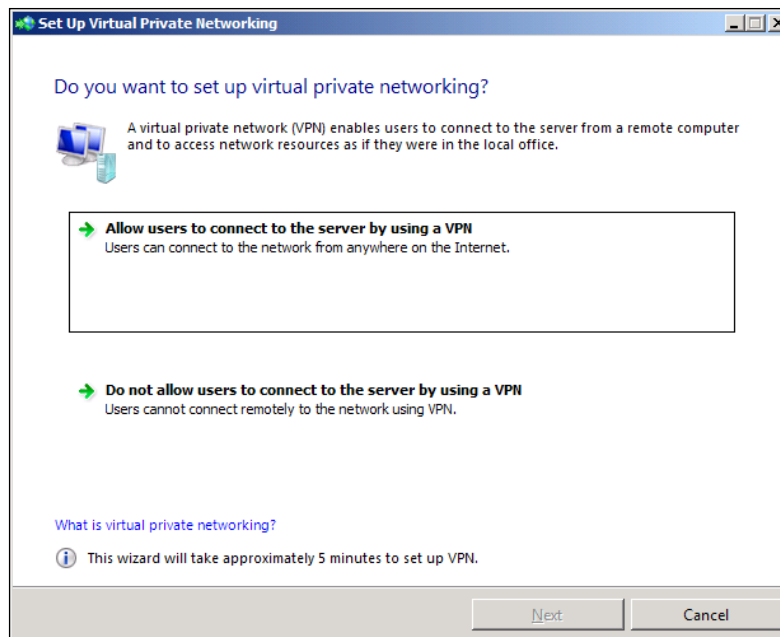
A **Virtual Private Network (VPN)**, allows people that are in a remote location to connect and access the network as if they are connected in the local office. It creates an encrypted tunnel across the Internet for them to access their Windows SBS 2011 Standard network as though they are on the same LAN. In Windows SBS 2011 Standard you need to first configure the server, and then setup the connection on the workstation.

### Configuring the SBS 2011 Standard server

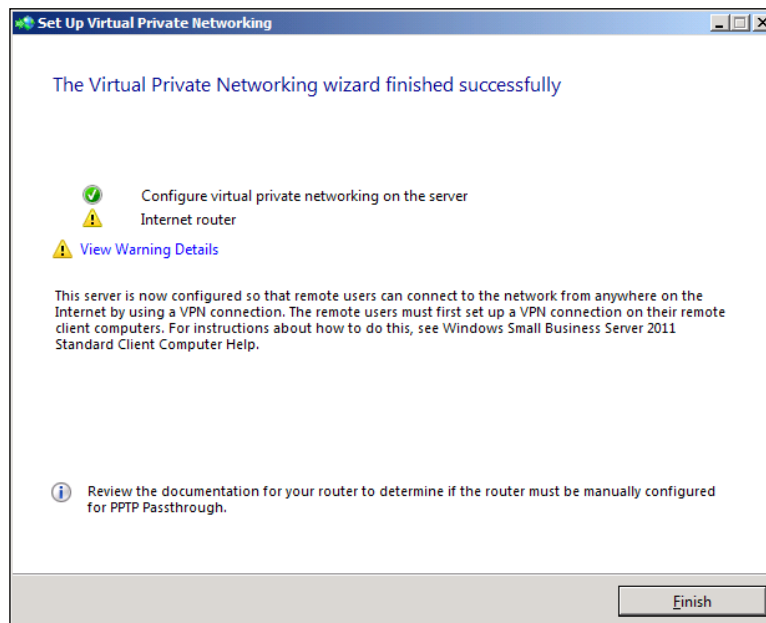
The first place to start this configuration is on the console of your Windows SBS 2011 Standard server using the Server Console dashboard.

On the server, open the Windows SBS 2011 Console. From the navigation bar, select **Network** and then click the **Connectivity** tab, click on **VPN connection - Allow users to connect to the local network**. On the right in **Connectivity Tasks**, choose **Configure a virtual private network**.

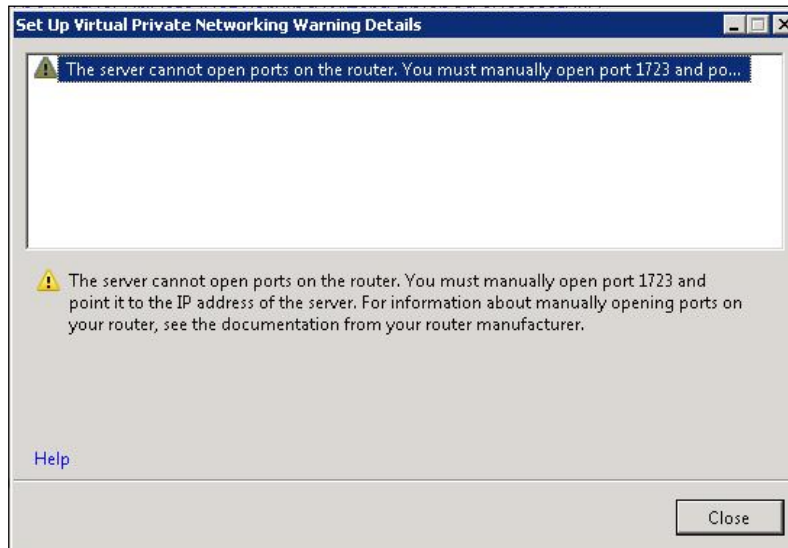
When the **Set Up Virtual Private Networking** wizard begins, choose **Allow users to connect to the server by using a VPN** option:



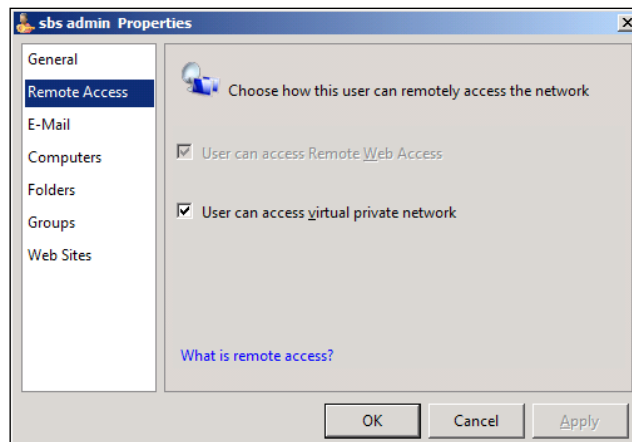
The wizard will then configure the Windows SBS 2011 Standard server, and display a message like the following indicating that the process is complete:



If the wizard is unable to configure your router, which it attempts to do via **Universal Plug and Play (UPnP)**, a warning is displayed. In this case, you must manually configure the router to port forward TCP Port 1723 through to the IP address of the Windows SBS 2011 Standard server. To do this you will need to consult the documentation of your router:



To assign the rights for a user to connect to the Windows SBS 2011 Standard server via a VPN, from the SBS 2011 Console under the **Users and Groups** tab, open the user's account properties. Then select **the Remote Access** section and select the **User can access virtual private network** checkbox as shown:





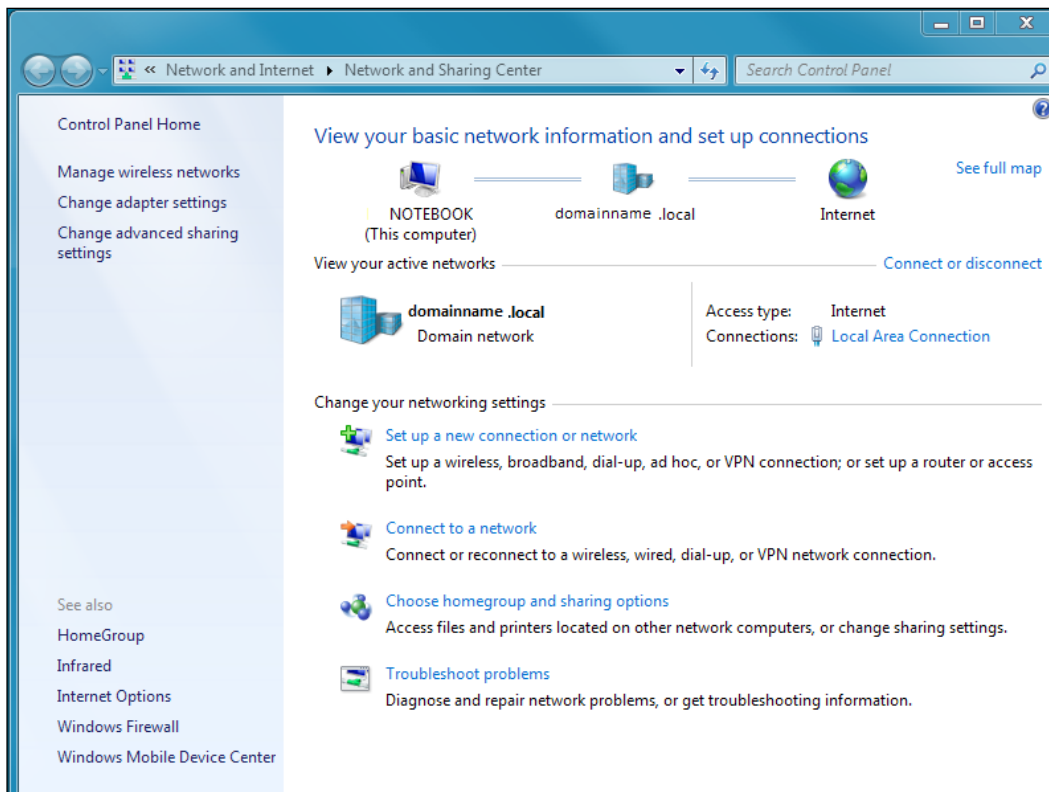
As a side note, Windows SBS 2011 Standard by default will allow 10 VPN concurrent connections. To increase the number of VPN connections allowed, you need to open the RRAS **Microsoft Management Console (MMC)**, and increase the number of WAN miniports allowed.

It is important to note that if the DHCP for the network has been assigned to another device on the LAN, such as the perimeter router, the RRAS service will not be able to provide IP addresses to devices connecting via the VPN. By default, the Windows SBS 2011 Standard server acts as a DHCP server and you should not see this issue.

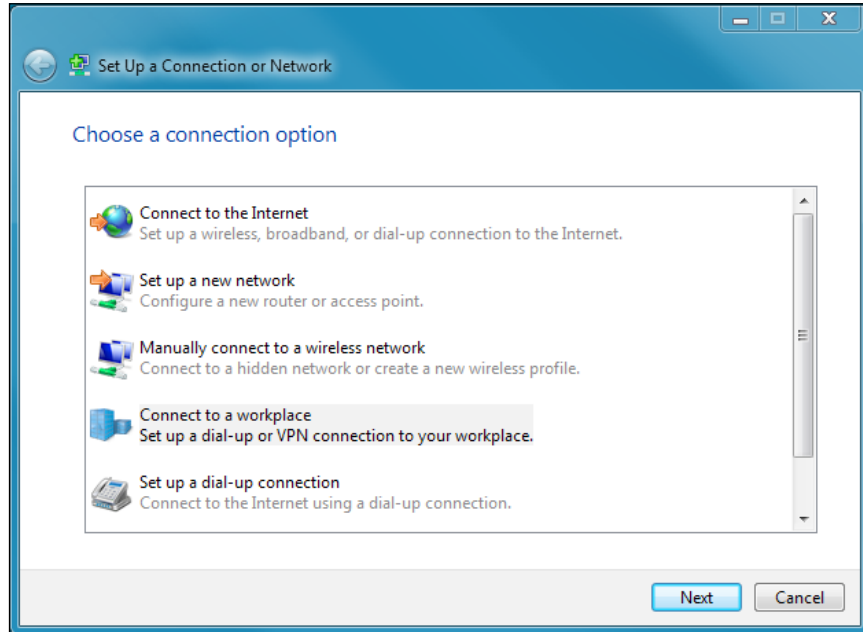
## Configuring a Windows 7 remote computer for VPN access

In order to configure a Windows 7 remote computer for VPN access, open **Network and Sharing Center** on the Microsoft Windows 7 computer.

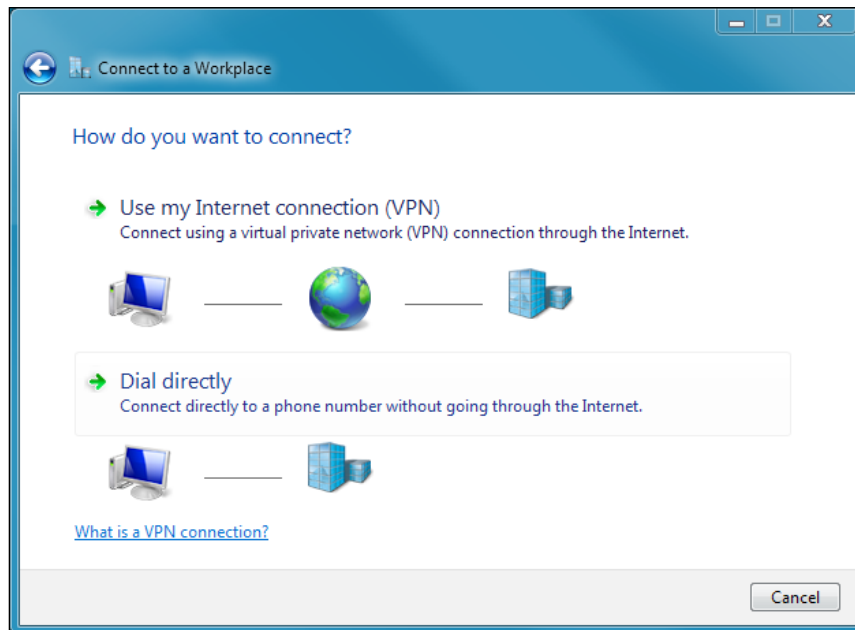
Choose **Set Up a new connection or network**, and a wizard will start:



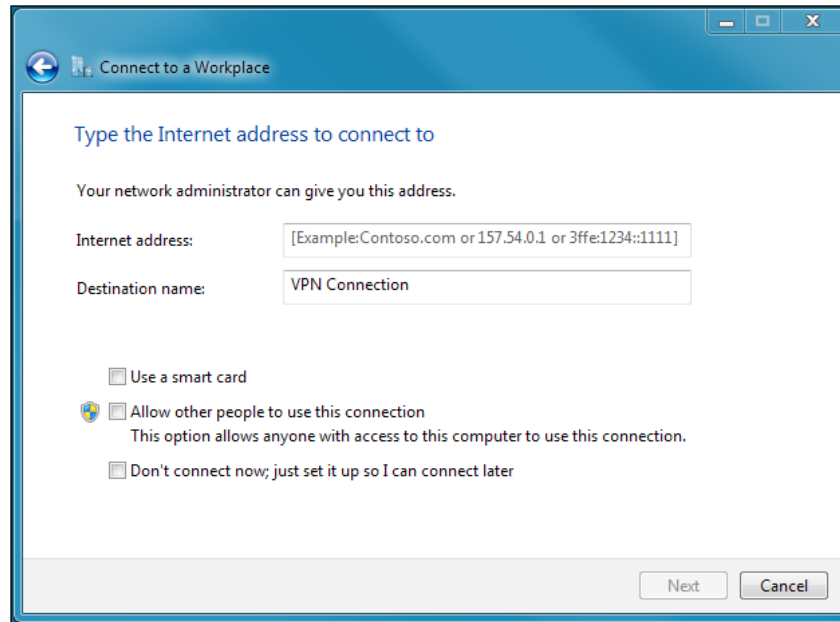
Choose **Connect to a workplace**:



Choose **Use my Internet connection (VPN)**:

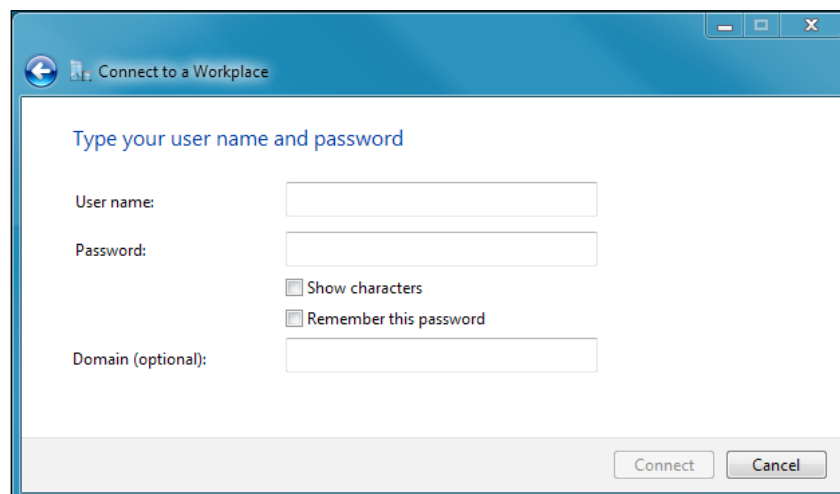


In the **Internet address** field, type in either the public IP Address or the FQDN for the Windows SBS 2011 Standard server you wish to connect to. Select any of the three options that you require:



The screenshot shows the 'Connect to a Workplace' dialog box. The title bar reads 'Connect to a Workplace'. The main heading is 'Type the Internet address to connect to'. Below this, it says 'Your network administrator can give you this address.' There are two text input fields: 'Internet address:' with a placeholder '[Example:Contoso.com or 157.54.0.1 or 3ffe:1234::1111]' and 'Destination name:' with the text 'VPN Connection'. Below the fields are three checkboxes: 'Use a smart card' (unchecked), 'Allow other people to use this connection' (unchecked) with a sub-note 'This option allows anyone with access to this computer to use this connection.', and 'Don't connect now; just set it up so I can connect later' (unchecked). At the bottom right are 'Next' and 'Cancel' buttons.

Enter the **User name**, **Password**, and **Domain (optional)** of the person who wishes to connect. Select any of the two options that you require. Click **Connect**:



The screenshot shows the 'Connect to a Workplace' dialog box. The title bar reads 'Connect to a Workplace'. The main heading is 'Type your user name and password'. There are three text input fields: 'User name:', 'Password:', and 'Domain (optional):'. Below the 'Password:' field are two checkboxes: 'Show characters' (unchecked) and 'Remember this password' (unchecked). At the bottom right are 'Connect' and 'Cancel' buttons.

## Connecting to the VPN

To connect to the VPN, open **Network and Sharing Center** on the Microsoft Windows 7 computer. Choose **Connect to a network**, and click the VPN connection just created.

There is a general move away from using VPNs to access remote systems. This is because there is little control over the security of the remote computer. If a remote computer has the correct VPN credentials and rights, it can access the Windows SBS 2011 Standard network as though it was a local computer. Although this provides convenient access for users, it may also provide convenient access for viruses and malware that reside on the remote system.

If you plan to use VPNs as a method of accessing your Windows SBS 2011 Standard system, then you need to ensure that they remain as secure as possible and that all software is kept up-to-date.

## Configuring Remote Web Access (RWA)

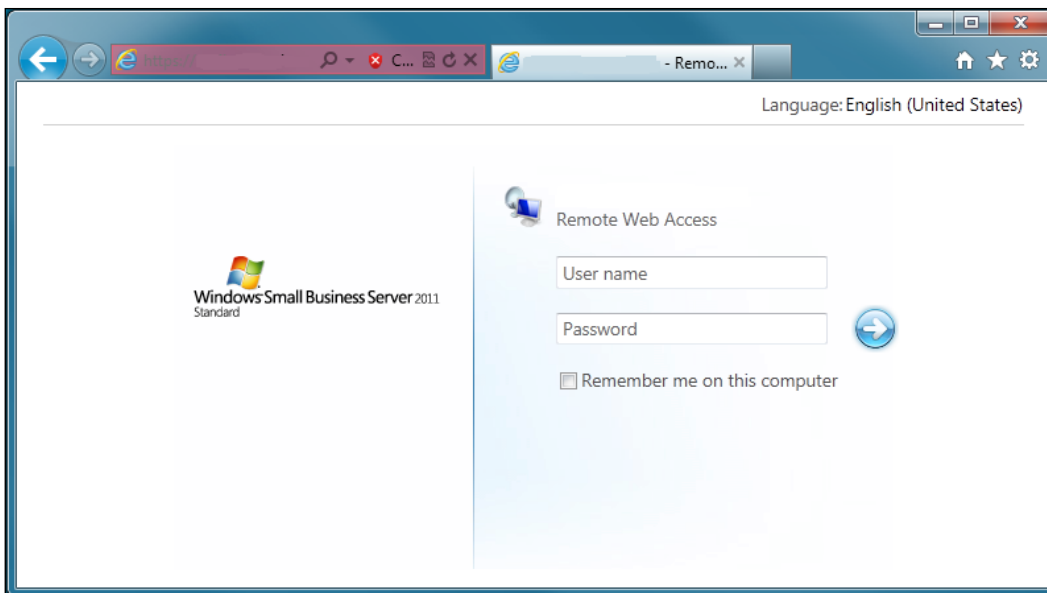
**Remote Web Access (RWA)** is the new name given to **Remote Web Workplace (RWW)** in Windows SBS 2011 Standard.

RWA provides remote users with access to Windows SBS 2011 Standard resources through a web browser. It removes the need for the configuration of a VPN making it much simpler for users to browse to a website in order to gain access. When used to connect to a computer it also provides improved performance over a VPN, as generally the only traffic that is sent across the link is screen information. Finally, it is also perhaps more secure than a VPN because it minimizes the chances of a virus or malware infection of the Windows SBS 2011 Standard system.

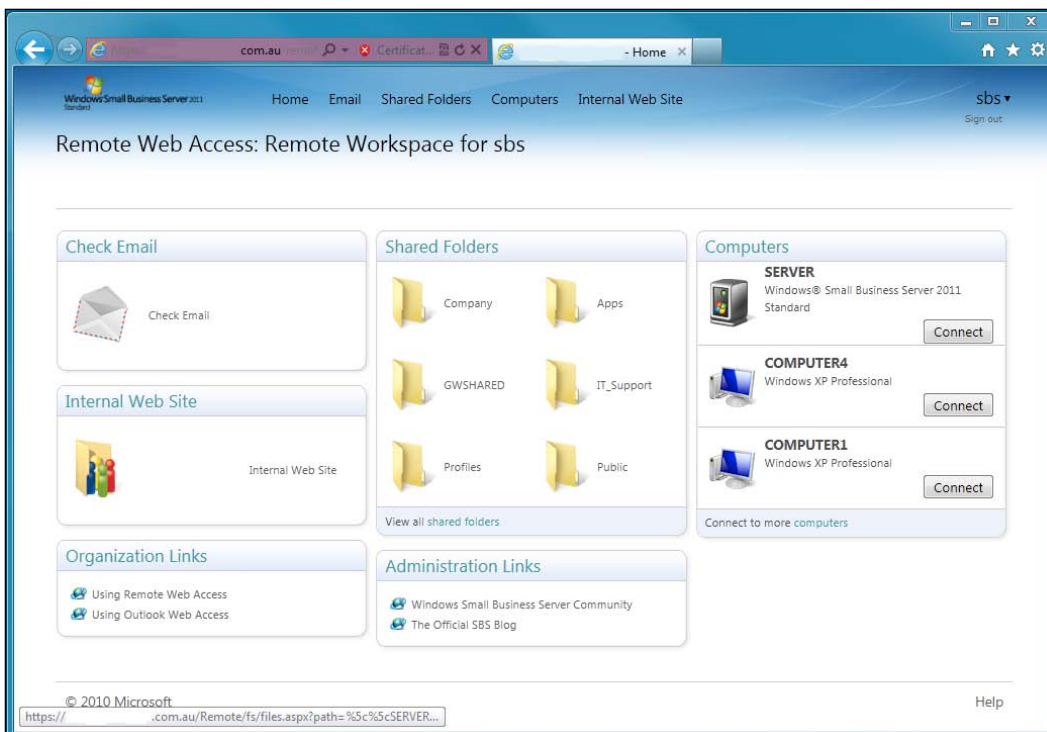
To be able to use the full features of RWA, the following conditions must be met:

- TCP 443 and TCP 987 port forwarded on your network router
- Remote machine must have Internet Explorer 6.0 SP2 or higher
- Remote machine must have RDP 6.1 or higher installed
- The remote machine must trust the SSL certificate for the Default Web Site
- The remote machine must connect to the site using the URL in the RWA security certificate

If you open Internet Explorer and go to the RWA URL for your server, the first page displayed is the logon screen:



Once you have correctly logged in you should see the RWA screen, as shown:



From this one central place, a user can carry out the following:

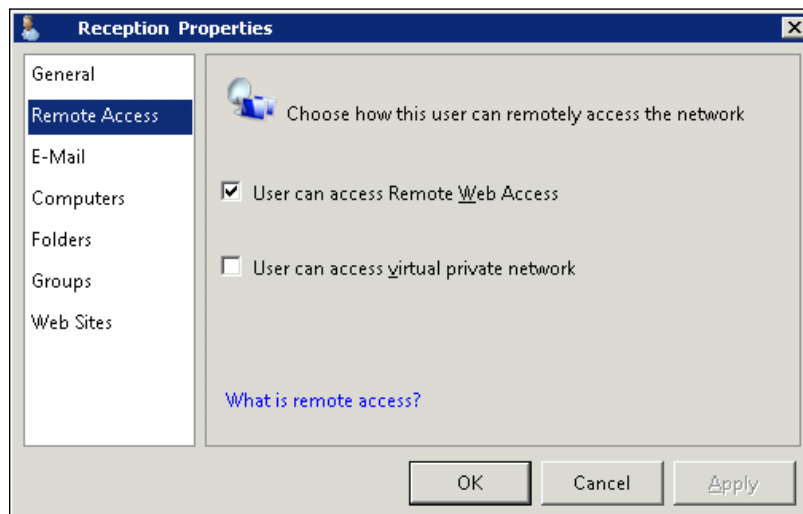
- Check their e-mail via **Outlook Web Access (OWA)**
- Open the internal SharePoint site (Companyweb)
- Access shared folders
- Gain access to an internal computer
- Change their domain password
- Access organization and administrative links

## Configuring the Windows SBS server to allow RWA access

As with the VPN configuration, a user must be given rights to utilize RWA and this is done via the Windows SBS 2011 Standard console.

### Windows SBS console

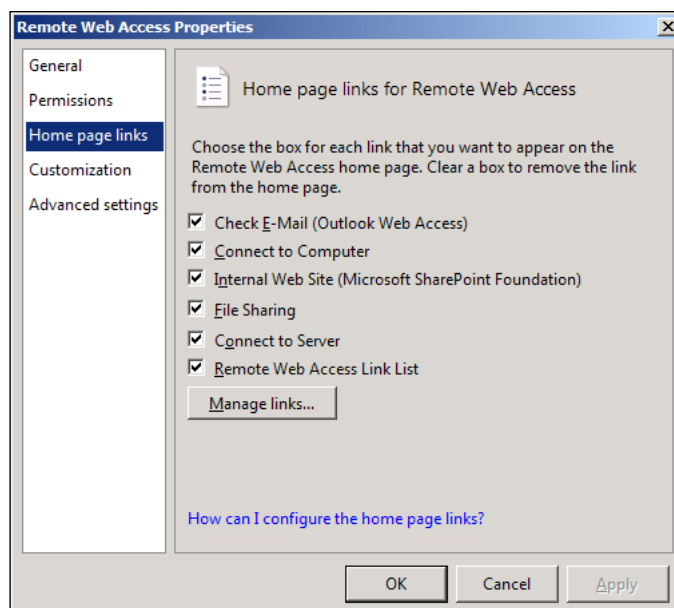
To give an individual user rights to RWA, run the Windows SBS 2011 Standard console and select the **Users and Groups** tab. You should see all the users listed under the **Users** tab below. Double click the user you desire and select the **Remote Access** option from the menu as shown:



To allow remote access via RWA simply check the **User can access Remote Web Workplace** option and select the default computer they will connect to remotely.

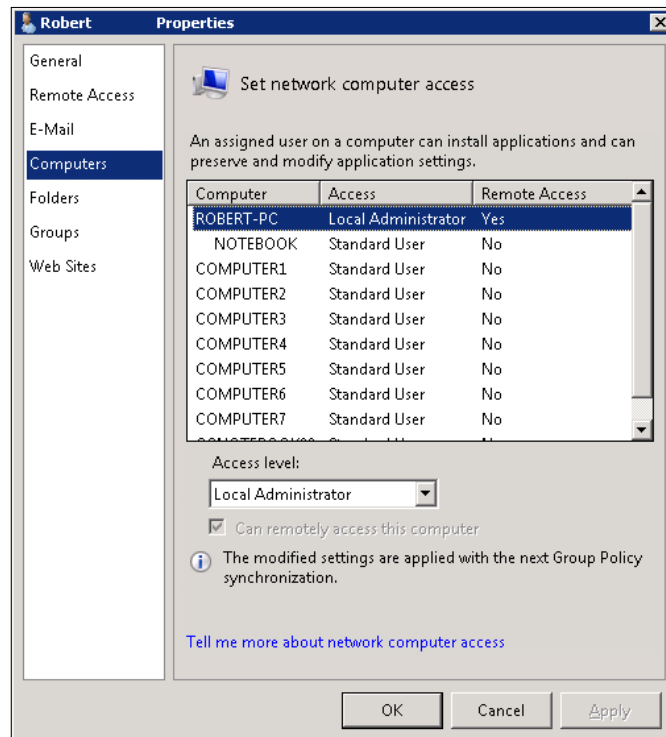
## RWA Gadget configuration

On the RWA site you see sections such as e-mail and computers, which are known as Gadgets. Gadgets load independently of each other so the gadgets that are displayed can be customized. This is done by accessing them from the Windows SBS 2011 Console: **Shared Folders and Web Sites | Web Sites | Remote Web Access | View site properties:**



## Computers

When a user logs into RWA they are presented with a list of computers that they are authorized to connect to. In order to authorize a user to connect to a computer in Windows SBS 2011 Standard, you will need to select the computers from a list found under the **Computer** tab of the **User Properties** window:



Highlight the computer name and then select the option **Can remotely access this computer**. You also have the option to select **Access, Local Administrator**, or **Standard User**.



## Shared Folders

Shared Folders is a new component of RWA. It allows remote users to access files on the Windows SBS 2011 Standard server shares. It will provide the following:

- File browsing
- Basic file/folder operations such as rename, delete, upload, download, copy, and cut
- A tree view control and a drag-and-drop option



## Configuring RWA to use Remote Desktop Services server

By default, Windows SBS 2011 Standard does not show member servers in RWA. To achieve this, a registry edit is required via `regedit`:

1. Click Start, and in the search box type **regedit**.
2. Go to `HKEY_LOCAL_MACHINE\Software\Microsoft\SmallBusinessServer`.
3. Create a new registry key **RemoteUserPortal**.
4. Inside this key create a new multi-string value called **TsServerNames**.
5. Enter the name of the RDS server.
6. Exit `regedit`, and the RDS will be listed in the **Connect** gadget of the RWA.

## Configuring Remote Desktop Services (RDS)

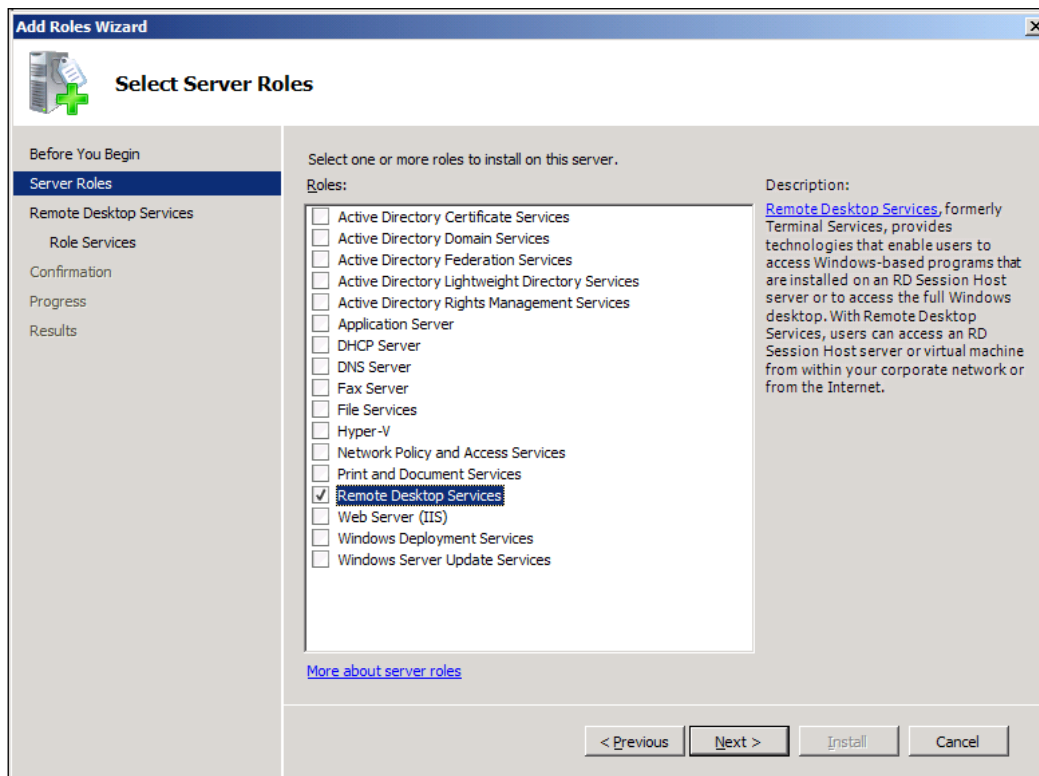
While RWA enables users to remotely control their computers, when more than one person needs to connect at the same computer at the same time then a **Remote Desktop Services (RDS)** server is required.

This second Windows Server 2008 R2 can be purchased either as a standalone product, or as part of the Windows SBS 2011 Premium Add-On Pack.

This server can be a physically separate server, or a second virtual server.

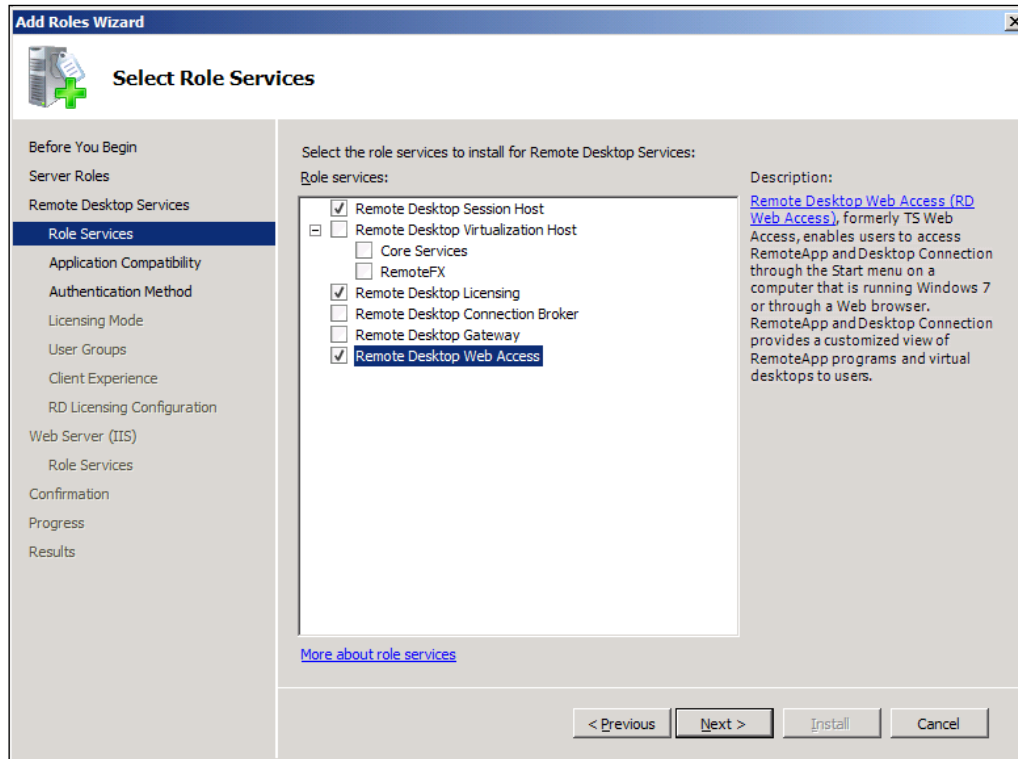
Before you can configure the role of Remote Desktop Services (RDS) server you must join the server to the domain and it is suggested that you assign the server a static IP Address. Once this has been completed, it is time to add the **Remote Desktop Services** role to the member server.

From the Windows server management console, select **Add a Role**:



Select the **Remote Desktop Services** option and click the **Next** button.

The next page asks which role services you wish to install:

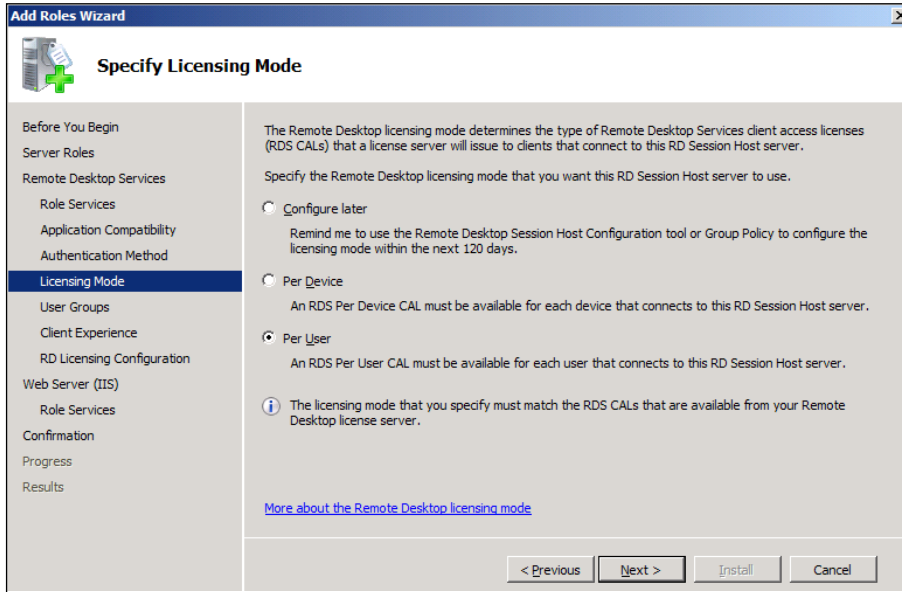


Choose the options you wish for the installation:

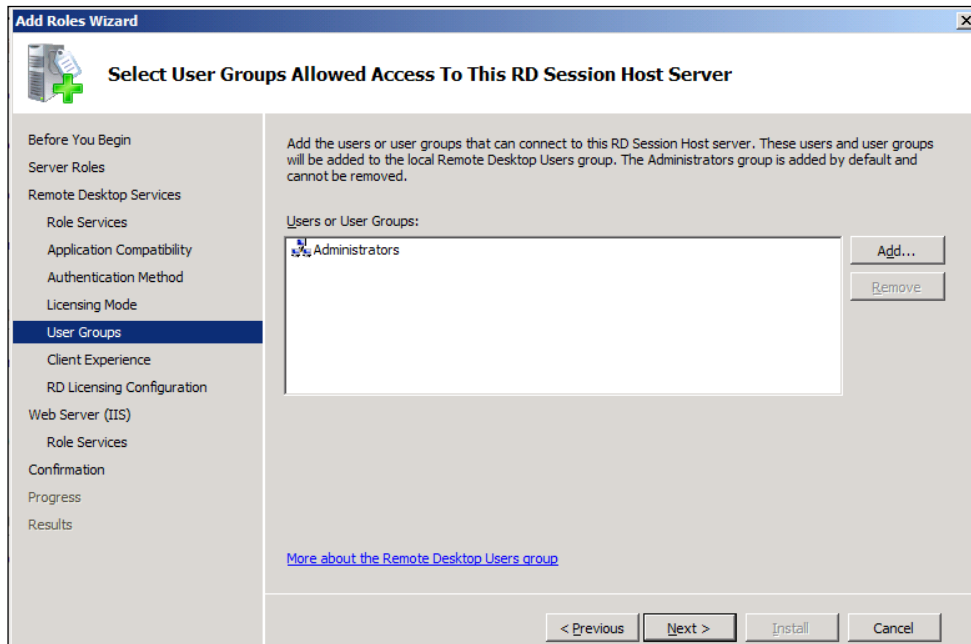
- **Remote Desktop Session Host** is the main role
- **Remote Desktop Virtualization Host** is for Virtual Desktops
- **Remote Desktop Licensing** is the RD CALs
- **Remote Desktop Connection Broker** and **Remote Desktop Gateway** are on Windows SBS 2011 Standard, so do not choose these options
- **Remote Desktop Web Access** if you wish to use a browser for a connection

Press **Next** at the following two pages as they are for information only and can't be changed.

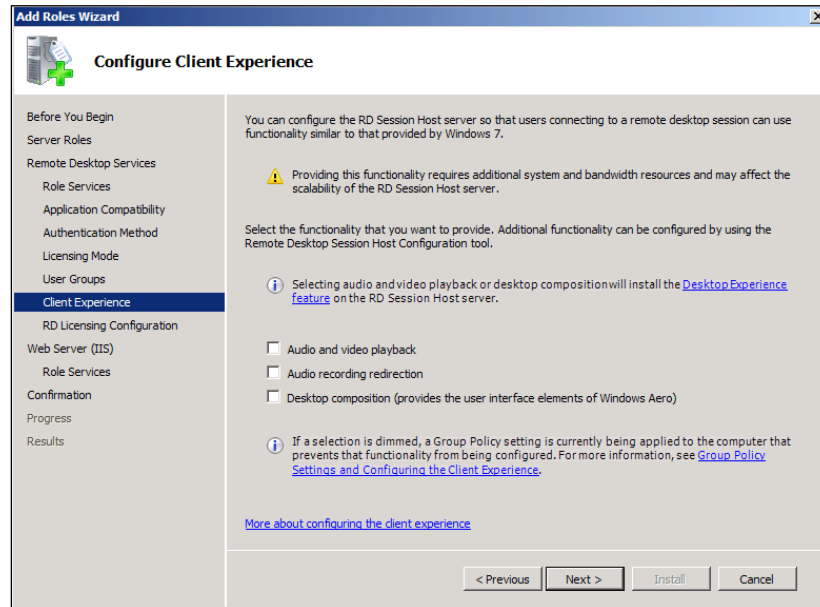
Next choose your **RDS licensing mode**:



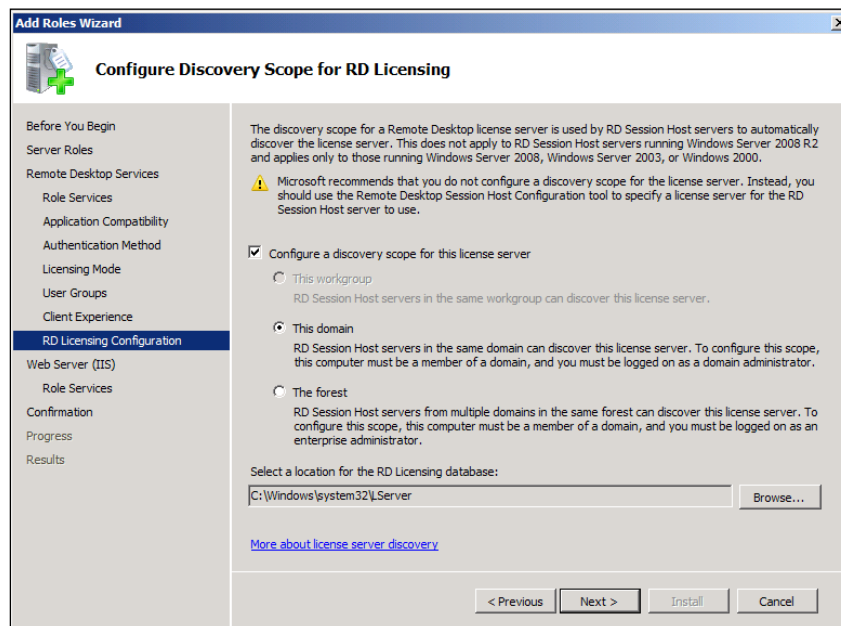
Select the users or group allowed to access the RD Session Host server. Add rights to those who will require access:



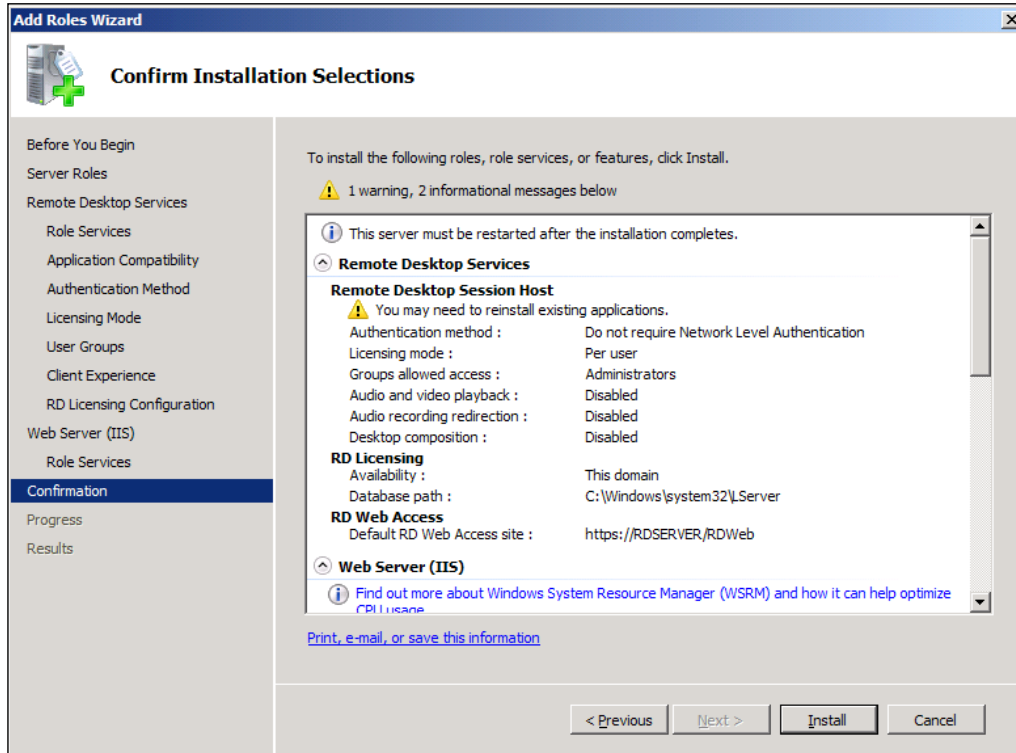
Configure client experience to meet the needs of your environment:



This Domain should be selected on the **Configure Discovery Scope for RD Licensing** page:



Confirm your settings:



Restart your server as prompted. Once the server has rebooted, the Remote Desktop Services will be available on this server.

## Configuring RemoteApp applications

RemoteApp services enable a user to have an icon on their desktop that they double click and the application is launched on the Remote Desktop Server, and it appears as though it is on the local machine.

Once the RemoteApp role is installed, you can add programs to RemoteApp programs as follows:

1. Using a user with administrative privileges, log onto the Remote Desktop Session Host server.
2. Select **Start | Administration Tools | Remote Desktop Services | RemoteApp Manager**.
3. In the Action pane, click **Add RemoteApp Program**.

4. Click **Next** on the **Welcome** page.
5. Select a program from the list on the **Choose programs to add to the RemoteApp Programs list** page.
6. Once the program is selected an administrator can choose to configure different RemoteApp properties for that application. Click **Next**.
7. Review the settings and then click **Finish**.

This RemoteApp program file can then be downloaded from the Remote Desktop Website, or the file generated by the Remote Desktop Configuration Manager Tool can be distributed to the computer and run locally. This file has the `.rdp` extension.

## Configuring Remote Desktop Session Host

The Remote Desktop Session Host is the server that hosts the programs of the full Windows desktop for the Remote Desktop Services clients. The Remote Desktop Session Host is where users run programs, save files, and use network resources on that server. The Remote Desktop Session Host can be accessed by users by using either a Remote Desktop connection or using RemoteApps.

Before you install any programs you should install your Remote Desktop Session Host. This installation process has been already covered earlier in this chapter. You should not have programs installed before you install the role as they may not work correctly in a multiuser environment. To ensure that the application is installed correctly for a multiuser environment, the Remote Desktop Session Host needs to be put into an installation mode. The installation mode ensures that the correct registry entries and `.ini` files needed to run the application in a multiuser mode are created during the installation.

To place the Remote Desktop Session Host server into the installation mode you either:

- Choose **Install Application on Remote Desktop Session Host** tool under **Programs** in **Control panel**.
- Issue the `Change user/install` command at an elevated command prompt.

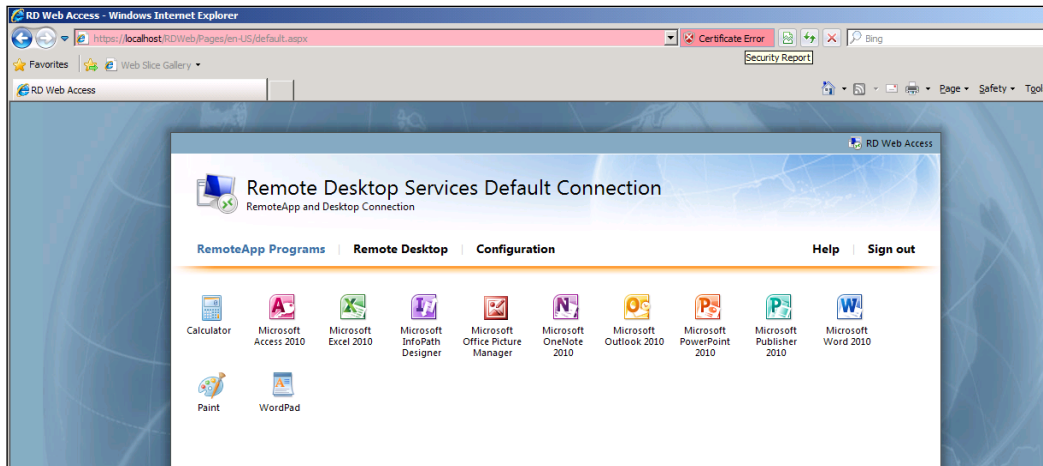
Once the application installation is complete you must put the Remote Desktop Session Host server back to the execution mode before users use the application. The **Install Application on Remote Desktop Session Host** tool will automatically return to this state once the wizard is completed. If you used the command prompt run the `change user / execute` command.

For a user to connect to the Remote Session Host server, they must be a member of the Local Group, Remote Desktop Users. This can be done either via the Local users and Group MMC snap-in, or on the Remote tab in the Systems Properties of the **Advanced** system settings. Members of the local Administrators group can connect even if they are not listed.

## Remote Desktop Web Access

Remote Desktop Web Access enables users to access RemoteApp and Desktop Connection through the **Start** menu on a computer that is running Windows 7 or through a Web browser.

To connect to the Remote Desktop website you need to type the following URL in a web browser: `https://server_name/rdweb`. Here `server_name` is the external FQDN of the web server.



## Remote Desktop Gateway (RD Gateway)

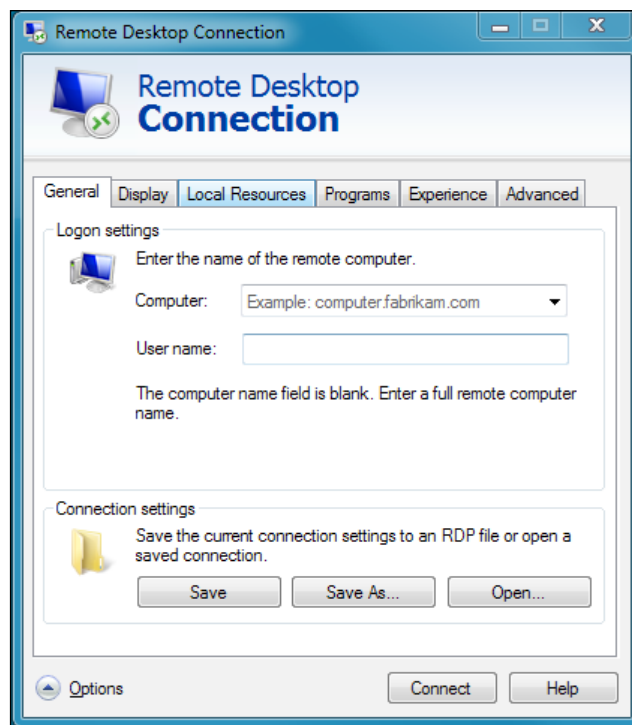
Remote Desktop Gateway (RD Gateway) is a role included with Windows Server 2008 R2. It enables authorized remote users to connect to computers on the internal network, from the Internet, using a RDP client. In Windows SBS 2011 Standard, this technology is used to accomplish the **Connect to Computer** function. Remote Desktop Gateway allows Remote Desktop clients to establish a secure connection over SSL (443) using RPC Proxy, also known as RDP over HTTPS.



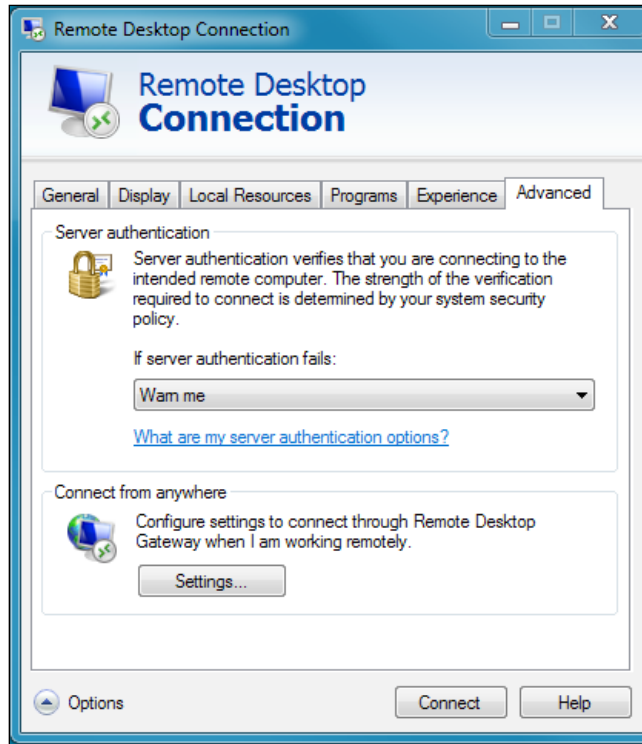
In Windows SBS 2011 Standard, Remote Desktop Gateway is a role that is installed by default.

Remote Desktop Gateway enables external users to connect to any computer that the network administrator allows for that user. The external user configures their Remote Desktop Connection Client as follows:

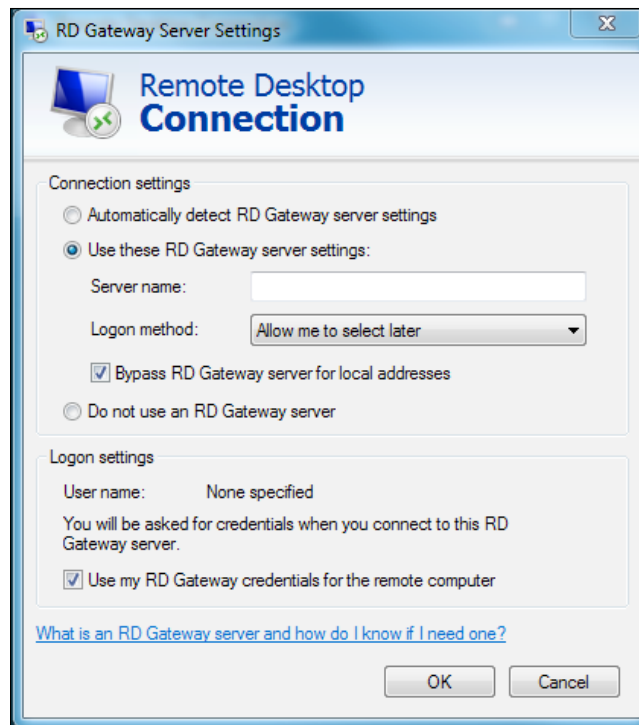
1. Open the Remote Desktop Connection client on the client computer. On the **General** tab, enter the internal domain name of the computer you wish to connect to. You can also choose to add your username in Domain\username fashion:



2. On the **Advanced** tab, click on the **Settings** button under the heading **Connect from Anywhere**:



3. This will open the **RD Gateway Server Settings**.
4. Select **Use these RD Gateway server settings**, and in the **Server name** enter your external FQDN. Also under **Logon method**, select **Use my RD Gateway credentials from the remote computer**. Click **OK** and return to the **General** tab and save the RDP to a location you can access for later use. You will now be able connect to the internal computer from an external location using the Remote Desktop Connection client.



It is important to note if your Windows SBS 2011 Standard does not have a valid trusted third-party certificate installed, you must first install the self-sign certified package from the Windows SBS 2011 Standard onto the external client computer.

## Test your knowledge

1. What are the minimum ports that need to be opened at the perimeter firewall to allow remote access?
  - a. 80, 443, and 3398.
  - b. 443.
  - c. 443 and 1725.
  - d. 443 and 987.

2. With remote access correctly configured on Windows SBS 2011 Standard, what can you access?
  - a. Windows SBS 2011 Standard Server.
  - b. File Shares.
  - c. Companyweb.
  - d. All of the above.
3. How do you configure remote access for users?
  - a. Using the Windows SBS 2011 Console.
  - b. Using Active directory users and computers.
  - c. Using group policy.
  - d. Using Remote Routing and Access System.
4. Select the options required for remote access on a Windows SBS 2011 Standard system (multiple selections required)?
  - a. Configure perimeter router to forward appropriate ports to SBS 2011 server.
  - b. Configure the Windows Server 2008 firewall on Windows SBS 2011 Standard Server.
  - c. Run the Windows SBS 2011 Standard remote access configurations wizards.
  - d. Enable remote access in user properties of Dashboard.
5. The number of concurrent VPN tunnel connections is at a maximum. How do you increase the number of allowed concurrent connections?
  - a. In the Windows SBS 2011 Standard console, run the Configure a Virtual Private network Wizard again.
  - b. In the Network Policy server, add a new connection request policy.
  - c. Increase the number of ports on the appropriate WAN miniport device in Routing and remote access console.
  - d. Reboot the Windows SBS 2011 Standard server.

## Summary

As you can now see there is a range of different ways that you can configure remote access to the Windows SBS 2011 Standard network. The most convenient from a user's perspective will be via Remote Web Access (RWA), which will also be the most secure. This chapter has not only shown you how to configure this, but also how to configure access via VPNs and Remote Desktop Services (RDS). It has also shown you the more advanced topic of how to publish RemoteApps through the Remote Desktop Web configuration.

Any certification exam is going to test your knowledge of remote access to a Windows SBS 2011 Standard system, simply because it is so critical to end users these days. It is therefore important that you have the ability to not only configure these different options, but also understand the advantages and disadvantages of both so you can better advise end users.

From here we now move on to configuring and managing messaging and collaboration.



# 3

## Configuring and Managing Messaging and Collaboration

Information is what running a business is all about. Effectively sharing that information is what, to a large extent, determines whether a business will be successful. Windows Small Business Server (SBS) 2011 Standard contains a number of features that facilitate this information sharing and it is important that they are configured correctly. To achieve any certification for Windows SBS 2011 Standard you will need to know not only how to configure these features, but also to maintain them.

The ability to collaborate and share information is what networks are all about and it is something that Windows SBS 2011 Standard automatically brings to the table. It does this through network file shares for storing files, Microsoft Exchange Server 2010 with e-mail, and SharePoint Foundation 2010 for collaboration. Not only are all of these products available with Windows SBS 2011 Standard, they have also been tightly integrated together to provide a seamless experience for the user and an ease of configuration for the administrator.

In this chapter we shall look at:

- Configuring e-mail
- Managing Microsoft Exchange Server
- Configuring folder shares
- Configuring storage
- Configuring Microsoft SharePoint

## Configuring e-mail

In today's business environment, e-mail is one of the most used and relied upon methods of communication and collaboration. This is for both internal and external people within your organization.

### Exchange Server

Exchange Server Standard 2011 is essentially set up for you with Windows SBS 2011 Standard. The primary ways to access your e-mails in a Windows SBS 2011 Standard network are via the desktop Outlook application or via a browser using **Outlook Web Access (OWA)**. Windows SBS 2011 Standard does not come with a copy of Outlook that can be installed on a client's desktops as some previous versions of SBS did. Thus, if your users want to use Microsoft Outlook to work with their Inbox on their desktop, they are going to need to already have Microsoft Outlook installed.

On Windows SBS 2011 Standard, the version of Exchange installed is the standard version and has the same limitations as any Exchange Server Standard installation. However, you are able to install additional Exchange Servers (standard or enterprise) in your network on other domain-connected servers if you desire.

### Configuring Microsoft Outlook on the desktop

The most common way that users will access their e-mails is using the Outlook desktop client that comes with the business versions of Microsoft Office. When you run the **SBS Connect computer** wizard during the setup of the workstation, Outlook on the desktop will automatically be configured for your Windows SBS 2011 Standard network.

When a new user logs into a desktop and then runs Outlook, they will be prompted to create a new profile for their e-mails. After doing this they will be connected to their Inbox on the server and a copy of their mailbox will generally be downloaded and stored in a local Offline Store (OST) file. This process is known as cached Exchange mode and is on by default for Windows SBS 2011 Standard mailboxes.

You can elect to configure a mailbox manually by going into the Mail option in Control Panel and adding a new Outlook profile. Setting up an Exchange account requires you to enter the name of the Exchange server (in this case the name of your Windows SBS 2011 Standard Server) and the username. Once these are correct you will see them underlined and the mail settings are now configured.



## POP3 Connector

If your site is unable to host its own e-mail, you still can use all of the benefits of Exchange Server 2010 by utilizing the Windows SBS POP3 Connector built into Windows SBS 2011 Standard. The POP3 Connector will download your e-mail from your e-mail host, and deliver the e-mail to the specified mailbox. It is important to remember that the POP3 connector should not be considered as a long-term solution for e-mail; it is designed as a migration method to enable an easy move to Exchange Server.

To view or change POP3 Connector properties:

1. Open the Windows SBS 2011 Standard Console.
2. Click **Network** on the Navigation bar, and then click the **Connectivity** tab.
3. Click on **POP3 Connector** in the list view.
4. In the task pane, click **View POP3 Connector properties**.
5. On the **Accounts** tab you can **ADD**, **EDIT**, or **REMOVE** POP3 accounts.
6. On the **Scheduling** tab, you schedule when to retrieve e-mail from your Internet service provider's POP3 server, at intervals of no less than five minutes. You can also manually retrieve e-mail by clicking the **Retrieve now** button.
7. Click **OK**, when you are finished with the POP3 Connector properties.

## Configuring e-mail client protocols

Windows SBS 2011 Standard has a number of different methods to connect to your Exchange mailbox with your Outlook client. These sometimes differ if you are external compared to internal. Externally it is recommended that you use Outlook Anywhere. That being said, there are other methods such as POP3 and IMAP. If you are going to use POP3 or IMAP, you need to ensure your Windows SBS 2011 Standard server is configured for these protocols. Another important point is that all of these methods detailed further in this chapter are encrypted, and thus the client must trust the server's certificate. This can be achieved by using either a trusted third-party certificate you have purchased, or by installing the self-signed certificate from the server.

### POP3 (on client side) / IMAP

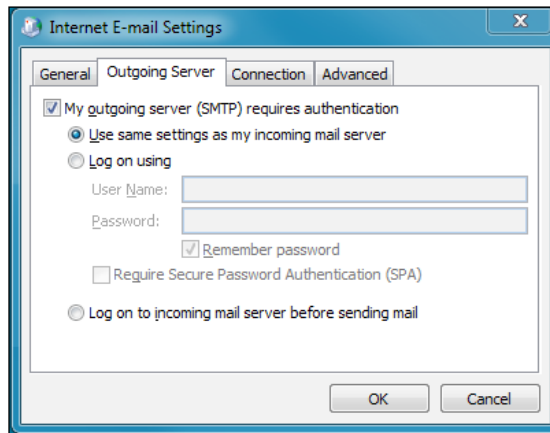
If for any reason Outlook Anywhere is not suitable for your needs, POP3 and IMAP on the client side are available on a Windows SBS 2011 Standard server. To help ensure security, it is recommended that these protocols be encrypted.

## SMTP

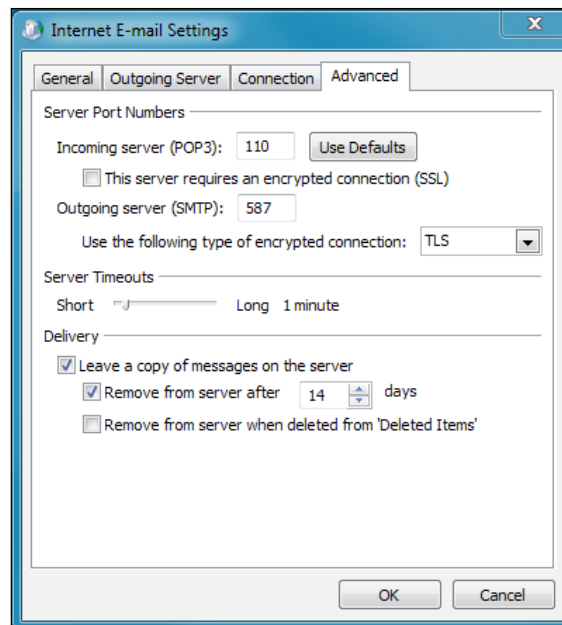
If you are downloading e-mails externally to your mail client, then you will have to set up the mail client to send via SMTP back to the Windows SBS 2011 Standard server.

When you are setting up the Internet e-mail settings:

1. Set the Outgoing mail server (SMTP) the same as the Incoming mail server, the external FQDN.
2. Once you have completed the settings on this page, you need to click on the **More Settings...** button.
3. Now select the **Outgoing Server** tab:



4. On this **Internet E-mail Settings** page, tick **Use same settings as my incoming mail server**.
5. Now select the **Advanced** tab:



6. Change the **Outgoing server (SMTP)** to port 587.
7. Ensure the **Use the following type of encrypted connection** is TLS.

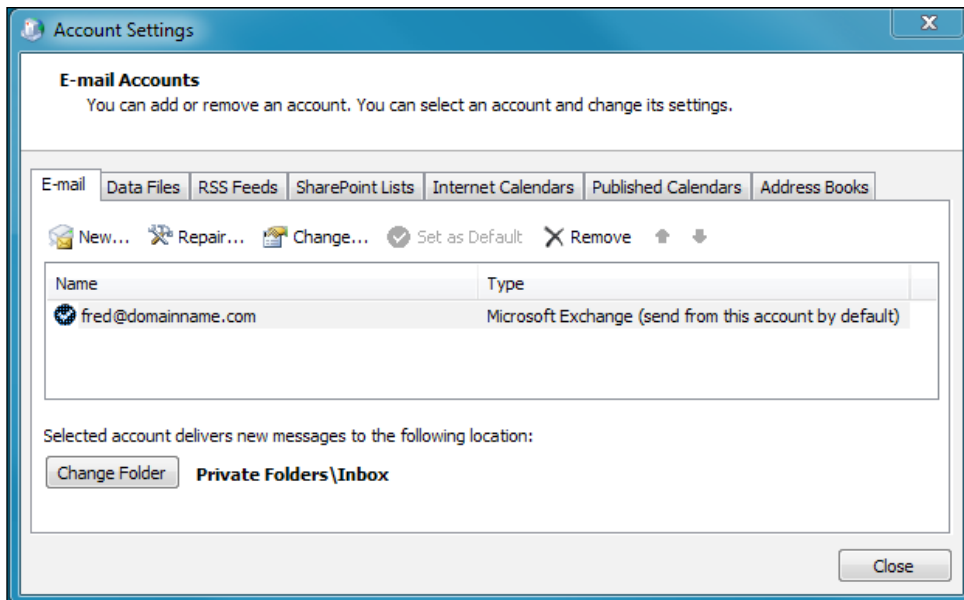
## RPC / HTTPS (also known as Outlook Anywhere)

With Outlook Anywhere you can access your Exchange mailbox on the Windows SBS 2011 Standard server using the HTTPS protocol from outside your network, provided you are using Microsoft Office Outlook 2003, 2007, or 2010. You can securely access your mailbox from anywhere without the need for additional hardware or the need for a VPN to be connected. If you use Outlook 2007 or Outlook 2010 to access your Exchange mailbox, then Outlook will be automatically configured when you create your Outlook profile while within the Windows SBS 2011 Standard network. If you are using Outlook 2003 to access your Exchange mailbox, you need to manually configure the Outlook settings.

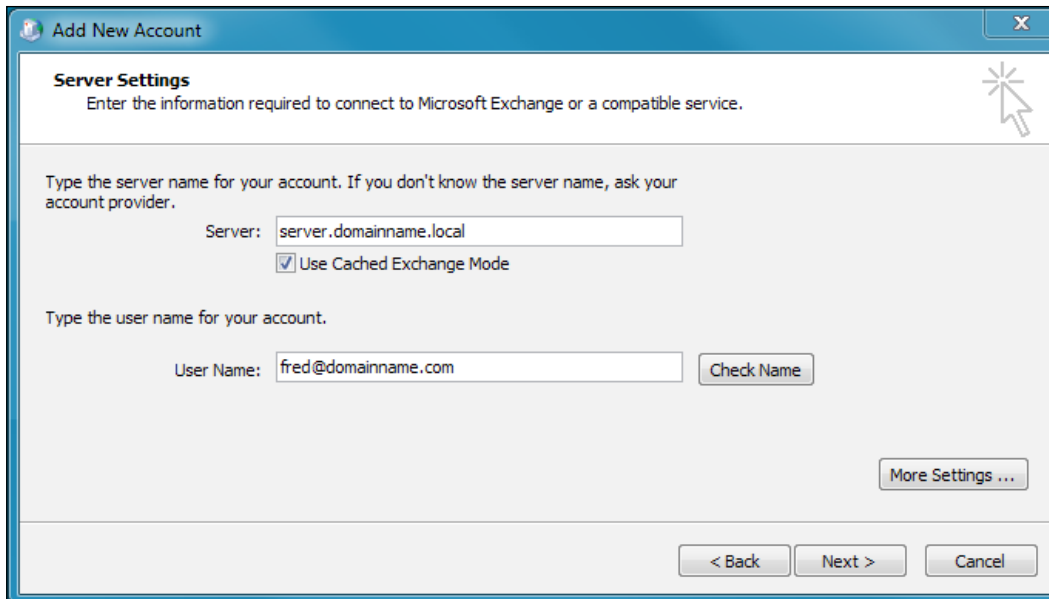
## Configuring Microsoft Outlook settings

If you are using either Outlook 2010 or Outlook 2007 to access your mailbox on the Windows SBS 2011 Standard server, then the Microsoft Exchange Server 2010 should automatically configure all of your settings in your Outlook profile. Part of this setup is to configure your Outlook to be able to remotely access your e-mails securely, without the need of a VPN connection or dedicated hardware. To set up Outlook for Outlook Anywhere manually, you will need to do the following:

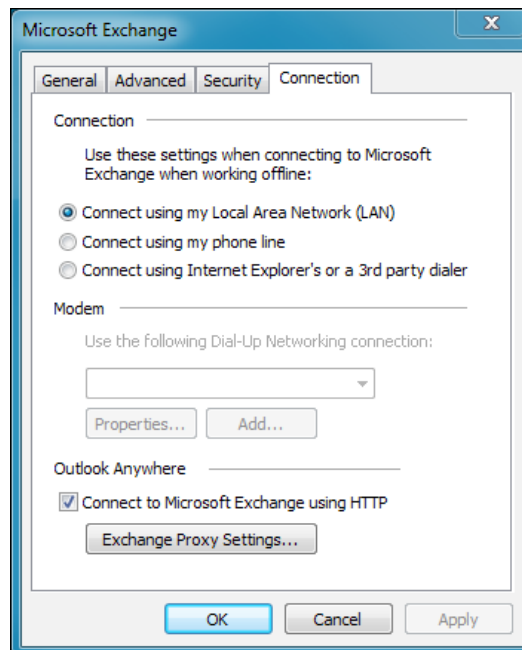
1. Click **File**.
2. Then click **Account Settings** button.
3. Select **Account Settings**.
4. Double Click on the Exchange account listed:



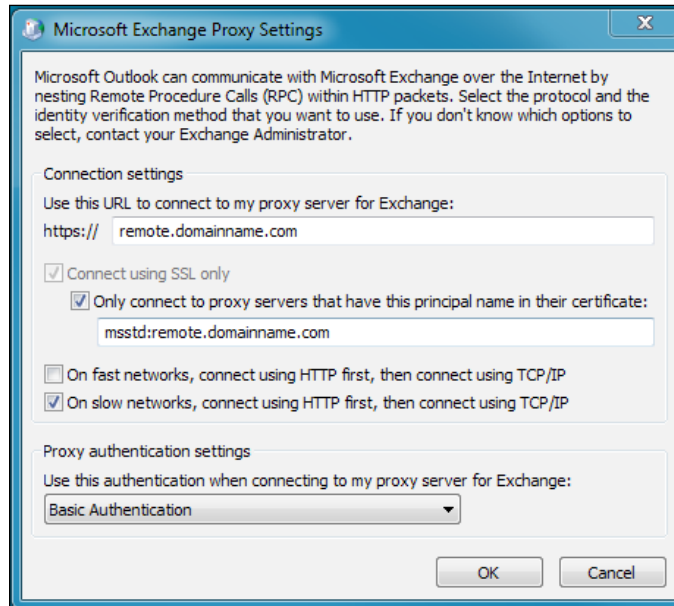
5. Click on the **More Settings ...** button:



6. Click on the **Connection** tab and tick **Connect to Microsoft Exchange using HTTP**. Then click the **Exchange Proxy Settings ...** button:



7. In **Use this URL to connect to my proxy server of Exchange** enter your External FQDN address:



8. Select **Connect using SSL only**, and then select **Only connect to proxy servers that have this principal name in their certificate**.
9. In the principle name for proxy server box, type **msstd:<FDQN>**.
10. Select **On slow networks, connect using HTTP first, then connect using TCP/IP**.
11. In the drop-down box under **Proxy authentication settings**, select **Basic Authentication**.
12. Click **OK**, and then **OK** again. Click **Next** and then **Finish**. Finally click **Close**.

When you open your Outlook from outside the Windows SBS 2011 Standard network, you will be prompted for your domain username and password. The username is in the format of `Domain\username`.

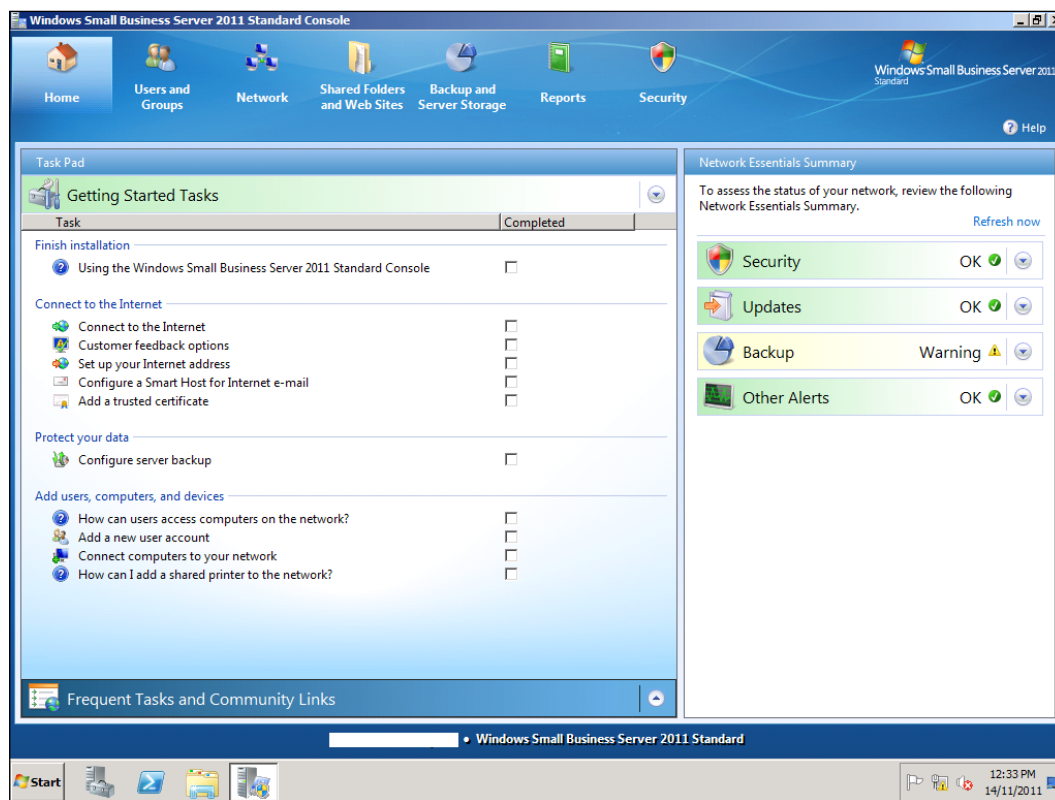
## Configuring a smart host

On a Windows SBS 2011 Standard, the Exchange Server can send e-mails on SMTP using either of two available methods. The default method is via DNS. This is where Windows SBS 2011 Standard carries out the DNS look up for the remote mail server and sends directly to it. The second method is using a smart host. This method is when Windows SBS 2011 Standard server sends out all mail to your ISP's mail server, and the ISP's mail server conducts the DNS lookup. Some ISPs require the use of a smart host for sending mail on port 25.

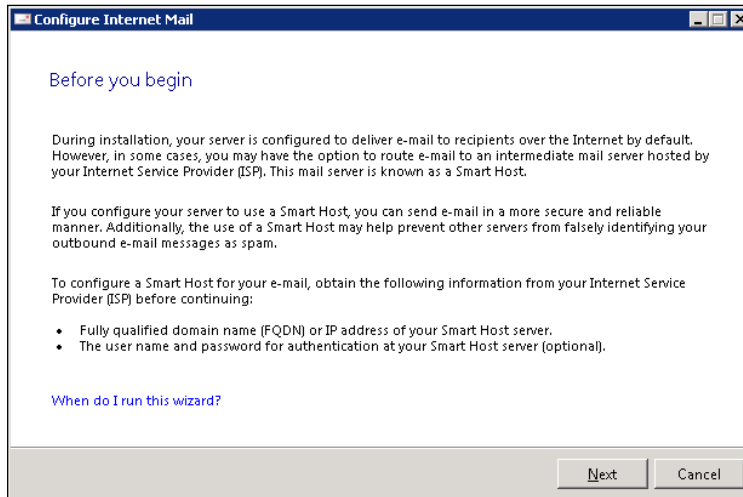
In some cases you may also need to configure a smart host for mail filtering and IP restriction reasons.

To set up Windows SBS 2011 Standard server as a smart host, complete the following steps:

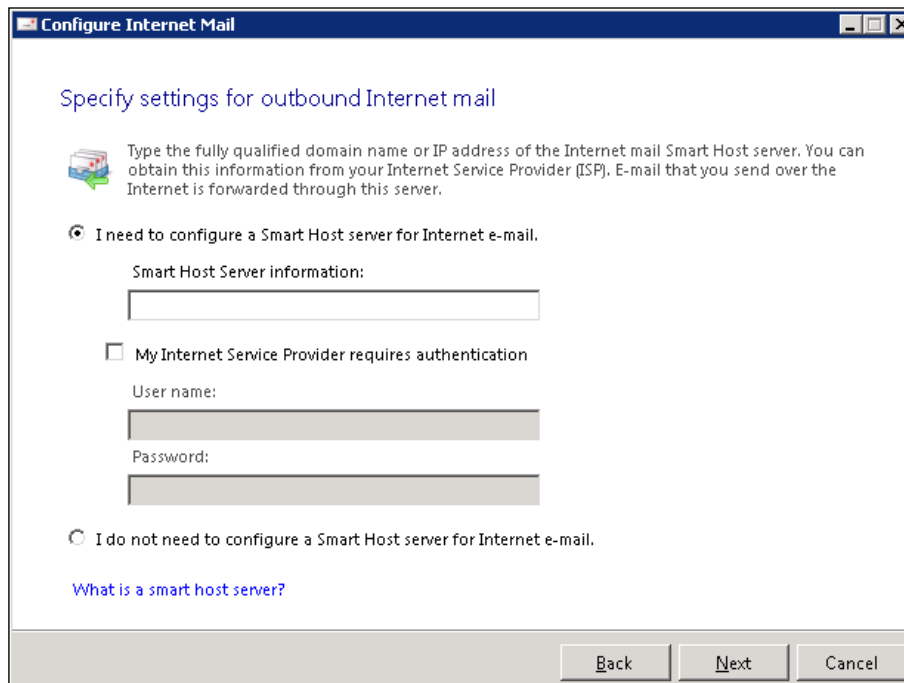
1. On the **Home** tab, click on **Configure a Smart Host for Internet e-mail**:



2. Once you have started the wizard, the **Before you begin** page opens, click **Next**:

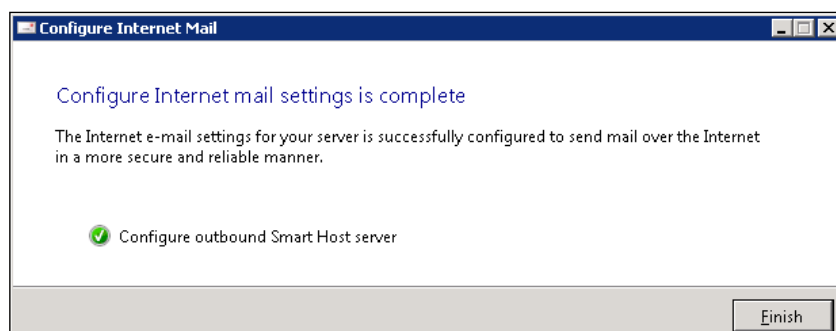


3. Enter the FQDN of the Smart Host server. Also, if the smart host requires authentication then enter the relevant **User name** and **Password**. Click **Next**:





4. Click **FINISH**. Configuration of a smart host for outgoing mail is now completed:



## Managing Microsoft Exchange Server

The version of Microsoft Exchange Server that is installed on Windows SBS 2011 Standard is exactly the same as any standard version of Microsoft Exchange Server installed anywhere else. It therefore supports the same management tools and options that are available for Microsoft Exchange Standard. The two management options are: Exchange Management Console and Exchange Management Powershell.

In most cases Exchange Server will not usually need a significant amount of direct management but the following are some of the more important options that you will need to consider for Windows SBS 2011 Standard.

## Maintaining logging

The information that comes into Exchange Server is maintained in a database and to reduce the possibility of this database getting corrupted, Exchange Server maintains a process known as transactional logging. This means that for each action taken by the Exchange database, separate log files are maintained that record these actions. In the event of an unexpected failure the content of the Exchange database is checked against the transaction logs. If there is a discrepancy then the database is brought up-to-date using the transaction logs.

As you can appreciate, with a lot of information flowing into the Exchange Server, these logs can become very large in size. The logs are generally removed via two methods. Firstly, when an Exchange 'aware' backup is completed (such as the standard SBS Backup), they are removed. Alternatively, Exchange Server can be configured to enable what is known as circular logging. This option only permits a certain number of logs to reside on the server and automatically overwrites the oldest log when required.

In Windows SBS 2011 Standard, Exchange 2010 has circular logging enabled to reduce the amount of disk space consumed by Exchange Server logs but significantly reduces the ability to recover the Exchange Server in the event of an unexpected corruption. You can relocate the Exchange Server logs to another drive on the SBS server and disable circular logging if desired, in order to provide greater redundancy if required.

To change the Exchange logging, complete the following steps:

1. Open Exchange Management Console from the Windows SBS 2011 server via **Start | All Programs** and then expand the **Microsoft Exchange Server 2010** group.
2. Expand the **Organization Configuration** option.
3. Select **Mailbox**.
4. Right click the **Mailbox Database**.
5. Select the **Maintenance** tab.
6. **Enable Circular logging** is ticked here by default. Make any changes you require and save the settings before exiting.

## Database management

One important difference that Windows SBS 2011 Standard provides is covered in the *Using the Move Data Wizard* section. If you wish to move Exchange data from the default installation location on the C: drive, then you should use the wizard in the Windows SBS Console. It is not recommended that you use the native Exchange Move Database Path wizard within Exchange 2010 on a Windows SBS 2011 Standard server. If you want to move the Exchange Server Logs, you will need to use them using the Exchange Management Console.

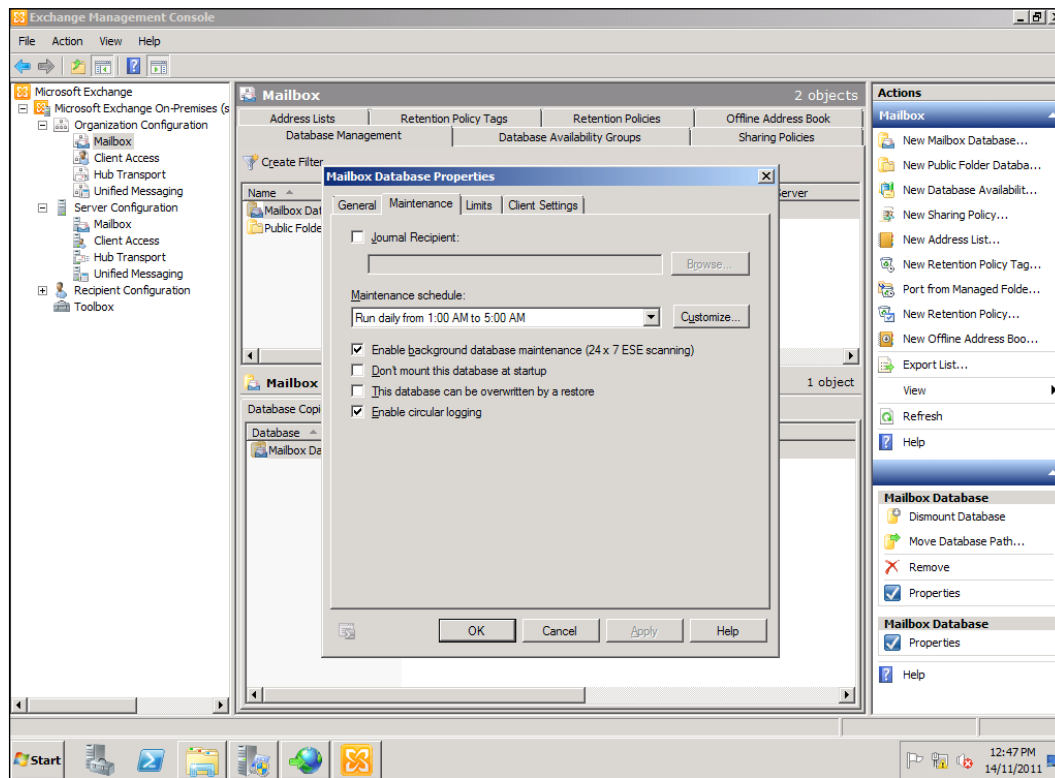
For information on relocating Exchange server databases, see the *Using the Move Data Wizard* section, later in this chapter.

## Defragmenting the database

Just like other databases, Exchange mailbox databases can become defragmented over time. To help prevent this you can carry out two types of defragmentation, online and offline. Online defragmentation does not affect the e-mail users, while offline defragmentation can stop access to all e-mail for a period of time.

## Online defragmentation

In past versions of Microsoft Exchange, online defragmentation was part of the database maintenance process. With Microsoft Exchange 2010, this is no longer the case. Online defragmentation now runs 24x7 in the background, and as the following screenshot shows is part of the 24x7 ESE database scan. There is nothing more to configure and the online defragmentation is throttled so it doesn't have a negative impact on client performance.



## Offline defragmentation

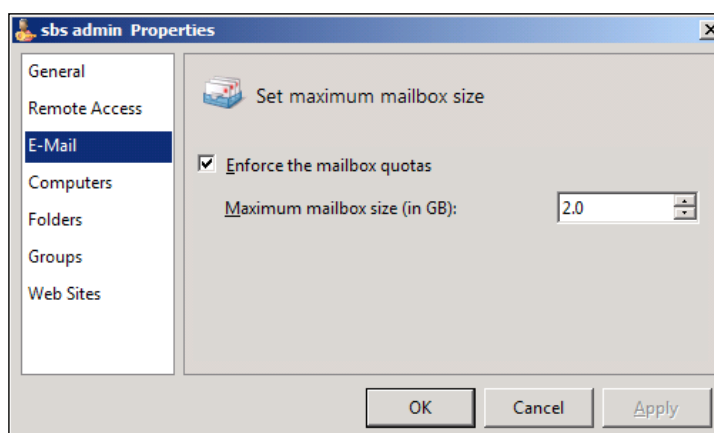
When you delete (from Outlook), the Exchange database does not shrink. The Exchange database is left with white space. The two methods to shrink the database file and reclaim space are:

- Create a new mailbox database and move all mailboxes to it
- Perform an offline defragmentation on the existing database

The offline defragmentation requires an outage for all users of that database. It is run using a ESEUtil.

## Quota management

Mailbox size quotas are enforced by default. The default size is 2.0 GB per person. This can be changed via the Windows SBS Console in the user's properties under the e-mail tab:



## Adding additional e-mail domains

If you wish to receive e-mails on SMTP from more than one domain, you will have to configure Exchange to accept e-mail from more than one domain.

To configure the accepted domains, carry out the following:

1. Expand the **Organization Configuration** node, and then click **Hub Transport**. In the results pane click the **Accepted Domains** tab.
2. In the action pane, click **New Accepted Domain**, and the wizard will start.
3. On the **New Accepted Domain** page, type a friendly name for the new domain name. In the **Accepted Domain** field, type the SMTP domain name. Select **Authoritative Domain. Email is delivered to a recipient in this Exchange organization**.
4. Click **New**.
5. Click **Finish** on the **Completion** page.

Then you must create a new Email Address Policy with a recipient filter:

1. Expand the **Organization Configuration** node, and then click **Hub Transport**, click the **E-mail Address Policies** and click **New E-mail Address Policy**.

2. Type the name for the policy, and select the recipients the policy will be applied to. Click **Next**.
3. Select the conditions used to filter the recipients to which the policy is applied. Click **Next**.
4. On the **E-mail Address** page, in the **SMTP E-mail Address** dialog box, select the option under **E-mail address local part** that you require.
5. Click **Select the accepted domain for the e-mail address** option, Click **Browse** and select the accepted domain you created previously. Click **Next** and then **Finish**.

## Redirecting e-mail

At times it is necessary to redirect e-mail from one person to the other. The person that is being forwarded mail can be internal or external to the Windows SBS 2011 Standard. Also you can simply forward all e-mails to the new user or send e-mails to both the original recipient and the forwarded recipient.

How to redirect e-mail to an internal recipient:

1. Open the Exchange Management Console and select **Recipient Configuration**.
2. In the **Recipient Configuration**, right click the user's mailbox you wish to forward mail from and select **Properties**.
3. Select the **Mail Flow Settings** tab, and then **Delivery Options**.
4. Under **Forward Address**, select **Forward To**, click **Browse**, and then select the name of the user you wish to forward to. As an option you can select **Deliver Message to Both Forwarding Address and Mailbox** to have a copy stored in the forwarder's mailbox. Click **OK**.

To forward to an external recipient from Windows SBS 2011 Standard, you first need to create an Exchange contact, which will contain the external e-mail address.

To create a contact in Exchange 2010, complete the following:

1. Open the Exchange Management Console and select **Recipient Configuration**.
2. In the **Actions** panel, select **New Mail Contact** to start the wizard.
3. On the introduction page, select **New Contact** and click **Next**.
4. On the **Contact information** page, enter the first and last name.
5. Click **Edit** next to the **External Email Address** field and enter the external e-mail address. Click **Next**.

6. On the next page review the configuration summary, and click **New** to create the contact.
7. The completion page will inform you if the contact creation has been successful.
8. Complete the forward as per the internal forward in the last section.

## Configuring mobile device Microsoft Exchange ActiveSync

With the mobile workforce of the modern world, a great feature of Windows SBS 2011 Standard is Microsoft Exchange ActiveSync to a mobile device. This feature allows you to synchronize e-mail messages, calendar items, contacts, tasks, and notes, in real-time to you mobile device. Exchange 2010 on Windows SBS 2011 Standard is configured by default to have this feature turned on and configured, once you have run the Connect to the internet and Set up your internet address wizards.

To configure a mobile device to use Exchange ActiveSync, complete the following:

1. On your Windows mobile device, click on **Start** and then **ActiveSync**.
2. Click Tools, tap **Options**, and then click on the **Server** tab.
3. Select the box next to each items type you wish to synchronize, and then click **Settings**.
4. In **Server Name**, enter the external FQDN server name.
5. Click on **Advanced**.
6. On the **Connection** tab, enter the username, password and domain name.
7. On the **Rules** tab, select the rule that applies best to you.
8. Click on **OK** to accept the setting you entered into ActiveSync.

## Configuring folder shares

The majority of network user data will be files and folders. These common files and folders should be moved to the Windows SBS 2011 Standard server for a number of reasons. Firstly, it provides a single location for the data. This means that the Windows SBS 2011 Standard server becomes the single point of reference for all data, preventing confusion with different versions being stored in different people's machines. Secondly, by storing data on the Windows SBS 2011 Standard it is stored

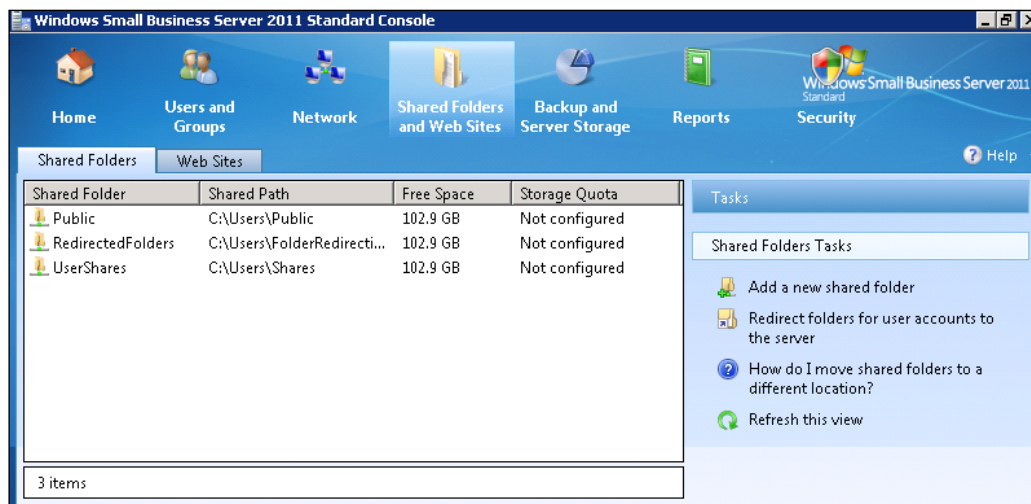
more securely. Using Windows NTFS, rights security can be assigned down to each file on the system thereby permitting those with the appropriate rights to work on the file. Finally, by storing network files in a single location you need the advantage of being able to easily backup and restore information since it is now centrally located.

Once you move data to a location on the Windows SBS 2011 Standard server, it is important to configure the appropriate rights to that information for users. It is recommended that this is always done via the SBS Wizards. However, it can be done directly via native Windows Explorer if a more granular level of control is required.

## Using Windows SBS 2011 Standard console

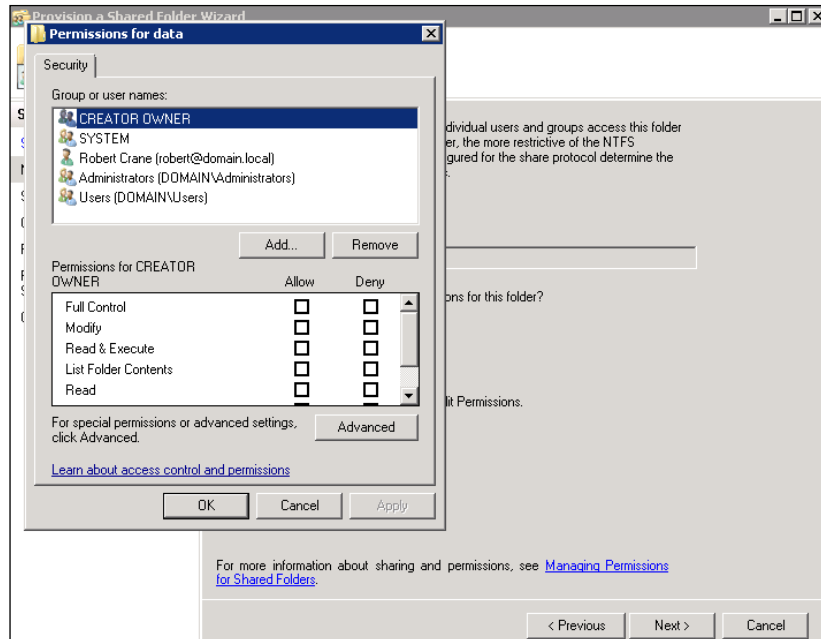
Windows SBS 2011 Standard provides wizards to help you share some data on your server:

1. Ensure that data has been copied to an appropriate location on the server.
2. Run the **Windows Small Business Server 2011 Standard Console**.
3. Select the **Shared Folders and Web Sites**.
4. Select the **Add a new shared folder** wizard that can be found in the **Shared Folders** tab, in the **Tasks** panel.



5. Browse to the location of the data using the **Browse** button. Click **Next** to continue.

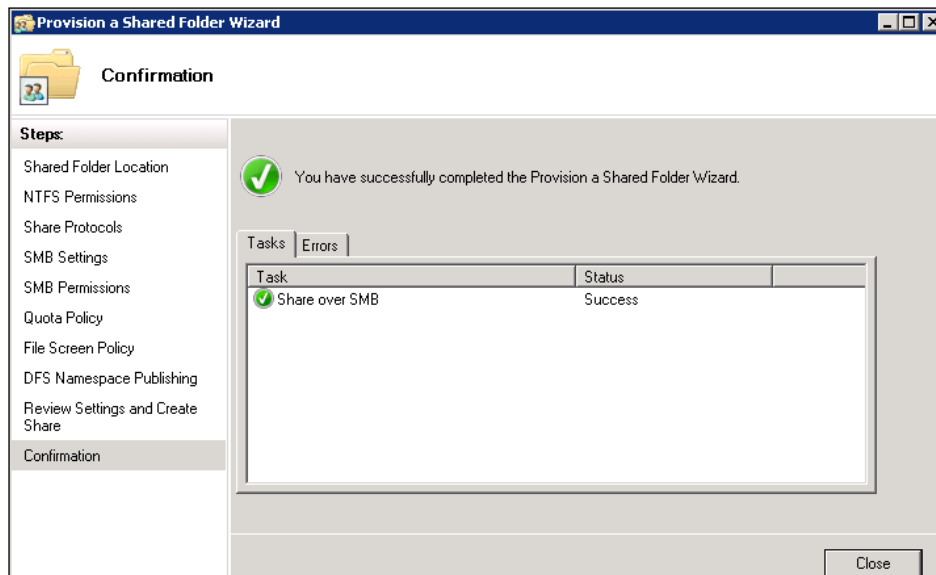
- You will then be prompted as to whether you wish to change the existing NTFS rights for the folder. If you select **Yes**, then the **Edit permissions** button will be highlighted. Clicking this button will display the standard NTFS rights window as shown:



- After you have set the appropriate NTFS rights, click **Next** to continue.
- You will be prompted to enter the SMB share information. Enter a share name; the default will be the name of the folder on the file system. This is the name that your users will see when they connect from their workstations, so it is important to ensure that you select an appropriate name. Click the **Next** button when complete.
- You are now taken to the **SMB Settings** option. Here you can adjust things such as the **User Limit** and **Offline** settings. To do so click the **Advanced** button. When complete, click the **Next** button to continue.
- You are now prompted to configure the **SMB Permissions**. By default the network users will have read-only rights. Select the rights that are appropriate (generally read and write for all users) and click the **Next** button to continue.
- You can now select whether you wish to apply a quota to this location. To do so check **Apply quota** and configure as desired. Click on the **Next** button to continue.



12. You can now elect to apply a file screen to the shared folder. This allows you to control what file types are copied to that location. For example, you could configure the screen to prevent MP3 files from being saved here. If you wish to apply a screen select the **Apply file screen** option and configure as desired. Click the **Next** button to continue.
13. You can now publish this location to a DFS (Distributed File System) namespace. To do so simply check the option **Publish the SMB share to a DFS namespace** and configure appropriately.
14. Review the configuration options you have selected and when satisfied click the **Create** button.
15. The wizard will now apply the configuration you have selected to the desired network location. At the completion of the process you should receive a message indicating the success of the process like so:



16. Click on the **Close** button to complete the process.
17. You should now see your new shared folder displayed in the list on the Console. If you select this you will see that a number of options appear in the task window on the right including the ability to browse the folder, stop sharing this folder, and change the folder permission.

## Using native tools

Although Windows SBS 2011 Standard allows you to complete a lot of tasks via the **Windows Small Business Server 2011 Standard Console**, sometimes you need to step out of this console and use the native tools. To do this, you will need to complete the following steps:

1. Run Windows Explorer.
2. Locate the data folder, right click it, and select **Properties** from the menu that appears.
3. Select the **Sharing** tab and click the **Advanced Sharing** button
4. Give the Share a name that will be visible on the network and allow all desired users to have full rights.
5. Now select the **Security** tab. To allocate the desired NTFS permissions for the object within the folder you have shared, select the Group or User in the top pane, and then select the appropriate Permissions in the lower pane.

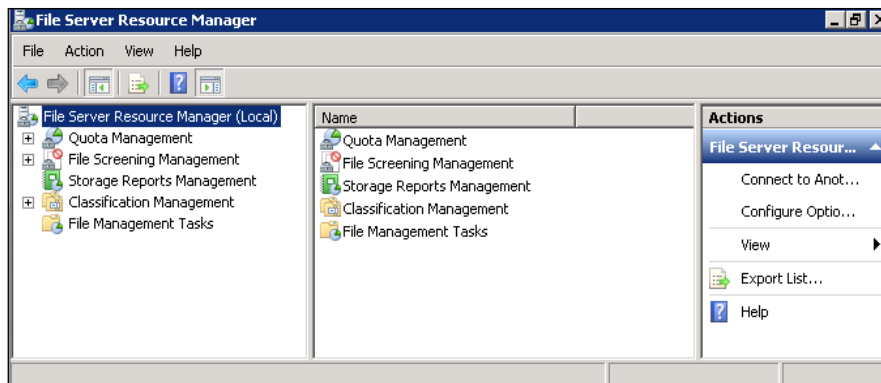
Best practice is always to assign securities via Active Directory security groups. Trying to maintain securities that have been assigned to individual network users can become a very time consuming and complex process. It is also recommended that you refrain from using the Deny right as this always overwrites any Access right. If a user or group doesn't need access to something, simply don't assign them that right.

## File Server Resource Manager

**File Server Resource Manager (FSRM)** can be used to enhance your ability to manage and monitor storage activities on your server. Windows SBS 2011 Standard installed the role of File Server Resource Manager by default.

The main capabilities of FSRM include:

- Folder quotas
- File screening
- Storage reports
- Event log integration
- Email notifications
- Automated scripts



## Quota console

Quotas are a way to help restrict and or monitor how much space a folder can use. This can be in the form of hard quotas, that prevent the user from adding more files, and soft quotas which only generate events and warnings.

Quotas are found in FSRM under the **Quota Management** node. To add more Quota restrictions, click **Create Quota ...** in the **Actions** pane.

## File screening

File screening is where you can restrict and/or monitor which file extensions can be used on the server. FSRM can provide active screening which will block a file with a certain extension, or passive screening which monitors file extensions without blocking. File extensions can also be combined into File Groups, such as Image, Audio, and Video Files.

File screens are found in FSRM under the **File Screening Management** node. To add a File Screen, click **Create File Screen ...** in the **Actions** pane.

## Reports

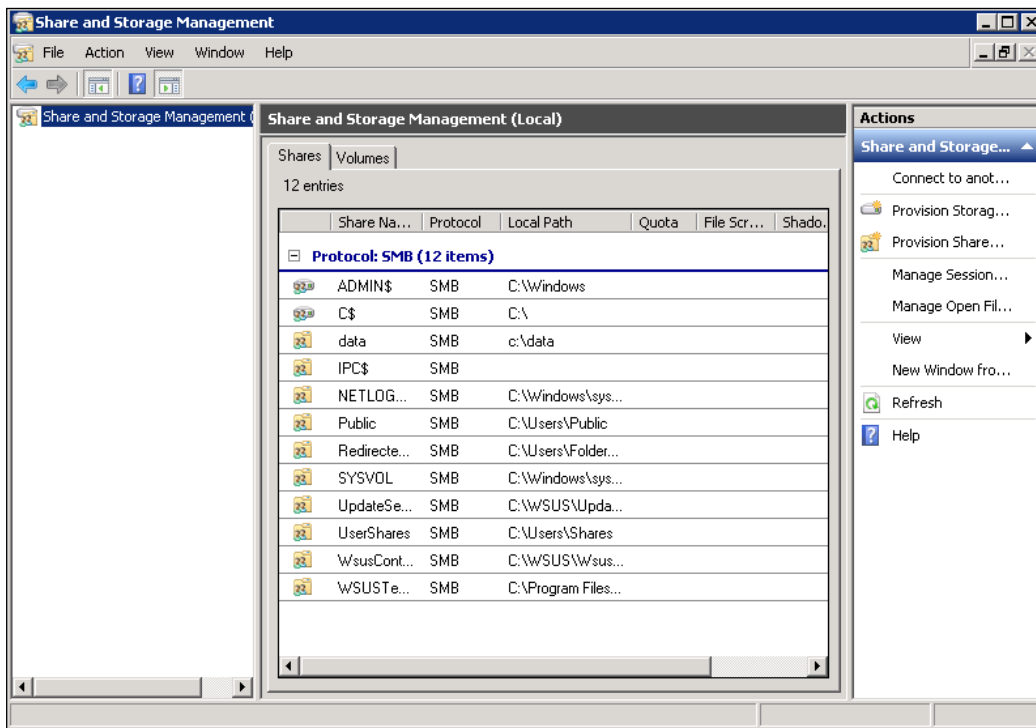
Storage Report Management in FSRM provides many reports associated with File Server Management. These reports include Files by Group, by Owner, Large Files, Most Recently Accessed Files, Duplicate files, and many more.

These reports can be generated manually, on a schedule, or triggered by a quota or file screen. The reports can be generated in different formats; these include DHTML, HTML, XML, CSV, and Text, and then delivered to a folder. The location of this folder is %systemdrive%\StorageReports\Scheduled by default.

## Shared folders

Windows SBS 2011 Standard comes with the standard Windows Server 2008 Share and Storage Management Console. This console enables you to better manage storage on volumes and shared folders. Some of the features of this console include:

- Add or remove disk and volumes
- Enable or disable shared access to server resources, such as files, folders, and volumes
- Secure access to shared resources
- View current users accessing a resource and disconnect them if needed



To add a share, choose the **Action** pane, and choose **Provision Share** to start the wizard. The wizard looks the same as the wizard run via the Windows SBS 2011 Standard Console.

Two features that are most useful are in the **Action** pane: **Manage Sessions** and **Manage Open Files**.

**Manage Sessions** will show users that are currently accessing your shares, whereas **Manage Open Files** provides you with a way to see which sessions have which files open, and from which computer.

## SMB permissions versus NTFS permissions

Controlling access to resources on the network is achieved via SMB permissions (Share) and NTFS permissions.

Share permissions are set for a folder. The share permissions determine the type of access users have to the shared folder across the network. The three share permissions are: Full control, Change, and Read.

NTFS permission determines the action users can carry out for a folder or file, both across the network and locally. NTFS permissions offer several permissions, such as Full control, Change, and Read. These permissions can be applied to individuals and /or groups. If there is a share and/or NTFS permission conflict, the most restrictive permission applies.

## Configuring storage

Windows SBS 2011 Standard is installed by default with the data storage located on the boot or C: partition. Best practices recommend that storing data on the boot partition should be avoided if at all possible. With this in mind, many Windows SBS 2011 Standard systems are configured with additional hard disks and partitions onto which data can be stored.

The best way to configure the storage of your Windows SBS 2011 Standard network is by using the available wizards.

## Using the Move Data Wizard

Windows SBS 2011 Standard provides wizards to help you move some of the more common data on your server.

The wizard can be found in the **Windows Small Business Server 2011 Standard Console**, on the **Backup and Server Storage** tab, in the Tasks panel. The wizards available are:

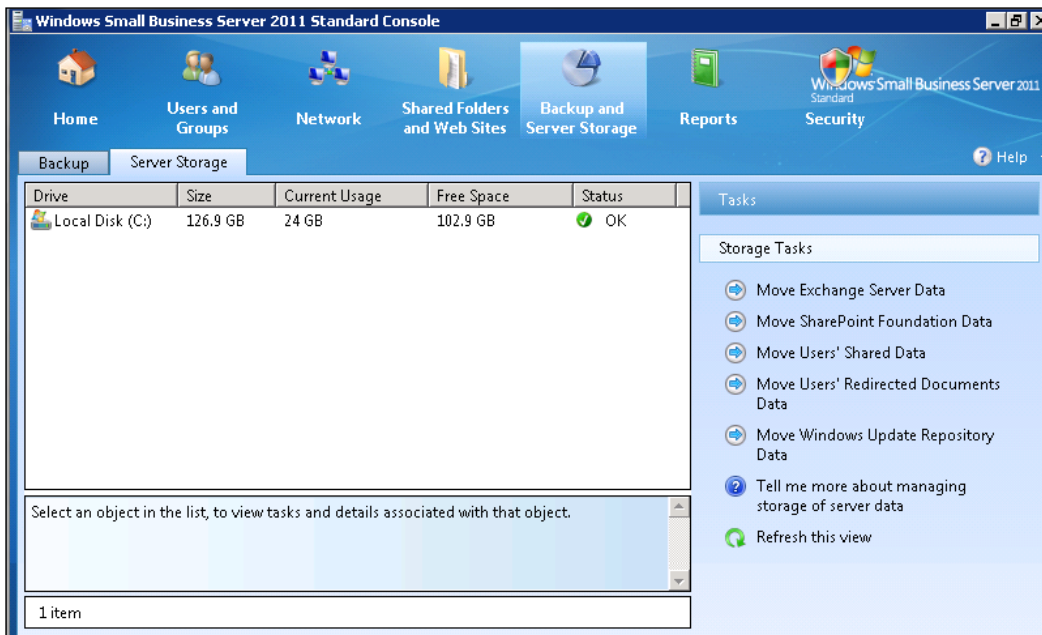
- Move Exchange Server Data
- Move SharePoint Foundation Data
- Move Users' Shared Data

- Move Users' Redirected Documents Data
- Move Windows Update Repository Data

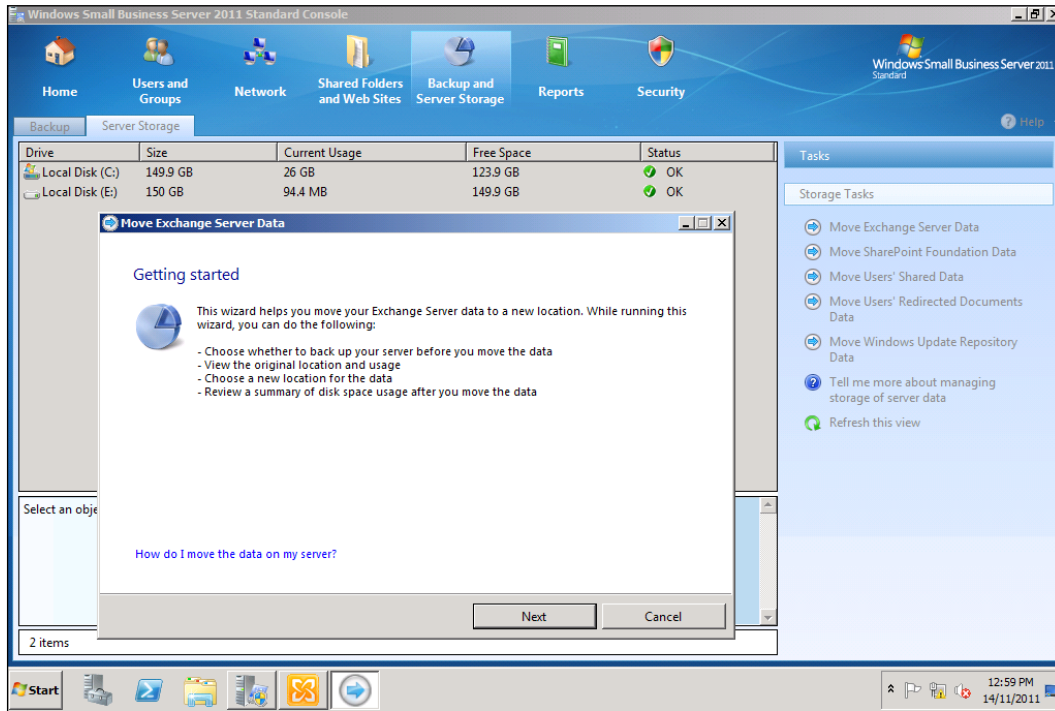
The procedure to run the wizards to move data is the same for each wizard and as such only the Move Exchange Server Data wizard will be shown here.

The **Move Exchange Server Data** wizard runs as follows:

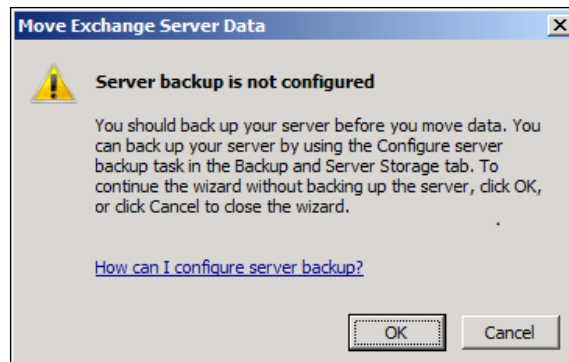
1. Click on **Move Exchange Server Data** under storage tasks on the right-hand panel:



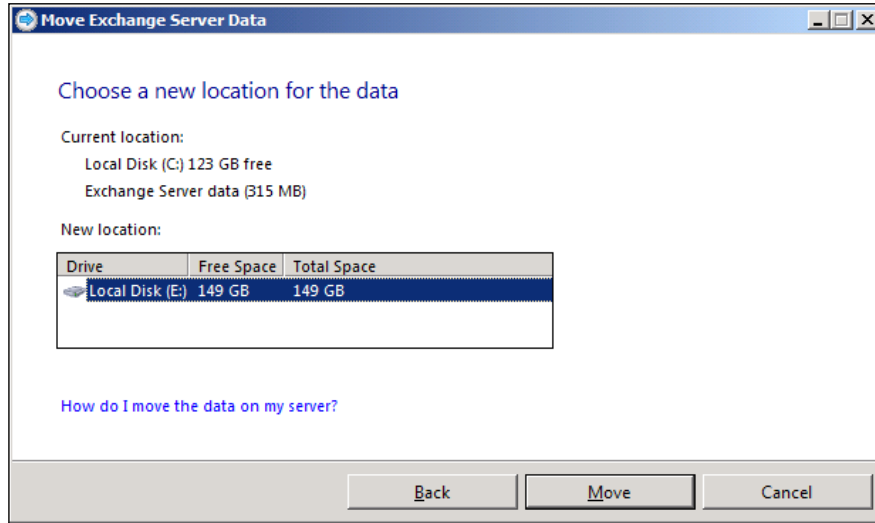
## 2. Click Next:



## 3. If you do not have a backup configured you will be warned. Click OK:

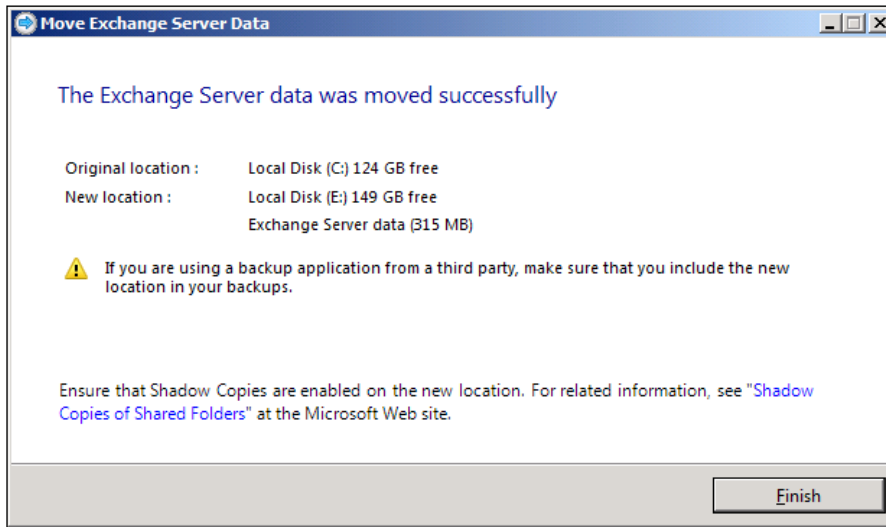


4. Choose the partition you wish to move the data to. Click **Move**:



The larger the amount of data to be moved the longer the wizard may take.

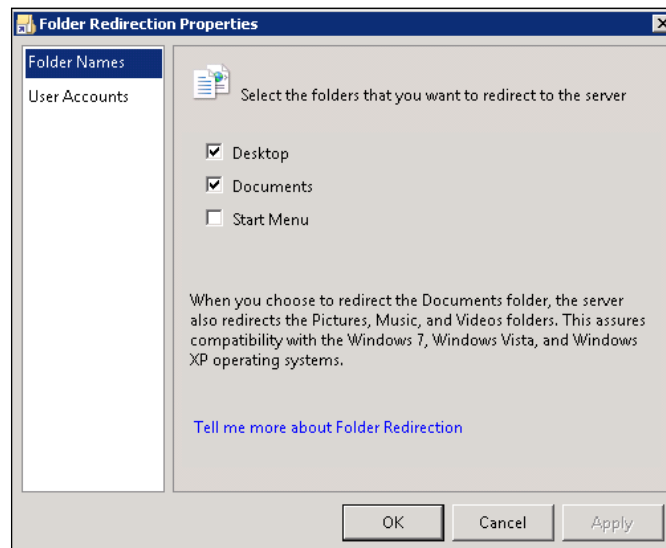
5. When you are presented with **The Exchange Data was moved successfully** message, click **Finish**:



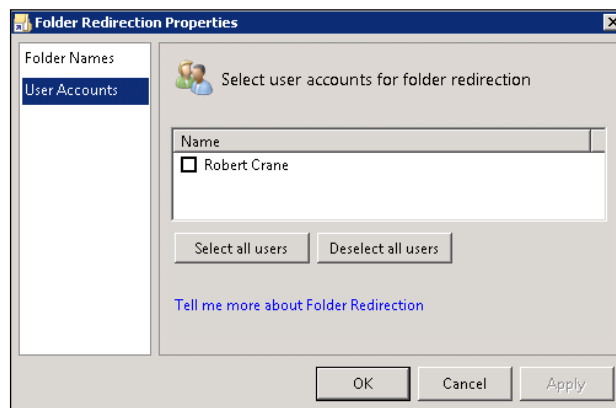


## Configuring folder redirection policy

If a user stores any data on their local computer, they run the risk of losing their data if the computer fails. To help prevent this loss of data, Windows SBS 2011 Standard enables you to redirect specific user folders to the default user's shared folder on the server. This folder redirection is accomplished by a group policy object; however you can use the wizard that can be found in the **Windows Small Business Server 2011 Standard Console**, on the **User and Groups** tab, in the **Task** panel. It is called **Redirect folders for user accounts to the server**.



Select the folders that you wish to redirect to the server:



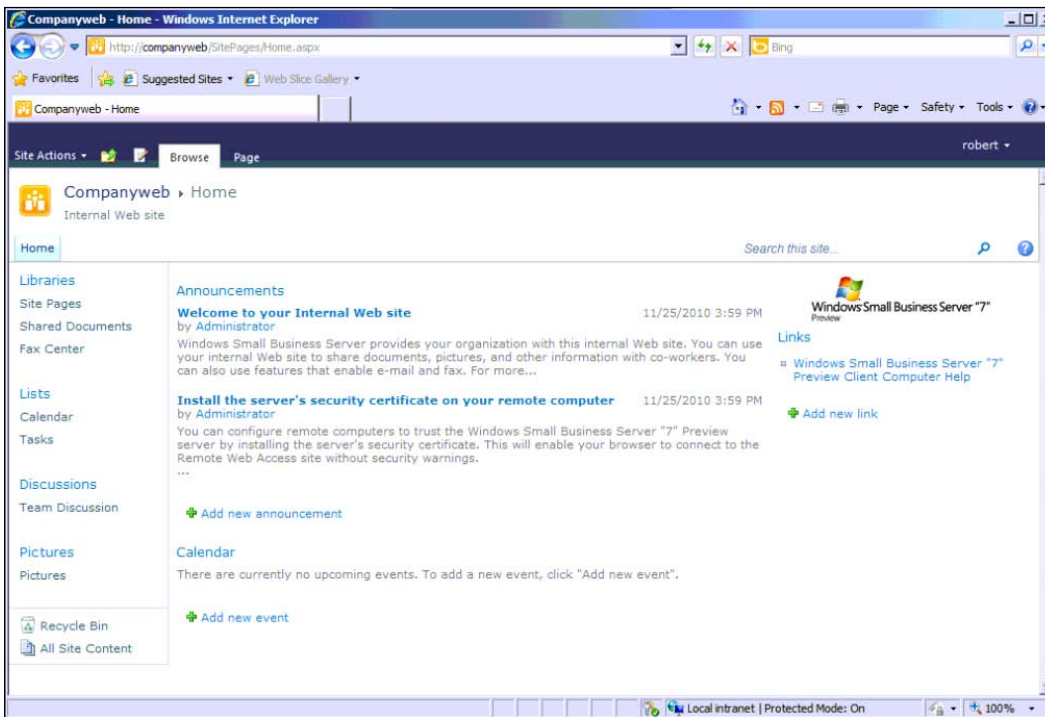
Click on the **User Accounts** tab, and select the user accounts you wish to have their folders redirected to the server, and then click **OK**.

The users must log off and log back on to apply the folder redirection setting to their computers.

## Configuring Microsoft SharePoint

Windows SBS 2011 comes integrated with SharePoint Foundation 2010. SharePoint is a tool that provides a wide range of features around collaboration, document management, as well as direct integration to Microsoft Office desktop applications.

The main method of accessing SharePoint on Windows SBS 2011 Standard is via a web browser and the URL `http://companyweb`. You can use any of the current browsers but you will achieve the greatest amount of functionality if you use Internet Explorer.



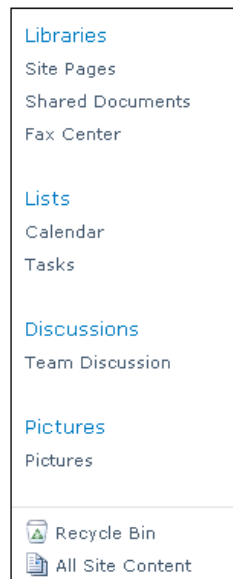
SharePoint Foundation 2010 on Windows SBS 2011 Standard is configured to use the SQL Server 2008 R2 Express database server that comes installed with Windows SBS 2011 Standard. The most important point that administrators need to be aware of is that this version of SQL Server is limited to a maximum database size of 10 GB. Thus, if the data you expect to enter into SharePoint is going to exceed this, then you should consider using a full version of SQL Server for your data storage needs. A full version of SQL Server Standard is available with the Windows SBS 2011 Premium Add-On pack.

It is also important to understand that SharePoint is a web application and as such uses **Internet Information Service (IIS)** to display web pages. If you look in the IIS manager, you will find that there are at least two SharePoint sites: one for Companyweb and the other for Central Administration. Likewise there are also two application pools, one for each website. All of these IIS components require a service account to operate.

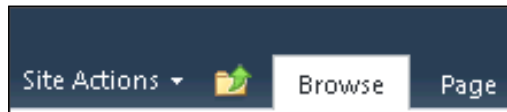
## Overview of SharePoint

When you first access `http://companyweb`, you will see the default site. You should consider this as only the starting point of what can be done with SharePoint.

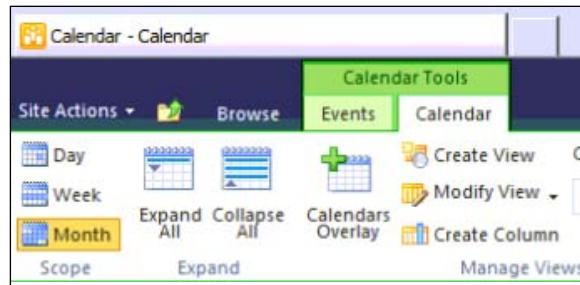
To navigate SharePoint you simply click on any of the hyperlinks on the page. The options down the left-hand side of the page are known as the Quickstart menu, while the area across the top is known as the Top Link Bar.



In the top left of the window, you will see an option called **Site Actions**, which when clicked will show a range of menu options. Next to this is a folder icon that is used to navigate the SharePoint site. Next to this is the edit icon, which will allow you to make changes to the page you are currently viewing. Then there are two tabs **Browse** and **Page**.



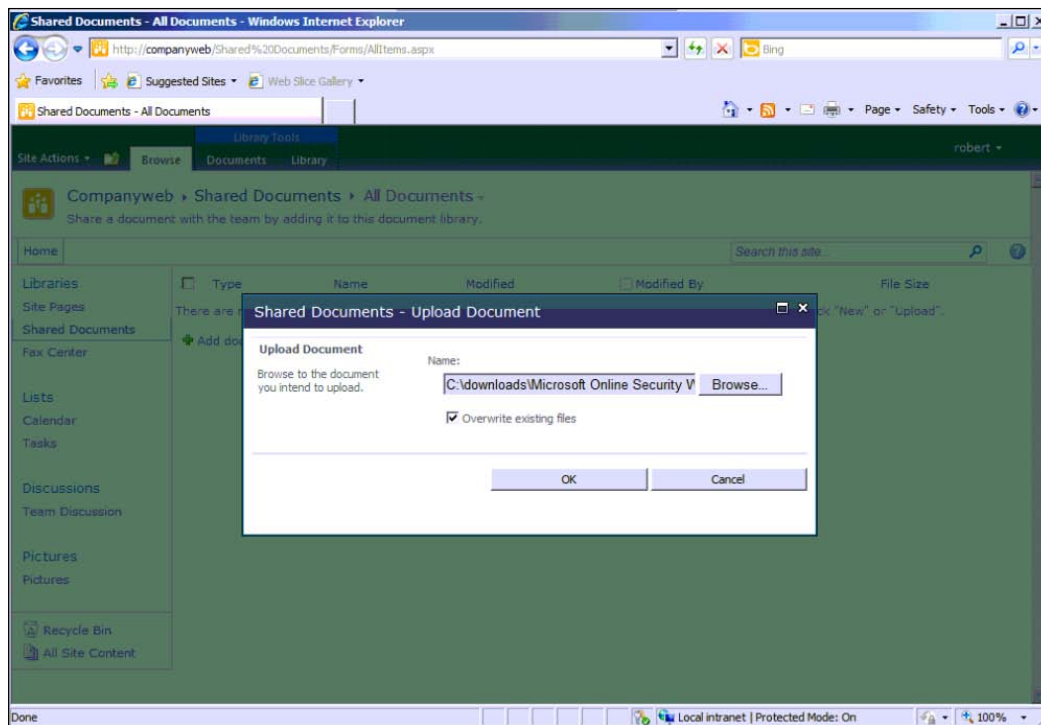
Clicking on the **Page** tab will reveal another important aspect of SharePoint Foundation 2010 – the fluent user interface or more commonly the ribbon interface. This makes the use of SharePoint very much like the most current Office products, which should speed up the network users' adoption of SharePoint.



On the right-hand side of the window you will find the **Search** line as well as the user menu at the top right.

## **Adding and deleting information**

If you click on a link on the Quickstart menu to the left of the window, in this case **Shared Documents**, you will be taken to that element in SharePoint. Once here you can easily add the required information. Since we are in the **Shared Documents** area, we can click the link to upload a document where we should then be prompted to navigate to a document on our local machine to copy into the SharePoint document library. Simply locate a document to be uploaded and click the **OK** button:



Once you have done this, a copy of the file will appear in the document library. If the document is a document type that is recognized by SharePoint, an icon will appear next to that document.

To now view that document, simply click on the document's name and it will open in the application native to that document. For example, if you uploaded a .docx document, then clicking on the name will open that document in Word. If you now edit that document and save it, the updated file will be saved directly into SharePoint.

If you highlight the row that contains the document, you should see the Document tab get selected and the ribbon interface being displayed. One of the options displayed is to **Delete** the document. By clicking this button, you will delete the document from the library and move it to the **Recycle Bin**.

SharePoint has a number of elements in which you can store different types of information from documents to lists, to tasks, calendars, and contacts.

## Other SharePoint components

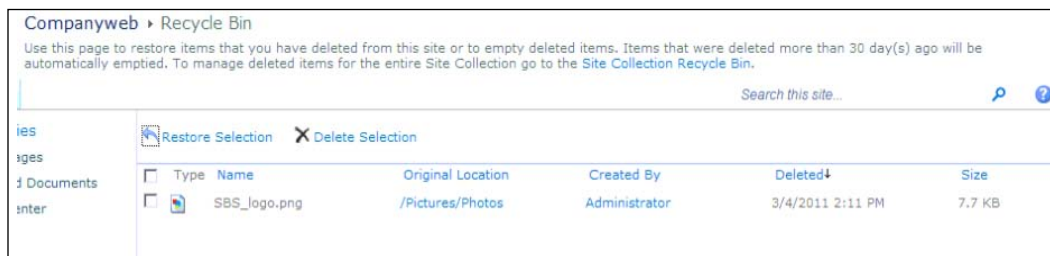
Apart from the previously mentioned Document Libraries, SharePoint also has a number of standard components including:

- **Announcements:** These are items that are displayed on the front page of Companyweb and can be set to expire so that they no longer appear after a certain date. You will see that there are already two SBS-specific announcements that appear.
- **Picture libraries:** These are very much like document libraries, but as the name suggests are designed specifically to hold images. In many ways they are a special version of Document Libraries with the major difference being the ability to view the images either as thumbnails or films strips.
- **Calendar:** You can create as many different calendars as you need in SharePoint. You can also overlay them in the web interface as well as link them directly to Outlook. If you have Outlook 2007 or better, there is a two-way sync between SharePoint and Outlook calendar items.
- **Tasks:** Provides the ability to create and easily monitor tasks for a team. Once again this component supports the ability to directly link to Outlook.
- **Team Discussion:** This component allows you to have threaded conversations much like you would in e-mails.

There is also one component that is unique to SharePoint on Windows SBS 2011 Standard and that is the Fax Library document library. This is the location where you can configure inbound faxes to appear using the SBS wizards.

Another important part of SharePoint is the **Recycle Bin** that appears at the lower left of the screen, under the Quickstart menu. Much like the recycle bin on a Windows PC desktop, elements that a user deletes are sent to the **Recycle Bin**. This allows them to easily restore items without the need of an administrator.

To recover a file from the **Recycle Bin**, all the user needs to do is select that file and click the **Restore Selection** option from the menu:



It is important to remember that not all items are sent to the **Recycle Bin** if they are deleted. By default, subsites, for example, are not sent to the **Recycle Bin** but recent Services Packs to SharePoint overcome this limitation.

A user can also elect to delete the files in their **Recycle Bin** at which point they are then sent to a Site Collection recycle bin that an administrator can access from the **Site Actions** and **Site Settings** menu options. No matter how the files are deleted they remain by default for 30 days before they are purged from the system.

## Creating and modifying SharePoint sites

The great thing about SharePoint is that it can be easily customized directly from the web page. For example, if you want to create a new Document Library you can do so from the Site Actions menu in the top left of the window.

Once **Site Actions** is selected, you should see an option **New Document Library**. Selecting this will now prompt you for information about the new document library. Once complete, click the **Create** button and you will have a new storage location for files.

You can repeat this process and create as many new elements as you desire from the **Site Actions** menu. You will find all the available options under the **More Options** item in the menu.

## Assigning user permissions

Much like a file system, SharePoint uses permissions to control what information users have access to. The great thing about SharePoint is that it is "security-trimmed". This means that if a user doesn't have rights to something in SharePoint they can't even see it when they visit the site.

By default SharePoint has the following access rights:

- Read: Can view pages and list items and download documents
- Contribute: Can view, add, update, and delete list items and documents
- Design: Can view, add, update, delete, approve, and customize
- Full control: Has full control

It is important to note that by default all domain users in Windows SBS 2011 Standard are automatically assigned the Contribute right via the group Active Directory security group `Windows SBS SharePoint_Membersgroup`. All members of this Active Directory group are automatically placed in a SharePoint group called `CompanyWeb Members` and assigned Contribute access in SharePoint.

In Active Directory you will also find the additional two SharePoint groups: Windows SBS SharePoint\_Visitorsgroup and Windows SBS SharePoint\_Ownersgroup. Any Windows SBS 2011 Standard user who has been configured as an Administrator will automatically be added to Windows SBS SharePoint\_Ownersgroup that is automatically placed in the SharePoint group called CompanyWeb Owners and assigned Full Control in SharePoint.

Access rights in SharePoint are always inherited from their parent by default. This means that any new element you create will automatically inherit the rights from the location where you created it. By default, all network users have contribute rights and administrators have full rights.

If you don't wish to have permissions inherited, then you need to stop inheriting permissions which you can do via the **Permissions** button on the ribbon interface for that element. Simply select the button **Stop Inheriting Permissions** to break the inheritance. When you break the inheritance, the existing inherited right will be copied but you are now able to configure the rights you require for this element to make them unique.

Not only are you able to assign rights to elements such as document libraries, calendars, and contacts but in many cases you can also assign rights down to an individual element. To do this, simply display the **Options** menu for that item and select the **Manage Permissions** option. The interface is identical to the one for all the other elements previously mentioned.

## **New team sites**

Apart from new elements like document libraries, calendars, and contacts you can also create new sites under the existing team site. You do this via the **Site Actions** menu in the top left of the window. Selecting a **New Site** from the drop menu presents you with a list of available templates you can use to create your subsite with. Select the one you desire, and then give the subsite a title and URL name. You can elect to view the **More Options** button to display some additional configuration options including whether the securities for this subsite will automatically inherit those from the parent and how the subsite is to be displayed on the menus.

Once you have made your selections and clicked on the **Create** button, the new subsite will be provisioned and your browser will then display the subsite automatically. If you have selected the Team Site template, you will notice that it is almost identical to the original top-level site created during the Windows SBS 2011 Standard installation.



You should consider a subsite as a way to not only collect information, but also as a security boundary. For example, you could create a subsite specifically for the Accounts staff. In this case you would choose not to automatically inherit the rights from the parent and instead assign them individually to the subsite once it has been created. It is good practice to create a unique Active Directory group for specific SharePoint users and then only assign this group the appropriate rights for the area in SharePoint. Doing so means that you only need to assign rights to SharePoint once, as well as being able to integrate this Active Directory group directly into any Windows SBS 2011 Standard user template you create.

## Blog sites

Another new feature of SharePoint Foundation 2010 is the ability to host blog sites. You create a blog site just like any other subsite on your Company website but in this case, select the Blog template during the creation process.

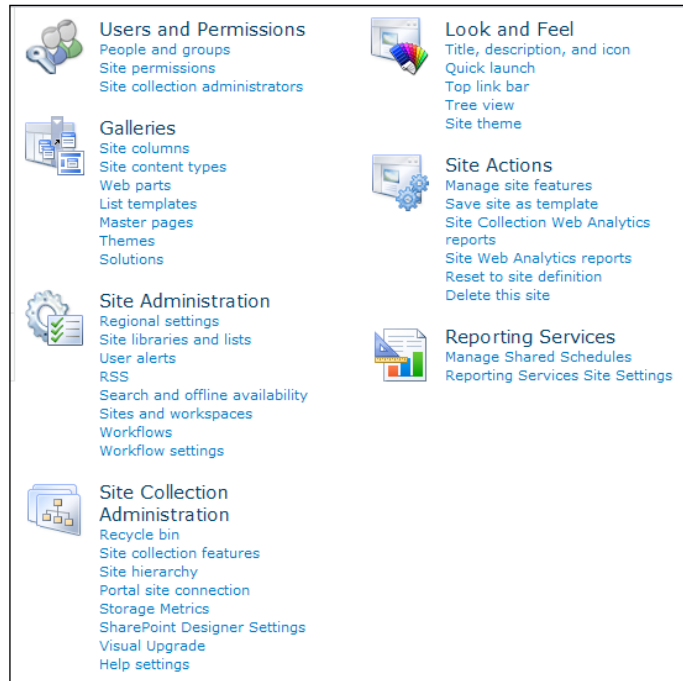
A blog is a fantastic way for users to share information with a team of people and have a conversation around a topic through postings and comments. You can use the e-mail alerting feature of SharePoint to allow users to be automatically notified when updates to a blog have been made. In fact, alerts can be used just about anywhere in SharePoint and can quickly be configured via the Alert Me button on the ribbon bar when the user is at the desired element.

## Site Settings

As an administrator you will have access to the Site Settings area of Companyweb. This is the location where you can control a number of important components of the site. To access the Site Settings area, simply select that option from the **Site Actions** menu in the top left of the window.

In **Site Settings** you will find a number of items categorized by heading. In the top left, you will see **Users and Permissions** that allow you to control the security of the site. Below that are the **Galleries** options where global content for the site is stored including things like **Site Columns**. Below this are the **Site Administration** options including the option to set the **Regional Settings** for the site as well as display items on the site including lists and libraries.

Below this are the **Site Collection Administration** options including those for the **Recycle bin**.

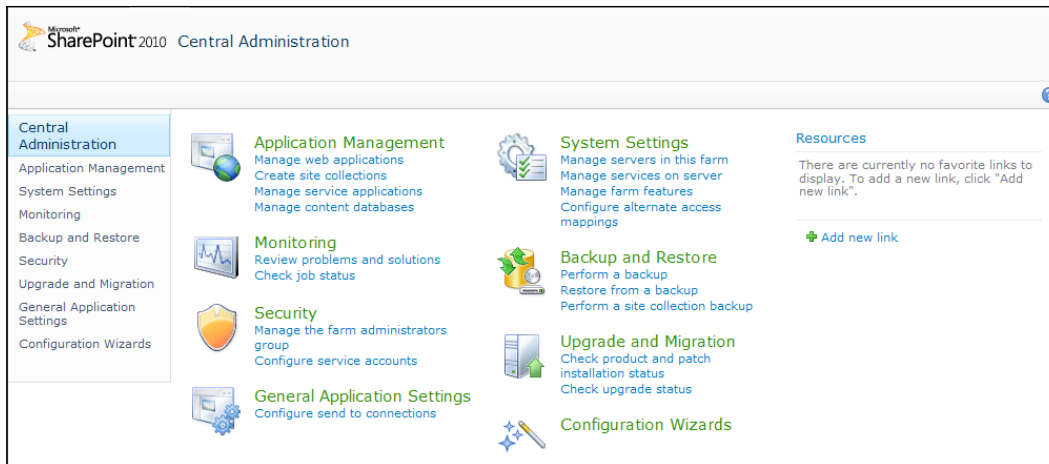


To the right is the area for **Look and Feel** which also has options for the navigation of the site. Below this are the **Site Actions** including the ability to view site reports. Finally, there are the options for the **Reporting Services**.

Thanks to the integrated setup of Windows SBS 2011 Standard most of these options will already have been set. The only one that you will most likely need to modify is the **Regional Settings** options under **Site Administration**.

## Central Administration

There is an administration level higher than **Site Settings** and this is known as SharePoint Central Administration. You can access this from **Start Menu | All Programs** under the **SharePoint Technologies** group. Central Administration is a separate area that allows you to configure settings for the whole of the SharePoint installation on Windows SBS 2011 Standard. Once again, all these options should already be set up and configured so there is no need to change any options here but it is worthwhile taking a quick look around to familiarize yourself with what is there.



Some of the important defaults in SharePoint 2010 that can be altered if required include:

- The default document upload size which is 50 MB.
- A number of blocked upload file extensions such as .exe, .com, and so on.
- How SharePoint handles the display of files within browsers. By default, this is set to strict which can prevent files like PDFs from being displayed in a browser.

## Moving the SharePoint databases

As noted previously, you can use the Windows SBS 2011 Standard wizards to relocate the SharePoint content databases to a drive other than the default C: drive. This is very important, especially as the SharePoint content databases can grow quite dramatically.

## PowerShell console

As with most Microsoft technologies SharePoint can also be managed and configured using PowerShell. You can access the **SharePoint 2010 Management Shell** console via the **Start Menu | All Programs | SharePoint technologies** menu options.

When you open the **SharePoint 2010 Management Shell**, you will be greeted with what appears to be a command prompt, but on closer inspection you will see that it actually has PS before each line (indicating that it is a PowerShell console).

At this prompt you can now type PowerShell commands as required to manage or configure SharePoint Foundation 2010. Details of these commands are beyond the scope of this book but are readily available on many Internet sites and blogs.

## Going further

SharePoint is one aspect of Windows SBS 2011 Standard that can really be expanded into a solution that solves a customer's business need. It can be developed and integrated to such a level that includes things such as complex workflows as well as direct integration with Microsoft Office products such as Outlook.

The configuration and development of these options is beyond the scope of this book but you are strongly encouraged to spend some more time learning about the potential of SharePoint and how it can deliver powerful solutions to customers.

## Test your knowledge

1. You have active file screening enabled on all volumes. The Windows SBS 2011 Standard is running low on disk space on the volume that contains user data. How can you quickly work out what can be removed to free up space?
  - a. In the Windows SBS 2011 console, create a Detailed Network Report.
  - b. In the Windows SBS 2011 console, create a Summary Network Report.
  - c. In the File Server Resource Manager, generate Large Files and Duplicate Files reports.
  - d. In the File Server Resource Manager, generate Quota Usage and File Screening Audit report.
  
2. Your company has two domains. You need to receive e-mail from both domains. You wish to add a second e-mail address to all mailboxes. Which two of the following should you perform?
  - a. Add the domain to the default Receive Connector in Server Configuration in Hub Transport.
  - b. Add a new Receive Connector in the Server Configuration Hub Transport.
  - c. Add a new Accepted Domain in the Organization Hub Transport.
  - d. Add the second domain to the Email Address Policy in the Organization Configuration Hub Transport.

3. What is the total size that SharePoint databases can generally grow to in a default installation of Windows SBS 2011 Standard?
  - a. 5 GB.
  - b. 10 GB.
  - c. 20 GB.
  - d. Unlimited.
  
4. To allow all network users to read and write to a network shared folder what do you need to configure? (Select two).
  - a. FSRM rights.
  - b. SMB rights.
  - c. NTFS rights.
  - d. Assign quota and file screening to network share.

## Summary

Information sharing is at the heart of any networked system today and Windows SBS 2011 Standard is no different. In fact, it provides users with some very important tools. These tools rely heavily on the correct configuration of software on the server. This chapter has taken you through this configuration as well as shown you what is required to maintain and in some cases expand what is already available.

A very important part of any Windows SBS 2011 Standard certification exam will directly test your knowledge on these areas simply because they are so important to a business. When users can no longer share information, you need to be able to troubleshoot and provide answers quickly.

We now need to shift our focus to configuring and enabling user access to this information through their logins and desktops. This will be the content of our next chapter.



# 4

## Managing Users, Computers, and Printers

The majority of time administrating a network is spent managing users. Users not only need access to a Windows Small Business Server (SBS) 2011 network but they all need access to its resources. The key to good network administration is doing this in the most effective manner. Any certification examination is going to test not only an understanding of user administration, but also the best way to go about this.

Probably the most important part of a network will be the users. They need access to the resources on the server as well as the services that it provides. To do this securely they are firstly going to need a network login ID that identifies them to the domain. They will typically use this login ID at a workstation connected to the domain.

This chapter will cover the creation of user and group accounts as well as the management of shared resources such as computers and printers.

In this chapter, we shall look at:

- Creating and managing user accounts
- Creating and managing user roles
- Creating and managing groups
- Joining computers to the domain
- Creating and configuring shared devices
- Test your knowledge

## **Creating and managing user accounts**

A user account or object in a Windows Server domain is a security mechanism that allows a person to access the resources of the network by "logging in" to the network. Doing so with the correct credentials automatically provides the user with the configured rights to network resources such as files, folders, printers, and so on.

Most importantly, Windows SBS 2011 Standard is just like any Windows Server in that it leverages the power of Active Directory to manage and maintain these user objects. The major difference that Windows SBS 2011 Standard brings with it is that the majority of these tasks can be accomplished via wizards. Using the wizards not only reduces the time taken to administer a Windows SBS 2011 Standard network, but it also always produces a consistent result. For these reasons alone every Windows SBS 2011 Standard administrator should always use the wizards when administrating their network, especially when working with user accounts.

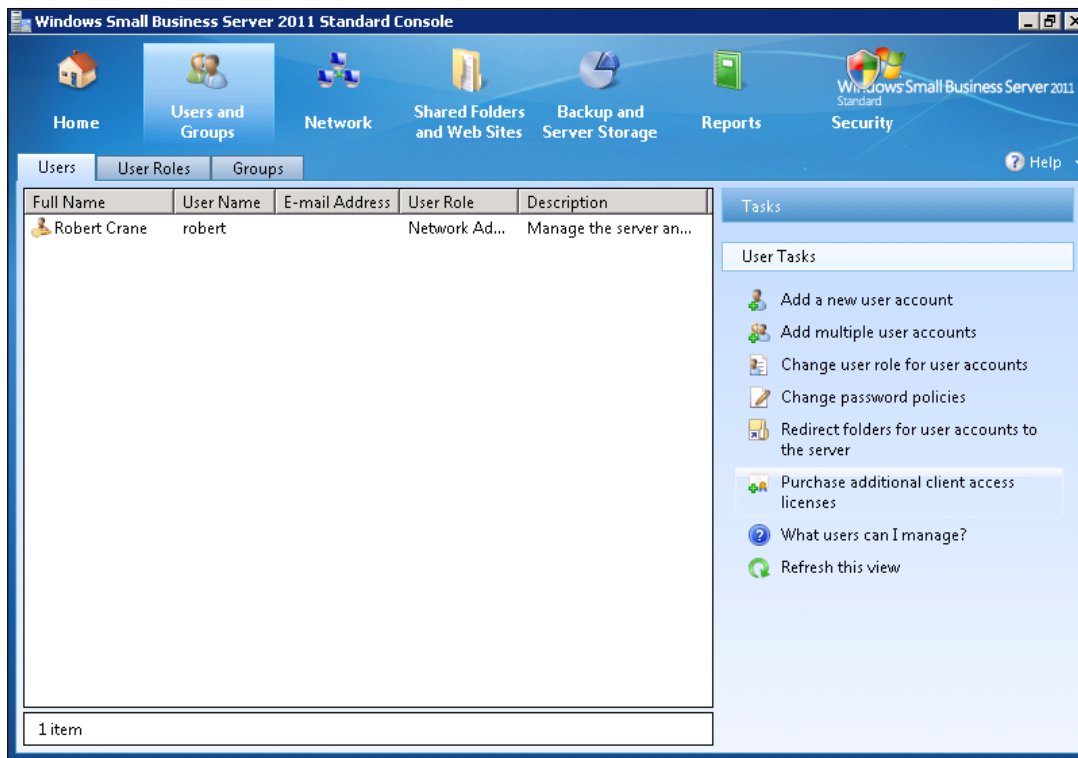
## **Creating, editing, and deleting user accounts**

It is important that you always use the Windows SBS 2011 Standard Console and wizards when you create, edit, or delete any users. The main reason is that the wizards do a number of things behind the scenes to ensure everything works correctly on the Windows SBS 2011 Standard system. Creating users manually via native Active Directory tools may result in features not being enabled. The wizards are there to do all the hard work and create the accounts for you in Active Directory; so don't fear they are doing something different, they aren't. They are there to make an administrators' life easier, so use them every time. This cannot be stressed strongly enough.

To create a new user:

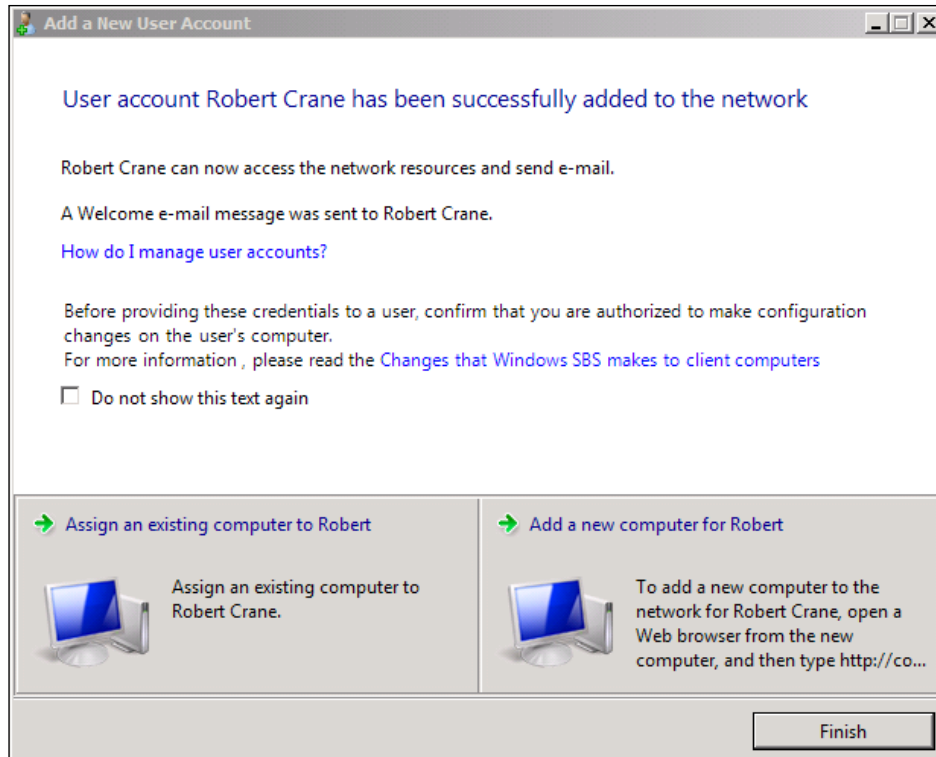
1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Users** tab:





4. You should now see a list of any existing users and you should also see the option **Add a new user account** link under the **Tasks** section to the right. Click this option to create a new user.
5. The **Add a New User Account** wizard now runs. Enter the details for the user. Also select the role for that user from the drop-down list. When complete, click the **Next** button to continue.
6. At the next screen you will be prompted to enter the user's password. It is important to note that you cannot progress past this screen until you have entered a password that conforms to both length and complexity requirements. These requirements can be modified in the system if required. Once you have entered a suitable password, the **Add user account** button will be available. Click this to continue.

7. The wizard will now run and create a network account for the user, create a home folder for that user, an e-mail account, set appropriate quotas, and send a Welcome e-mail to the user's inbox. When complete, click the **Finish** button:



You should now see the user you created appear in the list of Users.

To edit an existing user account, simply:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Users** tab.
4. Select the user you wish to edit from the list of users that is displayed.
5. From the **Tasks** list on the right, select **Edit user account properties**.

- You should now see all the properties of the user displayed in a window, as shown in the next screenshot. Simply select the desired section from the left and make any changes to the properties on the right. Click the **OK** button to save the changes and return to the Windows SBS 2011 Standard console:

The screenshot shows the 'Robert Crane Properties' dialog box. The 'General' tab is active, displaying the following information:

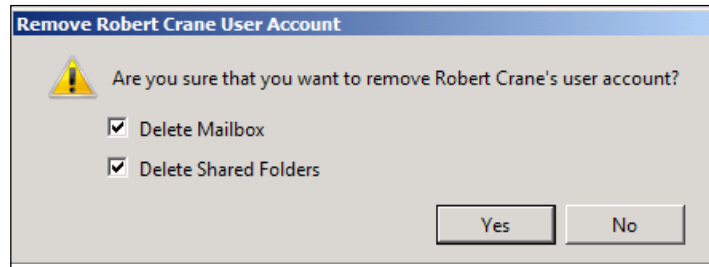
- General information**
- First name: Robert
- Last name: Crane
- User name: robert
- E-mail address: robert
- Description: (empty field)
- Phone number: 0409010950

Buttons at the bottom of the dialog include 'OK', 'Cancel', and 'Apply'. Within the 'General information' section, there are also 'Disable account' and 'Reset password' buttons.

To delete an existing user account:

- Run the Windows SBS 2011 Standard Console.
- Select the **Users and Groups** icon.
- Select the **Users** tab.
- Select the user you wish to delete from the list of users that is displayed.
- On the right-hand side, under the **Tasks** pane select **Remove user account**.

6. You'll be prompted to confirm that you wish to delete the selected account. By default doing so will also remove that user's mailbox and shared folder. If you don't desire this, simply uncheck these options before clicking the **Yes** button to proceed:

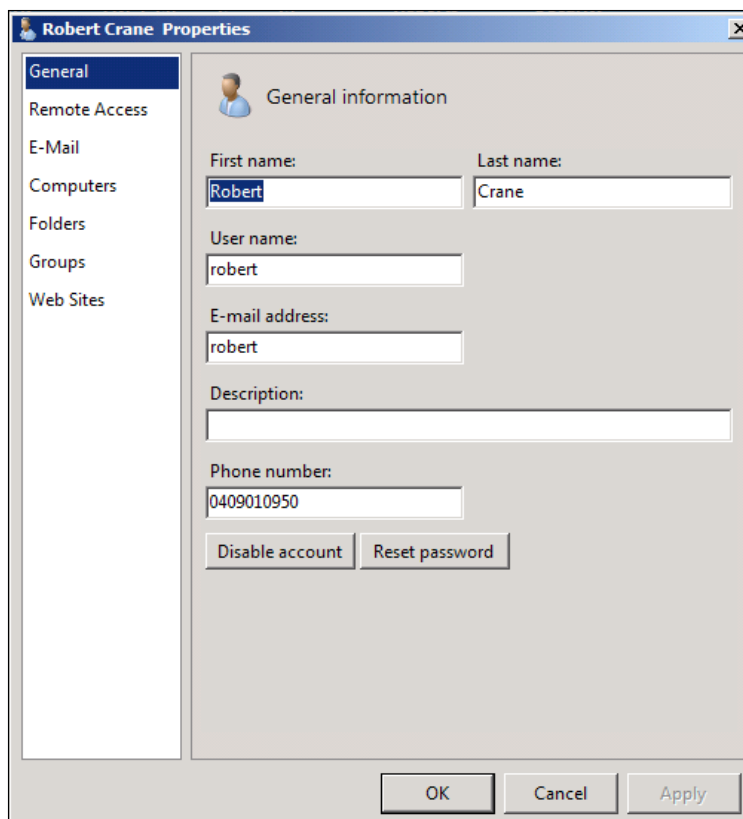


7. The selected account will then be removed from the system and you should receive a confirmation that the process completed successfully. When this is displayed simply click the **OK** button. This will take you to the Windows SBS 2011 Standard Console and you should notice that the selected user no longer appears in the list.

## Assigning permissions to users

To assign permissions to an existing user account you will need to edit that account. To do this:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Users** tab.
4. Select the user you wish to edit from the list of users that is displayed.
5. From the **Tasks** list on the right, select **Edit user account properties**.
6. You should now see all the properties of the user displayed in a window, as shown in the following screenshot. Simply select the desired section from the left and make any changes to the properties on the right:

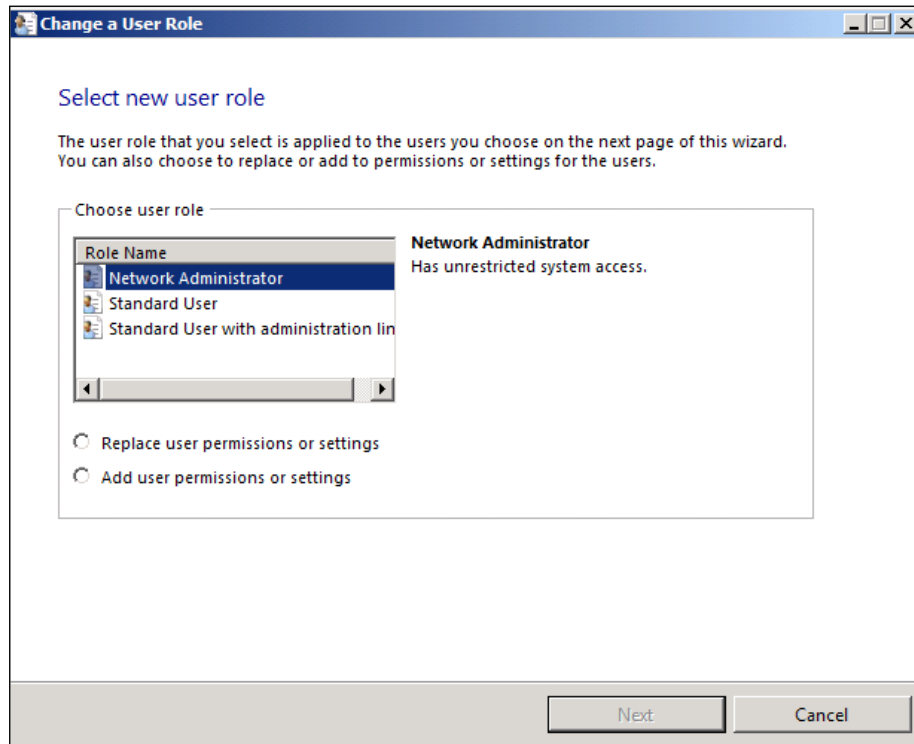


7. For example, if you wish to change the user's rights to the files on the server, this would normally be done via the **Groups** option. If you select the **Groups** option, you will be shown a list of groups that the user belongs to. You can select an existing group and remove it or you can add a group. Adding a user to a group will automatically provide them access to whatever the group has access to.
8. Click the **OK** button to save the changes and return to the Windows SBS 2011 Standard console.

You can also change the user's permissions by changing their role on the network. In this way, you can promote or demote a user to the same level as any pre-configured user role. To make this change:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Users** tab.

4. Select the user you wish to edit from the list of users that is displayed.
5. From the **Tasks** list on the right, select **Change user role for user accounts**.
6. The wizard will then prompt you to select which role you wish that user to assume, as previously shown. You can also elect to **Replace user permissions or settings** or **Add user permissions or settings**:



7. You will then be asked to select one or more users from a list of users whose role you wish to change. Once the selection process is complete click the Change user role button.
8. The wizard will now run and when complete you will be provided with a status window as to the success of the process. Click the **Finish** button to complete the process.

The user will now have either the same permissions as the role you selected, or the merged permission of the user role and the existing rights, depending on what option you selected during the process.

## Assigning users to computers

Users created in the Windows SBS 2011 Standard console are automatically given rights to client machines that are configured using the Windows SBS 2011 Standard wizards. It is however possible to control what level of access these users have on those machines and whether they also have remote access rights enabled.

There are two ways to configure these rights, both through the Windows SBS 2011 Standard Console. The first is via Computer and the second via Users and Groups.

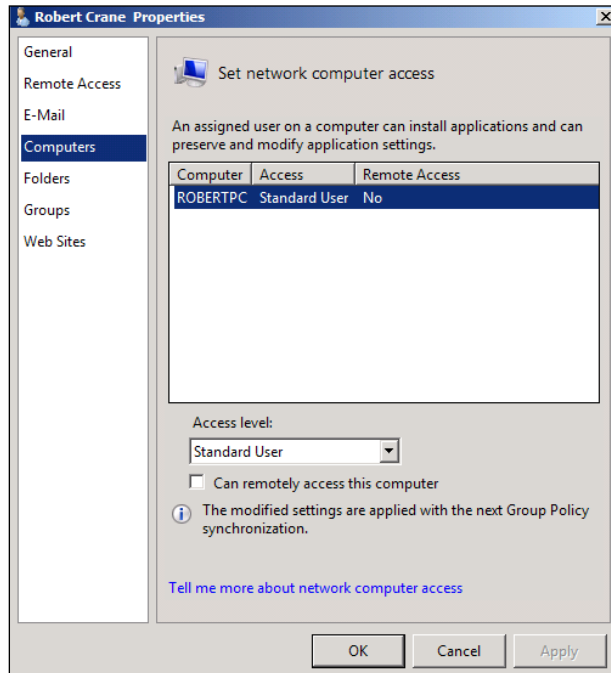
To control the access of users to client computers via the Computer option:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Network** icon.
3. Select the **Computers** tab.
4. Select the Computer you wish to edit from the list under the **Client Computers** heading in the lower half of the screen.
5. From the **Tasks** list on the right, select **View computer properties**.
6. Select the **User Access** option from the menu on the left.
7. You should then see a list of network users. You can add or delete any existing users and you can select a user and change their Access level for this computer from the option at the bottom of the screen. You can select from **Standard User** or **Local Administrator**.
8. You will also notice here that you have the option to allow the user to **Remotely access this computer**. Simply select the option to enable this if desired.
9. Click the **OK** button to save any changes made.

To control the access of users to client computers via the Users and Groups option:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Users** tab.
4. Select the user you wish to edit from the list of users that is displayed.
5. From the **Tasks** list on the right, select **Edit user account properties**.
6. Select the **Computer** option from the menu on the left-hand side.
7. Again you can't add or delete any network computers but you can select one and change the Access level that user has from the option at the bottom of the screen. You may select from **Standard User** or **Local Administrator**.

8. You will also notice here that you have the option to allow the user to **Remotely access this computer**. Simply select this option to enable this if desired.



9. Click the **OK** button to save any changes made.

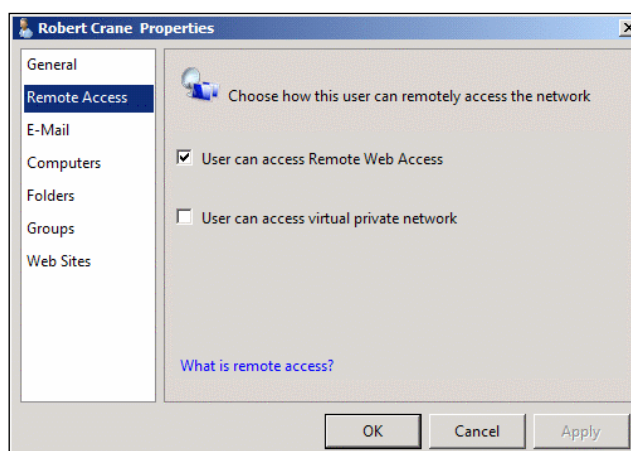
## Configuring user RWA access using Windows SBS console

The ability to remotely access the Windows SBS 2011 Standard server and networked workstations is provided via Remote Web Access (RWA) and is easily controlled via the SBS Console. There are two ways of doing this from the console, either individually for each user or for a group of users.



To make changes to the access rights of an individual user:

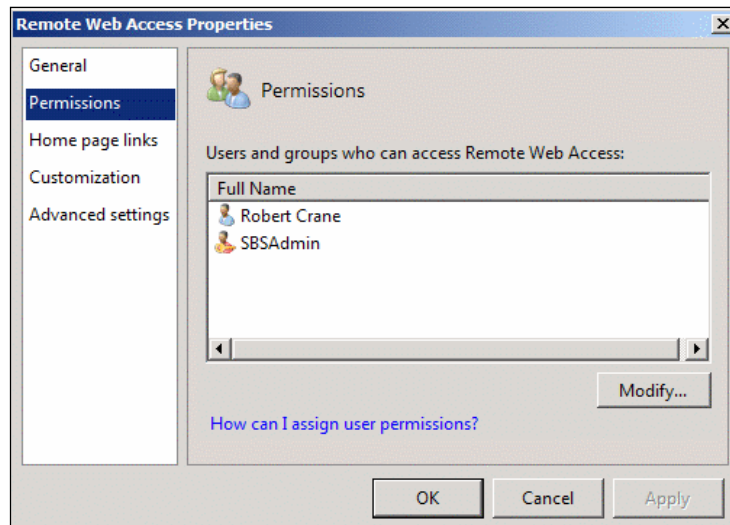
1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Users** tab.
4. Select the user you wish to delete from the list of users that is displayed.
5. From the **Tasks** list on the right, select **Edit user account properties**.
6. You should now see all the properties of the user displayed in a window. Select the **Remote Access** option from the left, as shown in the following screenshot, and then check the option **User can access Remote Web Access** on the right. Click the **OK** button to save the changes and return to the Windows SBS 2011 Standard console:



To make changes to the access rights of a group of users:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Shared Folders and Websites** icon.
3. Select the **Web Sites** tab.
4. Select the **Remote Web Access** item from the list.
5. Select **Manage Permissions** from the **Task** list on the right.

6. You should now see all the properties of the **Remote Web Access** displayed in a window. Select the **Permissions** option from the left, as shown in the following screenshot, and then select the **Modify** button to make any changes. This will display a standard list of users and groups that you can either add or remove from the group access list. Click the **OK** button to save the changes and return to the **Remote Web Access Properties** page. Click **OK** again to close and save changes:



## Properties and native tools

As Windows SBS 2011 Standard is built using Windows Server 2008 R2, it still has available all the native tools any Windows Server has to work with. You can still access these tools directly from the Start Menu if required. However, as mentioned previously, Windows SBS 2011 Standard provides a number of wizards to not only simplify the tasks of administration, but also to systemize the way that objects are used on the server. It is for these and other reasons that the Windows SBS 2011 Standard wizards should be used in all circumstances. It is also important to remember that the native Windows Server tools can also be used if the functionality is not covered by the standard wizards.

You will find most of the native Windows Server tools under the Administrative tools section which you can access from the server via the Start menu. From there you will see the standard list of native Windows Server tools including things such as Active Directory Users and Computers, Active Directory Sites and Services, Active Directory Domains and Trusts, and so on. These are all available to administrators to use but should be used with caution as the results of using these tools generally don't

flow back to the Windows SBS 2011 Standard console. This may mean that changes made using the native tools are not displayed in the Windows SBS 2011 Standard Console, making future management more difficult.

If however, you have a need to add a user to additional security groups, such as Account Operator Group, you will need to use the native tool Active Directory Users and computers.

## Creating and managing user roles

In Windows SBS 2011 Standard, when users are created, they use a standard template that contains certain rights, group memberships, and default settings. You use roles to control these settings. There are three default template user roles. They are, Standard User, Network Administrator, and Standard User with administration links. If these roles do not meet your needs, or you simply wish to refine the setting your users receive, then you can create and apply your own user roles and apply them to users or groups of users.

## Changing user roles

Once a user is already created on your Windows SBS 2011 Standard server and you decide to change the role of that user account, then this can be achieved in the Windows SBS 2011 Standard Console.

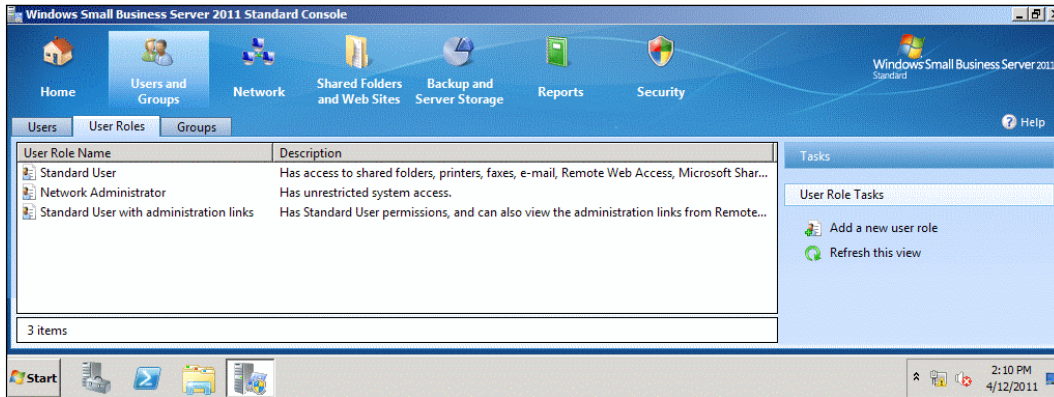
To change an existing user role:

1. Open the Windows SBS 2011 Standard Console.
2. Click on the **Users and Group** tab, and then click **Users**.
3. Click on the user you wish to change the role for and then in **User Tasks**, click **Change user role for user accounts**. The **Change a User Role wizard** will start.
4. On the **Select new user role** page, select the user role you wish for your user account. You must also choose whether to replace the current user's settings with the new roles settings, or to keep the current settings and add the new settings to the user. Click **Next**.
5. On the **Select user account** page, select the user accounts you wish to apply the changes to, click **Add**, and then click **Change user role**.
6. Click **Finish**.

If however, the settings you wish to apply to your users are not as per the three default roles, you can create your own role. Note that you can also modify any existing roles; however, it is not recommended that you change the three default roles.

To create a user role:

1. Open the Windows SBS 2011 Standard Console.
2. Click on the **Users and Group** tab, and then click **User Roles**:



3. Click **Add a new user role** under **Tasks**.
4. Enter a name and description of the new user role. You may also choose an existing role to base your new user role, or else start with a blank role.
5. Select either or both of the last two check boxes if you wish to apply them. They are:
  - **The user role appears as an option in the Add New User Account Wizard and in the Add Multiple New User Accounts Wizard.**
  - **The user role is the default in the Add New User Account Wizard and in the Add Multiple New User Accounts Wizard.**

The screenshot shows a dialog box titled "Add a New User Role". The main heading is "Specify a name and description for the new user role". Inside the dialog, there is a section titled "User role name and description" containing two text input fields: "User role name" and "Description". Below these fields is a checked checkbox labeled "Base defaults on an existing user role" and a dropdown menu currently showing "Standard User". At the bottom of the dialog, there are two checkboxes: the first is checked and reads "The user role appears as an option in the Add New User Account Wizard and in the Add Multiple New User Accounts Wizard"; the second is unchecked and reads "The user role is the default in the Add New User Account Wizard and in the Add Multiple New User Accounts Wizard". "Next" and "Cancel" buttons are located at the bottom right.

## Assigning users to a role

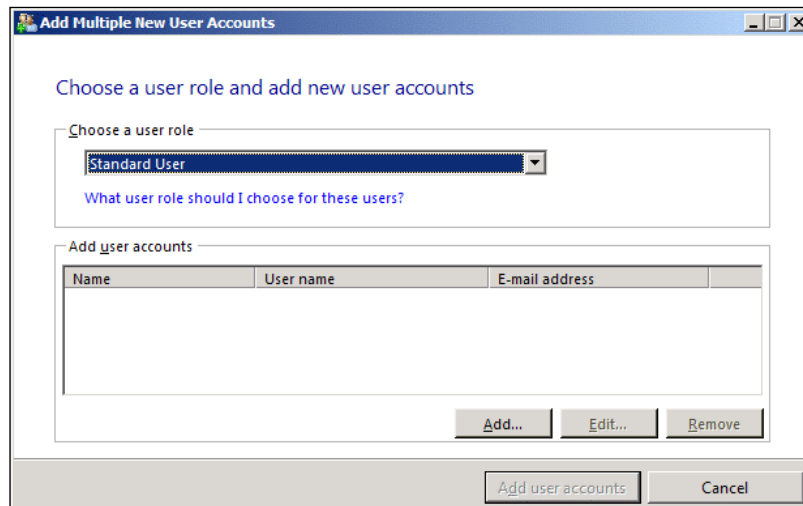
When you create a new user using the Windows SBS 2011 Standard Console **Add a New User Account** wizard, on the first page of the wizard you have to **Choose a user role**:

The screenshot shows a dialog box titled "Add a New User Account". The main heading is "Add a new user account and assign a user role". On the left side, there is a small icon of a person with a green plus sign. To the right of the icon are several input fields: "First name" and "Last name" (two separate text boxes), "User name" (a dropdown menu), "E-mail address" (a text box), "Description" (a text box), and "Phone number" (a text box). Below these fields is a section titled "Choose a user role" containing a dropdown menu labeled "User role:" with "Standard User" selected. A blue link below the dropdown reads "What user role should I choose for this user?". "Next" and "Cancel" buttons are located at the bottom right.

The choices are the three default roles plus any role you have created.

## Assigning groups to a role

When you have a number of users to add, it can be simpler if you add them all at one time. You create multiple new users using the Windows SBS 2011 Standard Console **Add Multiple New User Accounts** wizard, on the first page of the wizard you have to **Choose a user role**:

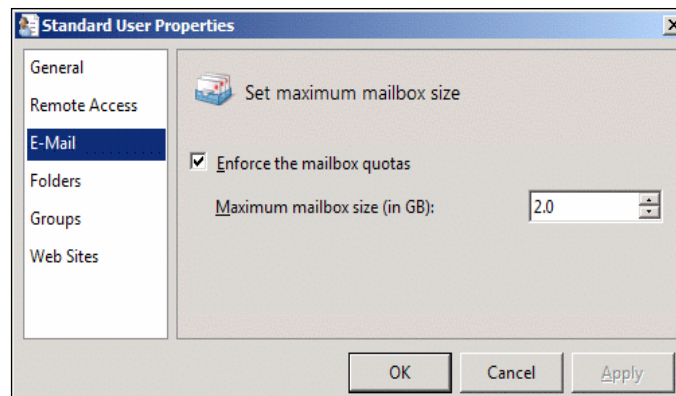


The choices are the three default roles plus any role you have created.

## Assigning quota policy

One of the settings given to users when a role is applied is e-mail quotas. This Exchange quota setting can be changed and applied to all users with this role applied. You may change the quota limit on any role template as follows:

1. Open the Windows SBS 2011 Standard Console.
2. Click on **Users and Group** tab, and then click **Users Roles**.
3. Click **Edit user role** properties.
4. Click on **Email** in the left.
5. Tick **Enforce the mailbox quotas**:



6. Enter a number for **Maximum mailbox size (in GB)**.
7. Click **OK**, and then click **OK** again to complete the changes.

When you change quota limits, it is suggested that you consider the total disk space you have allowed for your Exchange server files and database in order to ensure that you have capacity for all maximum mailbox sizes.

## Creating and managing groups

Many of the users on the network share things in common. Some may need similar access to files on the server, some may need to share the printer, while others may need to receive the same e-mails. Rather than having to work with individual users, Active Directory allows you to create groups and place existing user objects inside these groups. Groups can then be worked with, in many cases just like users, but anything that applies to them automatically applies to every user inside that group.

Best practices in network administration suggest that you should utilize groups instead of individual network users. This generally allows the rights and abilities to be assigned to groups once and then users added to and from these groups as required, making administration not only easier but also more consistent.

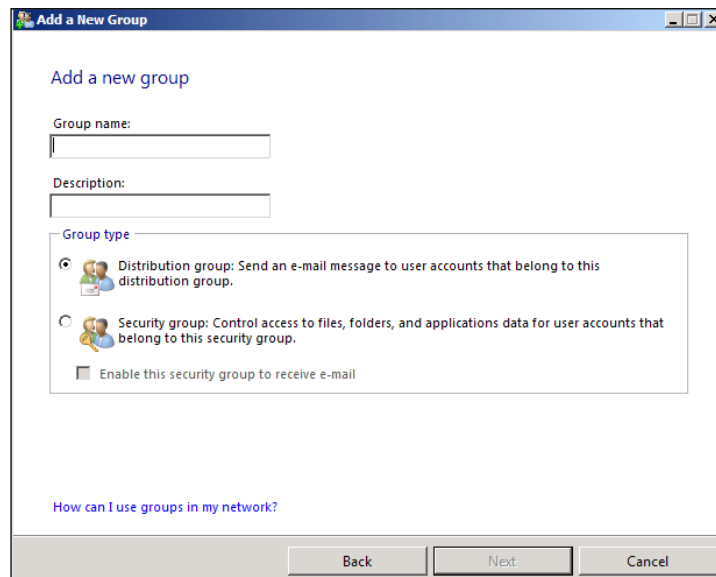
In Windows SBS 2011 Standard, there are two main types of groups that, as an administrator, you need to work with: Distribution and Security groups. It is important to remember that network groups are a feature of Windows Active Directory that is under the covers of Windows SBS 2011 Standard. You can use the native Windows Server tools to work with groups but using the Windows SBS 2011 Standard wizards makes life so much easier.

## Creating a distribution group

A distribution group is used to group users together to whom you wish to send e-mails. In this way you can send a single e-mail to a distribution group e-mail address and have it delivered to all members of that group.

To create a distribution group:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Groups** tab. You should then see a list of all the existing SBS groups of type Distribution and Security.
4. From the **Tasks** list on the right, select **Add a new group**.
5. When the wizard launches, you will see a **Getting Started** screen. You can click the option at the bottom left to prevent this from being displayed again. Click the **Next** button to continue.
6. You now need to enter the **Group name** and **Description**. You then need to select the **Group Type**, either **Distribution** or **Security**. In this case select **Distribution** and click the **Next** button to continue:



7. As a Distribution group you can now elect what the e-mail address of the group is and whether it will receive e-mails. Once you have made the appropriate selections, select the **Next** button to continue.



8. You will now be presented with a list of existing users and groups that you can make members of this new group. Windows Active Directory supports the ability to nest groups, that is, to have groups being members of other groups. To add members to the new group, simply select them from the left and click the **Add** button to move them to the right. When complete click the **Add group** button.
9. The wizard will now add the new group to Active Directory, add the members to that group, and configure the e-mail options you selected. When complete you should see a message that the new group has been successfully created. Click the **Finish** button to complete the process.
10. When you have returned to the Windows SBS 2011 Standard console, you should see the new group appear under the E-Mail Distribution Groups heading.

## Deleting a distribution group

To delete a distribution group:

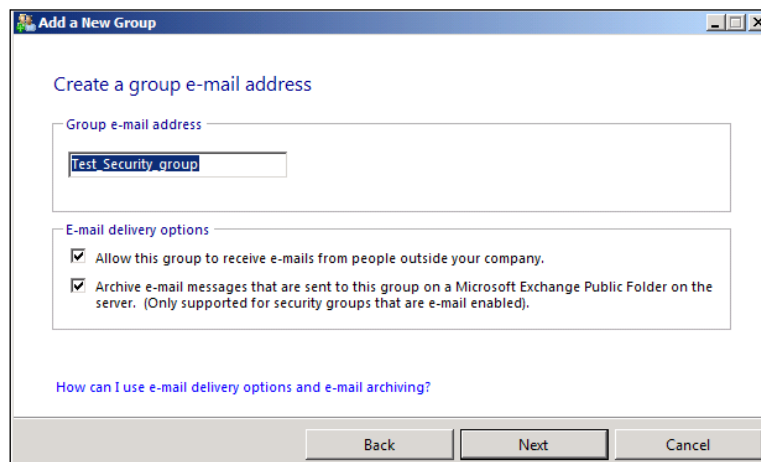
1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Groups** tab. You should then see a list of all the existing SBS groups of type Distribution and Security.
4. From the **Tasks** list on the right, select the **Remove** group.
5. You will be prompted with a message to verify that you wish to delete the group you have selected. If correct, click the **Yes** button.
6. The group will then be deleted and when the SBS Console refreshes, the group selected will no longer be displayed in the list.

## Creating a security group

A security group is used to manage access to network resources. It can be assigned rights to network resources such as files, folders, and printers. Any user who is a member of a security group automatically receives the same rights as the group. This makes it much easier to manage the security of your network because once you have set up your securities based on such groups, all you need to do is add users to the appropriate groups and they will receive the desired access. You can even add security groups to user templates so that when users are created they automatically receive the rights they need greatly reducing the administration overhead.

To create a security group:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Groups** tab. You should then see a list of all the existing Windows SBS 2011 Standard groups of type Distribution and Security.
4. From the **Tasks** list on the right, select **Add a new group**.
5. When the wizard launches you will see a **Getting Started** screen. You can click the option in the bottom left to prevent this from being displayed again. Click the **Next** button to continue.
6. You now need to enter the **Group name and Description**. You then need to select the **Group Type**, either **Distribution** or **Security**. In this case, select **Security**. When you do you will also see the option **Enable this security group to receive e-mail** become available for selection. If required, select this and click the **Next** button to continue.
7. If you have selected the option in the previous screen to enable the group to receive e-mails, you can now elect the e-mail address of the group. You will also be able to select the options as to whether the group can receive e-mails from outside the organization and whether e-mail messages will be archived in a public folder (which is only available for e-mail-enabled security groups). Once you have made the appropriate selections, click the **Next** button to continue:



8. You will now be presented with a list of existing users and groups that you can make members of this new group. Windows Active Directory supports the ability to nest groups, that is, have groups being members of other

groups. To add members to the new group simply select them from the left and click the **Add** button to move them to the right. When complete, click the **Add group** button.

9. The wizard will now add the new group to Active Directory, add the members to that group, and configure the e-mail options you selected. When complete you should see a message that the new group has been successfully created. Click the **Finish** button to complete the process.

When you have returned to the Windows SBS 2011 Standard console, you should see the new group appear under the **Security Groups** heading.

## Deleting a security group

To delete a distribution group:

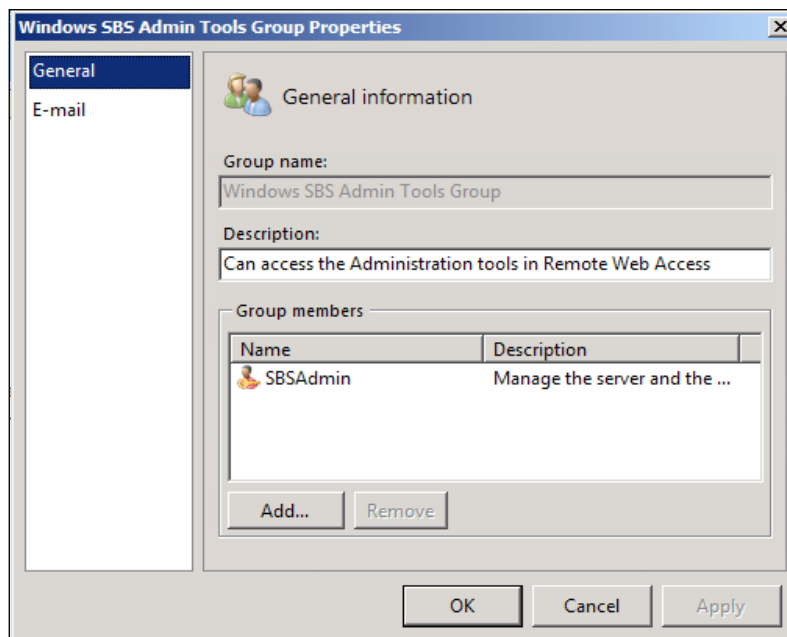
1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Groups** tab. You should then see a list of all the existing Windows SBS 2011 Standard groups of type Distribution and Security.
4. From the **Tasks** list on the right, select **Remove group**.
5. You will be prompted with a message to verify that you wish to delete the group you have selected. If correct click the **Yes** button.
6. The group will then be deleted and when the Windows SBS 2011 Standard Console refreshes, the group selected will no longer be displayed in the list.

## Adding/editing/deleting users to/from a group

Once a group has been created, you can simply edit the membership of this group from the Windows SBS 2011 Standard console. To make changes to an existing group:

1. Run the Windows SBS 2011 Standard Console.
2. Select the **Users and Groups** icon.
3. Select the **Groups** tab. You should then see a list of all the existing SBS groups of type Distribution and Security.
4. Select the group that you wish to work with from the list that appears on the left-hand side of the screen. Then from the right-hand side, under the **Tasks** options select **Edit group properties**.

5. You will now see a window displayed with all the group properties grouped by category down the left-hand side. To make changes to any of the existing properties, simply select the section on the left-hand side and make changes to the individual properties on the right-hand side. These properties will vary depending on the type of group you have selected to edit.
6. In the **General** tab you see a list of the users who are members of the group. To remove users, simply select them and click the **Remove** button that is highlighted when you select users. To include users as members of the group, click the **Add** button and then simply select the desired user from a list and add them to the existing Group members.



7. When you have finished making changes, click the **OK** button to save the changes and update the group properties.

## Mail enabled versus not mail enabled

You can select to mail enable both Distribution and Security groups. Not every group that has the ability to receive mail needs to be configured to do so. Thus, a Distribution or Security group that is configured to receive e-mails is known as a **mail-enabled** group, while one that doesn't is known as **not mail enabled**. Distribution Groups are always mail enabled, as mail distribution is the sole purpose of this group type.

When a group is e-mail enabled it is given an e-mail address during creation of the form `group_name@yourdomain.local` (or whatever e-mail domain you have chosen for your network). This means that when e-mails are sent to this e-mail address, they will automatically be delivered to every member of that group.

Mail enabled groups are a very handy way to reduce the administration of your network. A good example would be creating a mail-enabled Distribution group and then subscribing that e-mail address to corporate newsletters. That way, only members of that Distribution group would receive the newsletters and the management of how users receive these could be handled from a single location.

## Archived versus not archived

Mail-enabled security groups also have the ability to have e-mails they receive be archived in an Exchange Public folder. This means that if so configured, not only will inbound e-mails for that group be forwarded to every member of that group, but they will also be saved in an Exchange Public Folder.

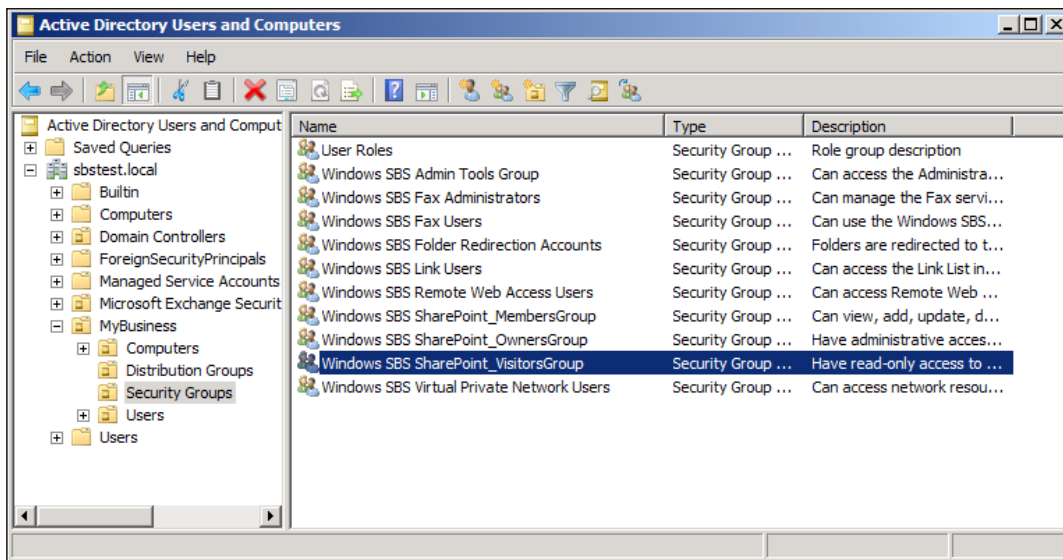
Using the e-mail newsletter example from above, you could mail-enable a Security group and also configure it to archive e-mails to a Public folder. This means that users who are members of this group will receive any e-mail newsletter sent to the Security group's e-mail address and the newsletter will also be archived in an Exchange public folder. These items can then be accessed and viewed by any other user who has rights to that Exchange Public Folder. Configuring things like e-mail newsletters this way can be utilized to reduce the amount of duplicate e-mails that are retained in users' mailboxes.

## Organizational Units (OU) structures

It is critical that at all stages you utilize the built-in Windows SBS 2011 Standard wizards when working with users and groups. It is important to understand that these wizards still work with the standard Windows Server 2008 R2 Active Directory.

If you open **Active Directory Users and Computers** from **Start | Administrative tools** and then navigate down to the Organizational Unit (OU) called **MyBusiness**, you will be able to see what actions the wizards have performed.

If you expand the **MyBusiness** OU, you will see OUs for **Computers**, **Distribution Groups**, and **Security Groups** as well as **Users**. If you view the contents of these OUs, you should see the same information that you see in the Windows SBS 2011 Standard console:



It is possible to manipulate the objects here via the native Windows Server 2008 R2 Active Directory options; however, it is not recommended that you do.

## Joining computers to the domain

As with all Active Directory domains, you are required to join your client computers and servers to the domain. With a Windows SBS 2011 Standard domain network however, the joining of a computer to the domain is not carried out the same way as it is on an Enterprise network.

## Joining client and server computers

Windows SBS 2011 Standard is limited to what operating system the client machines have, in order for the wizards to run correctly.

Supported clients of Windows SBS 2011 Standard are:

- Windows XP Professional SP2 or later (SP3 is suggested)
- Windows Vista Business, Enterprise, or Ultimate SP 1 or later
- Windows 7 Professional, Enterprise, or Ultimate and above

All clients also require Microsoft .NET Framework 4 installed to connect to the domain.

You should also have added your user accounts for each user that will require to log on to the network, by using a client computer.

## Joining an additional server

On a Windows SBS 2011 Standard network there is often a need for additional servers. These are typically Remote Desktop Service (RDS) servers, or Application servers, to name just two. Additional servers can be either from the Premium Add-On Pack, or a separate Windows Server licensed product.

To join a server to a Windows SBS 2011 Standard domain, you must do it manually; the connect wizard does not work for joining a server.

How to connect a server to the network:

1. On the additional server, open the server's **System Properties**.
2. Click the **Change** button on the **Computer Name** tab.
3. Enter the name you wish to name your server in the **Computer name** field and enter the domain name in the **Member of, Domain** field.
4. Click **OK**.
5. Enter the domain administrator username and password when prompted.
6. The server will be joined to the domain. Click **OK**, and then **OK** again to restart the server.
7. Once the server restarts, log onto the domain using the domain administrator username and password.
8. On the Windows SBS 2011 Standard, open **Active Directory Users and Computers**.

9. Expand the domain to navigate to the **SBSComputers** OU, which is under the domain, and then **MyBusiness**, and finally under **Computers**.
10. Right click the name of the server you have joined and click **Move**. Move the server to the **SBSServer** OU.

Your server is now a member server of the Windows SBS 2011 Standard domain, and in the correct server OU.

## The Connect wizard

Now you have a computer that meets the requirement specifications we need to join the computer to the domain. To join a computer to a Windows SBS 2011 Standard network, you are required to run the Connect wizard.

How to connect a computer to the network:

1. Open Internet Explorer and enter into the address bar: `http://connect`.
2. Click **Start Connect Computer Wizard**.
3. Click **Run** to run `Launcher.exe`, and click **Yes** to the UAC security warning.
4. Choose either **Setup this computer for myself** or **Set up this computer for other users**, and click **Next**.
5. Click **Next** to check if the computer requirements have been verified.
6. Enter the new user's username and password, or the network administrator's username and password, depending on your choice in step 4 above, and click **Next**.
7. Enter the **Name of this computer**, and a description if you wish, and then click **Next**.
8. If you wish to migrate your workgroup profile, choose it from the drop-down list, and click **Next**.
9. For each user you selected to add to the computer, you have to choose a level of access. Choose **Local Administrator** or **Standard User** for each person.
10. Confirm your settings and click **Next**.
11. When the wizard asks to restart, click **Restart**.
12. Once the computer has restarted and you log onto the domain the Connect Computer wizard will appear to say it was successful. Click **Finish**.

You can also copy the Connect Computer Wizard to portable media. The wizard that does this is in the Windows SBS 2011 Standard Console, **Network**, and then the **Computers** tab. In computer tasks, click **Connect computers to your network**, and follow the wizard to copy the wizard to the USB drive.



## Managing user permissions for domain computers (local administrator versus standard user, remote access)

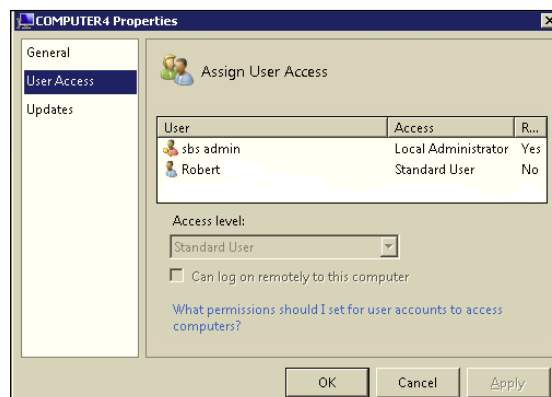
In the procedure for joining a client computer to the network, the Connect wizard has an option to make your users either Standard Users or Local Administrators. If you make your user a Standard User, they have the rights to physically log onto the computer and run most programs. They cannot however, install or uninstall some software or hardware. They cannot delete files that the computer requires to run, or change settings on the computer that affect other users. If you make your user a Local Administrator they do not have the restrictions of the Standard User, and therefore have full rights to the computer.

If you wish to allow a user to log into the computer using RWA, once you have given the user the right to log on remotely to a computer, then you have the option to change the Access Level for that User from a Standard User which is the default, to Local Administrator.

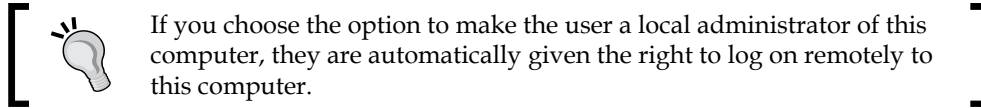
If it is possible, then it is best practice to leave users with Standard User rights, as this is the more secure option for you network.

To allow a user to be a local administrator on a specific client computer:

1. In the Windows SBS Console, click **Network** and then the **Computers** tab.
2. Click on the computer you wish to allow a user to remotely access, and then click **View computer properties**.
3. In **Computer properties**, click on **User Access**.
4. Click on the user account you wish to allow the remote access to this computer, and tick **Can log on remotely to this computer**:



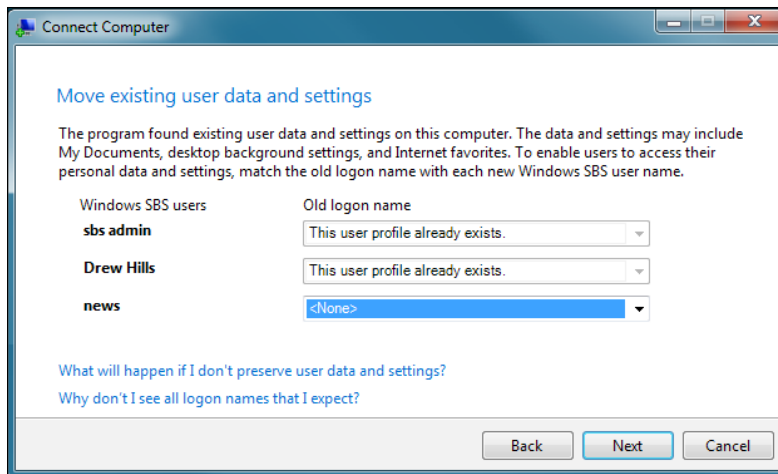
- To grant the local administrator rights to the computer for this user, in the **Access Level**, select **Local Administrator**.



- Click **Apply** and then click **OK**.

## Migrating local user profiles

During the Connect wizard process, when joining a client computer to the Windows SBS 2011 Standard network, there is an option to **Migrate local user profiles to the new domain user's profile**. This is a local or workgroup profile only, that can be copied to the domain user profile; you cannot have a domain-connected profile migrated during this wizard.

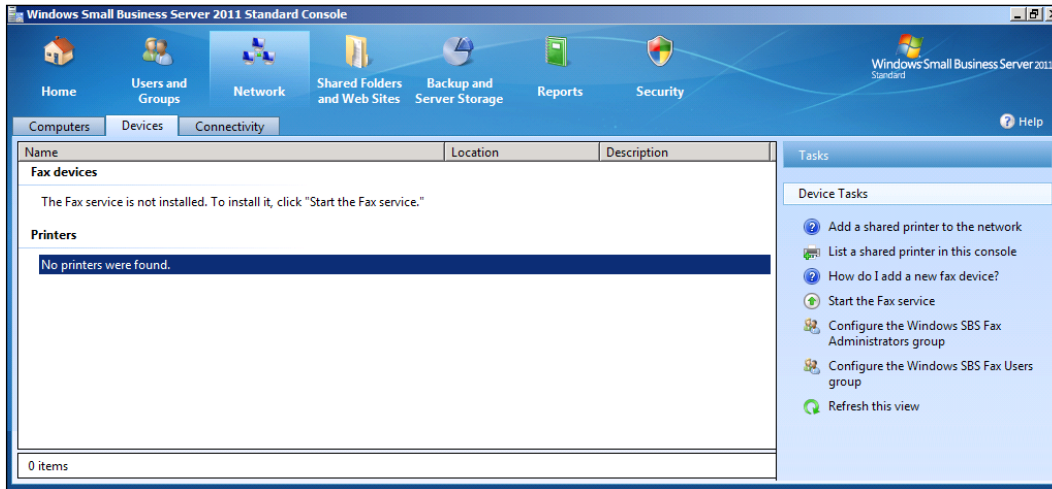


To migrate the settings from the local profile to the domain user, select the drop-down box next to the domain user and select the local profile from the list.

## Creating and configuring shared devices

Two forms of communication with the world outside a Windows SBS 2011 Standard network require additional hardware; these are shared faxing and printing. Both of these device types can be shared on the network for all required users to share.

You will find the shared devices in the Windows SBS 2011 Standard Console, **Network | Devices**:



## Faxes and printers

Usually, when you add a fax device, Windows automatically discovers and installs the necessary drivers. However, if Windows cannot find or install the right driver for your fax device, you might need to add the fax device manually.

To add a new fax device:

1. Click **Start**, and then click **Devices and Printers**.
2. On the **Devices and Printers** page, click **Add a device**.
3. Follow the instructions in the **Add Hardware Wizard**.



Note, that you must be a network administrator to complete this procedure.



To set up the Fax Service:

1. In the Windows SBS 2011 Console, click **Network** and then the **Devices** tab.
2. Under **Device Tasks**, click on the **Start the Fax service**.
3. At the pop up, click **Yes** to install the Fax service.
4. Click **OK** to **The Fax service has started successfully** window

5. When you are prompted, click **Yes** to run the **Configure Fax Service Wizard**.
6. When prompted enter the company information required, such as **Fax number**, and click **Next**.
7. Type the text you wish for your fax header, and click **Next**.
8. On the next page check the box besides the modem you wish to use, and click **Next**.
9. Next you have to define how to route your incoming faxes. You may choose any or all destinations. They are:
  - **Route through email**
  - **Store in a document library**
  - **Print**
  - **Store in a folder**
10. Once the destinations have been chosen, click **Configure Fax**.
11. When the wizard completes, click **Finish**.

In order to share a printer in the Windows SBS 2011 Standard network, first connect the printer cable either to a computer that is connected to the network or to a network switch ensuring the printer is turned on.

- If you connect your printer to a computer through a USB connection, Windows automatically detects the printer and adds it to the list of available printers
- If you connect your printer to a computer through a printer port, Windows adds the printer to the list of available printers
- If you connect your printer to a network switch, follow the installation instructions from the manufacturer of the printer

 You need to manually install the printer drivers, if they are not installed automatically when you physically connect the printer to a computer. 

To share a printer that is connected to the computer running Windows SBS 2011 Standard:

1. On Windows SBS 2011 Standard, click **Start | Control Panel | Devices and Printers**.

2. Right-click the printer that you want to share, and then click **Printer Properties**.
3. On the **Sharing** tab, click **Change Sharing Options**.
4. Click **Share this printer**, and then click **List in the directory**. Ensure that **Render print jobs on client computers** is also selected.
5. On the **General** tab, in **Location**, type the physical location of the printer. This step is optional.
6. Click **Apply**.
7. Open the Windows SBS 2011 Standard Console.
8. Click **Network**, and then click **Devices**. Check if the printer is in the **Printers** list.

## Adding drivers for 32-bit operating systems

Windows SBS 2011 Standard is a 64-bit operating system. Thus when you install a printer on the Windows SBS 2011 Standard server, you are required to use the x64 version of the printer's driver on the server. The issue that may arise is when your client machines may be running a 32-bit operating system, and the driver required is the x86 version.

If you try and connect to a printer that is shared on a Windows SBS 2011 Standard server from a client computer running a 32-bit version of Windows, you may receive a warning saying the server doesn't have the correct printer driver installed. To stop the warning and to allow the share print to be pushed from the server to the client, the 32-bit print driver must be installed on the server.

In order to add a 32-bit print driver to Windows SBS 2011 Standard, complete the following steps:

1. Log onto the 32-bit Windows 7 client computer with an account that has Administrator rights on the server.
2. Browse to the server and double click on **Printers** share.
3. Right click on a blank spot and click **Server Properties**.
4. Go to the **Drivers** tab and click **Add**.
5. The **Add Printer driver** wizard will appear. Click **Next** on the Welcome screen.
6. Check **x86 Type 3 - User Mode** and click **Next**.

7. If the client computer already has the driver for the printer, select it from the list, else click **Have Disk** and browse to the directory with the printer driver.
8. Click **Finish** to complete the wizard.

This process will copy the 32-bit driver files to the server, ready for other 32-bit client computers to install when required.

## **Configuring user permissions for a device**

Now that we have the network printers installed and shared, we can look at security and control of these print devices. By default, all users are allowed to print, and select groups can manage these printers. You may wish to limit access for some users, and you do this via specific printer permissions. These permissions can be applied to users or groups of users who have the same type of user account. To control access, Windows provides the following levels of security:

1. **Standard Printer Permissions:**
  - **Print:** Each user can print and cancel, pause, or restart jobs they sent to a printer.
  - **Manage Document:** Manage all jobs for a printer that is in the queue, including jobs by other users.
  - **Manage Printers:** Allow rename, delete, share, and choose preferences for a printer. Allows setting of printer permissions for other users and to manage all jobs for the printer.
2. **Special Permissions:**
  - **Read Permissions:** Users or Groups may view the permissions on the printer.
  - **Change Permissions:** User or groups change the permissions of a printer.
  - **Take Ownership:** User or group may take ownership of printer and/or print jobs.

Printer permission can be set as follows:

1. In the Windows SBS 2011 Standard Console, go to the **Network** and then **Devices** tab.
2. Select the print name under **Printers**, and click **Printer properties** under **Tasks**.
3. Select the **Security** tab, on the **Printer properties** settings.

4. In **Groups or user names**, click a user or group you wish to set permissions to.
5. Under **Permissions for <user or group name>**, and select **Allow** or **Deny** check boxes for the permissions you wish to edit. To edit Special permissions, click **Advanced**.
6. Click **OK** to finish the settings.

## Test your knowledge

1. Your Windows SBS 2011 Standard has a security group called managers. You need to create an e-mail address that can be used to send e-mails to all members of the managers' security group. What should you do?
  - a. In the Exchange Management Console, create an additional e-mail address for the head manager.
  - b. In the SBS Console, add an e-mail address to the managers' security group.
  - c. Create an e-mail address for a mail-enabled SharePoint library, and grant permissions to the managers' security group.
  - d. Create an e-mail address for a mail-enabled public folder, and grant permissions to the members of the managers' security group.
2. You are to join a new computer to the Windows SBS 2011 Standard network. It is Windows 7 Home Premium. To join this computer to the network, what must you do first?
  - a. Create a homegroup to match the network domain name.
  - b. Change the computer name to match the network domain name.
  - c. Perform an upgrade by using Windows Anytime Upgrade.
  - d. Reinstall Windows.
3. Your network has a dedicated cheque printer. Only authorized users can print to it. You have created a security group named Cheque Printing and added authorized users to it. What do you have to do to ensure only these users can print to the cheque printer?
  - a. Grant the cheque printing group Print, and also Manage this printer permission on the printer.
  - b. Grant the cheque printing group Print permissions, and deny permissions to the Everyone group on the printer.

- c. Add the cheque printing security group to the standard user role. Grant this group print permissions.
  - d. Create a new user role based on the standard user, and add the invoice printing security group to the role. Grant the group print permission and remove the Everyone group.
4. When you create a new user using the Windows SBS 2011 Standard wizards which users' roles are available by default for you to choose from?
  - a. Network administrator.
  - b. Standard user.
  - c. Standard user with administrative links.
  - d. All of the above.
5. What is the recommended way to connect a workstation to a Windows SBS 2011 Standard network?
  - a. Add the computer into the SBS console.
  - b. Connect the computer to the network and type `http://connect` in the address bar of your browser.
  - c. Attach the computer to the Windows SBS 2011 Standard domain from the computer.
  - d. Run the Connect Computer Wizard from portable media.

## Summary

In this chapter you have been taken through the major processes of managing users, computers, and printers which are the majority of the items that you will need to connect to your Windows SBS 2011 Standard network. These are also tasks that you will most likely need to perform on a regular basis as it is rare that such things stay static in any network these days.

The Windows SBS 2011 Standard network that commenced at the beginning of this book is now more or less configured and ready for use by users. It has come a long way from that first installation DVD, but the process of administrating a network doesn't stop with just getting it running. Most of the work of a network administrator is actually ensuring that the network continues to run smoothly.

The next challenge faced by a Windows SBS 2011 Standard network administrator will be monitoring and managing the health of the network, basically ensuring that the network runs at optimum levels. The next chapter will show you the tools that Windows SBS 2011 Standard provides network administrators with, in order to keep everything running as smoothly as possible.



# 5

## Managing Health and Security

Once you have installed Windows Small Business Server (SBS) 2011 Standard and have configured it by adding users and computers, the job of network administration is really just starting. Most of the day-to-day interaction administrators will have with their Windows SBS 2011 Standard network will be monitoring and maintenance. This not only includes the server and the workstations, but also things like users and security. In this chapter we'll take a closer look at exactly what tasks need to be performed to ensure that everything runs smoothly.

In this chapter, we shall cover the following topics:

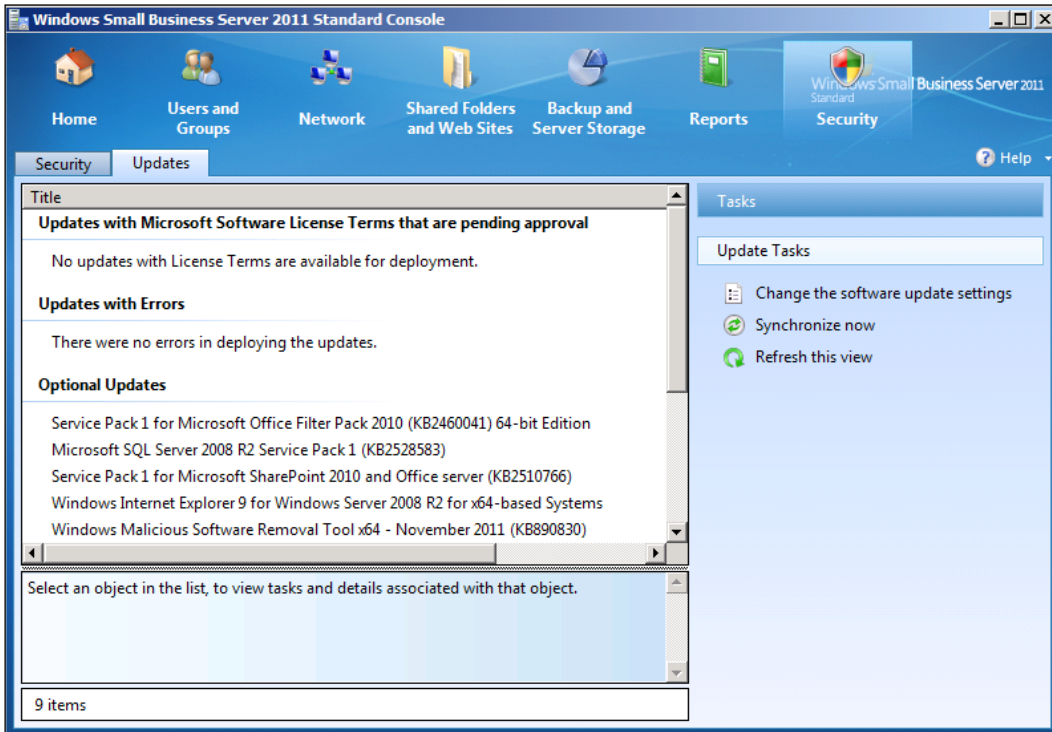
- Configuring Windows Server Update Services (WSUS)
- Managing monitoring and reporting
- Configuring backup and restoring data on the server
- Configuring SSL certificates

### Configuring Windows Server Update Services (WSUS)

One of the most important rules in network security is to always ensure that everything is kept up-to-date. No system is perfect and most will require regular updating during their operational life. As the size and complexity of a network grows, this updating process can become quite burdensome to an administrator. With this in mind Microsoft has developed a product that is incorporated into Windows SBS 2011 Standard to provide a centralized network updating capability called **Windows Server Update Services (WSUS)**.

WSUS is a component of Windows SBS 2011 Standard that provides the ability to update Microsoft software on all Windows machines on the network, servers, and workstations. It provides a central repository where update downloads can be stored and then delivered to multiple machines on the network, thus saving bandwidth and reducing the patching time of the network. It provides a central location to monitor and manage these updates for improved administration.

You can access the Windows SBS 2011 Standard server update information by selecting the **Security** icon from the top of the dashboard and then the **Updates** tab:



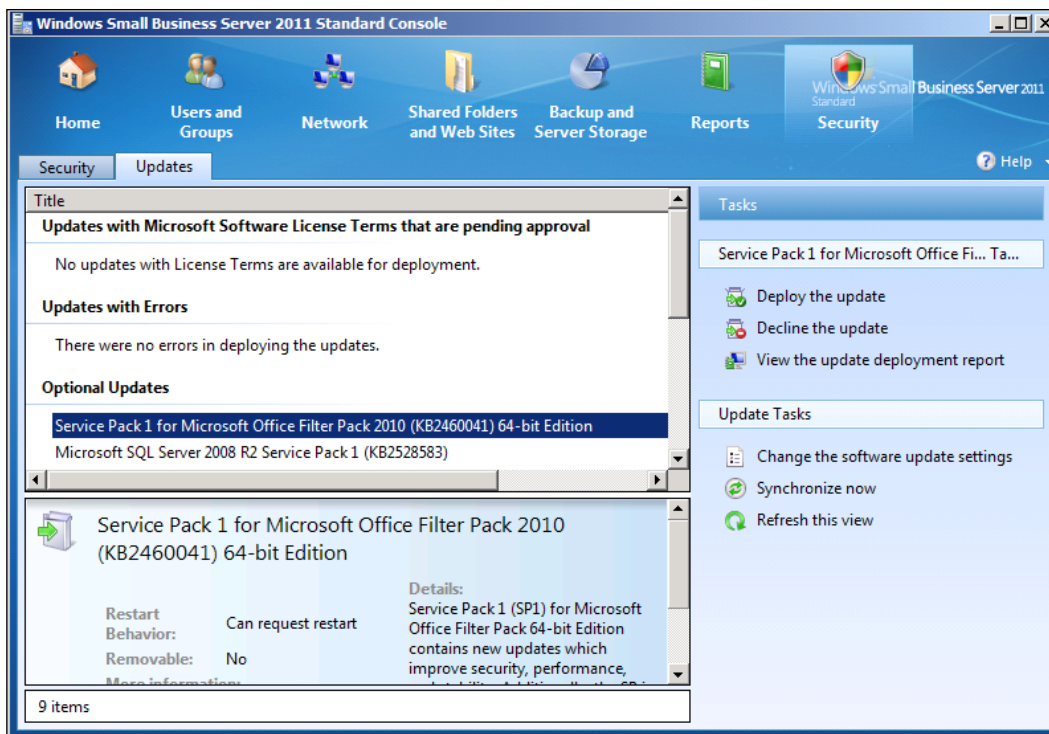
## Configuring client exclusions

Many network administrators want a certain amount of control over which updates are applied to their network machines. Using the **Updates** tab on the Windows SBS 2011 Standard console, an administrator can control the distribution of individual updates on their network.

On the left-hand side of the screen you will see a list of updates that are available for your network. You will see that these are grouped under the following headings:

- **Updates with Microsoft Software License Terms that are pending approval**
- **Updates with Errors**
- **Optional Updates**
- **Updates in Progress**

If you click on any of the updates on the left-hand side of the screen, the **Tasks** options will change as shown:



When an update is selected you should see the following additional options appear on the right:

- **Deploy the update**
- **Decline the update**
- **View the update deployment report**

If you select the **Deploy the update** option, you will be prompted to confirm that the selected update will be approved for all computers that require it. Upon accepting this you will be informed that you should wait four to 24 hours for the server to automatically deploy the update. Once you return to the console you will no longer see that update listed.

If you select to **Decline the update** option, you will be warned that it will not be available to any computer on the network and will be removed from the software repository. Once you return to the console you will no longer see that update listed.

If you select to **View the update deployment report**, you will be shown a list of computers and the status of that update. In some cases the update will not be applicable for that machine and for others it will show **Not installed**. You will also see when the last update scan was run for that machine.

The Windows SBS 2011 Standard machine will contact the Microsoft Update site at regular intervals to determine whether any new updates are available for your network. You can manually initiate this process by clicking the **Synchronize now** button. Once you accept the **Synchronize now** option at the next step you will see a progress bar and percentage complete, as this synchronization process takes place.

To alter the way that updates are delivered to the network, select the **Change the software updates settings** option from the **Tasks** list on the right-hand side of the console.

This will then open up the **Software Update settings** window.

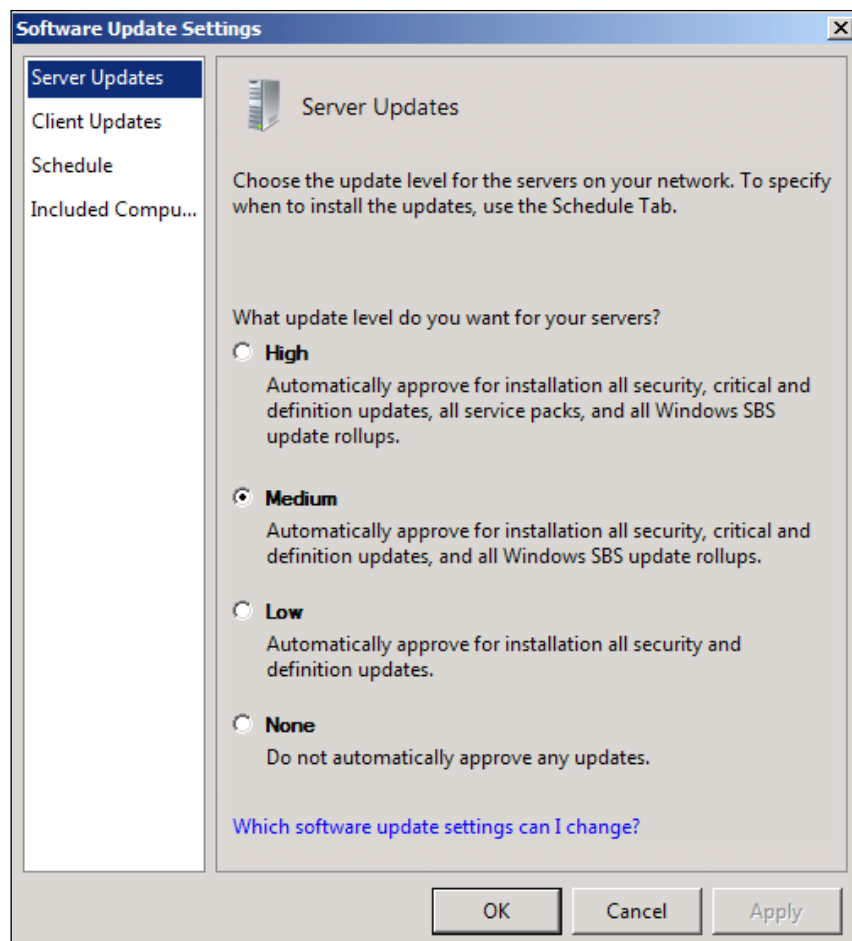
## **Maintaining server/client WSUS patching**

There are two basic types of machines on the network: servers and workstations, both of which need to be updated regularly. However, the method by which both are updated can vary widely. In most cases you want your workstation to install updates and reboot as soon as possible, but with servers most administrators desire more control over when patches are installed and specifically when they are rebooted.

Since Windows SBS 2011 Standard takes advantage of WSUS, you can configure update settings uniquely for both servers and workstations. To configure these settings, click on **Change the software update settings** in **Update tasks** on the right in the SBS Console.

## **Server security updates**

The first option from the menu on the left-hand side is **Server Updates**:



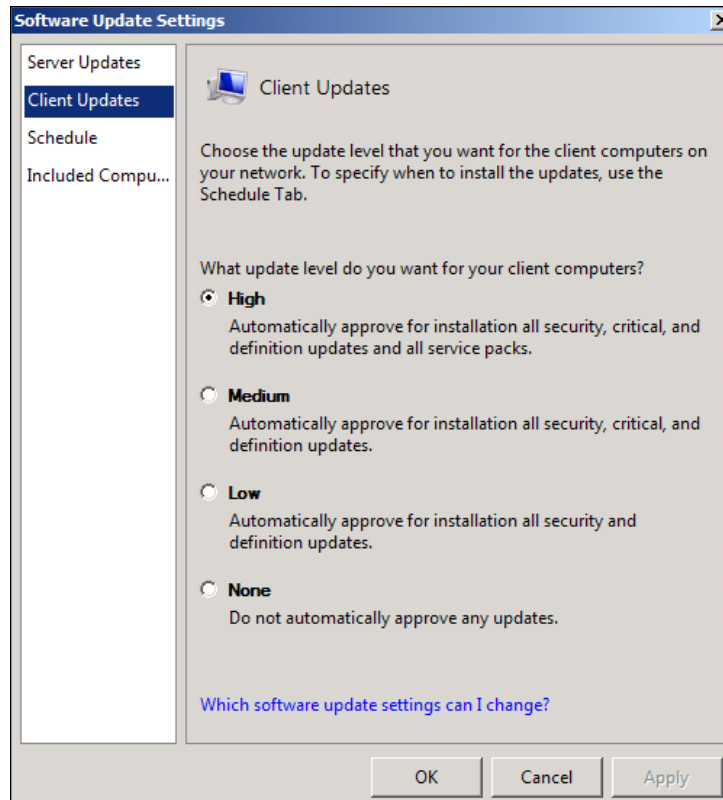
This option allows you to select what update level you wish to configure for your server. The options available are:

- **High:** Automatically approve for installation of all security, critical, and definition updates, all service packs, and all Windows SBS update rollups
- **Medium:** Automatically approve for installation of all security, critical, and definition updates, and all Windows SBS update rollups
- **Low:** Automatically approve for installation of all security and definition updates
- **None:** Do not automatically approve any updates

To change the settings simply select the option that you desire and click the **OK** button to save.

## Client security updates

The second option from the menu on the left-hand side is **Client Updates**:



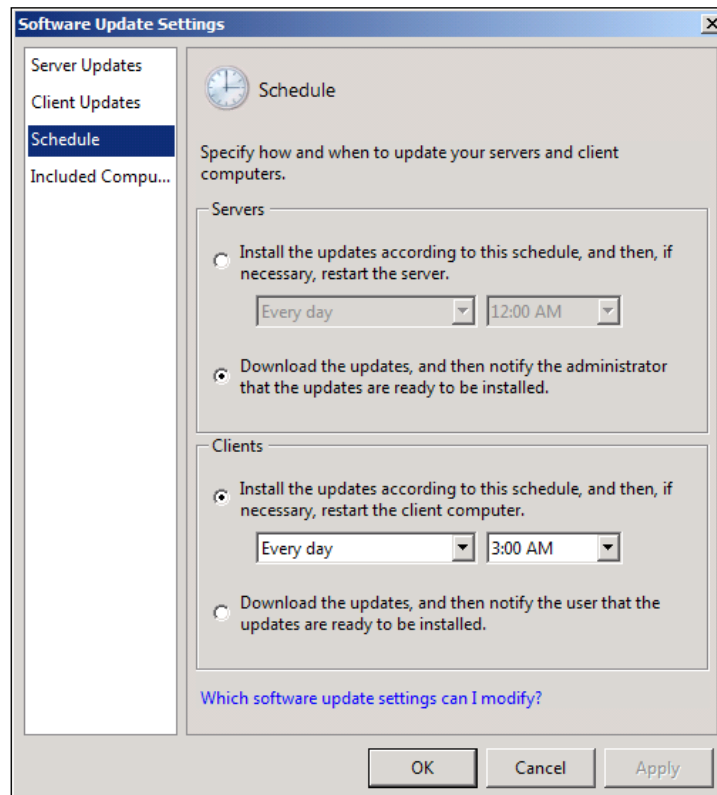
As you can see similar options are available here as those available for the server:

- **High:** Automatically approve for installation of all security, critical, and definition updates, and all service packs
- **Medium:** Automatically approve for installation of all security, critical, and definition updates
- **Low:** Automatically approve for installation of all security and definition updates
- **None:** Do not automatically approve any updates

Again, to make a change simply select the option and click the **OK** button to save the changes.

## Changing software update and schedule settings

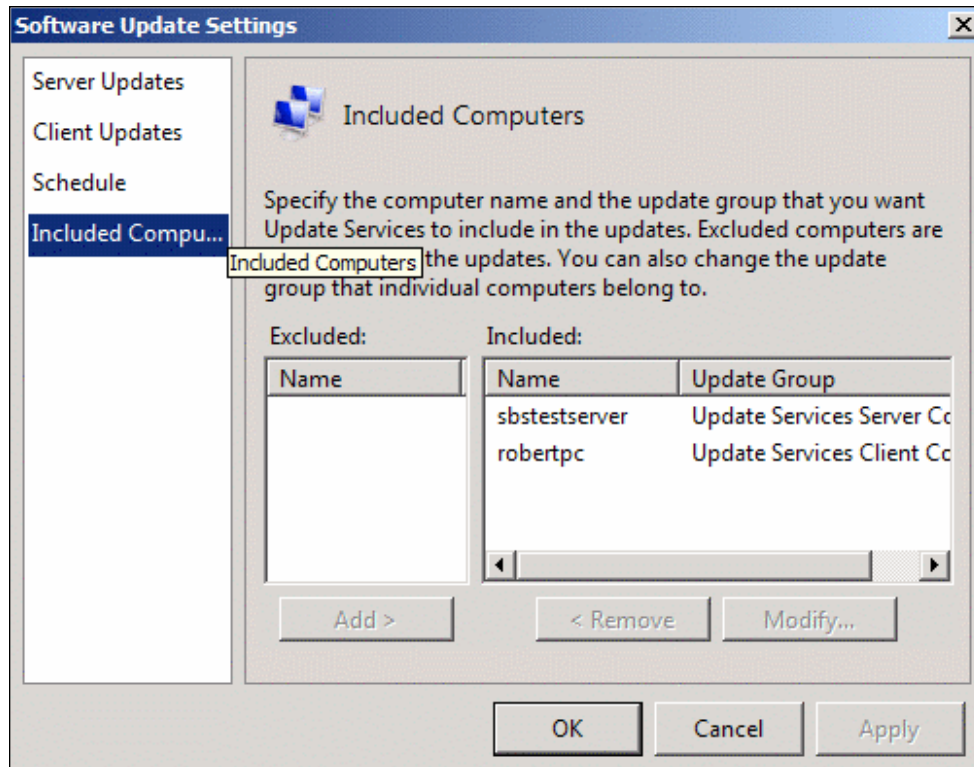
The third option from the menu on the left-hand side allows you to configure the schedule for when updates will be applied:



This option allows you to configure at what time updates will be installed and if required the machines rebooted. There is a separate section for **Servers** and **Clients**. By default, **Server** machines are configured to simply advise the administrator when downloads are available, while **Clients** are configured to automatically install updates and reboot if required at 3 A.M.

## Configuring included computers

The final option on the menu on the left-hand side is **Included Computers**:



This option allows you to specify which machines in the network will receive updates according to the schedule shown previously.

You can select whether to include or exclude particular machines on your network. You can move machines between these two groups by using the **Add >** and **< Remove** buttons at the bottom of the right-hand side of the window.

The **Modify** button allows you to move a selected computer between different update groups if required.

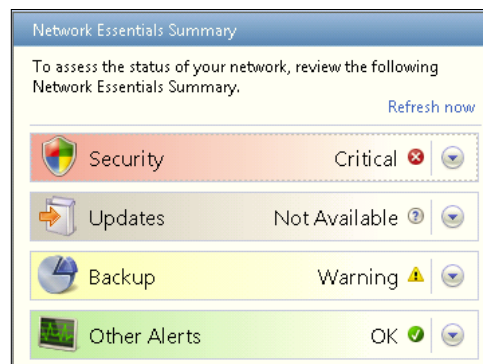


## Managing monitoring and reporting

Windows SBS 2011 Standard has built-in ability to monitor, alert, and report on not only itself, but also client devices on your network. Even though the built-in alerts and reports are comprehensive, Windows SBS 2011 Standard provides the ability to add additional alerts and customize reporting to better suit your environment. All of these alerts and reports can be found and customized via the Windows SBS 2011 console.

### Client

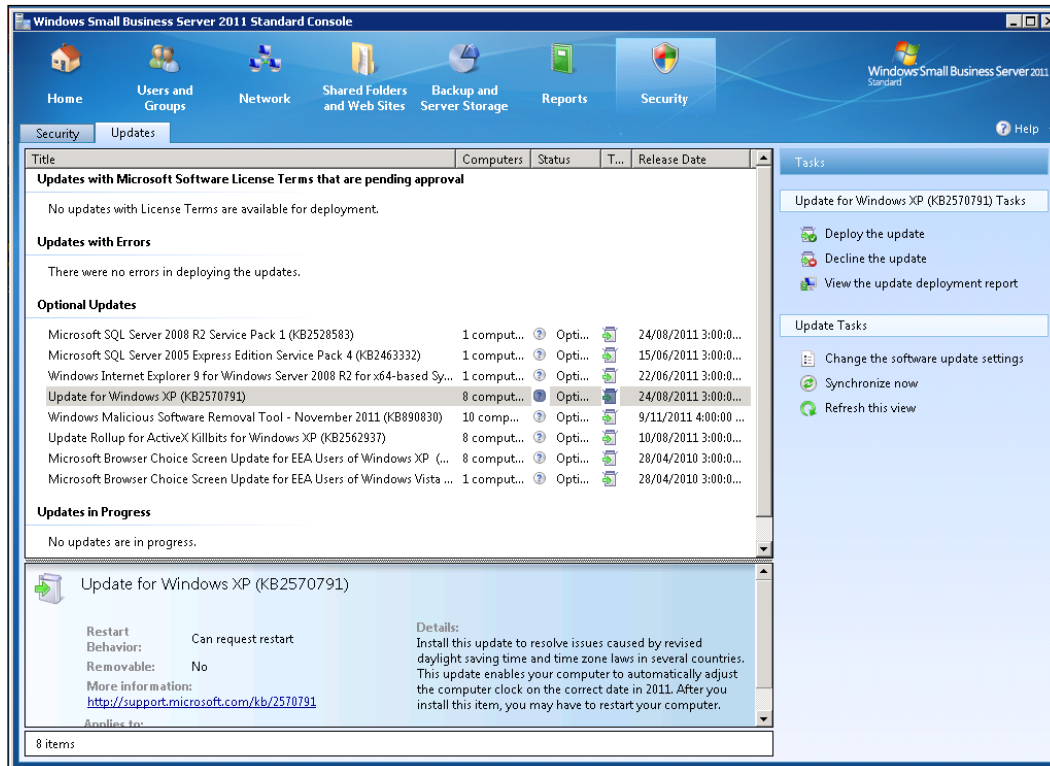
Windows SBS 2011 Standard by default monitors and alerts on client computers and servers, that are joined to the domain.



From this tab within the Windows SBS 2011 Standard Console you can see the status of the network at a glance. If you wish to see the reason behind the alert, click the down arrow to the right of the alert and click the link shown.

## Updating compliancy

On your network it is important that you are able to maintain installation of Microsoft Updates and monitor all computers to see what the status of installation of all updates is. The **Windows SBS 2011 Standard Console | Security | Updates** tab, gives you the ability to see the status of Updates in your network:



From within this tab you can see the **Updates**:

- Pending approval
- Updates with errors
- Optional updates
- Updates in progress

If you select and update, then on the right under **Tasks** you have the option to **Deploy the update** or **Decline the update**.

If you click on **View the update deployment report**, this will show you a list of all computers and if the update is Installed, Not installed, or Not applicable.

Under **Update Tasks**, you can change the software update settings. This is covered in the *Configuring Windows Server Update Services (WSUS)* section at the beginning of the chapter.

## Client computer firewall

Windows client operating systems now come with Windows Firewall. This firewall is important to help protect the network from unauthorized intrusion and/or virus infection. You can view the status of the client machine firewall in one location from the **Windows SBS 2011 Standard Console | Security | Security** tab. This will give you the ability to see the Security status in your network. Once you select **Client computer firewall** under **Security Essentials**, the information about your network is displayed in the lower pane:

The screenshot shows the Windows Small Business Server 2011 Standard Console interface. The 'Security' tab is active, and the 'Security Essentials' table is displayed. The 'Client computer firewall' row is selected, and its details are shown in the lower pane.

Security Essentials	Applicable to	Status	Source
Virus protection for file system	Client Computers	Critical	Security Center
Spyware and other malware protection	Client Computers	OK	Security Center
<b>Client computer firewall</b>	<b>Client Computers</b>	<b>OK</b>	<b>Windows SBS Manager</b>
Spam protection for e-mail	Server	OK	Exchange Server 2010
Server firewall	Server	Critical	Windows Firewall

**Client computer firewall**

A firewall helps prevent malicious users and software from accessing a computer. The status of the firewall on your client computers is in the Security section of the Detailed Network Summary Report on the Reports tab of this console.

Client computers with Firewall disabled: 0  
 Client computers with Firewall enabled: 9  
 Client computers with an unknown status for the Firewall: 1

5 items

If you find that you have an issue with one of the client's firewall and you wish to see details, then you can find this in a Detailed Network Report. In the Detailed Network Report, scroll down to the heading **Details**. Under this heading is the **Security** section, with the left-hand column showing the computer name and the right-hand column showing the firewall status for each of the computers with an issue:

Security essentials			
Computers that are reporting at least one security issue: 2			
Computer Name	Antivirus	Antispyware	Firewall
COMPUTER2	Warning	Not applicable	ON
COMPUTER7	Critical	Not applicable	ON

## Antivirus status

A fully functioning antivirus solution is essential in computer networks. With this in mind it is a must that the status of the antivirus on the client computers on the network be viewed easily. You can view the status of the client machine antivirus in one location from the **Windows SBS 2011 Standard Console | Security | Security** tab. Once you select Virus protection for file system under Security Essentials, the information about your network is displayed in the lower pane:

The screenshot shows the Windows SBS 2011 Standard Console interface. The top navigation bar includes Home, Users and Groups, Network, Shared Folders and Web Sites, Backup and Server Storage, Reports, and Security. The Security tab is active, showing a list of Security Essentials items:

Security Essentials	Applicable to	Status	Source
Virus protection for file system	Client Computers	Critical	Security Center
Spyware and other malware protection	Client Computers	OK	Security Center
Client computer firewall	Client Computers	OK	Windows SBS Manager
Spam protection for e-mail	Server	OK	Exchange Server 2010
Server firewall	Server	Critical	Windows Firewall
Best Practices Analyzer Update	Server	Critical	Windows Server Solutions BPA

Below the list, the 'Virus protection for file system' section is expanded, showing a description and a summary of client computer status:

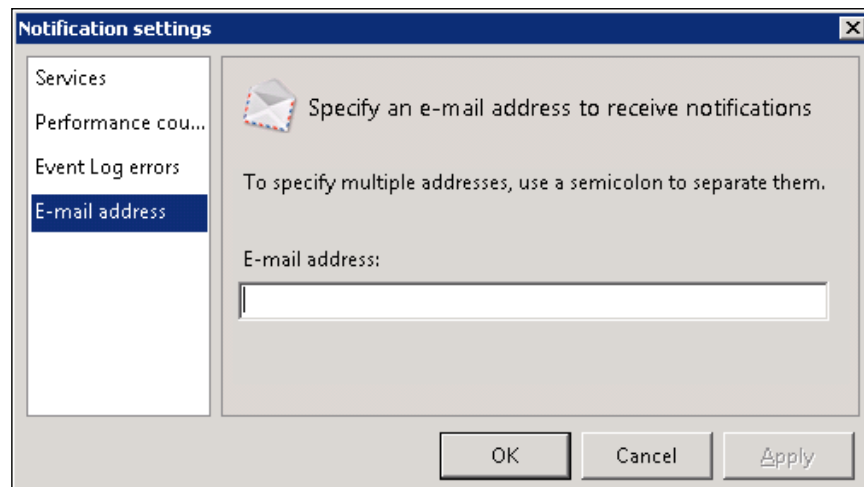
- Client computers: 10
- Client computers that require updates to the antivirus software: 1
- Client computers that have real-time scanning disabled: 0
- Client computers without an antivirus software: 0
- Client computers that cannot be queried: 1

The right-hand pane shows 'Security Tasks' with options to view summaries for virus protection, spyware and malware protection, and server firewall properties, along with a 'Refresh this view' button.

If you find that you have an issue with one of the client's antivirus and you wish to see further details, then you can find this in a Detailed Network Report. In the Detailed Network Report, scroll down to the heading **Details**. Under this heading is the **Security** section, with the left-hand column showing the computer name and the middle two columns are the antivirus and antispyware status.

## Server

Windows SBS 2011 Standard provides the ability to monitor and report on itself. Monitoring and reporting can monitor services, performance counters, and event logs. To see the current settings or to customize the monitoring to suit your needs, in the **SBS Console** go to the **Network | Computer** tab. Under **Computer Tasks**, click **View notification settings**.

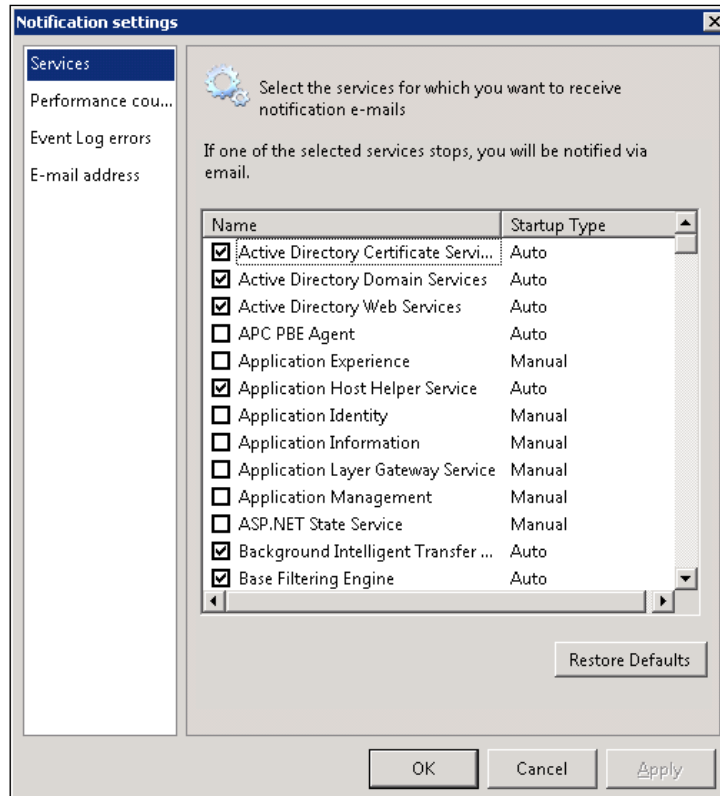


If you wish to be notified by e-mail when an alert condition has been met, you will need to enter the recipient's e-mail address in the **E-mail address** section of **Notification Settings**.

## Core services

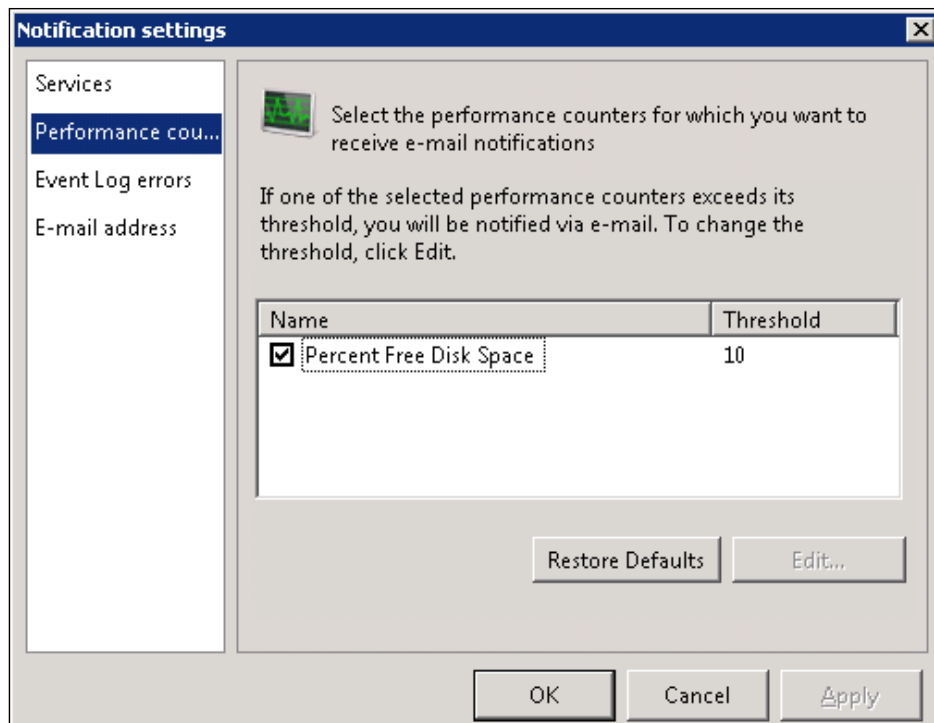
The first section in **Notification Settings** is **Services**. This section allows you to individually select each service that is on your Windows SBS 2011 Standard server. If you wish to be notified when a service stops, select the service name. If the service stops, an e-mail will be sent to the e-mail addresses specified in the e-mail address section of the notification settings.

This alert will allow you to resolve an issue with your server more easily, as you will know which service or services have stopped at the time of the incident:



## Low disk space

You do not ever want to run low on disk space on a Windows SBS 2011 Standard. If your free disk space becomes too low, Exchange mail will stop flowing and if free disk space becomes very low, corruption may occur in your file system. To help prevent this, Windows SBS 2011 Standard has a built-in notification in the **Performance counter** section of **Notification Settings**:

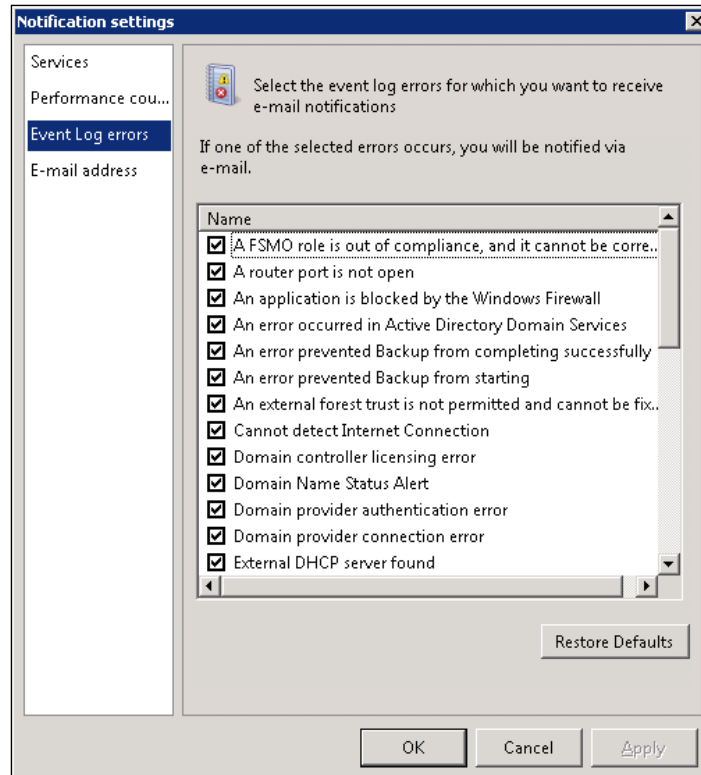


By default, the **Percent Free Disk Space** is set to **10** percent. If you wish to change this percentage, click the **Edit...** button and enter the new value.

## Success or failure

The third section in **Notification Settings** is **Event Log errors**. This section allows you to individually select each of a number of different event log errors that can occur on your Windows SBS 2011 Standard server. If you wish to be notified when an event occurs, select the error description. If the event occurs, an e-mail will be sent to the e-mail addresses specified in the e-mail address section of the notification settings.

This alert will allow you to resolve any issue with your server more easily, as you will know which event occurred and at what time.



Sometimes you may need to know of an error at the time it occurred, as opposed to waiting for the Network Report, or when the error is not listed in the Notification settings. To achieve this you need to step out of the Windows SBS 2011 Standard Console and use Event Viewer.

How to attach a task to an event:

1. Open **Event Viewer**, and expand and select Windows Logs.
2. Find the event in the relevant log and right click it.
3. Select **Attach Task To This Event**.
4. The **Create Basic Task Wizard** will start. Select the **Send an e-mail** action.
5. Import the required e-mail information, click **Next**, and click **Finish**.
6. This will create a task which can be found in **Task Scheduler**.



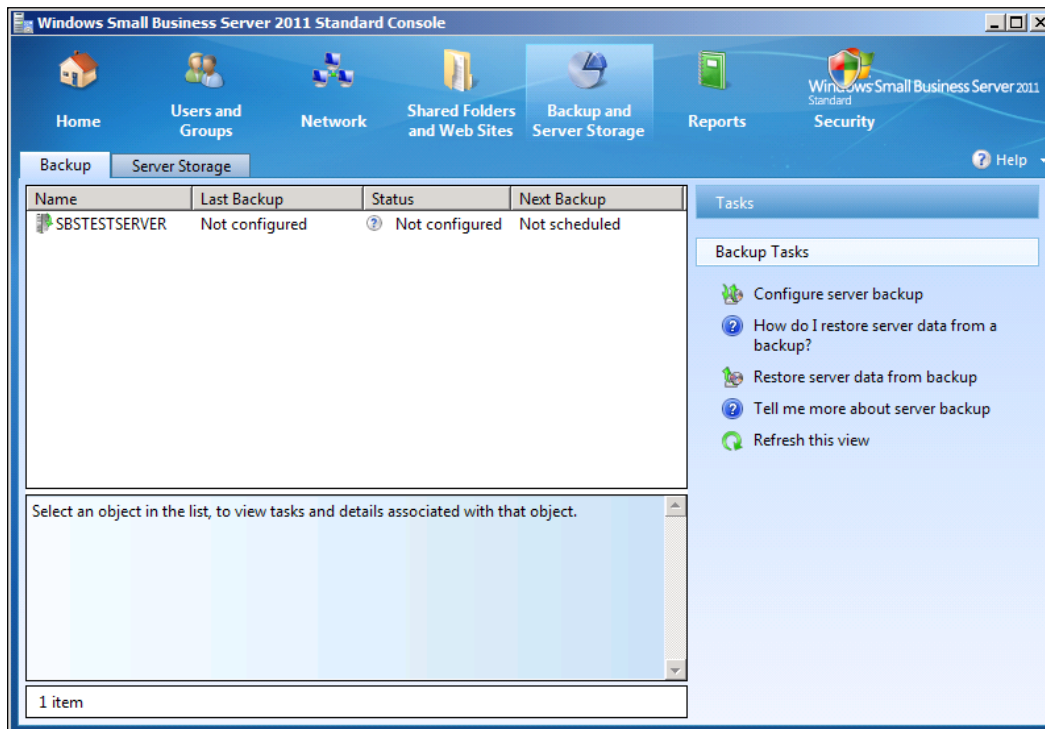
Now each time this event occurs, a notification e-mail will be sent.

**Attach Task To This Event** differs as you right click the log name, that is, System. It is recommended that you use the Advanced options with this wizard to set a **Trigger**, else you will receive an e-mail for every entry into this log.

## Configuring backups and restoring data on the server

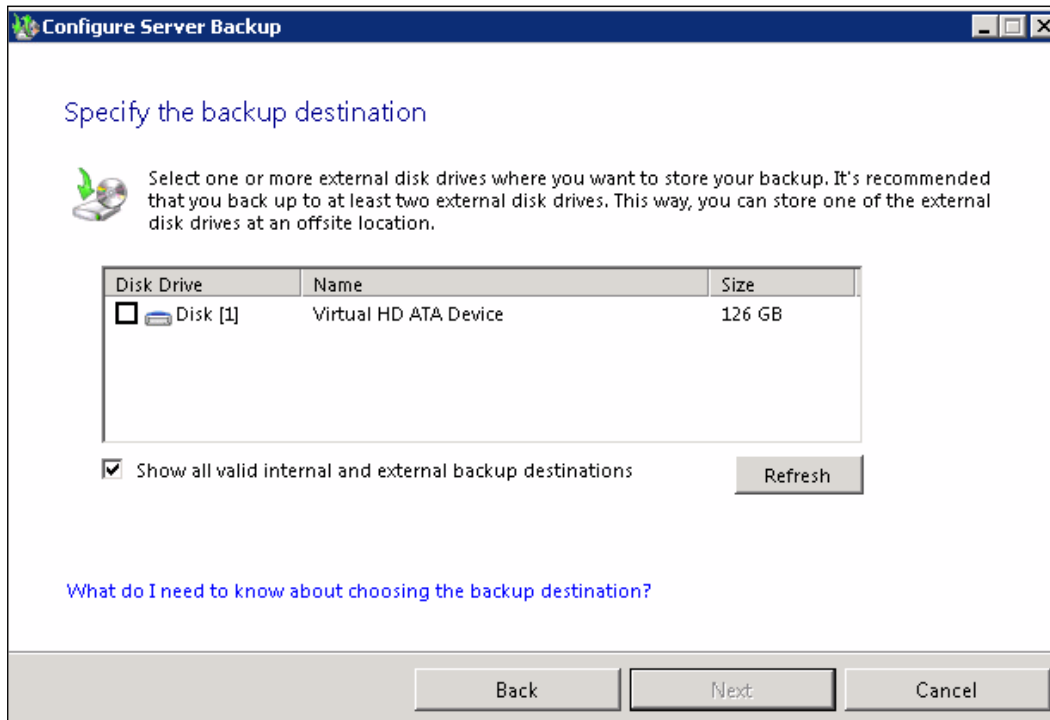
Probably the most important thing that you can do on a server is configure the backup. Windows SBS 2011 Standard can be configured with third-party backup solutions but it does come with its own native solution. After the server has been set up, you will need to configure the Windows SBS 2011 Standard backup to run as it is not configured by default. It is also important to remember that Windows SBS 2011 Standard no longer supports tape drives and thus the destination of this backup will need to be an externally-attached hard disk.

To configure the Windows SBS 2011 Standard backup, select the **Backup** icon from the console:



You should see your server listed and the status will say **Not configured**. To enable the backup, select **Configure server backup** from the **Tasks** list on the right. This will launch the Configure Server Backup Wizard.

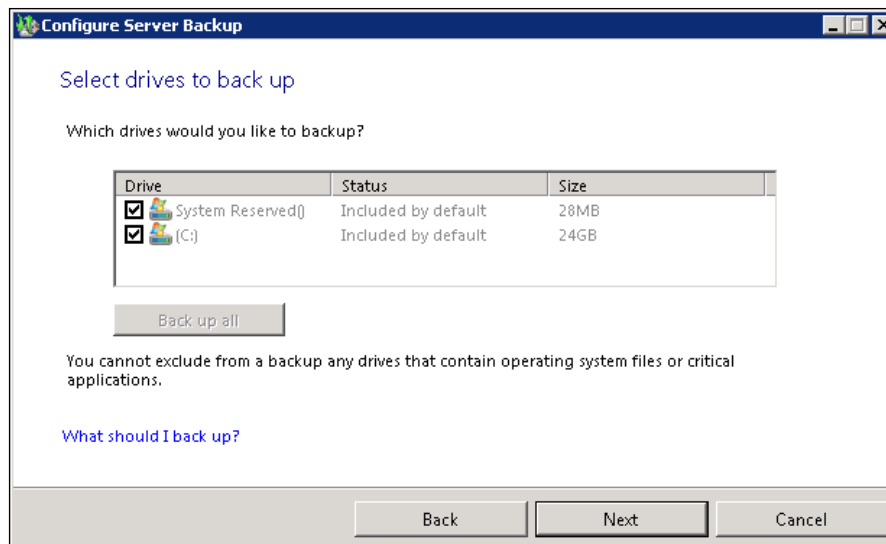
After clicking **Next** at the introduction screen you will be prompted to select a destination location for your backup:



You may need to check the option **Show all valid internal and external backup destinations** to display all of the available hard disks on your system. Select the location required and click the **Next** button.

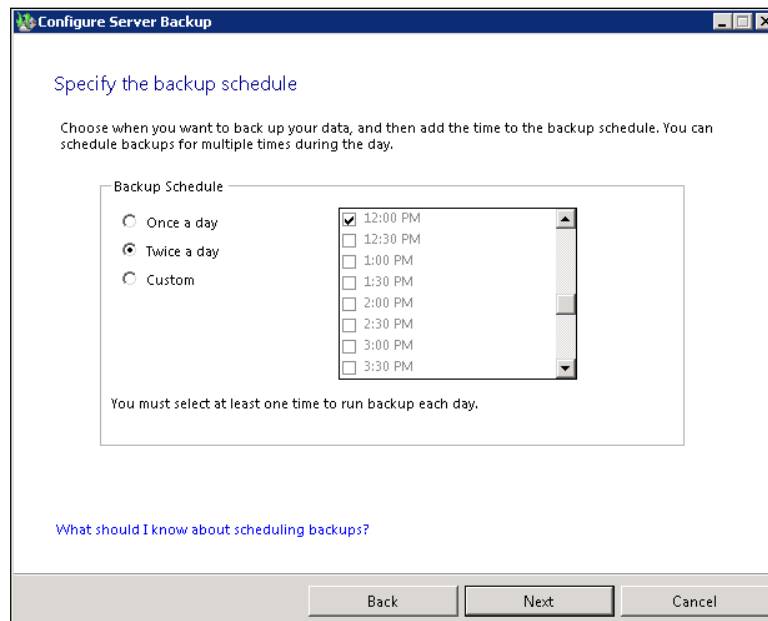
You'll then be asked to provide a label for the backup drive. When complete click the **Next** button to continue.

You will now be asked to select which drives on your Windows SBS 2011 Standard server you wish to back up:



It is best practice that you back up all of the information on your server together; however, this may not always be possible given the rapidly growing size of data.

Make whatever choices are most suitable and click the **Next** button to continue. Then, you will need to specify how often you wish to back up your system:



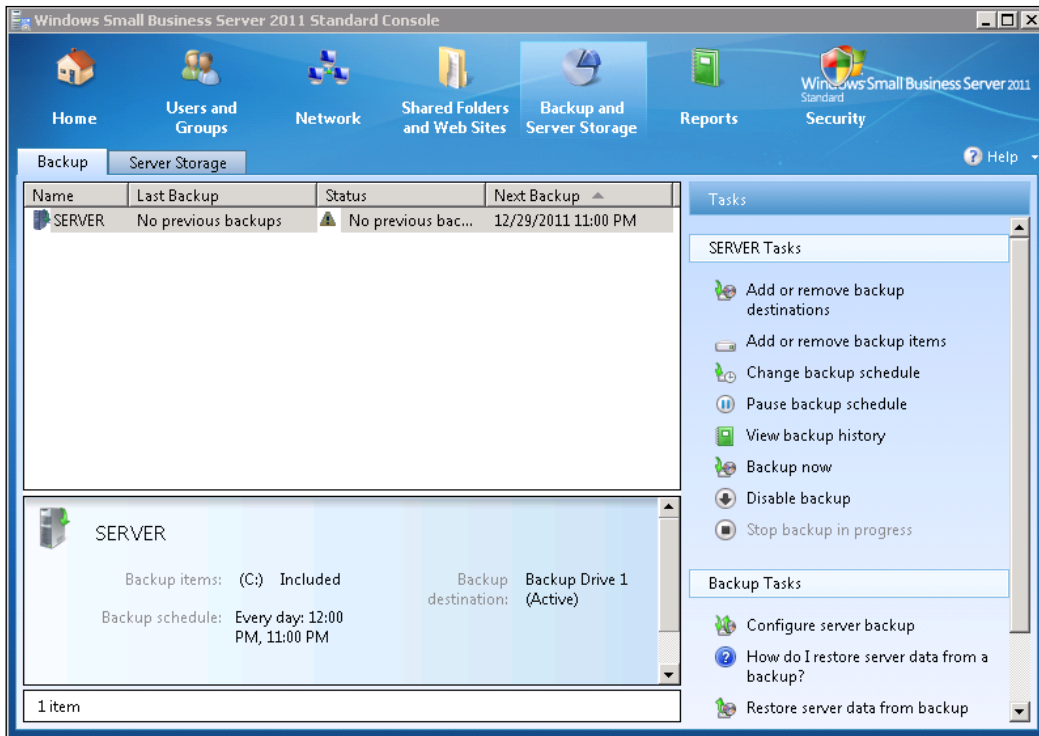
There are a number of standard options as well as **Custom** settings. Simply select the backup schedule you desire on the left and make adjustments to the time of execution on the right, if allowed.

When complete, click the **Next** button to proceed. You will then be prompted to confirm all of the details that you have configured. When complete, click the **Configure** button to proceed.

A warning will now be displayed informing you that the destination hard disk you have selected in the backup configuration will be formatted and as a result all data on this drive will be lost. Utilizing a disk for backup will also mean that it will be dedicated for backups and will not be seen as a normal disk volume in Windows Explorer. To proceed, click the **Yes** button.

The wizard will now configure the backup process as well as the destination. The time required will depend on the size of the destination hard drive, but when the process is done click the **Finish** button to complete the wizard.

You will be returned to the Windows SBS 2011 standard console where you should see that the backup is now configured and an additional list of **Tasks** is available on the right-hand side:

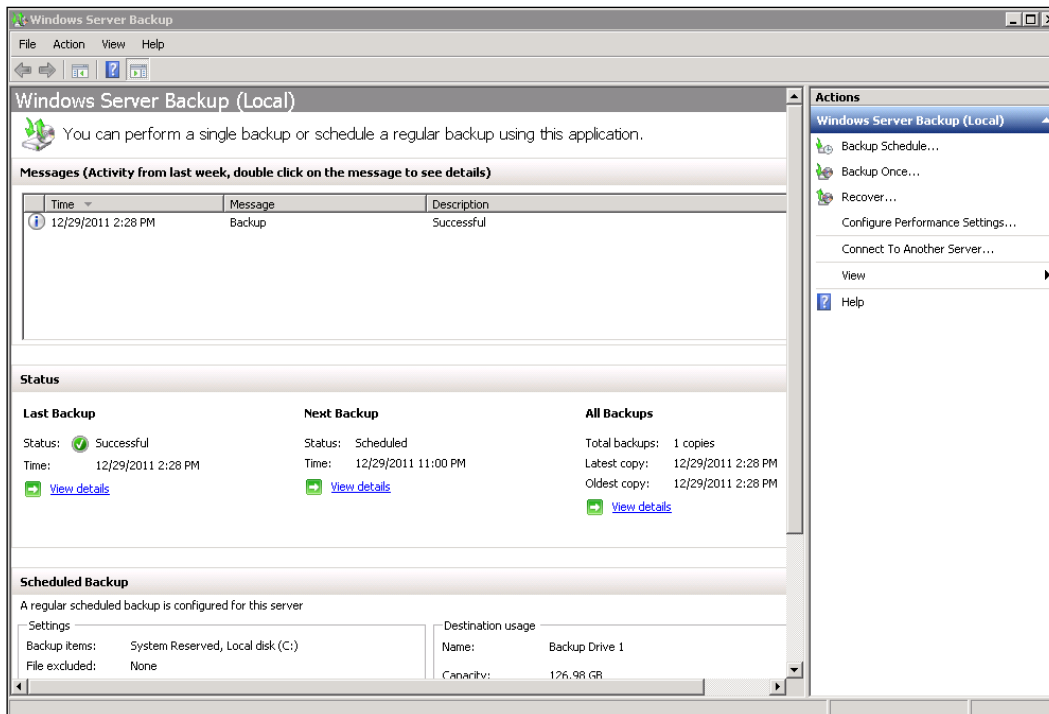


These options include:

- **Add or remove backup destinations:** Adjust the backup destinations.
- **Add or remove backup items:** Adjust what is to be backed up.
- **Change backup schedule:** Adjust when and how often backups run.
- **Pause backup schedule:** Prevent backups from running.
- **View backup history:** Examine the log of backup events.
- **Backup now:** Execute a backup immediately.
- **Disable backup:** Prevent this backup job from running again. You will need to create a new job to back up your server.
- **Stop backup in progress:** Halt a running backup.

Once a successful backup has completed, it will be possible to restore data from this backup. To do so, select the option **Restore server data from backup** under the **Backup Tasks** on the right-hand side of the **Backup** tab.

This will launch the native Windows Server 2008 Server Backup console:

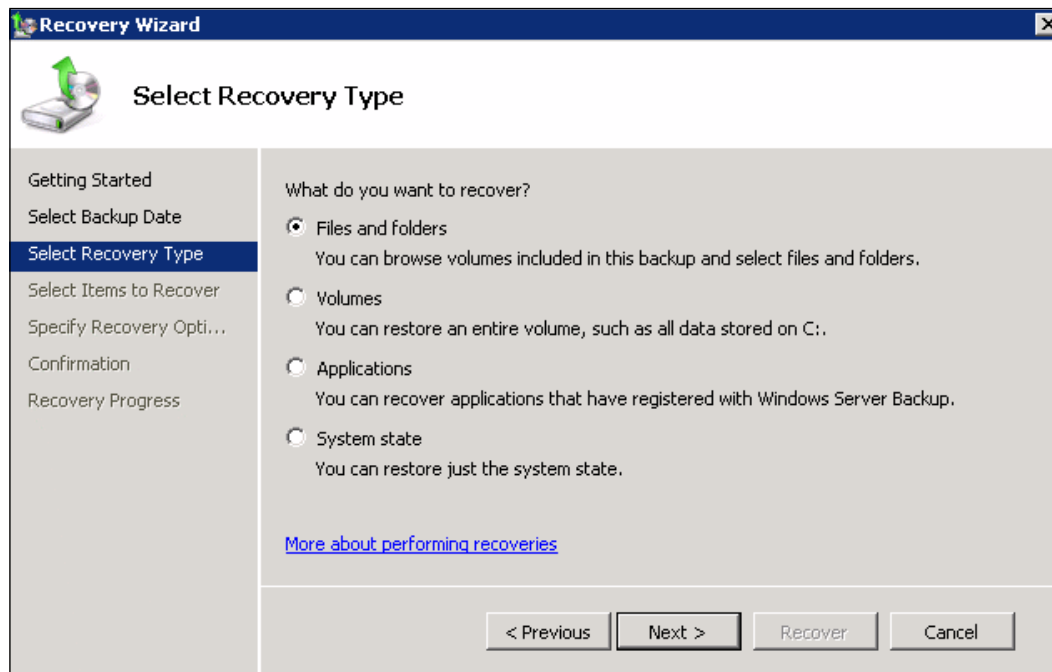


To commence the restore process, select the **Restore** option from under **Actions** on the right-hand side of the screen. This will commence the **Recovery Wizard**.

The first step in the process is to select the location of the backup. In most cases, this will be the Windows SBS 2011 Standard server. Select this and click **Next** to continue.

You'll then be asked to select the date of the backup you wish to recover from. Once you have made your selection, click the **Next** button to continue.

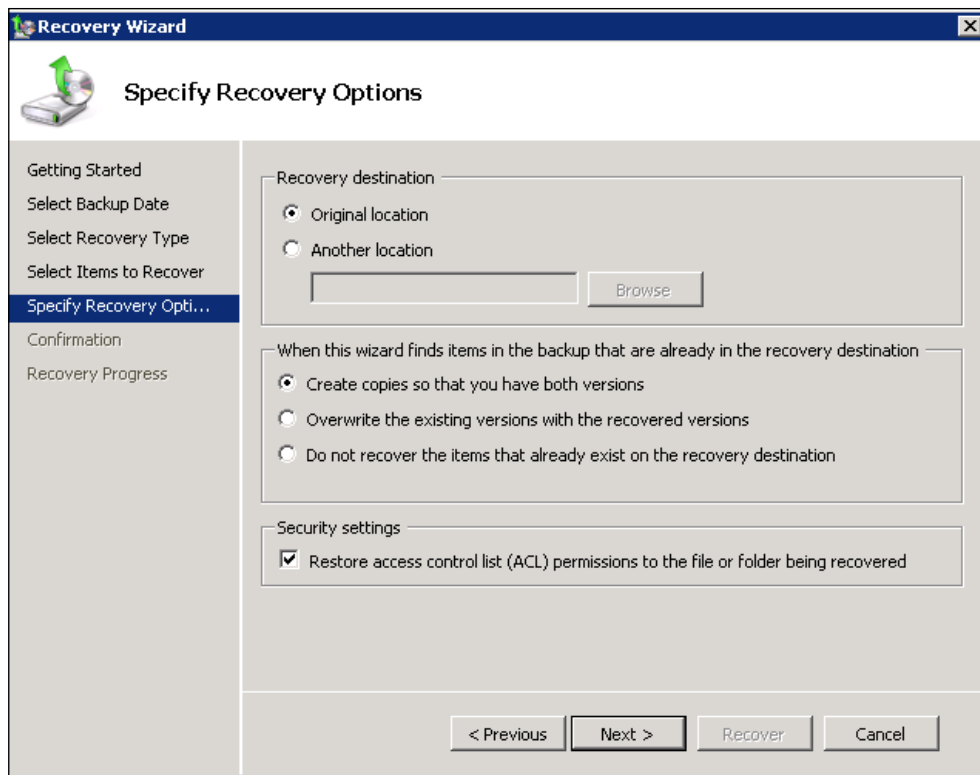
You'll now be prompted as to what you wish to recover:



Since in most cases you'll probably want to recover **Files and folders** that is what we'll focus on here; however, you should be aware that it is possible to also recover whole **Volumes** and the **System state** if required. When you have made your selection, click **Next** to continue.

The next step in the process is to locate the files and folders you wish to recover from the Windows Explorer window. When you have selected all of the desired files and folders to be recovered, click the **Next** button to continue.

You now need to specify the **Recovery Options**:



In most cases you will want to restore the data to its **Original location**, but you can also nominate an alternate location by selecting that option and using the **Browse** button to nominate a location.

You can also select the procedure if the restore finds similar items in the recovery destination. These options are:

- Create copies so that you have both versions
- Overwrite the existing versions with the recovered versions
- Do not recover the items that already exist on the recovery destination

Finally, you can also select whether to **Restore access control list (ACL) permissions to the file or folder being recovered**. This option is selected by default and is recommended in most situations as this restores the file or folders permissions.

When you have made your selections, click the **Next** button to continue.

A summary screen of your selections will be presented as a confirmation of the restore process. If everything is correct, click the **Recover** button.

A status display of the recovery process will now be displayed showing the items being recovered. Click the **Close** button when the process is complete. If the process is still running, you may close the wizard and the restore will continue in the background. You can return to view the progress of the operation by opening the Windows Server Backup console again if needed.

Once the wizard closes you should see the restore status displayed in the Windows Server Backup console. Close this console when complete and you will be returned to the Windows Server Backup console.

## Configuring SSL certificates

SSL certificates are used to secure communication with any device outside of your Windows Server Backup console network. These methods include but are not limited to OWA, RWA, ActiveSync, and Outlook Anywhere. To access the network with any of these devices, you need to configure an SSL certificate. With Windows Server Backup console you have the choice of either a self-signed or trusted third-party certificate.

In order for clients to be able to establish a connection using the SSL certificate, the following conditions must be met:

- The name of the certificate must match your public URL that the client uses to connect. For example, `remote.domainname.com`
- The certificate chain must be trusted by your client machine
- The certificate needs to have valid date and time stamps

How to install, use, and transfer SSL certificates will be tested as part of this certification.

## Configuring a trusted certificate

A trusted third-party SSL certificate is a certificate that has been purchased from a third party, and that provides the ability to encrypt and secure communication between two destinations. The trusted certificate tells the user that the communication is authentic, by the fact that the certificate has been validated by a third-party certificate authority.

How to install a trusted third-party certificate:

1. Open the **Windows Server Backup console | Network | Connectivity** tab. Click **Add a trusted Certificate** under **Tasks**.
2. Click **Next** on the welcome screen and choose the option **I want to buy a certificate from a certificate provider** and click **Next**.



3. Verify all the information is correct on the next page, as it is used to encode your SSL certificate, and then click **Next**.
4. In the next page, select either **Save to File... or Copy**, depending on the format your certificate provider requires. Request your certificate from your certificate provider. Click **Next**.
5. Once the certificate has been generated by your provider, choose I have a certificate from my certificate provider. Click **Next**.
6. Import your certificate. This is either a copy and paste, or browse to a certificate package. Which option is chosen depends on the format your certificate provider supplied the certificate in. Click **Next**.
7. Once the certificate is imported, click **Finish**.

## Configuring self-signed certificates

Windows SBS 2011 Standard uses a self-signed certificate out-of-the-box. The self-signed certificate does not incur any additional cost. To ensure you have a working self-signed certificate, and to be able to use it, you need to ensure you have your server configured to the point that the required components are configured. Therefore, you must run the Connect to the Internet and Setup your Internet address wizards. These wizards will allow your Windows SBS 2011 Standard server to be connected to the Internet, and have Exchange and remote access configured, along with the self-signed certificate.

Once these two wizards have been run, your self-signed certificate has been created and the Windows SBS 2011 Standard server has been configured to use the certificate for remote access activities.

## Managing certificate packages

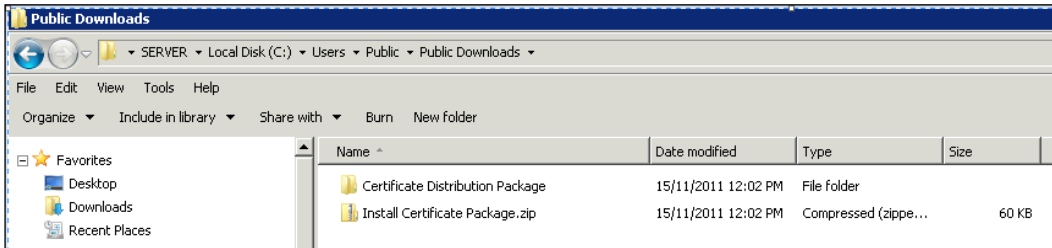
Once your Windows SBS 2011 Standard server has its SSL certificate installed and configured, it is ready to use. However, whether you go with self-signed or trusted third-party certificate will govern what the next step is on the client devices.

If you choose a trusted certificate purchased from a certificate provider, you will not have to do anything to your client device. The client devices do not need a certificate to be installed.

If however you have a self-signed certificate, your certificate will need to be installed manually on your client devices.

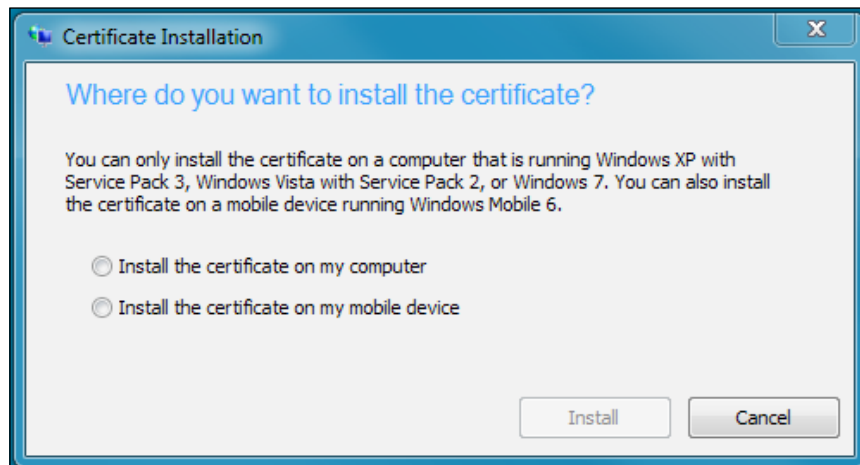
To have the self-signed certificate installed on the client device you need to obtain the package from your Windows SBS 2011 Standard server, from any of the following paths:

- Local Disk: C:\users\Public\Public Downloads
- UNC: \\servername\Public\Public Downloads
- UNC: \\sites\Public\Public Downloads



The Certificate package contains two files, the root certificate and `InstallCertificate.exe`. These files are available in uncompressed format or compressed in a `.zip` file.

To install the self-signed certificate, copy the certificate package to your computer and run `InstallCertificate.exe`:



To install the certificate into the machine's Trusted Root Certification Authority store, select **Install the certificate on my computer**. Note, you must be running Windows XP Service Pack 3 or later.

To install on a mobile device, running Windows Mobile 6 or later, connect your device to a machine running ActiveSync or Windows Mobile Device Center. Select **Install the certificate on my mobile device**.



Note: Domain joined clients do not require this package to be installed on them, as they already have this certificate in their trusted store.

## Importing and exporting during setup for migration

If you are carrying out a migration from a previous version of Windows SBS server to Windows SBS 2011 Standard server, you may wish to transfer the certificate package to your new server. The following is the procedure to achieve this.

### Self-issued certificates

Migration of self-issued certificate is not supported. If you are using a self-issued certificate you must install the certificate package on the required devices as described in the *Managing certificate packages* section.

### Trusted third-party certificates

To move your trusted third-party certificate from a previous server to the Windows SBS 2011 Standard server, use the following procedure to export the certificate from the Source Server and import it into the Destination Server. Then use the Add a Trusted Certificate Wizard to connect the certificate to Remote Web Access.

Export a trusted certificate from the Source Server using the following steps:

1. On the Source server, click **Start | Run**. Type `mmc.exe` and click **Enter**.
2. In the console, click **File | Add/Remove Snap-in**.
3. Click **Add** and choose **Certificates**. Click **Add** and then click **OK**.
4. At the pop-up window, select **Computer Account**, click **Finish**, and then click **OK**.
5. Expand **Certificates**, expand **Personal**, and then click **Certificates**.
6. Right click your trusted certificate (for example, `remote.domainname.com`), click **All Tasks**, and then click **Export**.
7. Click **Next** in the **Certificate Export Wizard**.
8. Make sure **Yes, export the private key** is selected, click **Next**.

9. Make sure **Include all certificates in the certificate path if possible** and **Export all extended properties** are selected, and then click **Next**. Do not select **Delete the private key if the export is successful**.
10. Enter a password for the protection of the certificate.
11. Choose the location to save the .pfx file (for example, c:\trustedcert.pfx), and then click **Next**.
12. Click **Finish** to complete the Wizard.

To import a trusted third-party certificate to the Destination Server use the following steps:

1. Copy the trustedcert.pfx file to the Destination Server.
2. On the Destination Server, click **Start | Run**, type mmc.exe, and click **Enter**.
3. When the console opens, click **File | Add/Remove Snap-in**.
4. Choose the **Certification** option and click **Add**.
5. In the pop-up window, select **Computer Account**, click **Finish**, and then click **OK**.
6. Expand **Certificates**, expand **Personal**, and then click **Certificates**.
7. Right click **Certificates**. Click **All Tasks** and then click **Import**.
8. On the certificates **Import Wizard Welcome** page, click **Next**.
9. Browse to the saved .pfx file location and then click **Next**.
10. Enter the password you created to protect the certificate during export, ensure **Mark this key as exportable** and **Include all extended properties** are selected, and then click **Next**.
11. Ensure the certificate is imported to the Personal folder, and click **Next**.
12. Finish the wizard.

You now have transferred you trusted third-party certificate from the source to the destination server.

## Test your knowledge

1. You have a LOB application that is crashing often. There is a critical event in the application log. You wish to be notified immediately when this particular event occurs. How?
  - a. In the SBS Console, create a new custom report. Select Server Event Logs and e-mail the report to you.

- b. In The SBS Console, edit the Detailed Network Report. Change the schedule to 12:00 P.M. and select e-mail the report to you.
  - c. In Event Viewer, Application Log, use the Attach a Task to this log action, and select e-mail the report to you.
  - d. In Event Viewer, Application Log, use the Attach to this event, and select e-mail the report to you.
2. You wish to change the schedule for your Microsoft updates, so they do not coincide with another nightly process. What do you need to do?
  - a. In the SBS Console, modify the software Updates Settings schedule.
  - b. In the SBS Console, modify the server updates, set to none: Do not automatically approve any updates.
  - c. In the Update settings console, modify the synchronization schedule to a time suitable after the nightly process.
  - d. In the Update settings console, modify the synchronization schedule to a time suitable to coincide with the nightly process.
3. You are migrating from Windows SBS 2008 to Windows SBS 2011 Standard. The source server uses a trusted third-party certificate. You need to move the certificate to the new destination server. What should you do?
  - a. Copy the certificate bundle from the source server `\Public\Public Downloads` folder to the source server and install it.
  - b. On the source server, Run Certificate Export Wizard, export to `.cer` file. Copy to the destination server and run the Certificate import wizard.
  - c. On the source server, Run Certificate Export Wizard, export to `.pfx` file. Copy to the destination server and run the Certificate import wizard.
  - d. On the destination server, browse to Remote Web workplace website on the source server, and install the certificate onto the destination server.
4. What locations can be used as the destination for the native Windows SBS 2011 Standard backups?
  - a. Tape.
  - b. Network Shares.
  - c. Hard disks.
  - d. Cloud storage.

## **Summary**

This chapter has detailed how to maintain the health and security of your Windows SBS 2011 Standard network. It has done so by using tools such as Windows Server Updates Services (WSUS), monitoring, and backup. Even though this chapter has shown you how to set up these elements, it is important that they be constantly maintained throughout the life of the network. Doing so will not only ensure the smooth running of the network, but also allow you to more easily recover from a disaster should it ever occur.

From here we will move into the final chapter which examines some of the advanced features and configurations of Windows SBS 2011 Standard.

# 6

## Advanced Configuration

Everything so far has covered the basics of setting up and maintaining your Windows Small Business Server (SBS) 2011 Standard network. However, Windows SBS 2011 Standard is a product that provides a good deal more flexibility and scalability. It does this through its advanced configuration which includes utilizing things like Premium Add-On Packs and virtualization.

This chapter will aim to show you some of these advanced topics that will provide a greater level of flexibility in your network configuration. To complete any certification examination, you will need to understand these advanced Windows SBS 2011 Standard options and how to take the product beyond the basics.

In this chapter we shall cover:

- Premium Add-On Packs
- Hyper-V
- Using the Best Practices Analyzer
- Test your knowledge

So let's get on with it...

### **Premium Add-On Packs**

Most Windows SBS 2011 Standard installations will only require a single server. However, there are a growing number of sites that require multiple servers. Additional servers may function for line of business applications, web servers, or Remote Desktop Services (RDS). Windows SBS 2011 Standard can accommodate these additional requirements via the Premium Add-On Packs.

## **What is included in the Premium Add-On Pack**

The Premium Add-On Pack includes:

- Windows Server 2008 R2 standard
- Microsoft SQL Server 2008 R2 for Small Business

## **Licensing for Add-On Packs**

Windows SBS 2011 Premium Add-On Packs are available as an additional purchase. You can purchase as many additional Premium Add-On Packs as you require for your network. It is important to remember that the Premium Add-On Packs do not allow you to exceed the maximum number of 75 CALs on your network, being a combination of both devices and users. You also need to understand that the Premium Add-On Pack only licenses existing Windows SBS 2011 Standard for those applications (Windows Server 2008 R2 and Microsoft SQL Server 2008 R2 for Small Business) that are part of the pack. If you install any other application on the Premium Add-On servers, then these will need to be licensed separately.

If you install Microsoft SQL Server 2008 R2 on your Microsoft SBS 2011 Standard network, any user that connects to the SQL application will require a SBS Premium CAL in addition to their Windows SBS 2011 Standard CAL

## **Add-On Pack scenarios**

The Windows SBS 2011 Premium Add-On can be used in a number of different ways including:

### **Line of business applications**

Some third-party software applications may require their own dedicated server or perhaps for performance and availability reasons, the business may want to host applications on a secondary server. The Premium Add-On Pack provides the ability to install Windows Server 2008 R2 on a second server along with SQL Server 2008 R2 to support many third-party database applications.

### **Virtualization**

Using technologies such as Microsoft Hyper-V, it is easy to reduce the amount of physical hardware that is required in a business. With virtualization you can consolidate multiple machines on a single piece of hardware. The Premium Add-On Pack gives you a greater level of flexibility in providing this environment.



## Remote Desktop Services

Even though Windows SBS 2011 Standard supports a wide variety of remote options, demands for access to third-party applications, session-based workstations, and shared remote desktops may warrant the introduction of a dedicated **Remote Desktop Services (RDS)** server. The Premium Add-On Pack allows the installation of RDS on a separate machine to provide dedicated resources for such an environment.

## Additional domain controller

Windows SBS 2011 Server is normally a single server environment. This means that it is also a network with a single **Domain Controller (DC)** and a single copy of **Active Directory (AD)**. To improve the redundancy of the network you can use the Premium Add-On Pack to implement additional DCs on the network. This also works well in the scenario where you have branch offices that require the services of a DC in their location to improve performance. There is also the ability to implement BranchCache in this scenario to also greatly improve performance for remote users.

## Office Web Apps

Office Web Apps is an Add-On for SharePoint 2010 that gives you the ability to view and edit Microsoft Office documents in a web browser. Using the Premium Add-On, another instance of SharePoint 2010 could be configured in the network and have Office Web Apps added to it, giving users the freedom to access, edit, and share Microsoft Office documents from anywhere there is an Internet connection.

## Hyper-V

One of the main uses stated for the Premium Add-On Pack is virtualization of your Windows SBS 2011 Standard server as well as additional virtual machines. The virtualization feature is known as Microsoft Hyper-V, with the feature being available on Windows Server 2008 x64 and Windows Server 2008 R2. Microsoft Hyper-V is described as technology providing software infrastructure and basic management tools that can be used to create and manage a virtualized server environment. This means that Hyper-V enables the running of multiple operating systems concurrently as "virtual machines" on a single physical server.

## Hyper-V basics

Microsoft Hyper-V enables you to run multiple operation systems on a single piece of hardware. This helps reduce hardware costs, obtain greater utilization of hardware and reduce power consumption/lower your environmental impact, to name a few advantages.

To use Hyper-V:

1. Although it is unlikely that modern hardware will not be able to run Hyper-V, it is important that you ensure that it does meet the requirements, if you plan to deploy a Hyper-V solution.
2. Install the Hyper-V role. It is suggested that you ensure your server operating system is fully patched before installing this role, to ensure you have the latest version of Hyper-V.
3. Create a virtual machine. This is done via the Hyper-V Manager. This is where you allocate resources to a virtual machine such as RAM, hard drives, network cards, and so on.
4. Install the operating systems and integration services. The operating system is installed as you would on physical hardware. Integration Services provide support to integrate the virtual machine with the host machine.

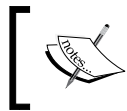
Once these steps have been completed you can start up your virtual machine and begin using it.

## Hardware virtualization in BIOS

In order to have the Hyper-V role functioning, you need to ensure your hardware, and in particular the BIOS settings need to be enabled.

Hyper-V requires the following specific hardware:

- 64 bit only and thus requires a 64 bit (x64) processor
- Hardware Assisted Virtualization must be enabled in the BIOS
- Hardware **Data Execution Protection (DEP)** must be available and enabled in the BIOS



Note that if you change any of the above settings in BIOS you must turn the server off, not simply reboot it, for the settings to take effect.

If you are able to, run the free tools available for either Intel or AMD on your server to ensure you hardware is compatible and the BIOS is configured to the requirements. There are other third-party tools freely available on the Internet. The following link has a free tool to download and run to check your hardware: <http://www.grc.com/securable.htm>.

## Hyper-V licensing basics

There are two very important points to remember when you are virtualizing Windows SBS 2011 Standard using Hyper-V.

1. Windows SBS 2011 Standard is not supported to be used as the Hyper-V Host. Windows SBS 2011 Standard can only ever be the guest/child.
2. You will require a license for at least one other server operating system (either Windows Server 2008 x64, or Windows Server 2008 R2, either via the Premium Add-On Pack, or purchased separately to be the Parent/Host for the Hyper-V role to be installed on. Microsoft Hyper-V Server 2008 R2 is another option and is free from Microsoft).

The Hyper-V licensing rules that apply to the different versions of Windows Server still apply in a Windows SBS 2011 Standard network. For example, Windows 2008 R2 Standard allows installation as the parent operating systems and one virtual server only.

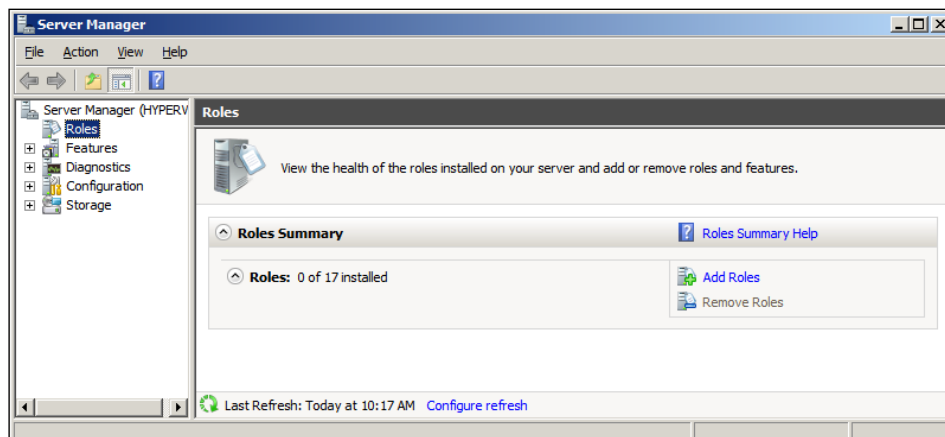
Also note, that once the role of Hyper-V is installed that is the only role allowed on that server, if you also use the same license for a virtual server.

## Installing the Hyper-V role

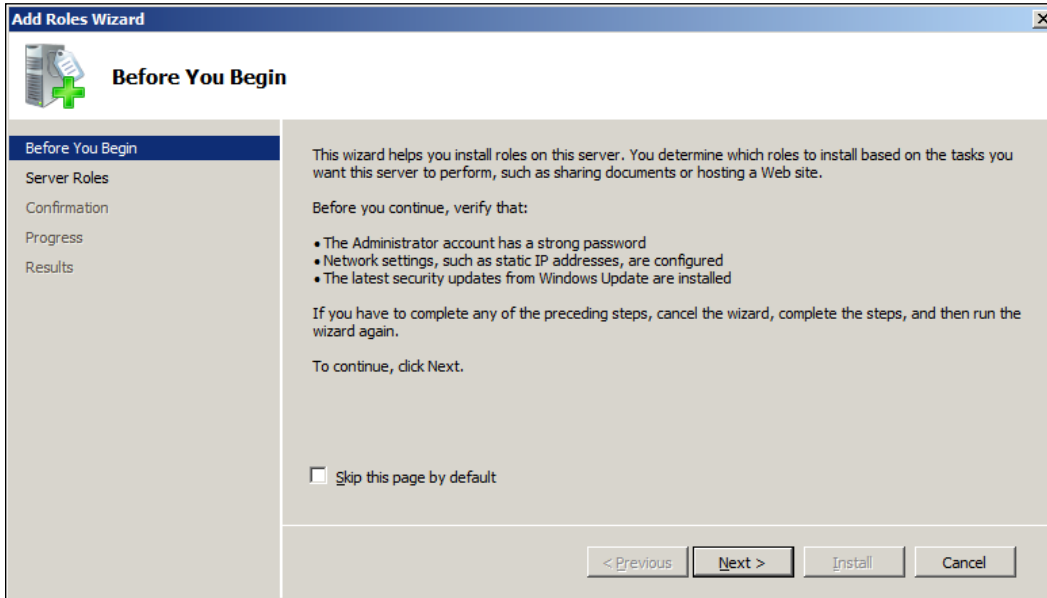
Now that you have an understanding of Hyper-V, the licensing considerations, and required hardware, you can install the Hyper-V Role. In this example we will use Windows 2008 R2 x64 that has been patched to install the Hyper-V role.

To install the Hyper-V role, follow these steps:

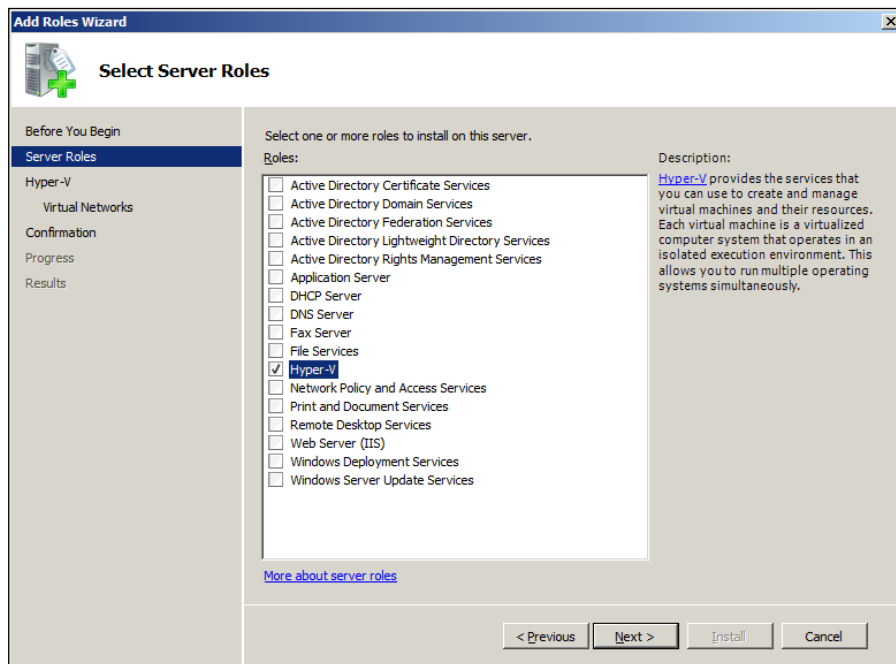
1. Open **Server Manager** and select **Add Roles**:



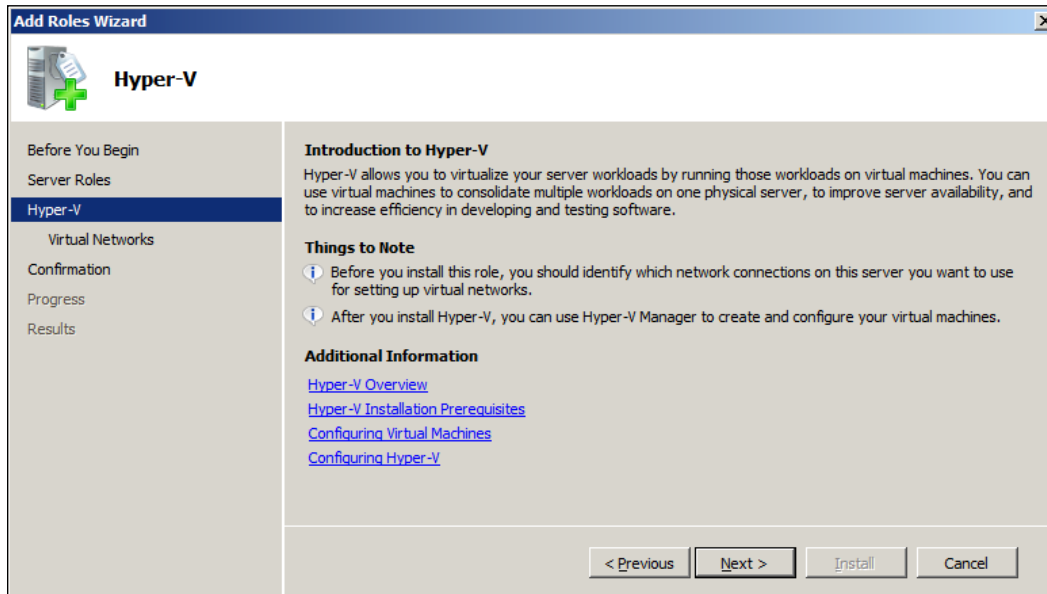
2. Click **Next** on the **Before You Begin** page:



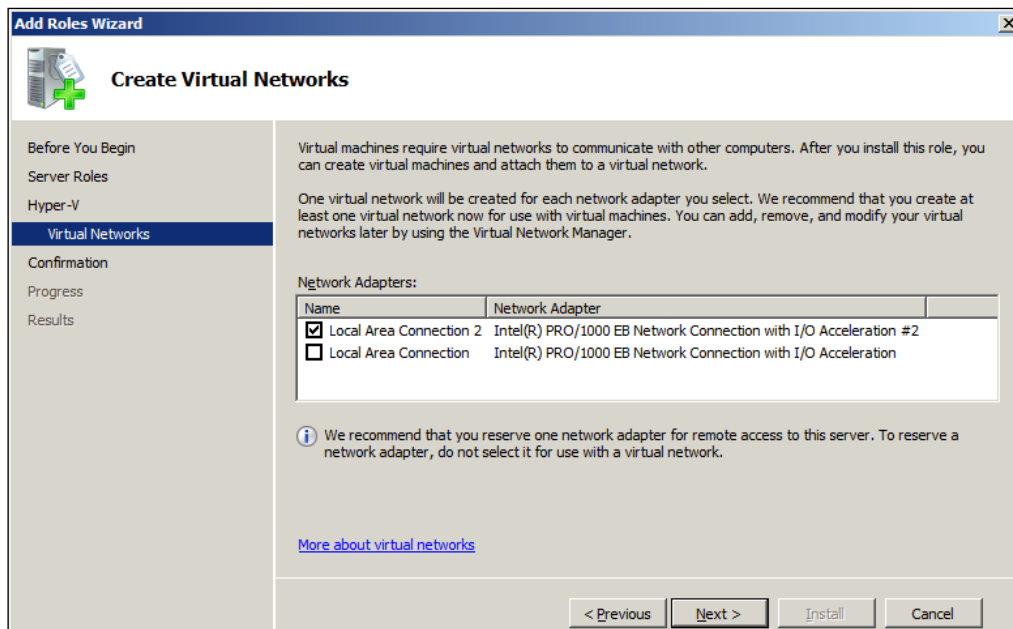
3. Select **Hyper-V** on the **Select Server Roles** page:



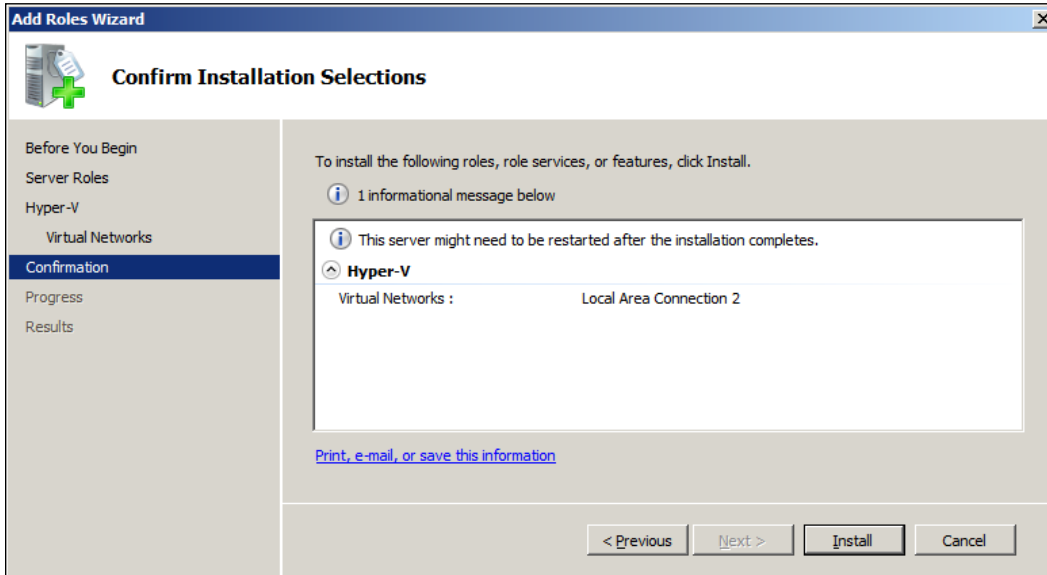
- Click **Next** on the **Hyper-V** page:



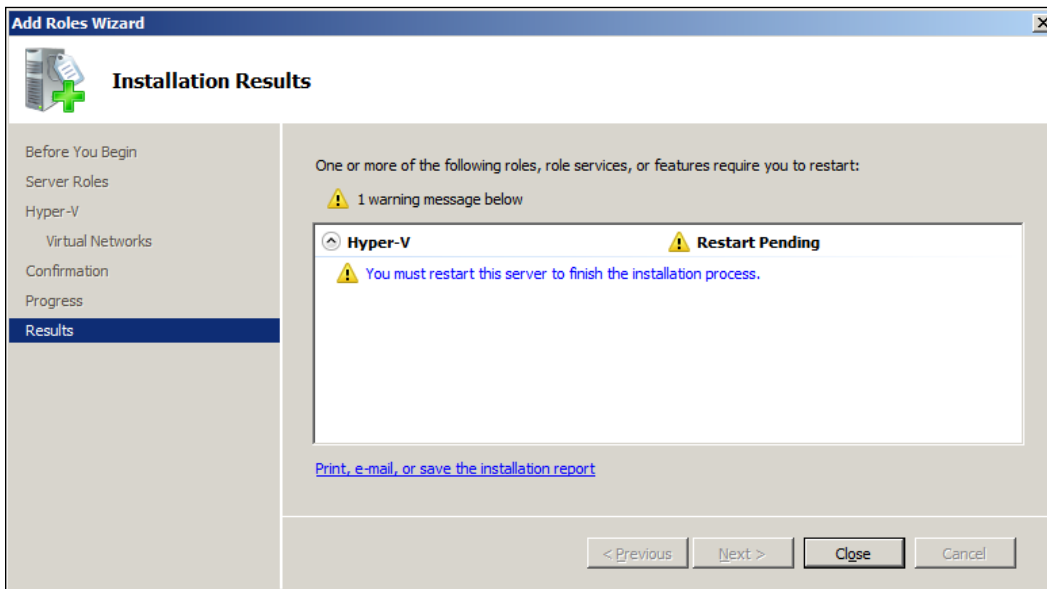
- Select the network adaptors you wish to create virtual networks for. It is recommended that one network adaptor is reserved for the host server:



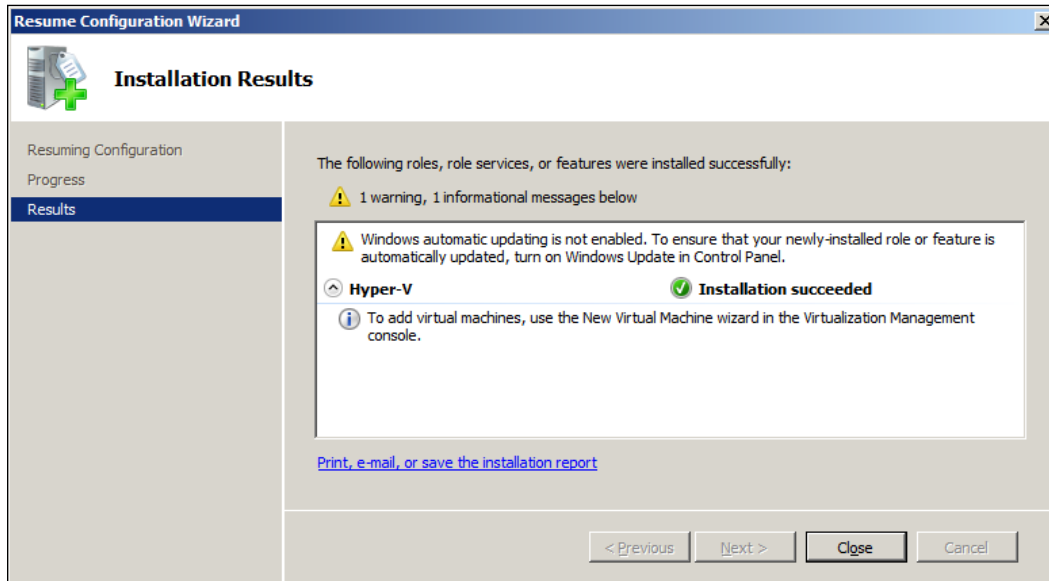
6. Click **Install** to begin the role installation:



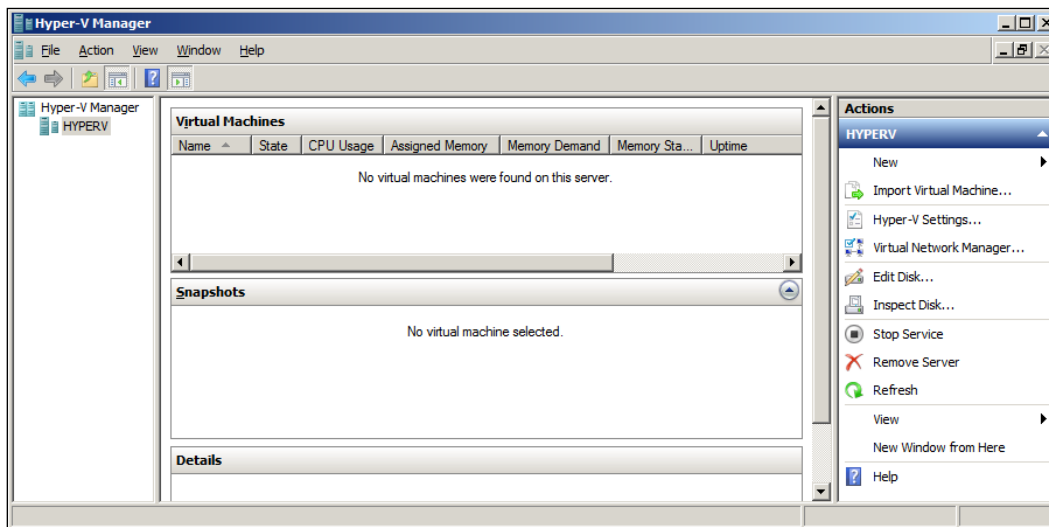
7. Once the role is installed, review any warnings and click **Close**:



- Once the server has been restarted and you log on to the host, the **Installation Results** are displayed. Click **Close** to complete the installation.



- You can then open **Hyper-V Manager** and begin configuring and managing your virtual machines:



## Using the Best Practices Analyzer

The Windows Server Solutions **Best Practices Analyzer (BPA)** is a free download from Microsoft that you can run on your Windows SBS 2011 Standard installation to provide a report on how the installation compares to a set of pre-defined rules and best practices.

This can be very handy when you are attempting to troubleshoot a Windows SBS 2011 Standard installation as it provides a known benchmark against which you can compare the current system. The good thing is that you can continue to use the BPA against your installation over time as the Analyzer is constantly updated with additional rules and best practices as well.

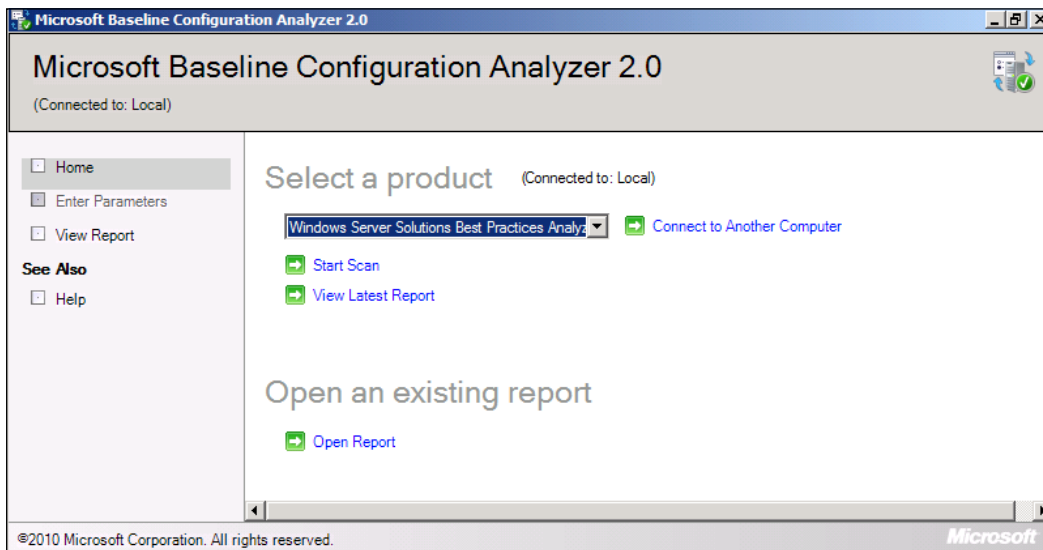
The first step in running the BPA is to download and install Microsoft Baseline Configuration Analyzer 2.0 and install it on your Windows SBS 2011 Standard server. You can download the MBCA 2.0 from the following URL:

<http://go.microsoft.com/fwlink/?LinkID=188529>.

The next step is to download and install the BPA on your Windows SBS 2011 Standard server. You can download the BPA from the following URL:

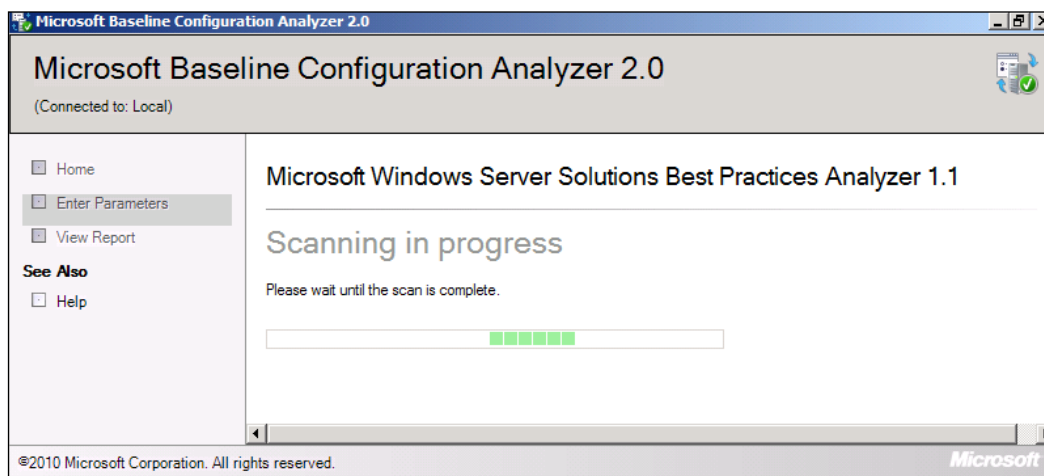
<http://www.microsoft.com/download/en/details.aspx?id=15556>.

After you have download and installed the BPA, you can run it from the Start menu on the server. When launched you should see a screen like the following screenshot:



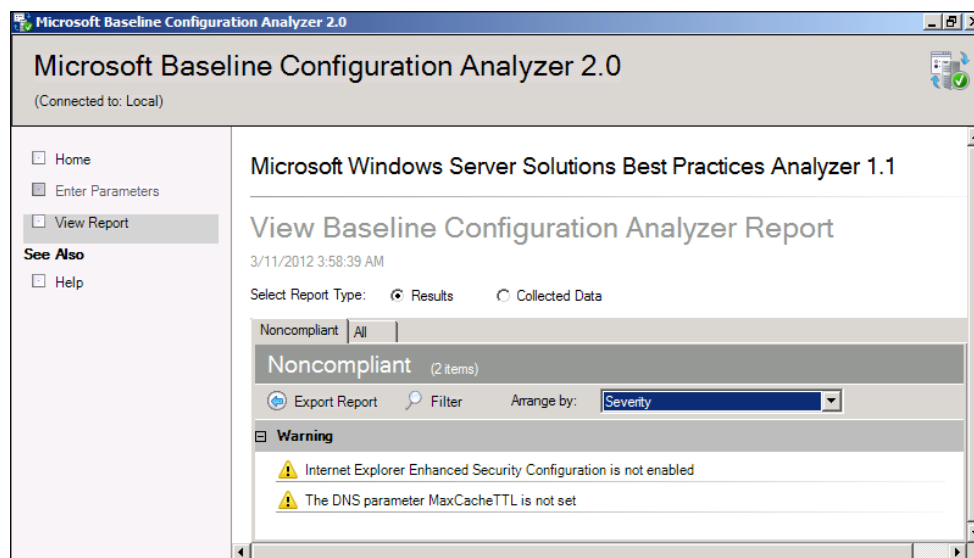


Ensure that you have the local computer connected and select **Windows Server Solutions Best Practices Analyzer** from the pull down menu at the top of the screen. Then click on the **Start Scan** hyperlink to commence the process:



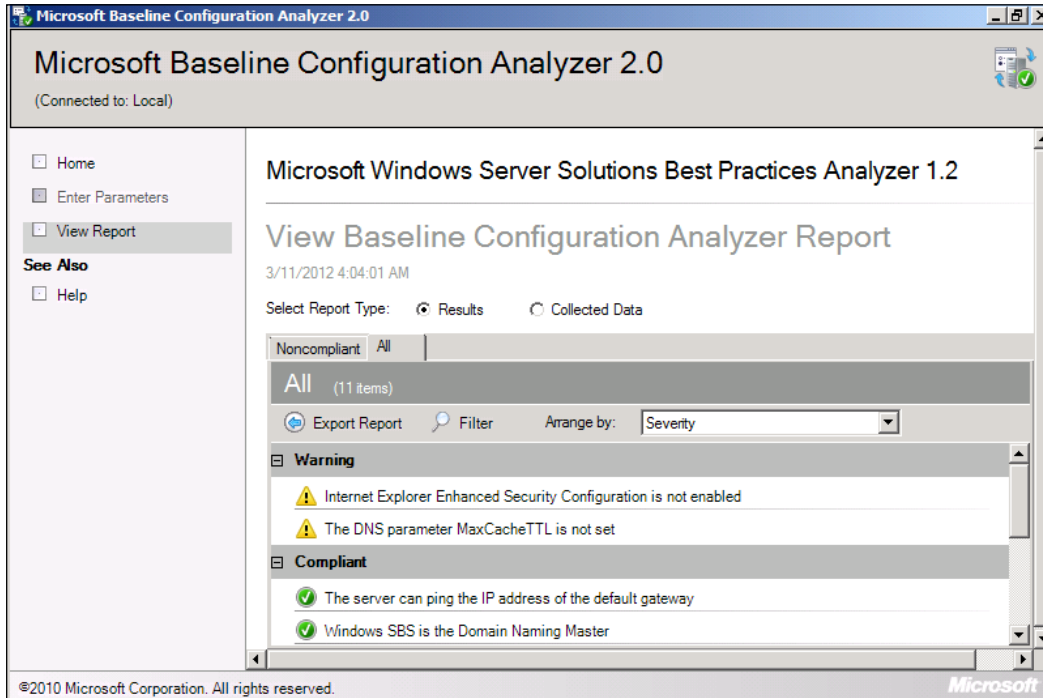
The server will then be scanned and a progress bar will scroll across the screen indicating the process is running. This scanning process may take several minutes to complete.

When the scanning process is complete you will see a results screen like the following screenshot:



The results that you obtain will vary since they depend on each unique installation. You will see that you can elect to display either the **Results** or the **Collected Data** by selecting the **Report Type**.

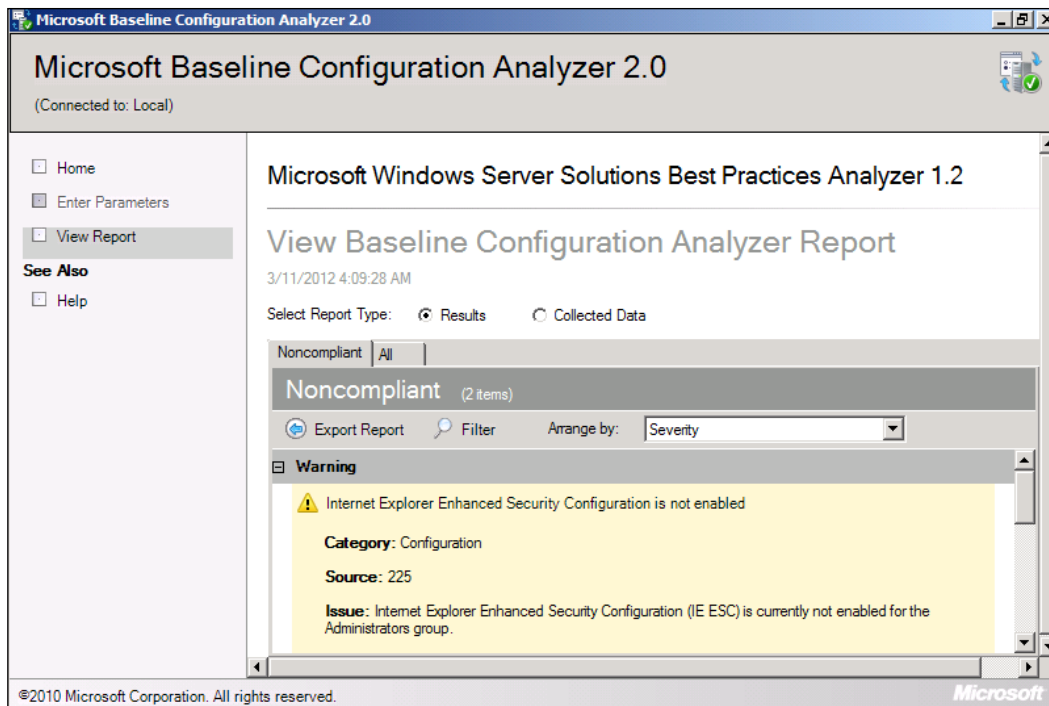
In the lower part of the screen you can elect to see the issues that may have been detected by the Analyzer or all the data that has been collected during the process, including the **Compliant** configuration:



You can also elect to export the results to an XML file using the **Export Report** button. You can likewise also filter the report to find specific information you are looking for and finally you can arrange the report by a number of criteria.

You can continue to run the BPA as many times as you like and it is best practice to run it regularly to ensure that your system meets the latest recommendations and best practices. Every time you run the BPA, it will automatically check for updated rules and information and prompt you to download these as required.

Many of the items that are noted in the BPA will also contain information and links to more information to help you understand why these recommendations have been made:



All you need to do to view this information is, normally, to just click on that area in the report. This can even be done with the compliant results.

The BPA tool is a very handy tool that should form a regular part of an SBS administrator's management arsenal for the simple reason that it not only provides a way of comparing the installation to a common set of best practices, but also as a way of recording and tracking your installation and configuration over time. It is therefore something that is highly recommended be installed on every SBS server.

## Test your knowledge

1. Your network currently runs a single server running a 32 bit LOB application. This application can only run on a 32 bit operation system. You wish to deploy Windows SBS 2011 Standard. How do you achieve this?
  - a. Install Windows SBS 2011 Standard, and transfer the LOB application to the Windows SBS 2011 Standard server.
  - b. Install Windows SBS 2011 Standard, and deploy the Hyper-V role on it. Install Windows Server 2008 x86 version and install the LOB application on the x86 server.

- c. Install Windows Server 2008 R2 on a server. Enable the Hyper-V role on it. Install Windows SBS 2011 Standard as a virtual machine. Install the LOB application on the Windows SBS 2011 Standard virtual machine.
  - d. Install Windows Server 2008 R2 on a server. Enable the Hyper-V role on it. Install Windows SBS 2011 Standard as a virtual machine. Install Windows Server 2008 x86 as a virtual machine. Install the LOB application on the Windows Server 2008 x86 virtual machine.
2. You wish to RDP directly into your Hyper-V host server. You have changed the RDP listening port on the host server to 3390. Your router does not have the port address translation feature. What else must you do to be able to connect to the host server using RDP on 3390?
  - a. Configure the network router to port forward port 3389:TCP to the IP of the Hyper-V host server.
  - b. Configure the network router to port forward port 3390:TCP to the IP of the Hyper-V host server.
  - c. Configure the network router to port forward port 4125:TCP to the IP of the Hyper-V host server.
  - d. Configure the network router to port forward port 443:TCP to the IP of the Hyper-V host server.
3. What licenses does the Premium Add-On provide?
  - a. Windows Server 2008 R2.
  - b. Windows Server 2008 R2 and SQL Server 2008 Small Business Edition.
  - c. SQL Server 2008 Standard.
  - d. Windows Server 2008 and SQL 2008 Standard.
4. How many additional SBS user CALs does the Premium Add-On Pack provide?
  - a. 0.
  - b. 5.
  - c. 10.
  - d. 20.

## **Summary**

The first advanced component of Windows SBS 2011 Standard that you need to become familiar with is the Premium Add-On Pack and what additional functionality it can provide. It basically allows you to install additional Windows and SQL Servers in your SBS network. Another advanced feature is the technology around virtualization that Windows SBS 2011 can take advantage of as a virtualized guest. Virtualization provides the ability to reduce the amount of server hardware in an SBS network and can also take advantage of the Premium Add-On Pack.

However, the advanced options of Windows SBS 2011 Standard do not stop here. There are many, many different ways to configure the product to suit just about any small business need. Where you go from here is up to you but with Windows SBS 2011 Standard you have a fantastic platform for now and the future.



# A Resources

If you run a search for Microsoft Windows Small Business (SBS) 2011 Standard on the Internet, you are likely to receive thousands if not millions of hits. What is provided here is what the authors believe are some of the best resources available. It is strongly recommended that you use these quality links as the initial starting place when searching for more information about Windows SBS 2011 Standard.

## Microsoft

The first point of call should always be information provided by the creator of Windows SBS 2011 Standard. Here you will find a wealth of up-to-date information about all versions of SBS including extensive training material, trials, and demos that you can download to help you with your study:

- Windows Small Business Server: <http://www.microsoft.com/en-us/server-cloud/windows-small-business-server/default.aspx>
- Windows Small Business Server 2011 Training Videos: <http://www.microsoft.com/download/en/details.aspx?id=20225>

## Microsoft Download Center

As has been highlighted, using the media that the product came with is only the beginning to ensuring that your Windows SBS 2011 Standard system is kept up-to-date. You'll not only find critical updates and service packs here, but you'll also find a number of important add-ons and utilities for all versions of SBS that will really help you over the life of the product:

- Migrate to Windows Small Business Server 2011 Standard from Windows Small Business Server 2003: <http://www.microsoft.com/download/en/details.aspx?id=14570>

- Migrate to Windows Small Business Server 2011 Standard from Windows Small Business Server 2008: <http://www.microsoft.com/download/en/details.aspx?id=19219>
- Migrate to Windows Small Business Server 2011 Standard to New Hardware: <http://www.microsoft.com/download/en/details.aspx?id=25237>
- Windows Small Business Server 2011 Standard Installation Guide: <http://www.microsoft.com/download/en/details.aspx?id=13913>

## Microsoft Learning

The best way to demonstrate your knowledge of Windows SBS 2011 Standard is to pass the Microsoft certification exam 70-169. That is the main aim of this book; however, you should also examine the official Microsoft learning material that is available to assist you in your study.

- 70-169: TS: Windows Small Business Server 2011 Standard, Configuring: <http://www.microsoft.com/learning/en/us/Exam.aspx?ID=70-169&Locale=en-us>
- SBS 2011 Learning Bites, in Microsoft Showcase: <http://www.microsoft.com/en-us/showcase/Search.aspx?phrase=SBS+2011>

## TechNet

When you really need to dive under the hood of Windows SBS 2011 Standard, there is no better resource than TechNet for the IT Professional. Here you will find in-depth information and guides to help you configure the product exactly the way that it should be. If you really want to deep dive into Windows SBS 2011 Standard, TechNet should be your starting point.

Windows Small Business Server 2011 Standard: <http://technet.microsoft.com/en-us/library/gg490793.aspx>.

## TechNet Wiki

Think of this as Wikipedia for Windows SBS 2011 Standard. In here you'll find a huge amount of information that not only comes from Microsoft, but also from the many talented and experienced implementers of the product. Don't forget that just like Wikipedia the information here is constantly being updated so it is wise to ensure that you check it regularly.



- Small Business Server 2011 Standard – Build Document I. Overview of SBS 2011: <http://social.technet.microsoft.com/wiki/contents/articles/1906.aspx>
- How to Add the Premium Add-on Server to a SBS 2011 Domain – TS/RDS Role: <http://social.technet.microsoft.com/wiki/contents/articles/3298.aspx>

## Blogs

There are lots and lots of Windows SBS 2011 Standard blogs out there. Some talk about nothing else while others focus on a very specific part of the product. Most importantly here you'll find blogs from the most-experienced and widely-recognized people in the industry. The topics and material they cover in detail are enormous. In addition they'll also point you to some additional great resources, so add these blogs to your favorite RSS reader and keep you finger on the pulse of the real world of Windows SBS 2011 Standard.

- The Official SBS Blog: <http://blogs.technet.com/b/sbs/>
- SBS Diva Blog: <http://msmvps.com/blogs/bradley/default.aspx>
- Share iT...: <http://blog.ronnypot.nl/>
- SBSfaq.com: [http://www.sbsfaq.com/?page\\_id=9](http://www.sbsfaq.com/?page_id=9)
- Title (Required): <http://www.titlerequired.com>
- MPECS Inc Blog: <http://blog.mpecsinc.ca>
- CIAOPS Supportweb: <http://support.ciaops.net.au/blog>

## E-mail lists

If there was ever a fire hose of information on all things related to SBS, then these lists are it. They have hundreds, if not thousands of subscribers from all over the world who engage in lively debates not only about technology but also the business applications of Windows SBS 2011 Standard. Make sure that you have configured your e-mail rules and be prepared for more information about SBS that you are ever likely to be able to read.

- SBS2K: [sbs2k-subscribe@yahoogroups.com](mailto:sbs2k-subscribe@yahoogroups.com)
- SmallbizIT: [smallbizIT-subscribe@yahoogroups.com](mailto:smallbizIT-subscribe@yahoogroups.com)

## **Summary**

As mentioned in the introduction, this list of resources is far from complete. There is a growing number of websites and blogs totally dedicated to Windows Small Business Server. Also, we can't stress enough the benefits of getting involved with the SBS community who are some of the most passionate and knowledgeable sources of information for the product.

We believe that you should have no trouble in locating more than enough resources, using the information that has been provided here as a starting point, to assist you getting through the certification exam.

# B

## Test your Knowledge Answers

Throughout this book, at the end of each chapter we have challenged your knowledge of the chapter with questions. The following are those questions, the correct answers and an explanation of how we came to that answer.

### Chapter 1

1. c: Always back up your server before starting a migration.
2. b: Windows SBS 2011 Standard can NOT be a Hyper-V host. Always install Windows Server 2008 R2 as the Hyper-V host and install Windows SBS 2011 Standard as a guest virtual machine.
3. c: The minimum amount of RAM required on Windows SBS 2011 Standard is 8 GB.
4. c: Windows SBS 2011 Standard can have up to a maximum of 75 clients; this is the total of user and device CALs.
5. c: Once the Migration Preparation Tool has been run on the source server you have 21 days to complete the migration.

### Chapter 2

1. b: With port 443 open you can access the RWA webpage, and thus give yourself access to any computer you are given access to, and open files via shared folders, and so on.
2. d: RWA gives you access to the Windows SBS 2011 Standard, Shared Folders, OWA, Companyweb, and Remote Access to computers.

3. a: Windows SBS Console, on the Users and Groups, and then Users tab. Select the user and click on Edit user account properties in the Tasks pane.
4. a, c, and d: You need to have port forwarded in the router, run the Wizards in the Windows SBS Console, and set up individual user properties to assign computer access. B is not required as the firewall is configured as part of the SBS wizards.
5. c: The only way to increase the number of concurrent VPN tunnel connections is via the Routing and remote access console.

## **Chapter 3**

1. c: File Server Resource Manager allows you to create a report that looks for Large Files and Duplicate Files. Once you have this information you can delete or move these files to free up disk space.
2. c and d: An accepted domain is the one used by the Exchange server to send or receive e-mails. The Email address Policy is how you added e-mail addresses for the recipients, so that they can send and receive those domain e-mails.
3. b: SQL 2008 R2 Express maximum database limit is 10 GB. SharePoint uses SQL to host its database.
4. b and c: SMB or share permissions are to share the folder with some permission control, and NTFS permissions are for the folders and files in the folder, with greater permission control.

## **Chapter 4**

1. b: Since the security group already exists, you can go into the SBS console, Users and Groups, Groups, and edit the properties of that manager's group. You simply need to add the e-mail address you require so that all members receive notification.
2. c: Windows 7 Home Premium cannot be joined to a domain; you must upgrade Windows 7 to Professional or Ultimate. This is achieved by using the Windows Anytime Upgrade.
3. d: First you have to grant the group print permission to the printer and remove the Everyone group; this sets the permissions on the printer. The easiest way to add given users the same rights in a SBS is to create a role template and apply that to the group and hence the role.
4. d: These are the three default user roles available in a Windows SBS 2011 Standard server.

5. b: The only way you should join a computer (not server) to a Windows SBS 2011 Standard network is by using `http://connect`.

## Chapter 5

1. d: In event Viewer, you can run the Attach a Task to this event action wizard. This can also send an e-mail to you when the event log is created.
2. d: You can't modify the update synchronization schedule in the Windows SBS Console; it must be done in the Update settings console.
3. c: As per the Migration whitepaper, the certificate that is exported from the source server must be in the PFX format. You must export and import via the Certificate import and export wizards to be transferred correctly.
4. c: Windows SBS 2011 Standard backup can only back up to USB, IEEE 1394, eSATA, and local hard drives installed on the server.

## Chapter 6

1. d: You cannot install the Hyper-V role on a Windows SBS 2011 Standard. You must use a second server operating system with the Hyper-V role installed, and then install Windows SBS 2011 Standard as a virtual machine. You can then add a second virtual machine for the LOB application; in this case a 32-bit version of Windows Server 2008.
2. b: The Hyper-V host is not part of the Windows SBS 2011 Standard domain, so port forward from the router must be done. In this case, the listening port is 3390.
3. b: The Premium Add-On pack provides the full products of both Windows Server 2008 R2 and SQL Server 2008 R2 Standard Edition for Small Business.
4. a: The Premium Add-On pack is Server and SQL only. It doesn't contain any additional CALs.



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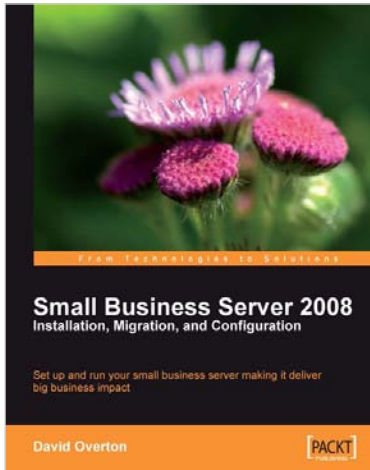
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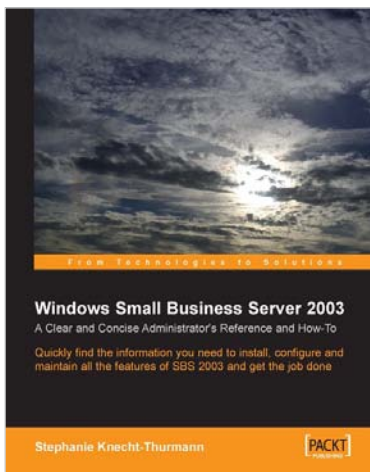
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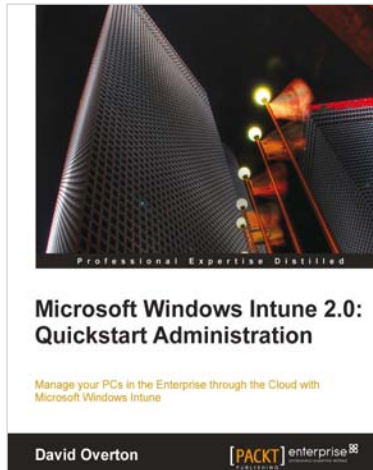
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