

Setting up SBS 4.5 to use a Cable Modem
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Considerations for set-up

Most ISP's offer two different deals.

1.) Single user - Cable modem (will only work with 1 network card, network card gets a real IP address, some need a cross over cable)

2.) Business / Multi-user (Network) - Router (uses Network Address Translations (NAT), works with any network cards that make a request, should be a normal cable)

Network Address Translation (NAT) is a means of allowing multiple PC's to simultaneously connect to the Internet using 1 IP address. It was invented to overcome the problem of there being an IP shortage.

The way it works in when a PC wants to do something on the internet the router remembers which machine asked for the information (e.g. Website) it then makes the request from itself to the destination, when the destination replies to the router it looks up on its list who asked for the info and then sends it to that workstation. There's a little more to it than that but you get the idea.

As the router is the only device with a real IP address (Internet IP address, Not 10.x.x.x or 192.x.x.x) it is the only thing which is really connected. The network ranges 10.x.x.x & 192.x.x.x are reserved for internal networks only so they do not cause problems on the Internet.

Because of this if you wanted to connect into the network from another PC on the internet to collect email or FTP files etc you would have to make the request to the IP address of the router. You would need to configure the router with a static NAT, you would put in some thing like external IP address > servers IP address. For example if the external address was 62.30.196.58 and the servers IP address of the card connected to the router is 192.168.0.2 then you would configure the router to forward all packets sent to 62.30.196.58 to 192.168.0.2.

With a router all machines should be able to use it to gain Internet access without the need for Proxy. There are Pro's and Con's to doing this or using Proxy as well.

Router

Pro's

Hardware device so unlikely to fail.

Not dependent on the server working to allow Internet access.

Con's

If a hacker manages to hack the router they would be straight onto the internal network.

No caching takes place apart from the workstations own cache so every time a different workstation goes to a site someone else has already been to it is fully downloaded again causing more traffic.

No control over who uses the Internet and what they do when there on there.

Proxy with router on second network card.

Pro's

Full control over who uses the Internet and what they do.

Log's of where people have gone.

Caching of web sites to speed things up and reduce network traffic.

Additional security, if a hacker manages to hack the router then they still have to hack through the server (Proxy) before they get to the internal network.

Con's

When the server is down so is Internet access.

I would use Proxy with router on second network card.

Set-up

TIP

Before we start a little tip is when you have to restart the server stop the Exchange services first as this will reduce the amount of time the server takes to shut down.

Ideally we still want to be running DHCP on the SBS Server however if the router is also running DHCP it will normally cause the DHCP service on the server to stop as it detects another DHCP server on the second network card.

If you can disable DHCP on the router and manually enter the TCP/IP details then you should be OK to continue to use DHCP which will mean you don't have to manually set the IP address on ever PC. If this is the case you can skip the next section about disabling DHCP on the server.

If you are using a cable modem without a router you are probably going to have to disable DHCP on the server. This is due to two factors.

- 1.) You will not be able to obtain an IP address from your cable modem as DHCP servers have to have static IP addresses hence the option is greyed out.
- 2.) Your SBS server will detect another DHCP server and stop the DHCP service.

Disabling DHCP on the server

Go to all workstations and check they have a TCP/IP address manually entered. If not then run winipcfg to find out the current address and enter that as the manual address (keep a list of the address for future reference).

On the server right click on network neighbourhood

Properties

Services

Remove Microsoft DHCP Server

Restart server

Fitting the second network card

Fit 2nd network card when server shuts down and connect to cable modem / router using a crossover cable or the router using a normal patch cable.

When server boots back up install driver for 2nd network card, when asked for DHCP information ensure obtain an IP address from DHCP server is selected and you enter the ISP's DNS servers or your router if it provides DNS. You can add both.

The server will reboot again.

When the server boots back up you should now be able to ping external addresses e.g. 195.147.246.57 & www.globalnet.co.uk.

Pinging an IP address tests that traffic is going in and out OK.

Pinging a domain name test the same but also that DNS is working which resolves the domain name to the IP address.

If both of these are successful then the cable modem is in and working.

When I did this I got a couldn't ping the router / cable modem so I swapped the function of the NIC's around so I was using the card I new worked for the router / cable modem and discovered that the second NIC wasn't working. I moved the NIC to another PCI slot and then it all started to work. It took longer prove that then to do the rest of the configuration.

Disabling autodial on Microsoft Proxy

Go into Start, Programs, Microsoft Proxy, Microsoft Management Console. Right click Web Proxy, properties

Auto Dial

Un-tick all boxes

All workstations should now be able to access the Internet via the cable modem (check this and make sure the modem isn't dialling). If it isn't working go into control panel and services and stop and start everything referring to Proxy, Web & WWW Publishing.

Setting up Microsoft Exchange

Next reconfigure Microsoft Exchange Server to use the cable modem.

Go into Exchange Admin

Connectors

Internet Mail Connector

In connections un-tick dial using & change the forward all messages to host from old ISP's Mail Server to the New ISP's Mail Server.

Click OK

Go into Connector for POP3 mailboxes if you are using it and change to Full Time / Broadband modem (it will check for mail every 15 minutes).

Click add, enter the details for the new email account from the New ISP.

Click OK.

Go into services in control panel again and stop Microsoft Exchange Internet Mail Service (it will also stop the POP3 connector). Now start the Microsoft Exchange Connector for POP3 (it will also start the Internet mail service).

Send and receive a couple of test emails from anyone's PC. This can take up to 15 for your server to collect it, but you can click on deliver now on the POP3 connector in exchange admin to speed it up.

It's a good idea to set-up a Hotmail account to use when checking sending and receiving of the emails.

Protecting the server from SPAM

YOU ONLY NEED TO DO THIS IF USING A CABLE MODEM NOT A ROUTER, AS THE SERVER IS NOT ACCESSABLE FROM THE INTERNET UNLES IT HAS A REAL IP ADDRESS (AN ADDRESS NOT STARTING WITH 192. OR 10.)

You will need to install Service Pack 4 for Exchange if there is no routing restrictions button at the bottom of the section in Internet mail service (Exchange Admin, Connectors, Internet Mail Service, Routing). Either way you should end up with this button, click it and tick Hosts and clients with these IP address. Add the following

Local Network
e.g. 10.0.0.0
255.255.255.0 (Subnet Mask)

Loopback Address
127.0.0.0
255.255.255.0 (Subnet Mask)

This stops people SPAMMING from the server.

Go into services in control panel again and stop Microsoft Exchange Internet Mail Service (it will also stop the POP3 connector). Now start the Microsoft Exchange Connector for POP3 (it will also start the Internet mail service).

If you are running Norton AntiVirus

Last thing is to check Norton AntiVirus, go into live update in control panel and make sure it is using internet explorer settings, now check the internet explorer settings and make sure it isn't set to use a dialup connection.

Disabling the Modem

Turn off the Internet Modem to make sure everything is now using the cable modem.

You can now use your spare modem for a number of things.

- 1.) Dial in for remote users.
- 2.) Redundant Internet connection in case the cable modem fails.
- 3.) For sending or receiving FAX's (Fax Server built into SBS)

Finally

Go home and on the way buy a crate of beer for Mark.

Mark Allbutt
mark.allbutt@windowsuncovered.com
MCSE-NT4, MCSE-2000, MCP+I, CCSE, CCSA, SAP

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