

# What are Servers?

An article by [My iT Support](#) December 2009

Servers are a familiar term but many don't know what they really are. The following outlines what a server means to you, and their basic functions and place within your business. There is minimal focus on the specifics of server functionality as these are covered in other papers found on this website.

## Server Overview

Essentially a server is a powerful computer that acts as the central administration point on your computer network. There are two defining differences between a server and a desktop computer:

- Server machines are built with different hardware specifications in respect to memory (RAM), hard drives (Storage) power supplies etc that allow them to run 24 hours a day in a robust and fault tolerant environment. They may look the same as your desktop computer, but they are very different under the hood so to speak.
- Their Operating System is different from say Windows XP, Vista or Seven. They are installed with special server operating systems to manage their unique role on the network. It is important to note that Microsoft and Linux for example design and sell the operating systems only, which is how we loosely refer to the server platform. They do not make the *actual* computers. These are made by computer manufactures such as Dell or HP.

Roles of a server can include the following in a typical business scenario:

- File server: keeping folders, documents, pictures, accounting files in a central spot on the network.
- Centralised Backup: As all files and folders are kept here, they easily backed up at one central location
- Network permission structure where users (staff/ personnel) on your network are allocated differing permissions for accessing relevant folders or files. For example the Accounts folder can be accessed by the bookkeeper and managers, but denied to general staff
- A central location for specific programs. Many businesses run specialised applications and databases that are specific to their business, and many of these applications are designed to run on servers
- Central location for the installation of printers, scanners and fax machines.
- Control communication between desktops, modem /router and external access such as the Internet

They also offer valuable tools for running your business such as:

- Collect and manage email allowing the sharing of Calendars and contacts amongst colleagues
- Webmail facilities that allow staff to access their mail offsite, which is great for Sales reps and part time employees working from home.

- Remote Desktop which allows you to view your work screen (desktop) at home just like you are sitting in the office.
- VPN (Virtual Private Network) access which allows you to connect to the server outside the office and browse files and folder etc. This is different from Remote Desktop above in that you are not viewing the screen of your work computer, just accessing the network resources in the office.

Servers come in many forms. Below are examples of server roles that can be found in networks across the world.

- File servers with roles as outlined above, and the most common of the server roles
- Web servers, which are built to deliver web sites to the internet
- Terminal Servers: special technology where big servers do all the work in the place of desktop computer - normally found in large organisations
- Database servers which hold large databases ran with specialised database engines like SQL, again typically found in larger organisations.

There are endless examples and definitions of server roles in the greater community. But here we focus on the need of small businesses and what servers can do for them.

## Server computers (Hardware)

If you are looking to purchase a server, buy a branded unit such as HP, Dell or IBM, not a locally made 'White box' as they are referred to. It is the most important computer in your office, so you want to be confident in their design, engineering and reliability. HP, IBM, Dell etc sell all their servers with onsite hardware warranties should they fail, an important consideration. These servers are all offered with Server Operating systems included under special licensing arrangements with the manufacturer.

## Operating Systems

In Australia today, a small business may employ a Microsoft, an Apple Mac Pro or a Linux based server. Or they may choose a NAS server – more on that in a moment.

### Linux

Linux is an operating system released under the open license platform, details of which can be found [here](#). Linux servers are for the brave. Whilst they are much cheaper than Microsoft systems, they are numerous in editions with limited technical support available for each one; they are unfamiliar to use; they do not have the richness of business features available in Microsoft products. Linux are big as in the web server industry due to the minimal requirements of this role.

### Apple

The Apple server is a product aimed at multi-media businesses using core Apple products so won't be dealt with here. This leaves Microsoft and NAS

### Microsoft

Microsoft servers come in three flavours for small business:

- Microsoft Server Standard - product details found [here](#)
- Microsoft Small Business Server – product details found [here](#)

- Microsoft Essentials Business server - product details found [here](#)

Server Standard is a stand alone machine ready to perform specific roles. Typically a small business would only employ a Standard server to manage an application that requires it. Its title is a little misleading as they are actually more expensive than Small Business and Essential servers. This is because they are designed to fit into multiple server environments with potentially thousands of users. The Small Business and Essential server editions have more features, but are restricted in user numbers.

Microsoft Small Business and Essential Business servers are separated as noted above by the amount of users (Personnel) that can access them at once which is 100 and 300 respectfully. More users than that and you will have to step up to the next level. Apart from that they both offer the same features which are there biggest selling point to small businesses - all the tools mentioned in the overview would have to be purchased *separately* for a Server Standard network, and are *expensive*. Recognising the financial limitations of smaller enterprises, Microsoft released their SBS and EBS products with these programs included to bring functionality of these tools with in reach for everyone. This is not just because they are nice guys; it also keeps you inside the Microsoft way as your business grows, which could mean stepping up to the big guys in the future.

Whether you're a Microsoft detractor or not, in business practicality rules, and there is simply is no other choice that comes close to delivering value for money over these Servers.

## NAS servers

NAS stands for *Network Accessible Storage* and is an industry buzz word right now. A NAS Server is a stand alone device (not a computer) that carries massive hard drive space for storage. Their design came about in the light of companies demanding more storage space for ever growing amounts of data. At first they were simple in design with a bunch of hard drives bound together in a case with a network port. Now they are a little more sophisticated with built in Network [permission security](#) for access control and USB ports for backup. Coupled with that, hard drives capacity are bigger and cheaper as they ever will be, which is good news for small business.

They are much cheaper than fully fledged servers, as little as a few hundred dollars, and if you don't require the extra goodies that come with SBS servers, but would like simple network folder security with a backup functions, then a NAS unit could be for you.

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