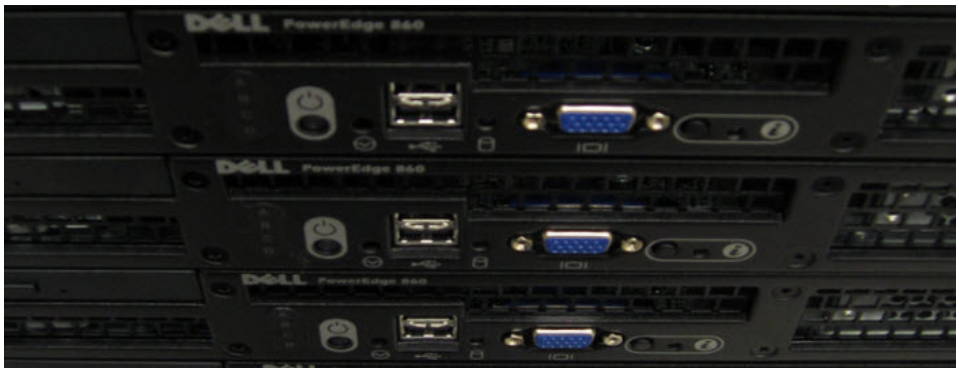
Small Business Server Buying Guide 2016



9th February 2016 *Image* *1*

This small business server buying guide for 2016 addresses the matter of which server you should buy for your small businesses. Many expanding businesses struggle with deciding what server to get, not to mention whether or not they even need a server. If you decide that your small enterprise has expanded to the point where you need a server, we outline the important considerations for you.

Is the Answer in the Cloud?

Your first choice when it comes to servers is whether or not you actually need one physically in your office. For businesses tight on space, introducing a business server may not be the best idea. Leasing a server on the cloud sometimes makes more sense—especially for small businesses that don't have a robust IT infrastructure. However, there are limits to what you can do with a cloud-based server. If you decide that you definitely need the server on premises, then you should choose whether to assemble a server in-house or to purchase a pre-built.

Building v. Buying

Building and buying both have their advantages and disadvantages. Buying a server gives you plenty of value from bundled software, warranty, and support from a brand-name manufacturer. Building a server on the other hand, gives you the

opportunity to custom-tailor your build to your application. We analyze the pros and cons of building vs buying a server for those undecided.

Keep in mind that purchasing a pre-built server may still require you to physically build out the system. For instance, some pre-built systems may not include hard drives, memory, or optical drives. You need to install them in-house.

How Will the Server Be Used?

Your usage scenario heavily influences the server hardware you should get for your business. By not paying heed to how the server will be used, you could overpay or end up with an underperformer.

File Server or NAS? – You generally don't need a dedicated server box in your office if you only plan on using it as a file server—particularly if you have fewer than 20 seats. For such an application, look at a network attached storage (NAS) solution instead. NAS boxes are essentially small file servers with fewer capabilities. You can save money by building a NAS from the ground up if you are inclined to do so.

A file server makes more sense for a small business with more than 20 seats and in need of advanced features such as automatic backup and VPN access. A file server can support many more hard drives and solid state drives than NAS boxes. Most of your build budget should be going towards storage components—particularly RAID. It offers you increased performance and data redundancy.

E-mail – For an e-mail or Exchange server, you want a moderately powerful system with a server-grade processor. Using that old desktop workstation you have in storage may seem like a good idea from a cost-cutting perspective, but stability and reliability will suffer. Pick a middle-of-the-road system with a quad-core processor, at least 8 GB of RAM, and room for several storage drives.

Virtualization – Virtualization allows for a small office to consolidate several servers into a handful of physical machines, making management and upkeep easier. It delivers very big benefits for small businesses—provided they have a capable IT presence and have machines to be virtualized. For a small business that barely needs one file server, purchasing a machine for virtualization is akin to using an 18-wheeler to deliver one monitor.

Virtualization makes more sense as a replacement for three or four servers. To that end, you need fairly beefy hardware and the appropriate software licenses. First, you'll need a processor that supports virtualization. Then you need plenty of memory since the number of virtual machines you can run is limited primarily by the amount of physical memory. Also be sure to have plenty of storage space for those virtual hard drives. Finally, you may want more than one network interface card as the server can quickly become a bottleneck if you have multiple VMs running on it.

On the software side, you'll need to run a hypervisor along with the operating systems for the virtual machines. You still have to pay for the software costs of the licenses for each virtual operating system, but not the hardware.

What Operating System Do You Plan to Run?

The operating system you plan to use on your server is also extremely important. Pre-built server workstations often don't include operating systems, so you need to purchase your software separately. This leaves you room to choose your own software and hypervisor licenses. While many small businesses choose Windows Server, some may go with a Linux distribution.

What Small Business Server Form Factor is Right for You?

Servers come in several different physical form factors that can be classified into three umbrellas: tower, blade, and rackmount.

Tower – In earlier years, they looked just like regular desktop computers—except that they had server components inside. Nowadays however, tower servers seem to come in several different shapes. For example, the cube-like HP ProLiant Microserver or the mini tower HP Z440 Workstation. Tower servers make sense as first servers because they can offer plenty of processing power and don't require you to purchase additional mounting hardware.

A major downside of tower servers is that they take up more room than either rackmount or blade setups once you start adding more.

- **Lenovo ThinkServer 70B7002TUX 5U Tower Server** – A tower server that can also be installed onto a rack chassis. Features an eight-core processor but you need to bring the storage drives.
    - **CPU:** Intel Xeon E5-2440 v2 1.9GHz
    - **Memory:** 8 GB installed, supports up to 192 GB
    - **Storage:** Up to 10 storage drives
- **HP ProLiant MicroServer Gen8 712317-001 MicroServer** – With a Celeron processor, this server is designed for a business looking for their first server. If your business has outgrown its NAS, this is a decent unit. Just don't expect it to do virtualization very well.
    - **CPU:** Intel Celeron G1610T 2.3GHz 2C/2T
    - **Memory:** 2 GB installed, supports up to 2 modules
    - **Storage:** Up to 4 storage drives

Rackmount – A step up from tower servers, rackmount workstations need to be installed onto a rack chassis. A chassis, typically several feet high, can hold multiple servers on top of each other in slots. For a first server, a rackmount configuration may not be ideal. Consider rackmount units only if you already have several servers and want to consolidate them into a smaller space.

- **Lenovo ThinkServer RD350 1U Rack Server** – A small rackmount server, the RD350 features plenty of processing power and support for up to four hard drives.
    - **CPU**: Intel Xeon E5-2603 v3 1.60 GHz
    - **Memory:** Supports up to 16 modules
    - **Storage:** Up to 4 storage drives
- **HP ProLiant DL380p Gen8 Rack Server System** – A dual processor server that should be excellent for any small business looking to start virtualizing their servers.
    - **CPU**: 2 x Intel Xeon E5-2660 2.2GHz 8C/16T
    - **Memory:** Supports up to 24 modules
    - **Storage:** Up to 16 storage drives

Blade – Similar to rackmount servers in that they require a chassis to be installed. Blade servers are even more space-efficient than rackmount servers. However, properly cooling blade servers can be more challenging and you may need an entire room for them. They are an even bigger investment than rackmount servers.

- **IBM BladeCenter 7875E8U Blade Server** – Comes in a standard 30 mm form factor and supports plenty of processing power for your virtualization needs.
    - **CPU:** 2 x Intel Xeon E5-2650 v2 2.60 GHz
    - **Memory:** Supports up to 512 GB
    - **Storage:** Up to 2 storage drives
- **HP ProLiant BL460c G9 Blade Server** – Larger than the BladeCenter unit above, this HP server supports up to two storage drives and plenty of memory.
    - **CPU:** 2 x Intel Xeon E5-2670 v3 2.3 GHz
    - **Memory:** Supports up to 512 GB
    - **Storage:** Up to 2 storage drives

Conclusion

Choosing a business server workstation—especially your first one—can either improve the way professionals carry out their tasks or be a potential bottleneck. If

they don't have enough storage bays, you may easily find yourself rushing to purchase another machine with even more drive bays. By following the guidance in our small business server buying guide, you can avoid both overpaying and bottlenecking your office.

Photo courtesy of redjar, taken from Flickr Creative Commons

Read more on HardBoiled:

Should You Disable Windows 10 Telemetry?

How-to Guide: Small Office Network Setup

PC Cooling: How to Set up Computer Case Fans

How to Recover Your Microsoft Product Key

5 Ways to Stream from PC to TV or Digital Display

Find the Best Computer for Video Editing at Any Budget

How to Choose the Correct RAM Upgrade

5 Free Tools to Draw a Network Diagram

Wallace Chu

A self-professed tech hipster that loves computers and music. Uses an iPhone ironically.

More Posts - Google Plus

6 Questions for Finding the Best SMB Server for

Windows Server 2003 EOS: 5 Free Migration Resources

For large enterprises and small businesses alike, migrating to Windows Server 2012 before

Keep Cloud Costs at Bay with Hybrid Storage

Your Needs
In "Datacenter"

In "Datacenter"

In "Industry Trends"

Tags: business server, Server, Server & Workstation Systems, servers & workstations, workstation

Show Comments (1)

SUBSCRIBE!

Articles delivered upon publication. All eggs, no spam.

Email Address

SUBSCRIBE

KABY LAKE DEALS

NEW ON HARDBOILED

- Step One of Ransomware Removal: Educate Your Users
- Lower Hardware Infrastructure Costs: Scale Up, Not Out
- Keep Cloud Costs at Bay with Hybrid Storage
- Hyper-Threading on a Budget with Kaby Lake Pentium
- Comparisons: Kaby Lake Laptops with Windows 10 Pro

AWESOME '80S OFFICE TECH

ARTICLES BY TOPIC

Articles by Topic

Select Category

POPULAR ON HARDBOILED

Should You Disable Windows 10 Telemetry?