Technology today

The importance of business-critical servers **Interviewed by Chelan David**

If desktop computers serve as an organization's brain, then a business-critical server functions as its backbone. Acting as a lifeline to a trove of data, servers play a crucial role in today's technologically driven society.

There are two key components to business-critical servers, says Hormazd Dalal, president of Castellan Inc. "The most critical component is the hard drive, because that is where your data is stored," he says. "The next most vulnerable is the power supply, because those tend to fail."

Should either key component fail, having server redundancy is an astute investment. This safeguard allows for continual operations in the event that a hard drive or power supply goes on the blink.

Smart Business spoke with Dalal about server redundancy, how often new servers should be purchased and the importance of warranties.

Hormazd Dalal
President
Castellan Inc.

What is server redundancy?

Redundancy is making sure that if a key component in the server fails, a redundant piece of hardware ensures it will keep running. In the case that a drive fails, your data is still intact because the server will continue running on one drive. In the case of power supplies, if one power supply fails, the server continues to run and your network stays up.

Why is it so important to have server redundancy in place?

Your mission-critical server will typically affect several people if it goes down, so a server needs redundancy, while a desktop computer doesn't. If a desktop component fails, then one user will be out of business. If a server component fails, then access to data is lost in its entirety, which will affect the entire company. For example, if an e-mail server does not have redundancy and one of those components fails, then the entire company is without e-mail.

What aspects of a server are most important when creating redundancy?

You should mirror your drive. This can be done either RAID 1, which is two drives mirrored, or RAID 5, which is three drives mirrored. This way, if one drive fails, the server continues to run and your data is still intact. The big manufacturers all offer dual power supplies, so that if the power to one supply fails, the server continues running. In most cases, the server will give you a warning saying that the component has failed, but will continue to run, which gives you enough time to call the manufacturer and arrange for a replacement part.

How does a business know when it's time to buy a new server?

Typically, the life of a server is three years. Most manufacturers only sell a three-year warranty, which is an indication of when they think the items will start failing. After that, if you try and extend the warranty, it's extremely expensive. It's much like a car warranty: they don't offer it after 50,000 miles because around that time, the components start to fail. The time frame for buying a new server depends on the critical nature of the server. If it's a server that isn't doing a mission-critical application, like e-mail, for example, it's not as important. The servers that a business relies on should be changed every three to four years.

How important is it to have a warranty in place for servers?

It is essential to have a three-year warranty for parts and labor. When you purchase a parts-and-labor warranty for your server, you can have the manufacturer ship a part out or have a tech bring a part out within four hours or the next business day, depending on what you purchased.

We recommend a four-hour response time for mission-critical servers. The redundancy is useful, but the warranty is the icing on the cake because it allows you to replace a part in a timely manner.

What are some additional considerations for purchasing a server?

It depends on what you need. Today's applications are all memory-intensive, memory being random access memory (RAM), not storage. We recommend at least four gigabytes of RAM and more if it's a database server or if it's running multiple applications.

The speed of the processor is important, although today's processors are fast enough to run many server-based applications. SCSI hard drives are faster than SATA RAID hard drives. Your fastest SATA RAID drive today is 7,200 rpm. SCSI hard drives are 10,000 rpm to 15,000 rpm. This means that the ability to retrieve and write information back to the server is much faster.

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