Waident

Upgrade Your Old Server Hardware or Move to the Cloud?

We are seeing more and more clients struggling with the same situation. They have an old server that is working fine, but they are worried about the increased risk of failure and potential for downtime due to hardware age and expired warranty. Is it is time to replace the server with new hardware and the latest version of Windows server, or should everything be moved to the cloud?

There is no one right answer to this question. We have found that for some clients, the cloud is the best option, while for others it makes more sense to just upgrade the server and leave it in house. If you're facing a similar situation and trying to decide between new hardware and the cloud, here are some questions to consider:
- Is your hardware over five years old and out of warranty?
- Do you have many users working in satellite offices and/or from home?
- Is cross-employee collaboration important to your business?
- Is your organization growing and/or changing rapidly?
- Do you rely primarily on standard applications (e.g., Microsoft suite) to get your job done?
- Are your security needs comparable to most businesses?

The more you answered "yes" to these questions, the more you should be considering the cloud.

What is the cloud? The most basic meaning is to leverage a 3rd party's hardware and/or software that are then accessed over the internet. To you, this could mean having your own Windows server in the cloud or just using the cloud for a specific application like email.

Which is best, cloud or local? As discussed above, it depends on your specific situation. Learn more below about the advantages and disadvantages of local versus cloud to help you make an informed decision.

Cloud	Local Server
Advantages	
Pay as you go* - Lower up front cost because you "rent" space as you go versus buying the hardware/software. - No need to worry about future hardware warranties or payments. - You don't manage Windows licensing; it's a monthly pay as you go via the cloud provider.	Cheaper over time* - Is typically the least expensive option over time.
Accessible remotely - Multiple offices or people can easily access the same information. - A problem with one office's internet connectivity does not affect the users in other offices or people working remotely.	Accessible locally - No issues needing redundant internet for this aspect of your business. If the internet fails, you still have access to your server. - You handle your own security (which could be a disadvantage as well).
High quality - Often much more robust that you can afford to build yourself.	Speed is independent of internet connection

- More redundant and reliable with the redundant hardware, power, internet, etc. - Normally you have a layer of backups included with options for disaster recovery (DR) replication. **Flexible** - You can increase or decrease the servers needs at any time and quite easily (i.e., need to add more hard drive space). - Securely and easily accessible from any place that has an internet connection (note: only the people you want to have access can have access). **Convenient** - No need to worry about equipment being loud or overheating. - No space needed for your server in your office.	
Disadvantages/Risks	
Security - Your data is not in your office and is usually on a shared platform with other parties. Normally not a big risk or anything to worry about, but it is a risk nonetheless. **On-going effort** - Once all of the servers are in the cloud, it can be time consuming and a bit difficult to get them moved out to another provider or back in house. - Still need to have someone manage the software side – Windows updates, troubleshooting, etc. **Reliant on internet access/speed*** - No internet, no access. You better have redundant internet connectivity in your office (and by different providers/technology, e.g., cable provider and DSL).	**Security** - You need to handle your own security compared to experts doing it on the cloud side. **On-going effort** - Need to worry about and manage your backups and get data offsite for DR purposes. - Need to have someone manage the software side – Windows updates, troubleshooting, etc. - Need to worry about where the equipment resides (it can be very loud!). Is it currently under someone's desk, in a conference room, or some other place that is not optimal? - Need to worry about having your equipment overheat and fail if there is ever an air-conditioning or airflow fan problem; may need a dedicated air conditioning unit in your server room, which can get expensive quickly. - If you need to increase your storage space, it can get expensive and takes a bit of time/effort to get it done.

* So what would this cost?

Cloud	Local Server
New copy of Windows runs about $800. Some cloud providers will include the software licenses in to their monthly fee.	New copy of Windows runs about $800. You will need two licenses though for best practice configuration – one for the virtual server host and one for the virtual server guest that will be the server the users will be accessing. $1,600 total.
Do you need software like SQL or anything else? If you do you need to add these costs as well	Do you need software like SQL or anything else? If you do you need to add these costs as well
Redundant internet – hard to estimate since different locations have different options. Just make sure this is part of your math.	Backups and offsite data could run about $300 per month depending on the amount of data you have and using a cloud provider to back up the data offsite over the internet.
Consulting to get it all configured, tested, and rolled out should take about 20 hours of time. We charge $125 per hour so the math would be $2,500.	Consulting to get it all configured, tested, and rolled out should take about 20 hours of time. We charge $125 per hour so the math would be $2,500.

User Impact

One of the most important considerations with any technology decision is how it will impact users. If it doesn't work for your users, all the financial and other benefits are going to get drowned out amid the daily complaints. The two biggest considerations to add to the discussion about cloud services are performance and changing user behavior. Fortunately, there are several tools that can mitigate issues:

- *SharePoint:* We have found that SharePoint works well for cloud server file sharing. If your users find and open their documents using the usual "My Computer" and accessing a network drive, it could be a lot slower with a cloud setup (depending on your internet connection speed) without SharePoint. SharePoint has other benefits including instant full text searching of documents, creating workflow rules, and document retention routines. We are seeing more and more clients adopt SharePoint for both local and cloud-based servers. The bonus is that SharePoint Foundation is included with Windows 2008 server so it would just take a little bit of consulting expertise to configure a document store.

- *Terminal Server:* If the organization utilizes intensive applications for their accounting, ERP, CRM, or other business needs, a tool called Windows Terminal Services can help preserve performance if you move to the cloud. Users just open another virtual desktop from their computer and they have access to all of the cloud server files and applications just like it was in their office again. And they can even print to their local printer. This tool is also a part of Windows 2008 server. To implement correctly, the organization would need to purchase another Windows license for $800 along with the needed number of user licenses.

Flexible Growth

If you plan on going the route of keeping the server in your office, be sure to build a new one with virtualization in mind. In tech speak, we recommend that clients configure the server hardware with Windows as a virtual server host, next build a Windows server guest which is then the server everyone accesses. The advantage of doing this type of setup means that you can add additional virtual servers on the same hardware. In English that means you have the flexibility of adding capacity in the future, either locally or in the cloud without having to buy a new server or completely reconfigure your old server.

The Final Decision

There is no one right answer to the cloud or local challenge. When we consult with clients, we typically start with a cost comparison and then layer in the risks and the benefits. Sometimes it's an easy decision where the cloud is the least expensive option, the risks are minimal to the organization, and the benefits are very compelling. Other times, it makes more sense to keep the server in office. Your best bet is to discuss your specific needs with somebody not invested in selling either cloud services or hardware.