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## ARE CLOUD SERVICES RIGHT FOR YOUR BUSINESS?

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These days you can't read business articles or attend industry events without hearing about cloud services. Things like, "Go to the cloud and you will be safe from hackers" Or "Go to the cloud to be sure you have backups." Or "The future is the cloud. If you are not there, your competition is going to leave you in the dust."

Certainly, in the right circumstances, a cloud service may improve your IT environment. However, just as easily, cloud services can make it much more challenging. The purpose of this article is to provide some clarity about when you should and should not consider cloud services.

### Exactly What Is "the Cloud"?

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Let's start by defining "cloud" because the word is about as broad as saying "vehicle" —there are passenger cars, sedans, trucks, semi-trucks, buses, sports cars, and many more types of "vehicles." It's helpful to break down the "cloud" into four primary categories:

1. SaaS (software as a service) applications
2. Private cloud
3. Public cloud
4. Hybrid cloud

**SaaS applications:** This is when an application you use in your business is delivered by the vendor of the application through a web/browser interface, such as NetSuite, QuickBooks Online, G-Suite, or some licenses of Microsoft 365. To use the software, you simply go to a website and run the application through the browser.

**Private cloud:** This is when you work with a provider to run components of a network infrastructure in a dedicated environment leased by a provider. It is usually comprised of servers, networking devices, and security devices (physical or virtual). From a day-to-day perspective, you are still responsible for updates, management, maintenance, etc., of the operating systems and possibly the virtual infrastructure management, but not the actual hardware. These agreements usually include redundancy guarantees and backup agreements.

**Public cloud:** This solution can be broken down into three major types:

1. Utilizing services as a part of a solution, such as Microsoft Azure Active Directory, Microsoft SQL Services, Microsoft 365 (Exchange), etc. The provider offers these services without any responsibility for servers, infrastructure management, or server updates.
2. Running a server or servers) and infrastructure that you fully manage. This is like a private cloud, but with a public cloud provider. Your responsibility for management is much the same as when the devices are on your premises.
3. Using servers where you only manage the applications that are on the servers. The provider manages updates. The big three providers of these services are Microsoft, Amazon Web Services, and Google.

**Hybrid cloud:** This is a design where part of your infrastructure is on your premises and part is running through one of the cloud designs mentioned above.

By and large, most organizations use some type of hybrid cloud solution. For example, they may use a service like Microsoft 365 or Azure AD, some onsite servers (traditional), and possibly some servers that run as a service. The kind of hybrid solution needed depends on the size of the organization, availability of affordable bandwidth, application and data requirements, and other factors.

## Cloud Myths

**A common myth is that cloud services are easier to manage.** We never say never, but for the most part, this is not the case. To provide some context of why, a local network looks like this:

- Workstation -> a switch -> a server(s) -> a firewall -> the Internet

With a cloud environment, more often than not, you'll have this:

- Workstation -> a switch -> a small server(s) -> a firewall -> an SDWAN appliance -> Internet connections (at least two) -> the Internet -> a provider's firewall -> a provider's switch infrastructure -> a provider's server environment

While the above examples oversimplify matters, they illustrate the fact that there are many more variables involved in a cloud design. Therefore, because there are more possible points of failure, troubleshooting performance issues, errors, or other problems becomes more complex.

**Another common myth is that cloud services are less expensive.** There may certainly be a reduction in upfront capital costs, but over time you will find that the cloud solution will have a greater multi-year total cost of ownership than a four-year amortization schedule on hardware.

Additionally, suppose you are in a private cloud where you are responsible for managing the operating systems. In that case, you will still have to manage migrations from the current infrastructure to an upgraded infrastructure when the lifecycle requires it. This may or may not be more challenging than a hardware replacement investment.

Another consideration is fees. Some solutions have fees based on utilization rather than a controlled expense. Managed improperly, costs can spiral out of control. Managed correctly, they can be minimized by shutting down unnecessary resources.

## When Should You Go to the Cloud?

Consider the cloud if one or more applications in your environment are challenging to manage. In this case, an SaaS application provider can lower infrastructure requirements, make management easier, and decrease the amount of energy required to keep the application functioning as designed.

Other times it makes sense to consider a cloud solution are when you don't have a great environment in which to operate servers, or you want to make sure your servers are secure in a data center, yet you don't want to deal with the major capital costs of having your servers hosted in that way.

An additional reason to look for a cloud solution is to ensure you do not have servers that have openings to the Internet—such as a Microsoft Exchange Server, a web server, etc. These access points into your network can quickly be exploited if there is a vulnerability, as we saw with the Microsoft Exchange vulnerability that was

discovered in February 2021. By using services or other solutions, you can assign this risk to a provider who can do a better job managing the security posture.

## Choosing a Partner

For every organization, arguments can be made for and against cloud solutions. That's why the vast majority of businesses will use a hybrid approach to get the best of all possible worlds. The right answer to the question of cloud computing for your organization is best found by working with a partner that can *impartially* evaluate what is best for you. A good partner will assess design, security, costs, availability, integrations, exit strategies, agreement terms, license management, size, geographic location(s), all application requirements, user requirements, and much more. The proper design can be very complex and should be done by an expert who can perform a cloud assessment to ensure there are clear outcomes that align with the predetermined success criteria.

### Keep the following in mind when picking a partner:

- A company that focuses on hardware will find a way to make a hardware purchase more appealing.
- A hosting or cloud company will find a way to make a hosting solution more appealing.
- A true partner will focus on a secure, effective, and budget-conscious design. They will work to simplify the design to minimize the footprint, decrease the complexity, and create an outcome geared toward *your* business objectives, not theirs.

If you'd like help navigating cloud options for your business, don't hesitate to get in touch with us at [JMARK.com](https://JMARK.com).