Are There Clouds in Your Forecast?

Cloud Computing and Your Organization

Everyone loves a good weather forecast as long as it calls for a nice, sunny, or otherwise perfect day. However, we know forecasting Mother Nature's plans for any given day is serious business. On a good day, forecasting the weather is a difficult exercise, and confidence decreases as the forecaster attempts to predict what may or may not happen in the near future. This is not only true when attempting to accurately predict weather, but can hold true when forecasting other things such as the stock market or future budgets.

The term "cloud" has been popping up in the last couple of years relative to our method of consumption of information technology (IT), and while writing an article on forecasting the weather would be an interesting topic, we're not going to use the term "cloud" here to attempt to explain Mother Nature - Mother Nature and IT have not joined forces.

In IT, the term cloud is essentially a case of what was once old is now new again. Business has cycles, sometimes short cycles and sometimes long cycles. So, it will be the seasoned veterans in the group who recognize that the use of clouds in IT is not really a new thing. I started adding clouds to IT diagrams 25 years ago to illustrate services, typically telecommunications services, physically located outside of the organization. Technically speaking, back then I would draw the clouds on transparencies so I could place them onto an overhead projector to be viewed on a screen. It was really cool because I could create multiple transparencies with various clouds and overlay them one on top of each other building up to one final, awesome looking picture for my audience. Transparencies were great, and you may very well have some equally awe-inspiring transparency stories yourself. Eventually they evolved into something better -- online drawing applications. Clouds, too, have evolved.

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An image of a cloud in an IT diagram still represents essentially the same thing it did 25 years ago, a service physically located outside of an organization, controlled or managed by another organization. Instead of saying cloud-based services, it was common to say the service "lived up in the network". Eventually, clouds were also used to illustrate Internet services in addition to local, local toll and long-distance voice services in the pre-VoIP days. However, today the term cloud is now used very broadly, means something different to everyone who says it or hears it, and is used to describe so much more than telecommunications services as it was back in the day. It is generally used to represent any type of service outside of an organization. Marketing departments have seized upon this repurposed old buzzword and have added the term, along with cloud pictures, to new and existing products. They have also changed names of products and services to end with "...-as-a-service" or "aaS" to capitalize on the cloud hype.

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Not only is the cloud term not new, the very concept it represents is not new either. In the past, we used terms like "outsourcing", "service bureaus", and "time-sharing" to describe hardware and software that was located at a vendor's site and rented or leased to create a predictable operating expense to prevent large capital investments in IT. It was a great concept until things began to change and the cost of technology became less expensive and more cost-effective while also becoming more powerful every 18 months or so. The seasoned veterans in the group might remember this observation has a name -- Gordon Moore's Law. The realization of this law meant every organization could eventually afford to acquire its own hardware and software instead of renting. Life was good until someone looked around one day and noticed that IT appeared to become a commodity that proliferated throughout their organization with much of the total cost of ownership now being spent on maintaining the complex infrastructure of cheap technology. The key to utilizing IT to its fullest is to think of it as being a set of ingredients that go into your organization's recipe for success. You are the chef, and the recipe you create is your strategy. That, however, is worthy of an entire article in itself. Let's get back to the growing hardware and software maintenance burden organizations may have. You can probably guess what happened next.

The old concept of centralized hardware and software has started to make a comeback, rebranded as cloud-based services, along with more benefits than simply avoiding large capital investment in IT. It has come full circle to potentially simplify an organization's on-site IT by off-loading their IT burden, in part or whole, onto another organization allowing them more time and resources to focus on their own mission. Hence, the cloud is born or re-born, depending upon your seasoned veteran status. One day, skinny ties may also make a comeback. Time will tell. Cloud computing is still a general term that can be used many different ways. It's important that any two people discussing cloud computing each define what they mean by this term to level the playing field. The main benefits of today's cloud computing include reducing the cost and complexities involved in managing and maintaining your own data center infrastructure. There are economies of scale to be achieved by pushing your own data center, in whole or part, into the cloud, whether that includes one server or multiple servers, where a server includes hardware as well as software applications.

No cloud computing discussion would be complete without highlighting the three main types of clouds: public, private and hybrid.

Public clouds are generally suited to providing consumer cloud-based services. Examples of these services may include your email provider, disk space for your computer data backups, or a place to store all of your music, television shows, movies and contacts to keep various portable devices synchronized with the same content. These services may be free to a point, with enhanced or premium services requiring a flat-rate monthly fee. The public cloud can be a very good place for the general consumer who does not have the same requirements as an organization.

Private clouds are generally suited to providing organizational cloud-based services where a more industrial strength Service Level Agreement (SLA) may be needed. A private cloud provider can provide an SLA to an organization that meets specific hosting requirements for reliability, availability, security, maintenance and management features, especially one that must protect confidential, proprietary and individually identifiable information (CPI) where a public cloud provider will be challenged to do the same.

Hybrid clouds generally consist of a mix and match of public and private cloud-based services.

Here's an example to give some context and perspective to cloud-based computing services. You may currently have your organization's website hosted at Christian Brothers Services (CBS). If you do, you know exactly where it is located, in our Romeoville, Illinois or related data centers, and you know it is fully maintained, managed, monitored and protected at industrial strength levels with the same high-level care you would provide to your website if you hosted it on your own premises. While you may not have given it much thought up until now, as a website hosting provider, CBS is a private cloud services provider. A web server is just one type of application server that may be found in a data center. Let's move on to another example.

You may have backup servers located at your site which work well for you if one of your production servers malfunctions. However, if you are a single-site organization, your servers may be physically too close should a disaster strike your facility. The CBS private cloud may be the perfect place for you to consider housing backup equipment to improve your own business continuity/disaster recovery plan.

In each of the cloud-based service examples, there are several underlying themes including improved economies of scale, access to full-time IT teams with up-to-date skills and availability of up-to-date data centers with redundant power, Internet and systems. When it comes to IT service delivery, there are many more options available today than there were 25 years ago. Cloud computing will have an effect on every organization to some degree. As the chef for your organization, consider how to bake cloud computing into your recipe for success. Your only real limitation may be your imagination. ☼

Visit us at cbservices.org/privatecloud to tell us what your IT burdens may be, and we'll gladly assist you in every way we can. You cannot get that from Mother Nature or the weather forecaster.

Tom Drez is the Managing Director of Information Technology Services, Chief Information Officer/Chief Privacy Officer/Chief Security Officer at Christian Brothers Services.
