

Advantages and Disadvantages of Hybrid Cloud Computing in Business

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There has been a lot of talk over the last few years about The Cloud. Many people are confused about the term and make assumptions to what it means. A new term has become a hot topic in the IT industry and it has raised some questions. The new term, Hybrid Cloud has been making the rounds in business and companies have been questioning whether to go in the direction of cloud computing. To better understand the Hybrid Cloud computing one must understand cloud environments. A cloud environment is a set of hardware, software, storage and services hosted at a data center. This environment allows centralized use of servers and applications to be more easily shared and leveraged within an organization. This type of computing has changed the way enterprises handle local IT and have cut costs and increased efficiency. Hybrid clouds are taking the way companies use cloud computing and taking it to the next level. A Hybrid cloud is a mix of private and public cloud environments that a company uses to do daily tasks. There are advantages and disadvantages for companies to start moving some of their IT to mixed cloud environments. Companies and Enterprises are looking to make the move in the future and require an understanding of what and how Hybrid Cloud computing can help their organization.

Private Clouds

The move to cloud environments has helped organizations improve their overall IT performance and reduced costs. With Private Clouds new technologies such as virtualization have made migrating to a cloud environment much easier. These technologies centralize and fully utilize a hardware device and use it to its full capacity. This has helped companies move servers out of small offices and network closets into more stable data centers that host their servers and services. Private clouds allow you to keep your security and compliance requirements as the datacenter sits behind a firewall and network connections can be setup in B2B or MPLS networks. Private Clouds are important for companies that have strict regulation with their customer's data. This allows companies to have a secure datacenter to host servers, and applications with the reliability of a datacenter. Even in the private cloud arena, companies have much better scalability and flexibility with their hardware and software. It allows Private clouds have enabled companies to keep their IT in their own hands while leveraging the technologies that cloud environments provide. With private clouds comes costs, and some of those costs is retaining competent IT staff to support internal and cloud environments. Maintaining a full cloud environment and keeping it updated is a daunting task. This gave room for public clouds to come into play.

Public Clouds

Public cloud environments have been popping up all over. New providers offer storage, processing, applications and Software as a service (SaaS) solutions. These environments allow companies to be able to use applications and software that was not available to them before. Public clouds connect you to the environments through internet connections. Due to some IT constraints such as budget or accessibility companies are looking to public cloud environments

to fit the bill. Public clouds are attractive to some companies because they can increase capacity and processing power without the big capitalizing expenditures of purchasing additional hardware and software for a datacenter. The trend is to use some public cloud services on an as needed basis. Some public cloud environments consist of a single or several applications that companies use. Software and full applications are being served up as services. This is saving companies from investing in expensive software and using it as a pay per use. Public clouds save on IT staff. This allows companies to have IT staff to monitor just the application than having to maintain an infrastructure. Public clouds also consist of storage space. This allows companies to store system and data backups to remote locations. Having the ability to migrate quickly to a public cloud in a disaster is very valuable to many companies. Both public and private cloud environments have their advantages and disadvantages that company must be careful when choosing an IT path for their environments.

Hybrid Clouds

The need to take advantage of what both public and private clouds has lead companies to use both. The term Hybrid cloud is born. In 5 years it is predicted that 43% of business computing will be using some form of hybrid computing. Companies are making the switch because it makes economic sense and it gives them the ability to quickly respond to surges and spikes. “The ability to provision IT services without large capital expenditures is appealing to CEO’s and CIO’s” (Howard). It also allows companies to keep their vital data in house while allowing non critical data to go to public cloud areas. The mix allows companies to spread the workload and allow public resources to handle tasks as needed saving costs. Hybrid clouds saves in infrastructure costs and allows for better investments on the private cloud for the more robust and secure applications. Infrastructure is not the only thing moving to cloud environments. Software has gone to the cloud and companies are now selling cloud versions for their applications. Microsoft has Office 360 and Adobe has creative cloud software that includes some of their most popular software tools such as Photoshop, and Acrobat. Customers can now pay for software as they need it and setup and install is no longer a problem. This also gives all their work better accessibility as they can log on from any terminal with internet access. In order to keep up and maintain the relationships in a hybrid cloud requires skilled IT cloud savvy professionals. The IT pros will have to ensure connectivity and manage applications between the two separated environments. This opens the door for many IT pros to make a change from the traditional IT role to a more adaptive role to the quick changes occurring in cloud technology. The main concern for companies making the switch into hybrid cloud computing is security. Most companies have secure and private customer data that they must protect. Public clouds do not provide the level of security that most companies are comfortable with. Breaches in security are very costly and keeping the data safe is a top priority. Another priority is uptime. Network is the weakest link in cloud environments. A dropped network line stops all traffic flow into production sites. To ensure continuous uptime companies invest in redundant network lines from different ISP’s to mitigate the chances of losing the connection to the cloud environments.

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This not only has to be setup at the company site but also at the private and public clouds. Overall the flexibility of having a hybrid cloud is a good choice for most companies as they can use levels of public or private clouds as they need it. Hybrid clouds setups can work for just about any kind of business.

Who uses Hybrid Clouds?

Who uses hybrid cloud technology today? Most companies already engage in some form of cloud computing. An example is a print shop that prints credit card statements for a large credit firm. The print shop uses a private cloud to receive the credit card information over the private cloud. It processes the data and performs some data manipulation and form composition by adding barcodes. It separates the shipping data for all the credit cards customers. The shipping data is sent to a public cloud environment using SaaS software to interrogate the address file to enhance the order and sorting for postal codes. The sorted file is also run through software that performs address correction. Companies receive postal discounts for presorted and address cleansed mail at the post office. The sorted file is sent back to the private cloud and a sorted print file is generated with the private customer data. The private customer file is then sent to the print facility for printing. This example shows that hybrid cloud computing is being used in a print shop. The concept of hybrid computing to cut costs and make IT more efficient is a trend that will be increasing. It is very likely that every business will engage in hybrid cloud computing in the future.

Conclusion

Public and private Cloud computing has emerged and the use of both environments simultaneously creates what is known as hybrid cloud computing. There are many advantages to using private and public cloud computing in any business. Companies are leveraging their resources to separate critical applications from applications they can move to public clouds. Using public clouds is saving costs on hardware and software required to run a business. Public clouds give companies flexibility to integrate resources they did not have access to before quickly and efficiently. Software has also made the move to the cloud and companies are saving money by not having to purchase full suites for multiple devices. Customers use public cloud services and software as pay as needed. Disadvantages to hybrid cloud computing comes with less security and reliability concerns. Companies must protect their customers and using cloud and virtual software has the same security flaws as traditional IT environments. Single points of failure in networking can put hybrid cloud computing to a halt. Companies must ensure that they have redundant networking available at every level of cloud computing. Overall companies are choosing to integrate their environments in hybrid cloud computing to keep costs down and make IT more efficient.

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