Cloud Characteristics

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CYSE 600 36666 Cybersecurity Principles

July 2, 2021

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Are you tired of using the typical physical hard drive to store data? Have you ever used cloud technology? Do you understand how cloud computing works? Technology is always changing and so is the way we store our data. The cloud is new technology that we can use to help and make our lives easier because it reduces physical space taken up on our computers and it increases our data storage space. We can also control that storage space by continuing to upgrade the amount of space needed. To understand how the cloud works we must understand the five different types of essential characteristics of cloud computing and the different types of models that are offered on the cloud. Those five essential characteristics of cloud computing are on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service.

There are five characteristics that are essential to cloud computing and the first one is on-demand self-service. “On-demand self-service refers to the service provided by cloud computing vendors that enables the provision of cloud resources on demand whenever they are required. The user can scale the required infrastructure up to a substantial level without disrupting the host operations. Resources such as server time, applications, e-mail and network storage can be automatically allocated and used as needed without interaction from the CSP” (Freet, Agrawal, John, & Walker, p. 144). This first characteristic shows that the cloud service can be requested when demanded or required. If you run out of space for data you can always request for more storage space. It is also convenient because the storage can be distributed automatically without you having to worry about any upgrades for storage space.

The second characteristic is broad network access. “Network access and capabilities are available through a web browser, and can be accessed through standard devices such as cell

phones, tablets, laptops and workstations" (Freet, Agrawal, John, & Walker, p. 149). This characteristic shows that you do not need an application or a type of software to access the cloud. It is easy to access just by using a web browser. Today, a lot of people are on the go and they carry their work with them so accessing through the web using many devices makes work easier. I can see this type of technology useful with the COVID-19 pandemic because a lot of people are forced to telework. This helps us use this technology and share and transfer data through the cloud with the touch of our fingertips.

The next characteristic is resource pooling. "Cloud computing resources such as virtual machines, bandwidth, memory, storage devices, and processing power are dynamically allocated and assigned to multiple customers using a multi-tenant model. As it is a location-independent technology, the customer does not have any control or information about the exact location of the given resources. However, the information about the location is available at a higher level of abstraction" (Freet, Agrawal, John, & Walker, p. 149). This shows that cloud services are shard by multiple customers. Having all physical servers and hardware stored into one or many other places for different customers saves space and shares each customer shares the cloud services.

The fourth characteristic of cloud computing is rapid elasticity. "Depending on customer demand, cloud services can be quickly and elastically provisioned and scaled up or down at any time" (Freet, Agrawal, John, & Walker, p. 149). This shows that customers are allowed to control the supply of the storage or data and the demand of the storage or data. Having this characteristic is convenient because data can be requested anytime the customer needs extra storage space. There is no more need to worry about buying more physical hard drives, you can

now buy as much storage space you need. This gives the customer to control their own supply and demand.

The last characteristic is measured service. “Cloud computing services and resources can be automatically measured, controlled, and monitored. Therefore, it ensures transparency to both the provider and consumer as to the nature and degree of utilized services. Cloud technology uses a metering capability which is helpful to customers to control and optimize resource usage. It is similar to a pay-per-use model as seen with electricity or municipality water bills” (Freet, Agrawal, John, & Walker, p. 149). The last characteristic is another convenience feature that helps customers and service providers monitor the use of cloud computing which gives transparency. Unlike buying a set amount of storage space from a physical hard drive, the cloud services allows a pay-per-use which is another convenient feature because the cloud allows usage to be tracked and you only have to pay for what you need.

All in all, the cloud can offer a lot of benefits. We understand that the cloud offers and allows the customer or user to control its services or use. These benefits come from the five characteristics of cloud computing which are on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service. Understanding the cloud characteristics enables us to reap its rewards. As technology changes, we must adapt as well because learning and understanding how to use it can make our lives easier.

References

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