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WEB 201

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9/14/2021

Cloud Computing Characteristics

1: On-Demand Self-Service

Cloud computing is all about On-Demand Self-Service, this is because you are able to access your cloud from virtually anywhere with an internet connection. Controleng.com states that “Cloud computing resources can be provisioned without human interaction from the service provider… A manufacturing organization can provision additional computing resources as needed without going through the cloud service provider” (ControlEng) for things like storage, virtual machines, and databases all you need to do is click a button and there you have it. From personal experience with AWS this is exactly how it works, and it does work great. If I needed a second instance of a web server or database all I would have to do is click add and there it was, billed at the end of the month for the amount I used it. With little help from the Cloud service provider, there is room for user self-service issues. In an article by ScienceDirect they said that “Often, compliance programs like Sarbanes-Oxley (SOX) require controls to be in place to prevent a single user from being able to use certain services or perform certain actions without approval” (ScienceDirect). Since the cloud is Elastic and Scalable, pay-as-you-grow is a popular subscription method when considering cloud computing, where you pay for only the amount of resources used, instead of paying for the entire infrastructure. On-Demand Self-Service and the Scalability of the Cloud go hand in hand, and make Cloud Computing become more and more popular.

2: Elasticity and Scalability

With On-Demand Self-Service, the cloud is totally scalable. Need 3 web servers? Create them in an instant with preset settings. Need more space on a database? Add it easily through a web interface. “One of the great things about cloud computing is the ability to quickly provision resources in the cloud as manufacturing organizations need them. And then to remove them when they don’t need them” (ControlEng). With the elasticity of Cloud Computing organizations can rapidly provision and deprovision any of the resources they need in a moment's notice because of the On-Demand Self-Service. With the Scalability of Cloud Computing there is less money to be spent on the organization using the service because as the organization needs more resources, they can simply buy more, or if they need less they can remove some. In a blog post by Jacob Ben-David he explains how the purpose of Elasticity is to “match the resources allocated with actual amount of resources needed at any given point in time” (Ben-David, J.), the blog post continues by explaining how Scalability; “handles the changing needs of an application within the confines of the infrastructure via statically adding or removing resources to meet applications demand if needed” (Ben-David, J.). Being able to scale how many resources you need for your business is a big deal if you are trying to save money. When your business is only taking up <50GB for a database, then you can pay for just that instead of a 100GB database plan, all while using the On-Demand Self-Service.

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