

# Executive Summary

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## Project Description

Don & Associates have taken close consideration to moving their current IT infrastructure to a cloud computing infrastructure. During the past several years, many cloud vendors have emerged to help maintain business practice at an efficient and costly level. There are many different types of cloud computing services that cater to a company's needs. Especially during a time where the global economy is constantly shifting, it is important to utilize whatever tools there are available to maintain a strong and dedicated network. The three major cloud computing vendors that companies, corporations, and organizations use in the world, are AWS (Amazon Web Services), Microsoft Azure, and GCP (Google Cloud Platform.) These three companies offer a variety of cloud services, such as storage, management, virtualization, security, configuration and much more. A company usually chooses one out of the three vendors when the current IT infrastructure is slow, unmanageable, unsecure, storage limited, expensive and more. Corporations, companies, organizations usually choose one of the three cloud providers depending on what the current IT infrastructure needs. Whether its networking solutions, storage solutions, security solutions, virtualization solutions, these three vendors aim to minimize problems and create an efficient computing infrastructure.

## Statement of Need

Many companies like Don & Associates struggle with the cost of a sophisticated network. By migrating the network to the cloud, Don & Associates would save a lot of money on IT, maintenance, physical space, storage, and many more features that the cloud offers. Cloud providers create features for all types of industries and can be considered more secure than current IT infrastructures.

## Cloud Service Providers

Cloud Computing Models:

Cloud computing companies use three different types of models to address the needs of a company. They are referred to as 'IaaS' (Infrastructure as a service.) 'PaaS' (Platform as a service) and 'SaaS' (Software as a service.) All three of these models have their advantages and disadvantages.

Software as a Service 'SaaS': This model provides control and security; they also assume full responsibility for everything. They provide secure software that users can use in their current IT infrastructure with little to no maintenance operations cost. Furthermore, because this model provides everything in one package, it limits human control over the current IT management and security.

Platform as a Service 'PaaS': This model provides responsibility by the cloud provider to secure the applications you are running. In this model, the cloud providers are responsible for the virtual machine's they provide, operating systems, and storage used. In some cases, this model may also offer automatic networking services, depending on which vendor you choose. Furthermore, platform as a service can be a good model for an organization, it provides virtual machines, and storage without having a huge cost,

and little to no human labor on the current IT infrastructure. However, this model might limit and change the controls and roles of some IT employees at Don & Associates.

Infrastructure as a service 'IaaS': In this final model, the cloud provider is responsible for the underlying infrastructure in your existing IT infrastructure. The hardware, hypervisors, storage, and networking. It is the most similar to traditional IT infrastructure models today. This service allows more controls for network administrators. "Infrastructure as a Service provides you with the highest level of flexibility and management control over your IT resources and is most similar to existing IT resources that many IT departments and developers are familiar with today." (AWS, 2023). Although 'IaaS' seems expensive, it can actually save the company money without the need to terminate employees. With this model some employees' roles might change, however they will still have an active and more effective role in the company.

## Recommended Plan

My recommendation is to use Amazon Web Services (AWS) to enhance the current IT architecture at Don & Associates. AWS has a long reputation for being one of the best cloud providers on the market. With all their customized features and low pricing, it is easy to manage and scale how much our network actually needs. Eliminating the use of underused servers and end machines. Features such as Amazon EC2, which provides virtual CPU's, memory, storage, and network configuration. Amazon EBS, which allows additional block storage within EC2, and Amazon Detective providing security issues within the network and much more. Many organizations have praised AWS for cost efficiency and management. "Without cloud managed services, we had very limited scope of innovation," states the organization's IT infrastructure manager. "With new services, we can modify and innovate applications, and add new services to enhance the user experience, reduce costs, and improve application resiliency." He has been able to do so with existing staff, shifting their duties from system provisioning and other operational tasks rather than replacing team members." (The Hackett Group, 2021)

## Impact of Recommended Plan

When transitioning to AWS, it may be overwhelming for some individuals that are used to the traditional IT network infrastructure. However, Amazon Web Services does provide a user interface that is easy to learn. Also, there would be little to no issues when migrating. Features like AWS Application Migration Service will allow our current servers to be running on AWS technology in a very short amount of time.

## References

Amazon. (2023). *Types of Cloud Computing*. AWS. Retrieved March 26, 2023, from <https://aws.amazon.com/types-of-cloud-computing/>

The Hackett Group. (2022, January). *Business value of cloud modernization*. Retrieved March 26, 2023, from <https://d1.awsstatic.com/psc-digital/2022/gc-300/business-value-of-cloud/Business-Value-of-Cloud-EN.pdf>