Assignment 01

## Overview of the Project:

Mo Vid Inc. is at a crossroads with its SaaS solution and can no longer sustain the physical infrastructure needed for their continued growth. The goal of the project is to help Mo Vid Inc. to find the correct cloud vendor, to identify the type of resources are going to be used by Mo Vid, Itemize out specific resources which are going to be used to host the SaaS, identify the expected service uptimes offered by the cloud vendor and any guarantees provided by the vendor during and after transmission and also to help enable Mo Vid Inc. to run SaaS software platforms from a public cloud.

## Cloud Vendor: Microsoft Azure

The cloud vendor most applicable for Mo Vid after thorough research is Microsoft Azure. Microsoft Azure has remained to be one of the best reliant and safest cloud vendors out there that companies can rely on for heavy SaaS usage. Also, based on some requirements made by Mo Vid, the web application requires the. Net5 to run. Net5 happens to be a Microsoft product and since this is one of the heavy restrictions of Mo Vid, integrating into Microsoft Azure will be easier than compared to other cloud vendors. Also, Microsoft Azure does provide some flexibility and discounts for long term usage that will be beneficial towards Mo Vid.

## Resources Needed to Produce SaaS: Virtual Machines

For resources that are needed to produce SaaS in Mo Vid, *it would be heavily beneficial to run all 4 systems as VM’s*. VM’s are very flexible, and the vendor provides data security and helps with data recovery. General physical servers, require heavy resources for thorough maintenance which can be avoided by using VM’s. These are only some benefits to using VMs, others include, personalization, easy recovery, easy backup, run multiple operating systems and money savers. Since, a customer would want a personalized machine for themselves, using virtual machines would be very helpful to personalize and cater towards customer needs. Therefore, it is highly recommended that Mo Vid Inc should run all four servers as VMs.

Also, it is advised that *Mo Vid Inc. considers changing its architecture from SaaS architecture to PaaS architecture*, as almost everything expect for application and data would be handled by the provider. As for Mo Vid Inc, *changing the video transcoder’s architecture to PaaS with containers is recommended*, as containers are generally more consistent, they have great efficiency, easy to deploy to multiple operating systems, and has an overall better application development environment. To keep the video encoding consistent and to rely on data security it is heavily advised that to use containers for Paas architecture for video transcoder.

Resources Details from Microsoft Azure:

**1 VM for Application Server**

A7: 8 cores, 56 GB RAM, 605 GB Temporary storage

Standard HDD disk: S20: 512GiB

Monthly Cost: $963.65

**1 VM for Wowza Streaming Engine**

A4: 8 cores, 14GB RAM, 605GB Temporary storage

Standard HDD disk: S20: 512GiB

Monthly Cost: $535.73

**1 VM for Video Transcoder**

B12ms: 12 cores, 48GB RAM, 96GB Temporary storage

Standard HDD disk: S15: 256GiB

Monthly Cost: $469.44

**1 VM for MS SQL server**

A4: 8 cores, 14GB RAM, 605GB Temporary storage

Standard HDD disk: S20: 512GiB

Monthly Cost: $372.21

Total Estimated Monthly Cost: ***$2341.24***

Expected Service Uptimes: Approximately 24/7

The vendor is expected to have an expected uptime of 24/7 as Mo Vid users may want to use their service whenever possible. Also, depending on the length of the video, processing it can take hours, to days possibly so having a service uptime of 24/7 is expected and warranted.

Guarantees that are provided by the vendor:

* All VMs’ connectivity is available at possibly all times.
* Firewall will be available is available at possibly all times.
* Customers will have connectivity between their Microsoft Azure Database for MySQL Server and their Internet gateway at possibly all times.
* Data Security ensures no one else has access to any of the customers data.
* Backup and restore functionality are guaranteed.

In case of downtime, reimbursement by Microsoft Azure:

* Provide service credits per the downtime the customers may have, which is calculated based on the below formula.
* Monthly Uptime % = ( - Downtime) / Minutes in the Month X 100