



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**SCHOOL OF COMPUTING**  
Faculty of Engineering

**Semester I 2020/2021**  
**SECP 1513**  
**Technology Information System**  
**Faculty of Engineering**  
**School of Computing**

**Group: 10**

**Group member:**

- |                              |                    |
|------------------------------|--------------------|
| <b>1. Kheng Ming Jie</b>     | <b>(A20EC0197)</b> |
| <b>2. Ariq Ghazi Rabbani</b> | <b>(A20EC0262)</b> |
| <b>3. Hasin Araf</b>         | <b>(A20EC4024)</b> |
| <b>4. Hasan Adittyia</b>     | <b>(A20EC4023)</b> |

## **Introduction**

The reality that innovation nowadays features a noteworthy impact on the industry is clear. Not as well long back, ventures had to construct and oversee their server environment to have and work applications on their premises. We have cloud framework presently, which is revolutionizing businesses and their bones. This comparatively advanced innovation has been the spine of corporations' computerized change. The report will talk about the comparative assessment and conclusions of diverse cloud-computing stages concerning Amazon EC2, Google Cloud Stage and Microsoft Sky blue.

## **Objective**

- Growth of business agility
- Rapid time-to-market
- Cut the operational costs
- Automatic security
- Reduce development cost
- Enhance employee productivity
- Stay secure

## **Outline**

As for Amazon EC2 advantage, the EC2 encompasses a wide set of settings for computers. EC2 can have appropriate framework setups based on whether the anticipated arrangements are memory overwhelming, CPU overwhelming, GPU overwhelming or IO overwhelming. EC2 does have numerous machine pictures to customize the OS and applications required (Pier Leoni et al., 2020). It too empowers client to construct users' claim disk picture. It makes it simple for the customer to halt the EC2 occasion without losing the work. This tends to diminish the charge (Subramanian and Jeyaraj, 2018). In arrange to continue from the same put from where it was cleared out, the picture can be included to EC2 once more. The impediment is It takes as well long frequently to develop pictures of occurrences of EC2. For the extra time, this keeps the EC2 up. The UI for the EC2 benefit may be a small befuddling and needs point by point depiction in particular ways. This benefit may be a small challenging to utilize. To utilize this benefit effectively, modern clients require a critical learning bend (Ouda, 2020).

As for Google cloud stage, the aces of GCP is nice documentation (Kumar, Raj and Jelciana, 2018). A beautiful nitty gritty reference direct is given by GCP. There are moreover sensible costs in GCP. 99.9999999999 percent of thing strength over an indicated year is given through Google Cloud Capacity (Khan et al., 2020). This suggests that indeed within the case of the shared destruction of two disks, data

survives—also, \$300 free credit to induce begun inside the primary year on each GCP item. At that point, 5 GB of free capacity is free to have uncertainly. As for the drawback, profiting GCP bolster is very strong. Too, downloading information from google cloud capacity is costly. Moreover, the SDK APIs appear less steady than Amazon EC2 (Hyseni and Ibrahim, 2017).

### **Top or Leading Cloud Providers**

Amazon EC2 is origin from the name Amazon Elastic Compute Cloud. It is an online web services that the secure and resizable compute capacity in the cloud that being provided to the clients. Amazon EC2 also had designed a simple web service that the clients to obtain and configure the static capacity with the minimal friction. It is also allowed us to control our resources wisely and easier. Apart from that, Amazon EC2 provided the platform to allow the clients to have broadest and deepest computing with some choice of CPU, Storage, Network, OS system and the model.

Google Cloud Platform is kindly as a public cloud-based machine which provided the services for the clients. The Google Cloud Platform also as a computing resources provider in deploying and operating applications through the web. Furthermore, the Google Cloud Platform also providing a place for company or personal using in building or running software.

Microsoft Azure also same as the Amazon EC2 and Google Cloud Platform is a public cloud computing platform but for the Microsoft Azure it provides the solution that included the Infrastructure as a service (IaaS), Platform as a Services (PaaS) and the Software as a Services (SaaS). From that, we know that Microsoft Azure is focusing their function in analytics, computing, storage and network.

### **Cloud services**

Cloud services are infrastructure, platforms, or software that are hosted by third-party providers and made available to users through the internet.

Cloud services facilitate the flow of user data from front-end clients (e.g., users' servers, tablets, desktops, laptops—anything on the users' ends), through the internet, to the provider's systems, and back. Users can access cloud services with nothing more than a computer, operating system, and internet connectivity or virtual private network (VPN).

### **Cloud service types**

All infrastructure, platforms, software, or technologies that users access through the internet without requiring additional software downloads can be considered cloud computing services—including the following as-a-Service solutions.

Infrastructure-as-a-Service (IaaS) provides users with compute, networking, and storage resources.

Platforms-as-a-Service (PaaS) provides users with a platform on which applications can run, as well as all the IT infrastructure required for it to run.

Software-as-a-Service (SaaS) provides users with—essentially—a cloud application, the platform on which it runs, and the platform’s underlying infrastructure.

Function-as-a-Service (FaaS), an event-driven execution model, lets developers build, run, and manage app packages as functions without maintaining the infrastructure.

Depending on whom you ask, clouds can also be considered cloud services. Clouds are IT environments that abstract, pool, and share scalable resources across a network. Clouds enable cloud computing, which is the act of running workloads within a cloud environment. Clouds are a type of PaaS, since someone other than the user supplies the underlying infrastructure on which a web-based platform is provided.

Private clouds are loosely defined as a cloud environment solely dedicated to the end user, usually within the user’s firewall and sometimes on premise.

Public clouds are cloud environments created from resources not owned by the end user that can be redistributed to other tenants.

Hybrid clouds are multiple cloud environments with some degree of workload portability, orchestration, and management among them.

Multiclouds are IT systems that includes more than 1 cloud—public or private—that may or may not be networked together.

Amazon EC2	Google Cloud Platform	Microsoft Azure
Powerful GPU	-	Powerful GPU
About 400Gbps ethernet networking	Using network of “Hyperscale”	-
-	track of all of the resources and making the debugging all the times	Enhance and Implement Backup and Disaster Recovery
Flexible Storage	Configured Storage	-
Low Prices	Almost Free	Slightly High Prices

Cloud computing has been a moving subject for in any event a couple of years straight. It gives organizations admittance to workers, stockpiling, data sets, and extra application administrations, in an adaptable, pay-more only as costs arise model. Truth be told, the cloud is pervasive. In mid-2019 94% of organizations use in any event one cloud-based application that handles secure business information and an ever-increasing number of organizations and associations change from self-facilitated framework to public cloud suppliers. There are different purposes behind it.

### **Top reasons to choose cloud services**

Most importantly, organizations can zero in on building up their items as opposed to keeping up all the vital framework, which is exorbitant, tedious, and requires heaps of assets. All things considered, cloud arrangements suppliers charge a month to month expense (that can be paid month to month or yearly) for access. The foundation, its support, permitting and all the extra prerequisites are on the supplier's side.

### **How to choose the right cloud service provider**

We're mindful that picking the best supplier is a difficult undertaking as there are such large numbers of them available and from the outset, their highlights appear to be comparative. The correct choice is consistently the blend of a top to bottom investigation of explicit business necessities and least assumptions and evaluating suppliers as far as highlights, estimating, notoriety, security, and different variables. We've assembled them to help you settle on an educated decision.

### **Reliability and Performance**

Even though vacations are unavoidable and you shouldn't preclude a supplier since it straightforwardly distributes data about it. Notwithstanding, it's significant how frequently vacations occur and how the supplier addresses such a circumstance. Confirm supplier's cycles, jobs and obligations, devices, and debacle recuperation arrangements.

### **Partnerships and Integrations**

When choosing the cloud provider, you should think in terms of the ecosystems, not a single product. As a representative of a digital company you likely use various digital tools, such as CRM, analytics, etc. It's no different in terms of the cloud providers - they also have a network of partners and it's advisable to know them in advance and make sure they're trusted and reliable.

### **Company profile**

It's always advisable to work with a company that is reputable and has a strong record of stability and has no history of legal issues or data breach. It should also be in a healthy financial position and run by experienced managers.

**Top Cloud Computing Services companies are :**

- Microsoft Azure
- Amazon Web Services
- Google Cloud
- IBM Cloud
- Oracle Cloud Infrastructure

**Disadvantages:**

When moving administrations to the cloud, you are giving over your information and data. For organizations that have an in-house IT staff, they will be not able to deal with issues all alone. Notwithstanding, Stratosphere Networks has a day in and day out live assistance work area that can amend any issues right away. Not all cloud administrations are the equivalent. Some cloud suppliers will in general offer restricted forms and empower the most mainstream includes just, so you may not get each element or customization you need. Before joining, ensure you understand what your cloud specialist organization offers.

You may have fewer workers to deal with which implies less for your IT staff to deal with, yet that doesn't mean you can relinquish every one of your workers and staff.

While it might appear exorbitant to have server farms and a cloud foundation, the excess is key for reinforcement and recuperation. A cloud worker isn't repetitive nor is it upheld up. As innovation may flop to a great extent, abstain from getting singed by buying an excess arrangement. Although it is an additional expense, by and large, it will be well justified, despite all the trouble.

**Conclusion**

The ponder paper is related to cloud computing stages. Since its improvement, cloud-computing has voyaged a long way. Nowadays, it is now not the issue of whether or not companies need to utilize cloud computing, and the issue presently is which cloud stage to select. Various cloud benefit suppliers are right now flooding the cloud computing showcase, but the beat three spaces are gladly held by AWS, Sky blue, and Google Cloud Stage (GCP). From the over clarification of the three clouds computing stage, it has been caught on that advanced innovation advances are quickly changing. In this way, this report will offer assistance the peruses to get it the viability of diverse cloud stage administrations.