IMPACT OF COVID-19 ON CLOUD COMPUTING

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Abstract: Cloud computing is a technological enhancement that focuses on delivering the things on the way in which we design computing systems, develop application and upgrade existing services for building software. During this period of Covid-19 pandemic many changes have been occurred in our society. It turns our society into online mode and most of the cloud applications are prolific. And it's also introduce an online work culture.
This paper focus on the impact of Covid-19 pandemic in cloud computing and the future of this stream.
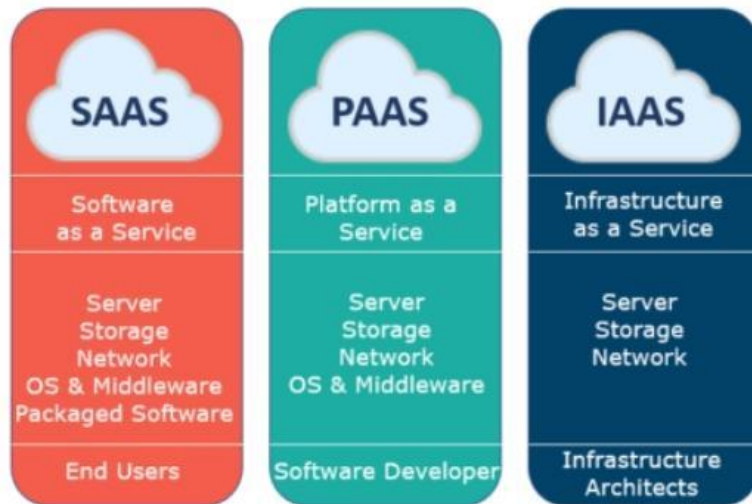
Index Terms - Cloud Computing, Covid-19 crisis, Increased Demand, Cloud Market, Recent Trends.

I. INTRODUCTION

Cloud computing is the delivery of different services through the internet, including data bases, data storage, servers, networking, and software. Cloud based storage makes it possible to save files to a remote database and retrieve them on demand or pay-per - usage basis. Services can be both public and private. Public services are provided online for a free while private services are hosted on a network to specific clients. It is the best option for people and businesses for a number of reasons including cost savings, increased productivity, speed and efficiency, performance, and security.

II. TYPES OF SERVICES

- **Software-as-a-Service (SaaS)**:-It is used for web based applications. SaaS is a method for delivering software applications over the Internet, where cloud providers host and manage the software applications making it easier to have the same application on all of your devices at once by accessing it in in the cloud.
- **Infrastructure-as-a-Service (IaaS):**-Which is used for Internet based access to storage and computing power. The most basic category of cloud computing types, IaaS lets you rent IT infrastructure, servers and virtual machines, storage, networks and operating systems from a cloud provider on a pay-as-you-go basis.
- **Platform-as-a-Service (PaaS) :**That gives developers the tools to build and host web applications. PaaS is designed to give users access to the components they require to quickly develop and operate web or mobile applications over the Internet, without worrying about setting up or managing the underlying infrastructure of servers, storage, networks, and databases.

III. CLOUD COMPUTING DURING COVID-19 PANDEMIC

The global COVID-19 pandemic has shaped us to reinvent how we work, learn, help, engage and communicate. Cloud computing has played a vital role in enabling businesses and governments to quickly apply solutions to respond to the crisis and maintain continuity. The year 2020 was frightful year as humanity suffered from novel Corona virus it shook the world do hard that it is starts that it might take as long as 5 years to recover from it as there would be a possible economic recession.

In this scenario no one can predict the future but during the lockdown period of pandemic we were suddenly introduce "online work culture" and I'd possible because of information technology more specifically we were able to work with such efficiency from remote location is only possible because of" Cloud computing "as it provides these services on demand through dynamic provisioning. It also provides reliability, security, safety and compliance.
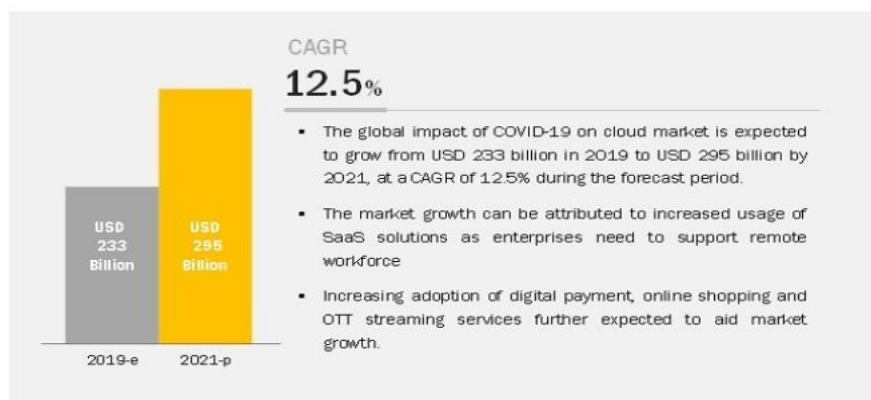
This transition from Work From Office (WFO) to Work From Home (WFH) was so instant that no every organization was able to follow through and had faced a lot of loss which also led to many companies to shut their business which also adversely effected employees as they lose their jobs where for some high end companies this transition was smooth as they have that much capital, they were able to provide their employees everything they need making them to not fluctuate in their performance. But still this all was possible but cloud was one of unsung hero in this. Where cloud computing has been more than a facilitator, it has become a vital enabler to avoid service disruption. Cloud computing has impacted the actual provision of service in an environment of massive market volatility.

Many multinational companies like amazon, Microsoft are investing hugely on cloud they are adding jobs also in order to keep up with the demands they are creating over 1000 job opportunities in Ireland and open a new Dublin campus.

IV. COVID-19 IMPACT ON CLOUD COMPUTING MARKET

The global impact of COVID-19 on cloud market size is expected to grow from USD 233 billion in 2019 to USD 295 billion by 2021, at a Compound Annual Growth Rate (CAGR) of 12.5% during the forecast period. Major driving factors of the market growth include enterprises need to support remote workforce to induce investment in IT infrastructure for hyperscalers, cloud service providers (CSPs), internet service providers (ISPs), and managed hosting providers, rise in demand for cloud-based business continuity tools and services and suitability of public cloud environment best suited for the current unprecedented scenario.

Attractive Opportunities in the Impact of COVID-19 on Cloud Market

The retail sector to show the highest growth rate during the forecast period within the global cloud industry. The healthcare segment to record higher investment and growth in 2020 within the global cloud market. Software as a service (SaaS) solution segment to hold the largest size of the cloud market during the forecast period.

V. RECENT DEVELOPMENTS

In March 2020, HPE introduces a powerful Virtual Desktop Infrastructure (VDI) product with flexible financing norms and new pre-configured solutions for remote working. The company offers industries and academic organizations software and applications to help researchers to compete with the pandemic.

In March 2020, Alibaba has launched a suit of cloud-native anti-coronavirus solutions. Alibaba Cloud hosting DingTalk's International Medical Expert Communication Platform for free communication to medical workers. The company has also launched the CT Image Analytics technology to identify the characteristics of coronavirus pneumonia in CT scans.

In March 2020, Google launched a Rapid Response Virtual Agent program that can quickly process Contact Center AI agents for handling conversations with online chat or over the phone to aid in COVID-19 response.

VI. CONCLUSION

Cloud computing is the delivery of computing resources, means Everything as a Service(XaaS). It has a bright future and new trends in coming years. Through the Covid-19 pandemic cloud services are fulfilled.

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