CLOUD TRENDS IN 2020

UMKLOMELO ELECTRONICS AND IT SOLUTIONS PTY LTD

Cloud Computing

Cloud computing services eliminate the need for users to maintain and upgrade hardware. Depending on the development model, the redundant nature of the infrastructure ensures stability and security. This method of computing is often more affordable than a standard system. There is universal accessibility anywhere there is an internet connection or other means of interfacing with the system.

With recent technological advances, cloud computing has become an increasingly attractive method of processing workloads and running software. Several enterprises and companies have been taking advantage of these newly available services, which creates an ever-growing demand for more processing power, storage capability, and security measures.

The cloud computing market has been skyrocketing in recent years, with a rate of growth difficult to measure. Dave Bartoletti, tech expert and vice president of *Forrester* predicted 2019 to be the "coming of age" of cloud computing, and he was correct.
This year, 83% of enterprises are expected to conduct their work using cloud computing, which is a staggering figure. Time will tell if this will continue to rise.
Despite how dynamic this ever-growing market is, there are some large-scale trends that can be followed.

Market Value and Revenue

The global cloud computing market value is expected to reach $625 USD per share within five years, a figure that rivals some countries' entire stock exchange.
Tech companies and organizations are likely to be committing upwards of 70% of their total spending on cloud initiatives such as security and infrastructure development within this year.
IaaS, PaaS, and SaaS are the three most common software genres in cloud services. All three are growing fast, both in revenue and market value. Some services, such as SaaS, are growing faster than the rest because of how easy it is to utilize.

These figures are based on previous annual growth rates and are not necessarily 100% accurate.

❖ Infrastructure-as-a-service (IaaS)

Infrastructure-as-a-service is computing infrastructure sold as a product. Amazon Web Services and Microsoft Azure are two examples of IaaS. It is the service that involves the most user management.
IaaS revenue is expected to swell from $50 billion this year to $74.1 billion by 2022. This makes it the second-largest sector of cloud infrastructure.

❖ Platform-as-a-service (PaaS)

The platform-as-a-service software genre refers to the hardware and software tools involved with cloud computing.
A common example of PaaS is the Google App Engine, which is used for designing and managing web applications.
The total investment in this type of cloud computing was 56% in 2019, which hints at further growth as the service usage increases. PaaS is forecast to bring in an estimated $58 billion by 2022, up from around $39.7 this year.

❖ Software-as-a-service (SaaS)

Software-as-a-service is the method with the least user management. It involves the vending of software over the Internet. SaaS is perhaps the most familiar of cloud computing services, as it includes all online Google Apps, as well as other common vendors such as Dropbox and Salesforce.
SaaS is also the largest and most profitable sector of cloud computing, making an estimated $116 billion by the end of 2020, and a projected $151.1 billion in 2022.

Public, Private, and Hybrid Deployment Models

❖ Public Cloud

A system is a "public cloud" when the services that it provides are open for public use. Generally speaking, the infrastructure between public and private clouds are the same; only the access is different. Public clouds are becoming increasingly popular, and more difficult to manage. Security can be a major issue with public clouds, as the information is more easily accessible.

Public cloud usage is growing at a rate 3 times faster than that of the private cloud market. An estimated 41% of enterprises are forecast to rely on public clouds by the end of this year.

❖ Private Cloud

Private clouds are independent entities that often serve a single company or enterprise. These clouds can be operated by the company, or by a third-party provider. A private cloud is generally more secure from outsiders, but is often more expensive than it's public counterpart. This is largely because of the maintenance involved with keeping it operational. Private cloud adoption is sitting at around 72% as of 2019, down from 75% the previous year.

❖ Hybrid Cloud

Hybrid clouds have features from both private and public clouds, making them preferable for companies that need both a private computing section and public access abilities.
Some cloud computing professionals expect 22% of all corporate workloads to be handled by hybrid systems during the 2020 year.

Security and IT Trends

Security has been a concern for many cloud computing providers and users alike. With such a close-knit system, the privacy of cloud users has been a growing issue.
Companies and providers have been searching for effective ways to counteract any cloud cybersecurity threats, as it has the potential to detract from their business.
After the first few trial years, it is believed that 99% of all abused cloud computer vulnerabilities will be known by IT specialists and cloud computing technicians. As usage increases, so should security.

The IDC (International Data Corporation) claims that spending on cloud-based services will reach 60% of total IT expenditure during the 2020 year. More than half of all companies place very high importance on optimizing and managing their clouds.

Artificial Intelligence

Artificial intelligence has been slowly integrated into SaaS systems in the form of internet chatbots, inference engines, and analytical predictors.

The largely untapped potential of AI cloud computing is a huge opportunity for tech companies.

Not only is cloud-based AI a major selling point, but it also increases the potential uses for their products and services.

Kubernetes and Docker

New and improved methods of delivering and managing packages (bundles of fully operational software) have been released in recent years.

Kubernetes is an open-source automated container manager system. It is responsible for scaling and deploying packages in cloud computing systems. This software conveniently mounts local storage systems and public cloud providers.

Docker containers and independent packages that contain the necessary functions to run an application, including runtime, code, tools, information library, and user settings.

Docker has set industry standards to ensure the compatibility and portability of these containers.

What does the future hold?

As the world continues to take advantage of cloud computing, more funding and effort will be put towards improving the existing infrastructure and adapting to the current needs of the users, to the benefit of both individuals and megacorporation's alike.

About Umklomelo Electronics and IT Solutions

Formed in the year 2013, Umklomelo Electronics and IT Solutions Pty Ltd, is Level One, female owned ICT organization that focuses on developing end to end solutions for our clientele within their digitized environments, while leveraging data and technologies to enable business optimization and efficiency.
Sensoring, Aggregation and Security of data is at the core of our activities which enables us to operate at the edge of computing, giving our customers real time insights into their business environments.