# Emerging Trends in Cloud Computing

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**ABSTRACT**

Today most of the IT-enabled organizations are working on cloud computing environment. It has various benefits like low-cost ownership, easy upgradation, productivity anywhere, saving on maintenance cost, disaster assistance, off site data storage, constant availability etc. There are very few organizations which have not adopted cloud computing services. What are the emerging trends in cloud computing? How can these effect on upcoming and emerging technologies of the cloud environment? The adoption cloud computing has increased worldwide. There is increase in revenue generation through cloud computing. Public cloud usage has also increased tremendously. The 3 main pillars of the cloud are growing day by day. Service providers companies are growing very fast. Security threats are declining. In this paper we are trying to focus on upcoming trends in cloud computing which may have a bearing on cloud computing and its service and environment.

**Keywords**: Cloud computing, Emerging trends, Future trends, Latest cloud computing trends

## 1. Introduction

**Cloud computing [3][4][5]** is providing service over internet, and customers can choose it whenever they require it. The cloud services such as applications, storage and servers are provided over the internet and are very much easy for the customers to manage.

## 2. Cloud Computing Services

**a. Software as a Service [SAAS][3][4[5]**: Cloud service providers offer to rent out a software (application) to the customer over the internet.

**b. Platform as a Service [PAAS]:** Cloud service provider offers to rent out any hardware, storage, network and operating system for the use of customer.

**c. Infrastructure as a Service [IAAS]:** Cloud service provider offers storage, hardware and networking components on pay-as-use basis to the customer.

## 3. Emerging Trends

Today cloud computing is being widely used on the assumption that it is very safe. It has also various benefits like low cost, better efficiency, powerful agility and versatile growth and development.

When analyzing the technology trends for the next decade, companies seem to need to adopt the cloud to measure their competitors and innovate.

**3.1 The Rise of Quantum Computing [5][6][7]:** It allows computers to work at very high speed and process the data very fast and accurately. It will increase computational power and efficiency.

It has been growing in all areas except the medical field, which is where it is very much essential. Quantum computing can grow in the field of medical services to support quite a number of patients who may require immediate help. It is helpful to take correct and fast decision to diagnose any illness by using machine learning mechanism. ML will also help to increase the efficiency of equipment.

**3.2 Cloud Computing Revenue is Rising**

The prediction for this year's cloud computing market is about $350 billion. According to research and forecast of expenses will reach about 70 percentage of all technology till 2020. The cloud computing revenue has been increasing day to day. There is increase in the number of cloud providers too. The growth rate has also increased from 8 to 24 percentile. The free and public cloud offering has been increased and acceptance ration of it has also increased.

If we see the current trends of revenue generation in cloud,

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there is potential of grow for any organization and get benefited.

*Table 1 : Public and Drivers*

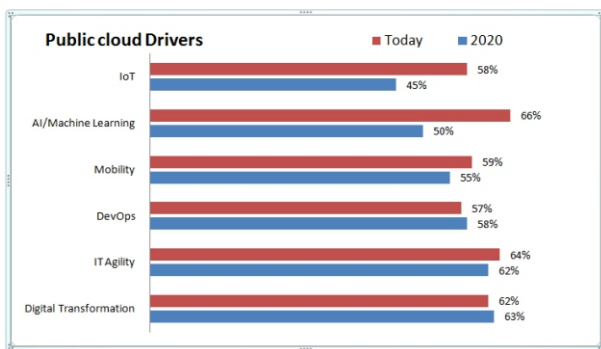| Public cloud Drivers | | |
|---|---|---|
| **Name** | **Today** | **2020** |
| Digital Transformation | 63% | 62% |
| IT Agility | 62% | 64% |
| DevOps | 58% | 57% |
| Mobility | 55% | 59% |
| AI/Machine Learning | 50% | 66% |
| IoT | 45% | 58% |



*Fig 1 :  Result Of Public Cloud Drivers*

**3.3 All Things Blockchain:**  The services offered by cloud providers are mostly decentralized. If we work on enterprise entity then it should be centralized. The best solution is blockchain, which will naturally fit the same. Most of the cloud providers are using the same, when we talk about analysis of crypto-currency and its validation.   Blockchain in not only for financial area but also organizations, which can adopt blockchain technology for the upgradation of servers in cloud and data analyses and find out the result.

**3.4 Cloud Computing Companies Growth Trends for 2020:** The cloud service provider companies' growth is

tremendous, which shows a positive sign on the usage of the cloud services. It is also happening because companies are providing better services day by day.

*Table 2 : : Cloud Computing Companies Growth Trends for 2020*

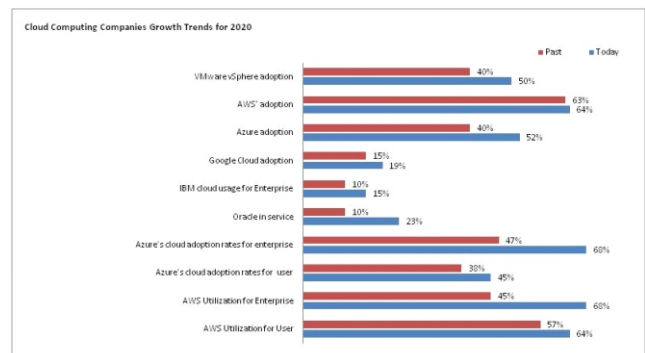| Cloud Computing Companies Growth Trends for 2020 | | |
|---|---|---|
| **Name** | **Today** | **Past** |
| AWS Utilization for User | 64% | 57% |
| AWS Utilization for Enterprise | 68% | 45% |
| Azure's cloud adoption rates for  user | 45% | 38% |
| Azure's cloud adoption rates for enterprise | 68% | 47% |
| Oracle in service | 23% | 10% |
| IBM cloud usage for Enterprise | 15% | 10% |
| Google Cloud adoption | 19% | 15% |
| Azure adoption | 52% | 40% |
| AWS' adoption | 64% | 63% |
| VMware vSphere adoption | 50% | 40% |



*Fig 2 :  Result of  Cloud Computing Companies Growth Trends*

**3.5 Cloud Computing Security Trends**:

Security is the main hurdle for the cloud computing, and security is tighter than earlier. And research on the same plays an important role.  In the marker the applications which are on the cloud are mostly secure, and the reason behind it is that the service providers spend a lot of money and effort on it.

The experts in this area know of the threats in advance, and so it is easy to work on it

## 4. Conclusion

This paper has focused on upcoming trends in cloud computing. This may help the research students in cloud computing field to recognize the latest trends and to move further to fill the research gap.

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