Impact of Cloud Computing Techniques in Indian IT Industry

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Abstract

It is predicted that the cloud market will reach over \$3 billion by next year in India-an almost five-fold increase from 2012. Cloud computing will transform the way business is done. Small to medium sized businesses (SMBs) will directly be benefited across the country. This sector employs 40% of the workforce and is growing at a rate of 8% per year; it will also dictate the future course of Indian development. According to Zinnov, which a leading consulting company, the cloud computing market in India is expected to reach \$4.5 billion by this year with most users being SMBs. The latest market analysis by Cisco* shows that within next three years more than four-fifths of all data center traffic, 83 percent, will be based in the cloud. Wherein most of this will be going to public cloud services, thus there will be more workloads (56 percent) in the public cloud than in private clouds (44 percent). According to Cisco, there will be over 50 billion devices connected to the Internet, by 2020. Cisco's strategy is to invest in solutions of hybrid data centers to create an optimized IoT (Internet of Things) infrastructure. The above are just a few situations in which cloud is growing, and how all industries are benefitting from, thus making it clear that there is going to be a substantial increase in the demand for cloud computing professionals.

Keywords: IT Industry, Cloud Computing, Indian Market, Block-chain.

Introduction

Cloud computing is a method for delivering information technology (IT) services in which resources are retrieved from the Internet through web-based tools and applications, as opposed to a direct connection to a server. Rather than storing files on a hard drive or local storage device, cloudbased storage makes it possible to save them to a remote database. As long as an electronic device has access to the web, it has access to the data and the software programs to run it. It's called cloud computing because the information being accessed is found in "the cloud" and does not require a user to be in a specific place to gain access to it. This type of system allows working remotely. Companies providing cloud services enable users to store files and applications on remote servers, and then access all the data via the internet.

Opportunities in cloud are increasing day by day, IT Architects with Cloud Computing skills can earn as high as INR 2,000,000*. According to the survey by Computerworld 25% of the hirers interviewed would be looking out for individuals with Cloud Computing skills.

Following are the jobs where Cloud Computing skills are used, and the median salary earned by the employees:

- Solutions Architect: ₹ 1,549,417
- Technical Architect: ₹ 1,720,354
- IT Architect: ₹ 1,846,893
- Senior Architect Consultant: ₹ 1,265,381

Cloud Computing is storing and processing of data over the internet rather than on the hard drive. Today almost everyone is using cloud computing to store, maintain and process their data and rightfully so it provides a various advantage: No requirement of hardware maintenance or administration of any infrastructure for the same. No worries in regards to storage space. Cloud computing provides Infinite storage space. The data stored on the cloud can easily be accessed anytime anywhere. One just requires a device with an internet connection.



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Figure 2: Cloud Clients

Upscale Application Complexity

Companies initially shifted some of simple workloads to the cloud to check viability of doing so and to make an organization efficient. However, now that the simpler projects have been established on the cloud and the companies will be shifting the more complex applications to the cloud in the hope of even better workplace efficiency.

Cloud Platform Will Allow Companies to Avoid Unnecessary Tools

Cloud platforms emphasis on short learning curve. Another advantage is the low barrier to entry in terms of cost and seamless integration into organisation. The recent example is that of the lean manufacturer "Toyota" which has shifted to all kind of cloud technologies denting other expensive tools. Toyota cloud alternative to exchange mail **LJESPR**

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and Microsoft Office desktop is Microsoft Office 365.

Reducing the Task

The feasibility of developing one app that does everything for a company is being put to test. For every release, the testing time increases with an increase in utilities, causing delays and even making the software outdated by the time it hits the production environment. Companies are looking at micro services on the cloud that perfectly handles one or a few such tasks at a time. A business service can be a combination of one or more micro services. This way, updates can be released quickly because only the specific micro service has to be tested before release.

Cloud Platforms to Compete with Blockchain

Block chain has revolutionised the IT industry. Presently cloud industry is oligopolistic market place dominated by three major player AWS, Microsoft Azure and Google Cloud. These companies collude to set the prices. Several companies are leveraging block chain technology to turn cloud into an open market place, where price is determined by the supply and demand for computing power. For example, on the blockchain network, users can "rent" computing power from idle data centers. They only use the power they need for the amount of time they need it. In turn, data centers and large-scale companies with hardware they aren't currently using can turn these assets into new revenue streams. By creating decentralized ecosystems, blockchain technology will have a massive impact on the way the business world uses the cloud.

Change the Productivity Perspective by Companies

Cloud computing has made a real impact on team work. Whether they are sitting on the same office or two sides of world, data is made accessible to employees 24/7 which made continuous flow of work without any disruptions. The empowerment of artificial intelligence and machine learning will radicalise cloud computing. Say for example if you are constantly making changes to the documents in the cloud, the cloud may soon be able to learn from

the changes and suggest the changes to the other team members autonomously.

Towards Sharing Mentality of Companies

In the past many companies decided to invest thousands of dollars in building their own servers, CRM tools, databases and file-storing programs. But now many of those services are being offered on the cloud which is free and very cheap to start. Therefore, it's difficult to justify such a substantial cost just to keep everything in one room. In addition, cloud companies see the massive potential for enterprise services. They can replace many of these unnecessary in-house tools and platforms. As demand for cloud computing increases so will their efforts to ensure cloud computing technology are superior over the ones built internally.

Positive impacts of cloud computing

Cloud computing have positive impact on the business organizations as it increases their revenue and helps them to achieve the business goals. Companies prefer to use the services offered by the cloud rather than building their own infrastructure. Following are the benefits of cloud computing technology which motivates the business organizations to migrate from local infrastructure to cloud.

Reduced cost: Cloud computing reduces the expenses of the company as the resources are only acquired when needed and only paid for when used as the billing model works as per usage and there is no up-front cost. The infrastructure is not purchased and thus lowering the initial expenses and maintenance cost as well. The clients are not the owners of the infrastructure but can use the cloud services online.

Unlimited scalability: This is the major benefit of cloud technology as the client has the flexibility to scale up or scale down as per the needs of the organization. The companies do not need to worry about the future demands as they can easily acquire the additional services anytime. Also, if a business grows over time, the cloud can scale effortlessly to meet the increased demand over time.

Flexibility: Cloud computing provides lot of flexibility to its clients. There is an easy testing and deployment of the services over cloud. The

customers are free to decide which services they need and pay for accordingly. The cloud services can better meet the changing business demands by providing various services. If any application provided by the cloud is not getting our job done, we have the flexibility to switch to another cloud.

Better mobility: The users of the cloud can access the services of the cloud anytime anywhere from a variety of devices. Whenever they have the working internet connection, they can login and use the services. This benefit of cloud computing provides a flexible work culture to the employees and they can perform their duties from anywhere without the need to be physically present at the business headquarter.

Improved communication: Cloud computing improves communication and collaboration among employees by having access to instant messaging, conferencing and video conferencing options. They can jointly work on documents and projects ensuring higher cohesion and team work. This is possible because of data centralization and updation of cloud servers in real time.

Reliability: As the services of cloud is available all the time and can be accessed anywhere. Also, the backup and recovery management make this technology more reliable.

Increased storage: Some cloud providers offer the Storage as service to its customers. Companies can store lot more data on cloud than their local devices. If business grows and demands more storage, companies effortlessly scale up and get more storage from the cloud provider.

Easier upgrades: It is the responsibility of the cloud providers to upgrade the infrastructure and services for their customers. The new business trends and solutions are made available to the clients by cloud providers to compete in the business market by adopting latest technologies. The cloud providers maintain the system by doing different software and security updates.

Disaster recovery: Companies using cloud services need not to frame the complex disaster or failure recovery plans as the service providers take care of such issues and put the clients out of the trouble in a fast manner.

Security: The most important factor while choosing a cloud provider is the security and privacy they provide to our data. This is the main

reason that these providers invest large amount on their services and infrastructure to offer better security.

Conclusion

Cloud computing is in the toddler phase of advancement. Instead of review cloud computing as an independent marvel, it must be seen against the setting of financial and institutional substances confronting the advancing scene and all the more explicitly more modest businesses with lighter operational loads. In principle, there are numerous conceivable employments of cloud and a few channels and instruments through which businesses from advancing nations might profit. In practice, notwithstanding, genuine issues identified with the determinants hinder usage and reasonable effects. Public cloud developments and businesses still seem to be a long way from details and implementations of small medium enterprises in improving scene.

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