Future and Scope of Cloud Computing in India

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ABSTRACT

Cloud computing is ready to transform the structure of businesses. There will be abundance of service suppliers, as well as international players like Google, and Amazon who can roll out their Indian plans. With the concept of 'Digital India', it will provide an important push to enterprises to switch to the cloud computing. For India, it is an immediate helpful impact for small to medium sized businesses (SMBs) across the country. This paper explains regarding the opportunities and future of cloud computing in India and the way businesses will get changed with developed infrastructure and how get benefited from it.

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Introduction

Cloud computing is one in every of the foremost talked regarding IT trends these days. This is often due to the fact that cloud computing has helped many enterprises to save lots of money whereas adding to the convenience of the users [1]. Cloud computing is prepared to remodel however we have a tendency to try and to do business and therefore the approach we tend to move up within the digital value chain. There will be abundance of service suppliers, yet as international players like Google, and Amazon who can roll out their Indian plans. Relating to the challenges, one is that the accessibility of broadband internet, which is kept limited in India. However with the thought of 'Digital India', it will provides a necessary push to enterprises to switch to the cloud computing.

India, it is a direct useful impact for small to medium sized businesses (SMBs), across the country. This paper explains about the opportunities and future of cloud computing in India and also about how businesses are benefited from it, which implies that cloud computing is an internet based computing where services are delivered to the users via internet [2].

Cloud computing is a kind of computing that involves sharing of computer resources instead of using local servers or dedicated devices for process. In easy words, it is the method of storing frequently used information on multiple servers that may be accessed by using the net. Numerous services like servers, storage and applications are provided to the user's computing devices via net. Some smart examples of using cloud are Dropbox which is an internet storage which provides 2 GB of free storage to the users. Also another example is Google which allows the users to form documents and calendars for free of charge.

Need and Importance of Cloud Computing

Cloud computing is currently turning into a business standard. It simplifies the user's accessibility. It provides a storage space to the user that may be used without bothering regarding the details of the whole mechanism. Here are other reasons why each enterprise may want cloud computing for their business:

Cost: Cloud computing removes the necessity of an organization to invest in storage hardware and servers.

Focus on the business: Since all the services can execute over the internet, an organization does not need to hassle about technical problems and different issues related to physical storage and backup. An organization will therefore focus more on their core business.

Performance: It gives reliable performance though the user may at any geographical location. Another key feature may be the automated change of all services and also applications.

Security: Cloud computing offers optimum security that protects you against any unauthorized access, modification and loss of information.

Flexibility: Although a part of the cloud surroundings fails or stops operating, the opposite resources still work till the problem is fixed.

The advantages of the cloud are standard and documented. However one aspect that must be understood is it results in career opportunities. Cloud computing brings down the price and manpower requirements since the expensive software system packages and hardware systems required to install them are not longer needed. The software system required is downloaded from the net as per the need of the unit, by paying the service supplier. Proof indicates that it might be economical to download the software system, instead of storing them in the hardware of the system.

Current Scenario of Cloud Computing

This sector of cloud computing employs four hundred of the manpower and is growing at a rate of 8% per year; it will additionally indicate the future of Indian development. Current figures indicate that 68% of SMBs having over a hundred staff have resorted to cloud computing.

In line with Zinnov, a number one company, the cloud computing market in India is anticipated to achieve $4.5 billion coming back in private control cloud firms trying to achieve those prestigious elite that were mentioned in BVP's
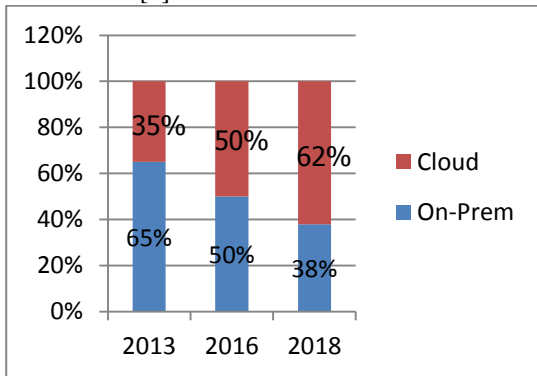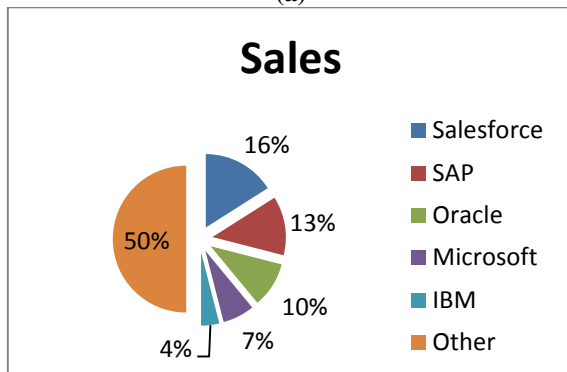
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Cloudscape is able to profit exponentially from higher accessibility, enhanced geographic reach and improved business continuity due to the cloud [6].

The report additionally claims that by the year of 2018, 62% of all CRM software packages are going to be cloud-based. Salesforce can leverage on cloud, the foremost and strengthen its market leader position. Half of all application spending is for SaaS-based applications, projected to grow at a Compound Annual Growth Rate (CAGR) of 17.6% from the year 2013 to 2018 [6].

(a)

(b)

Figure 1. Worldwide Enterprise Application spends by SaaS and On-Prem, 2013-18 [6]

Effect of cloud mobility

The impact of quality on the cloud-computing market is all time high. Enterprise mobile has additional potential to legitimatize than client mobile. Rely on this; total 80% of staff does not work on desktop as they are using internet mobile devices. With nearly 3.6 billion Smartphone users by the end of the year of 2014, the worldwide penetration of Smartphone has already crossed 500 numbers. The growth of mobile internet in developing countries, together with the large two countries as China and India, has been extraordinary in the last two years [6].

According to the BVP's report 43% enterprise apps build over $10,000 a month, compared to only 19% client apps. The revenue from the client apps builds 50%, between $1 and $1000 as revenue from monetization per month [6].

Forecasts of future of Cloud computing, by various research firms

With cloud computing market globally, together with the developing countries, since last ten months, India witnessed plenty of activities during this section. Whereas several brands

and entrepreneurs have adopted it and some existing ones additionally attracted vital investments.

There is a startup referred to as Freshdesk that provides a cloud based mostly personal accounting answer. Bookyourtable, the web table reservation service came in news for exploitation of cloud services to produce real time booking choices for restaurants. And then, there have been brands like Oracle and holler that non heritable Bigmachines and Enstratius severally, to achieve technological advantage within the sector and even the Indian Government has recently taken an initiative to launch a national cloud, referred to as Meghraj [4].

Chennai based IT firm; Sify Technologies has recently announced to take a position in or partner with technology startups specializing in cloud, security and managed services. This involves 30 Cr for initial investments and 120Cr for future investments during this field.

Some other names to be anticipate for brand spanking new innovations in cloud this year embody BSNL, Tata Communications, British medium, OpenXcell, HP etc.

The situation so clearly demands a transparent image of the market opportunities out there and therefore the expected way forward for cloud within the country [4].

Gartner: Cloud computing can become the majority of IT by the year 2016. From the year 2012 to 2017, across all segments of the cloud computing market, cloud services revenue is projected to possess a CAGR of 33.2%, with SaaS and IaaS and growth rates projected to be 34.4% and 39.8% severally.

Also, with higher rates of SaaS adoption, by the year 2017, USD 4.2 Billion will be spent on cloud services in India, USD 1.8 Billion of which can be spent on software system as a service (SaaS).

VMware, Inc. Cloud index: A study, conducted by Forrester analysis across twelve Asian countries, reveals that just about 89% respondents in India believe that Cloud Computing, or 'as-a-service' approach, has relevancy to their organization and majority say that they presently have a cloud-related initiative in place among the organization, or are aiming to implement cloud, or 'as-a-service' approach, in the next year.

CII: Public cloud computing in India has developed in the year 2013 to total USD 443 Million, up from USD 326 Million in the year 2012. The Indian IT-BPO vendors will develop their social media, mobility, analytics and cloud computing (SMAC) methods and cross the USD 225 Billion mark by the year 2020.

Microsoft IDC study: Cloud computing can generate some 14 Million new jobs worldwide and India alone can produce over two Million jobs [4].

Cloud Computing and Digital India

Prime Minister Narendra Modi visited Silicon Valley seeking the support of counsel of US technology corporations and International Business Machines Corporation (IBM), to form his dream of Digital India in reality. The "Digital India" initiative has nice potential to enhance the technology infrastructure in a country expected to be the third-largest economy in the coming next ten years by the World Bank [7].

One of the key technologies that are important to fulfilling the promise of Digital India is cloud computing which running all forms of business applications in information centers that are designed for the fast delivery of computing resources instead of desktop or laptop computers [8].

Offering versatile consumption models is important to Digital India especially for regulated industries that need a high degree of information management and oversight, like finance. Versatile consumption offers clients management over wherever they build, test, deploy, run and manage their cloud applications.

Companies should not see cloud computing in isolation. Instead, they have to seem to the future and perceive the potential of another major wave in technology that is on the way cloud computing which represents a complete new model of computing that features a variety of technology innovations in analytics, natural language process and machine learning.

Industry analyst firm IDC predicts that by the year 2018, half of all customers can move frequently with services supported cloud computing. Cloud systems are able to ingest immense quantities of information, comprehend it, learn from interactions with information and humans, and facilitate businesses build better selections [8].

The power of cloud computing for Digital India:

Prime Minister Modi's mandate for Digital India revolves around 3 key pillars: Infrastructure as utility to each national, government services on demand and digital authorization of citizens. Currently imagine an e-health system wherever various Indians will use cognitive cloud technology in new and meaningful ways in which to expedite disease diagnosing and treatment. To see however this works in practice is examine by Watson Health, a new business unit at IBM. Its centerpiece is Watson Health Cloud. This is often a platform open to an outsized and growing ecosystem where application developers, physicians and different medical and health care suppliers will notice and share information, will use dozens of pre-made cognitive elements to make new applications, and may mix services to launch new analysis collaborations and improve patient reaching and engagement.

Another sensible application of cloud capabilities delivered via the cloud in India would be to deliver government services info across mobile platforms, ensuring the proper data is available once and wherever it is required, particularly for citizens without home net service [8].

These are simply some examples of however cloud computing will mobilize Digital India. India's production, retail, money services, telecommunications, and government sectors all have the potential to be remodeled by cognitive cloud applications.

India is presently the world's quickest growing economy with an exclusive scheme of developers, start-ups, large enterprises and ISVs (independent software package vendors) fast its digital transformation.

Conclusion

Cloud computing will be the revolution for India to develop entrepreneurs and will be the cost saving key pillar to develop new enterprises. It will be the easiest way to develop

infrastructure of new businesses. Also, Indian start-ups and established enterprises will get huge financial progress by adopting cloud computing. According to the analysis of International information corporation (IDC), there is no doubt that Cloud will increase about $3.5 billion market in India by the current year. For this India will need a strong platform to make, manage and run its cloud applications.

References

[1] Buyya, R.., Yeo, C., Venugopal, S., Broberg, J., and Brandic, I. June 2009. Cloud Computing and Emerging IT Platforms. Vision, Hype and Reality for Delivering Computing as the 5th Utility. Future Generation Computer Systems, Elsevier, The Netherlands 25(6): 599-616

[2] http://www.financialexpress.com/What The Future Holds For India In Cloud Computing; Ahok K. Laha; c2015-16[updated 2015 July 27; cites 2016 Feb 18]. Available from

[3] http://www.financialexpress.com/article/industry/tech/what-the-future-holds-for-india-in-cloud-computing/108207/

[4] http://cloudcomputingnews.in/ The Cloud Computing News India, News and Info on Cloud Computing and Virtualization; c2015-16 [updated 2015 August 9; cited 2016 Feb 18]. Available from http://cloudcomputingnews.in/what-the-future-holds-for-india-in-cloud-computing/

[5] http://cloudcomputingnews.in/ The Cloud Computing News India, News and Info on Cloud Computing and Virtualization; Neha agrawal; c2013-14 [updated 2013 November 1; cited 2016 Feb 18]. Available from

[6] http://www.iamwire.com/2013/11/cloud-computing-india-current-status-future-forecasts-research-firms/21548

[7] R. Buyya, C. S. Yeo, and S. Venugopal, Market-Oriented Cloud Computing Vision, Hype, and Reality for Delivering IT Services as Computing Utilities, Proceedings of the 10th IEEE International Conference on High Performance Computing and Communications, Sept. 25_27, 2008, Dalian, China.

[8] http://dazeinfo.com/ The Future of cloud Computing: $127 Billion Market By 2018 [REPORT]; c2015-16 [updated 2015 July 1; cited 2016 Feb 18]. Available from http://dazeinfo.com/2015/07/01/the-future-of-cloud-computing-127-billion-market-by-2018-report/

[9] https://www2.deloitte.com/ Digital India: Unleashing Prosperity; Retrieved from https://www2.deloitte.com/content/dam/Deloitte/in/Documents/technology-media-telecommunications/in-tmt-tele-tech-2015-noexp.pdf

[10] http://www.livemint.com/ Intelligent cloud will define Digital India's success; c2015-16 [updated 2015 December 2; cited 2016 Feb 18]. Available from

[11] http://www.livemint.com/Opinion/JhJdtYSpPp1TSxVmP90fHO/Intelligent-cloud-will-define-Digital-Indias-success.html