

CLOUD COMPUTING OVER TRADITIONAL COMPUTING

Lakshmi C

Keraleeya Samajam Dombivli's Model College, Dombivli East, Mumbai, Maharashtra, India

ABSTRACT: - *Computing is any operation that handles, processes, and communicates information using computers. It involves both hardware and software creation. Computing is an important, vital part of modern industrial technology. Computing involves the planning, development and construction of processing, structuring and management of different types of knowledge for hardware and software systems, doing scientific research on and with computer entertainment media.*

For decades, conventional computing has become the most popular business computing form. Traditional computing consists of different pieces of hardware that are connected to a network via a remote server, such as a desktop computer. Usually, this server is built on the premises and gives access to the stored data and software of the organization to all workers using the hardware.

Cloud computing is an excellent business technology tool. These remote servers aren't floating up in the clouds though; they are located in data center and accessed via the Internet. The data center provides a climate-controlled, secure location with alternate power supplies and 24/7/365 system monitoring.

This paper mainly focuses on the ideas of cloud computing, why we should Cloud computing over traditional computing, basic characteristics and limitations.

The main intention of this paper is to explore and present a comprehensive survey of Cloud computing among technical people, Cloud computing applications, and any contribution of the various applications worldwide at intervals. The paper ends with the conclusion and future aspects of Cloud computing.

Keywords:- Computing, Traditional computing, Cloud computing, Remote server

1. INTRODUCTION

There has been a heightened interest in companies embracing cloud computing over the past decade. Cloud computing promises the ability to quickly and cost-effectively reshape the way companies procure and handle their computing resource requirements. Remote access was awkward, and portability was achieved through the use of laptop computers. The current trend is to provide more ways to access these computing environments. Web technologies extend the boundaries of traditional computing. Companies are establishing portals that provide web access to their internal servers.

Network computers are basically terminals that understand web-based computing. Handheld PDAs may also connect to wireless networks to use the company's web portal (as well as the myriad other web resources). At home, most of the users had a single computer with a slow modem connection to the office, the Internet, or both. Today, network connectivity speeds once only available at high cost are relatively inexpensive, giving home users more access to more data. These fast data connections allow home computers to serve web pages and run networks that include printers, client PCs and servers. Some homes even have firewalls designed to protect their networks from security breaches. Those firewalls cost thousands of dollars a few years ago, and they didn't even exist a decade ago. Computing resources were scarce in the latter half of the previous century.

Although traditional computing takes place on physical hard drives and web servers, cloud computing runs on third-party servers hosted by third-party hosting companies. Businesses can access these servers on-line. Cloud Computing is the ability to access data anywhere and at any time. While in traditional computing, the user can only access his data on the system in which he has stored it.

Cloud software is provided as a service on demand. You should not order and purchase a drive to use such applications; instead, companies simply need to connect to the desired service while using it. Not only does this save time and money, but it also makes the software scalable. Because the service is not written on disk, it can be quickly modified to meet the needs of large and small businesses. Services may also be extended or reduced depending on whether the activity itself is in a period of growth or decline. Expert software offers a wide range of clouds that can be used in many different areas.

In general, the cost of cloud computing is lower than the traditional cost of computing. This is mainly due to the fact that the operation and maintenance of the server is shared between several different parties, which reduces the cost of public services. Businesses can save on investment costs by not having to purchase expensive equipment. Because cloud computing is only available on the Internet, it must be used in conjunction with a stable, reliable and fast Internet connection to maximize the platform. However, as long as this link exists, the data can be accessed anywhere, which can be very useful to a company.

Many security concerns are deeply rooted in cloud statistics. In fact, it may seem a little frustrating to have

data stored on servers. Businesses may not know the exact location of their servers or server scripts. However, this does not mean that the data is not in good hands; the third web host's role is to protect it, which means that the company is likely to focus more attention and resources on its security than the data owner.

When it comes to monitoring the fast-growing field of information technology, cloud statistics differ from traditional information technology owners. Thanks to its reliability, flexibility and availability, it is fast becoming the norm for many businesses and industries. Among other things, when companies deploy cloud infrastructure, they save money. Private solutions that trust your cloud infrastructure to enterprise cloud data centers, including on-site solutions that allow companies to move their physical infrastructure wherever they choose, remain in the cloud.

2. LITERATURE REVIEW

In recent years, IT services have been popular topics in both the academic and corporate worlds, with IT outsourcing, service-oriented architecture (SOA) and cloud computing as major themes. Cloud computing has attracted a lot of attention over the last decade, but critics say it's just old wine in new bottles (Lucas, Ballay, & Lombreglia, 2009). However, cloud computing is growing at an unprecedented rate. Gartner predicts that the cloud market will rise to more than USD \$148 billion in 2014 and concludes that "the personal cloud will replace the personal computer at the digital user centre" in a megatrend analysis (Gartner, 2012). This rapid growth offers new opportunities and will fundamentally change the way we do business.

Major organizations are increasingly adopting cloud solutions such as Office 365, Salesforce.com and Google Docs. Approximately 77% of all businesses use cloud services to some degree (Skendrovic, 2013). The adoption of such services can be attributed, among other things, to better networking infrastructures that enable real-time interaction through Internet technology. Cloud computing can be used for a variety of purposes, including Business improvement by establishing a common infrastructure (Chen & Liou 2012) and business transformation by enabling faster deployment of solutions (Vouk 2008), achieving business value (Aljabre 2012) and creating flexible and agile business capabilities (Iyer & Henderson 2010). Cloud computing is not, however, a 'silver bullet' solution to organizational IT issues, since its adoption also raises a number of issues that need to be carefully considered, such as data locking and data confidentiality/auditability (Armbrust et al., 2010; Kim 2011).

A latest survey reveals that there is a mixed cloud approach for 78 enterprises. Cloud computing is the use on the Internet of various resources, such as networks for file storage and software creation, also called clouds. Current

systems have been transferred to cloud providers, and in solving security and integration problems, businesses have found cost and flexibility. Cloud computing, to put it simply, is the provision of information services, storage of databases, software collection of intelligence and more on the Internet, in the cloud, to allow faster innovation, versatile resources and economies of scale. Scalability and performance have been enhanced by cloud architecture with lower implementation costs.

Scholars and practitioners are currently discussing the potential of cloud computing, the benefits of using technology, and the need for maturity models to specify best practices, measure progress, identify capabilities, and benchmark performance. Large corporations such as Oracle, Microsoft, and SunGard have already developed cloud computing assessment and maturity models³, but searches in quotation databases reveal a lack of academic publications that distinguish between cloud computing maturity levels and associated benefits.

3. METHODS AND APPROACHES

First, I prepared a questionnaire about Cloud computing and conducted an Online Survey with the help of Google form. I shared it with few people and asked them to respond to it by providing their answers

I got around 50 responses from my peers and friends. More than 60% of people doesn't even heard about it and most of them are not preferring Cloud computing over traditional computing because they have no idea what Cloud computing actually is.

After got the information, the collected data can be exported to .csv format.

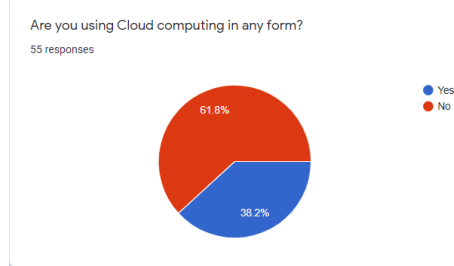
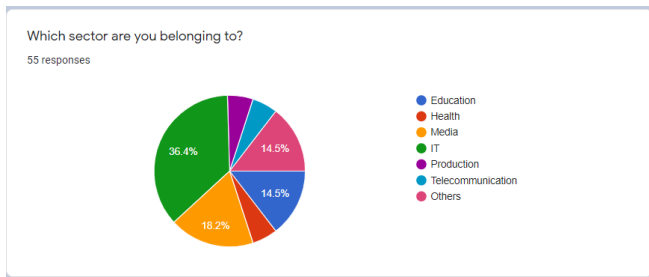
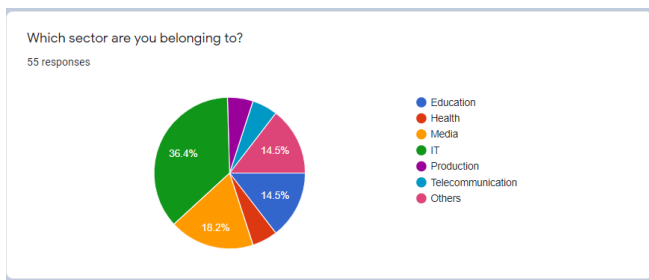
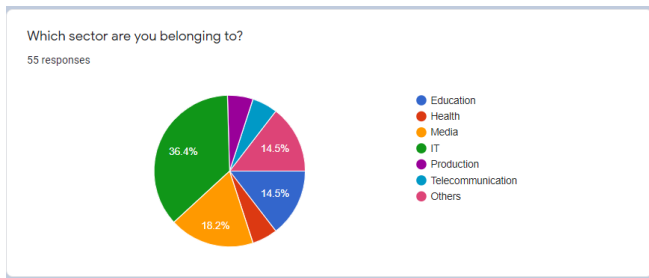
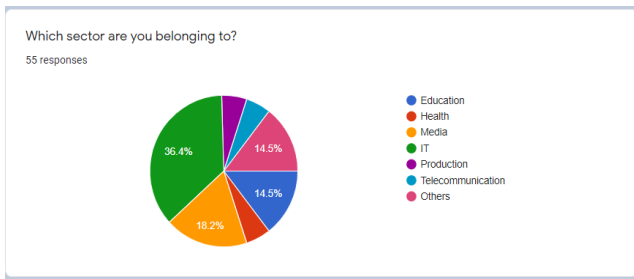
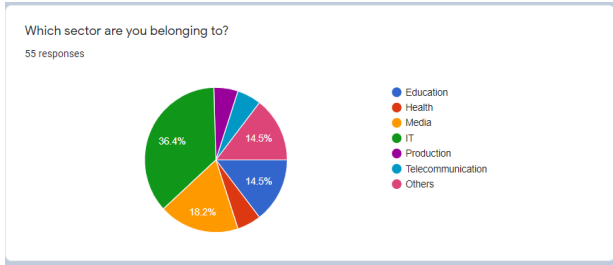
4. PUBLIC SURVEY AND EXPERIMENT

After doing the survey I send it to various people and collected information regarding Cloud computing. I have created some questions regarding Cloud computing to get the people's awareness about it. I developed 8 questions about Cloud computing and collected their responses. I send it to various people from IT and non-IT fields. It simply implies the awareness of Cloud computing of various people.

Questions and Results

1. Which sector are you belonging to?
2. Which all options would you prefer to use to store your data?
3. What kind of protection you use for the personal data?
4. Would you prefer to use Cloud computing over Traditional computing?
5. What is your level of understanding of cloud computing?
6. Are you using Cloud computing in any form?

7. If you are using Cloud computing, please tell me what you use it for?
8. Do you think that the data stored in the cloud system is?



5. DISCUSSION

Cloud computing is an IT release model that provides services to infrastructure and computer resources. Cloud computing enables business activities to be carried out with little difficulty and with greater efficiency. Cloud computing offers many advantages to a wide range of customers and is simple to acquire. Generally, cloud computing provides a dynamic and scalable resources as a service over the internet. Cloud is used to reduce capital and operating expenditure and to promote economic growth. Even the adoption of cloud computing in organizations has many advantages and still faces a number of risks. Significant customer data can be stored in a data center in cloud computing.

Cloud computing is divided into three sections: cloud application, cloud platform, and cloud infrastructure. They have a number of operational issues: operational security, privacy, reliability, accessibility, non-reputation, security breaches, other customer attacks, legal and regulatory issues, and a broken perimeter security model. Cloud computing is very popular nowadays. More and more companies prefer the use of cloud infrastructure rather than the traditional one. It's a lot more reasonable to buy a cloud storage subscription than to invest in physical in-house servers. First of all, you don't need to buy the hardware and maintain it with your own team. Cloud information is stored on multiple servers at the same time. This means that even if 1 or 2 servers are damaged, your information will not be lost. It also helps to provide a high uptime of up to 99.9 percent.

Cloud computing is the perfect choice for those who do not constantly require high performance but use it time to time. You can get a subscription and use the resources you've paid for. Most providers even let the subscription stop if you don't need it. And at the same time, you're in a position to control everything and get instant help from the support team. The traditional infrastructure is not as flexible as that. You need to buy and maintain the equipment even if you don't use it.

In many cases, it's even more expensive, because you might need your own technical crew. One of the biggest differences between cloud and traditional infrastructure is how it is maintained. The cloud service is provided by the support team of the provider. They will take care of all the necessary aspects, including security, updates, hardware, etc. The traditional infrastructure required the

maintenance and monitoring of the system by the own team. It takes a lot of time and effort.

6. CONCLUSIONS

After the survey, I came to know that most people, even technical people, don't have any idea about cloud computing at all. I've received about 50 responses from people, and most of them are technicians, so they don't even know or hear about cloud computing. This is why I have chosen this topic over Traditional Computing. The reports presented above illustrated that cloud computing encompasses a wealth of potential, but must overcome a number of challenges before becoming an additional versatile tool. However, the interest and enthusiasm for the sector is growing, and already today we have a tendency to see unimaginable real-world applications of this technology.

Cloud computing is a new advancement of technology that has the potential to have a significant impact on the planet. It has many advantages for its users and companies. Some of the advantages it brings to companies, for instance, are that it lowers operational costs by investing less on maintenance and software updates and focusing more on the companies themselves. Yet there are other problems that cloud computing needs to tackle. People are quite skeptical as to whether their information is protected and confidential.

There are no norms or legislation that provide data through cloud computing worldwide. Europe has data protection rules, but there are no data protection regulations in the US, which is one of the most technologically advanced nations. Users also worry about who is willing to reveal their details and who owns their data. But if there are worldwide standards and regulations, cloud computing will revolutionize the future.

We can't deny the fact that cloud computing is the fastest growing aspect of network-based computing, considering all the pros and cons. It provides consumers of all sizes with a great advantage: basic users, developers, companies and all forms of organizations. So, this technology will remain here for a long time.

6.1 Findings

- Self-service on-demand
- Multi-tenancy
- Resilient Computing Offers
- Speedy and powerful virtualization
- Providing you with low-cost apps
- Offers advanced protection online
- Freedom of place and Computer
- Always available, and automatically scales to adapt to the demand increase
- Pay-per-use allows
- Web-based interfaces & controls

6.2 Applications

- Vistaprint
- Adobe Creative Cloud
- Salesforce
- Chatter
- Bitrix24
- Paypal
- Quickbooks
- Google G Suite
- Google Apps for Education
- AWS in Education
- Online games
- Facebook
- Twitter

6.3 Limitations

- Sometimes performance can vary.
- Cloud technology is often vulnerable to failure and other technological problems.
- Downtime when dealing with cloud computing should also be considered.
- In cloud computing, strong Internet connectivity is compulsory.

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