

Advantages and risks of Cloud computing Technology in small Business

Pournima K. Jangle *1

*Asst. Prof. Department of Computer Science
Tilak Maharashtra Vidyapeeth, Vidyapeeth Bhavan, Gultekdi,
Pune-37, Maharashtra, India
pournimakj@rediffmail.com*

Abstract

Cloud computing is the new emerging computer paradigm nowadays. Cloud technology is vastly adopted in modern business. Using Traditional way in businesses is now somewhat difficult to survive in market in today's competitive world. In old way of doing business, it consume time and money. Entrepreneur are ready to adopt new technology in business for more profit in short time.

Using cloud computing they can store the huge amount of data in one place and can handle from anywhere. It will reduce the cost of hardware devices, administrative work and software. It saves time and cost also. There are some risk factors and challenges as there are number of devices connected with each other in single place via internet. So there are a high risk of data hacking. Security is the major concern in cloud computing. But using proper way cloud service provider can secure the data and protect it from hackers. In this paper we discuss that with implementing the cloud computing technology in small businesses we can increase the growth of business as well as profit, reduce cost and can survive in market at today's tough competition.

Keywords: *cloud technology, paradigm, survive, risk factors.*

Introduction:

Nowadays businesses are down worth the economy. With adopting new technology they can increase the productivity, profit and reduce the cost and time. Cloud technology is the process where we can share network connectivity, resources and services by using internet. Cloud computing offers extensibility, agility, simplicity and suppleness. For these features cloud computing technology is increasing in corporate industries.

It is necessary to improve the business methodology from traditional way to modern one. With the help of Cloud computing, we can share services and resources in one host via internet.

In Cloud computing Technology, we can store huge amount of data in single host globally. We can access any information from anywhere whenever and wherever we required. Most of the businesses uses this technology for efficient working. The main aim of using cloud computing is to reduce resources, organizations expenditures and connecting networks.

Dispersion of higher education in all areas is increasing all over the world at a very fast step. With increase in number of institutions offering higher education, challenged by growing needs, universities are facing problems in providing necessary information technology (IT) support for educational, research and development activities. (14)

Cloud computing organizations allow for enterprises to utilize servers, OS and other computing systems on a requirement base. They need not have to handle their complex management. This sort of cloud offering can help balance businesses both vertically as well as horizontally.

Features of cloud computing :

- 1) Resource sharing and flexibility.
- 2) Self service and online demand service.
- 3) Pricing
- 4) Quality of service.

Also cloud computing provides 3 major services –

a) SaaS:- (Software as a service)-

User can access/use the services provided by cloud technology. The way of carrying applications as a service is called SaaS. User need not purchase every software they required for services. They just access the software by using cloud computing and save the cost.

Examples of SaaS - Google Docs, Microsoft Office 365, salesforce.com etc.

b) PaaS:- (Platform as a Service):

PaaS is a cloud computing model where a third-party provider provides hardware and software tools to user through the internet. These tools are needed in application development. A PaaS provider hosts the hardware and software on its own infrastructure.

Some examples of PaaS are Google App Engine, Microsoft Azure and Amazon Web Services.

c) IaaS:- (Infrastructure as a Service):

Infrastructure as a service (IaaS) is a service provided by cloud computing in which a vendor provides user access to computing resources such as servers, storage and networking. Service provider provides infrastructure to organizations and organization use their own platforms and applications within it. This service provides the infrastructure for the applications to run over internet.. It allows users to organize and run both operating systems and applications. The main benefit of IaaS is that user does not take any responsibility of operation, administration and maintenance.

An example of IaaS is Amazon.

Cloud computing in small Business:

Why cloud computing used in Business :

1. Cost efficient:

If the business want to establish their own data center it is very expensive task. They should invest on equipment and recruit technicians for installations and managing services and it would be too much expensive. Instead of establish data center ,if business is shifted on cloud, they need not purchase infrastructure. They just have to pay the cost for the services they used only.

2. Elasticity :- Cloud computing provides the suppleness to consumer as there are scalability in business always. There are rapidly ups and downs in industry. So users are comfortable with cloud computing as they use/manage resources time to time.

1) Enhance Security :-Cloud computing serves data encryption. It strongly controls on data access and key management.

Information is very secure and safe on cloud in this technology. If you want, you can remotely transfer your confidential data to other devices or place(location) on cloud.

2) Cloud computing provides highly data security intelligence also.

3) Mobility : The most important advantages of cloud computing technology is mobility of business. Cloud computing provides such a facility(scalability) to employee to work from anywhere as they are connected through internet on cloud. One can work from any place instead of sitting in office physically. They can access the information from workstation, from anywhere at field or work from home. The company also have benefits by reducing the workstation and allowing the employee work from home.

4) Backup and disaster recovery :

In traditional business ,it is need to take the backup of data otherwise there may a huge loss which would not covered if any disaster happened. If business use cloud technology, there is no need to keep backup of data as it is safely stored on cloud as long as there is internet connection.

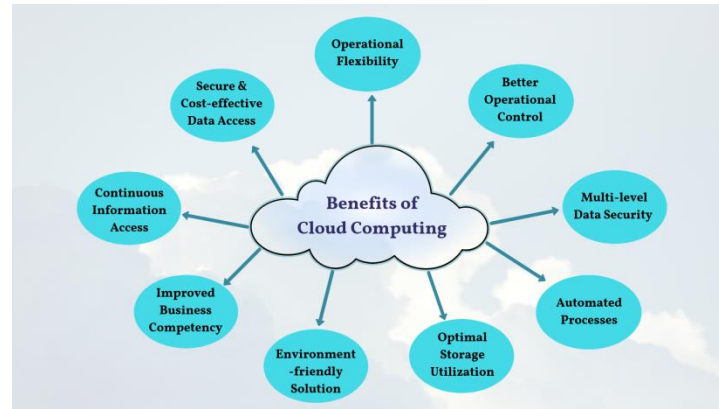


Fig.1 : Why business use cloud

[<https://www.chapter247.com/blog/strategic-importance-cloud-computing-solution-in-business-organizations/>]

7] Boost individual or team performance:

Cloud is the best to improve employees performance or team performance. Employee can share the data with each other and complete their project with short time using cloud as they are sitting on different location. They can share real time data and update in office when in field also.

When any small business is established, they start up the business with small organization with less number of employees and resources. They can't afford to purchase software or applications and infrastructure. By using cloud technology, they would be beneficial in various ways.

Businesses use much resources as they need or remove the services as per requirement. They would reduce the cost of staffing, software installation, up gradation, maintenance cost. Businesses use cloud computing to access information from anywhere with any compatible device. Rather than storing information on your computer or a server in your office, cloud computing stores data on the internet.

Cloud applications that are browser based and can access from mobile or desktop. Employee can access data/information easily from home or from their field also. Accounting applications on cloud are compatible with android device. User can access their accounting data, send invoices by mobile also. Some vendors also provides the incentive facility and upgrade their product.

The cloud hosting uses remote server that have the resources (RAM and CPU) which will scale up and down, as per the demand.

If someone want to start up small or medium business out of India but on Indian customer base, following are some companies which provides cloud services having their data centers in India.

Following are the top public cloud providers who provide data center also in India

1. Digitalocean
2. Amazon Web Service:
2. Google Cloud
3. Microsoft Azure
4. IBM Bengluru
5. VMWare:
6. Sify
7. Ctrl

Following are some companies which provides web hosting service.

- I. Hostgator
- II. Cloudways

- III BigRock
- IV. InterServer
- V. MilesWeb
- VI. Resellerclub
- VII. SiteGround
- VIII.A2 Hosting

Risks of cloud computing in Business:

- 1) As there are huge amount of resources and number of networks connected with each other via internet on cloud, there may be occurs traffic in networks and it will responsible to reduce the performance of cloud.
- 2) There are also the chances of crashing servers and computers on cloud as number of servers and computers are connected with each other. It may damage or loss valuable data like customer’s personal information, sale and purchase report etc.
- 3) Many business uses the cloud for their business growth nowadays, So the number of users and networks are connected on cloud increased day by day. Due to increased users , there may be the chances of data stealing.
- 4) Cloud computing is a place for the users to host their web services such as web hosting and cloud storage. This has attracted the hackers to steal the business data, such as daily sales, profit reports, financial reports etc.[1]
- 5) Vendors in cloud technology doesn’t know what the system will do and what requirement the system need. It is not clear even applications are merge in different cloud .
- 6) Technical and operational limitations can make complex the project.
- 7) Some portion of the application run on server side and some portion runs on client side. In such situation it is difficult to predict correct running of data
- 8) There are some members in organization who deny to accept or adopt new technology .Then it is very difficult and loss to migrate our business on another cloud.

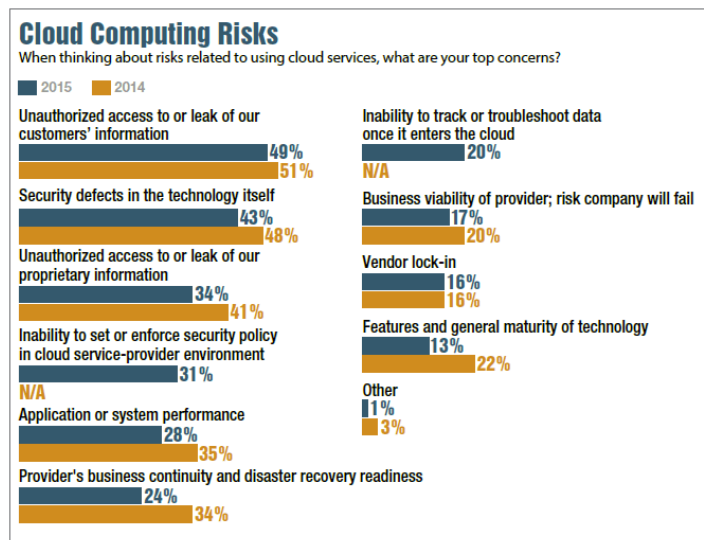


Fig: 2 Risks of cloud computing in Business.

[<https://www.calyptix.com/>]

Sometimes cyber attacks cause the business loss. Some of them are-

1. Cloud malware injection attack.
2. Abuse of cloud
3. Denial of service attack
4. Side channel attacks.
5. Wrapping attack.
6. Man in the cloud attack.
7. Insider attack..
8. Account or service hijacking [8]

By understanding the way of cyber attack by cyber criminal , cloud developer can prevent these attacks and protect their data from loss.

Current Situation:

In Covid 19 Pandemic situation, maximum growth of businesses becomes down . Many companies were stopped their work due to transport issues and small businesses are collapsed. Many employees become jobless. They are sitting at home idle. Most of the companies have facing too much economy problem till date. They are getting loss. Many small businesses are shut down. Most of the IT companies and small businesses which are using cloud technology, still working regularly in such a covid-19 pandemic situation. The employees are working by sitting at home and do their work , upgrade every information and data time to time .This is possible due to cloud technology and they survive from any loss. They are following work from home policy wherever possible and save the cost of infrastructure, transport cost and many more and works regularly due to cloud computing technology with minimum or no loss.

Conclusion :

Small scale companies can't afford much manpower, infrastructure and purchase and upgrade software. They do not have enough budgets for these all. Cloud computing is the best option for them. Cloud computing plays an important role to decrease their expenses and time.

Shifting the business on cloud , any small business can make progress. They can get better efficiency, increase production and save the cost by moving their data on cloud .There are some risk factors of losing data also but can avoidable by using security policy. This paper describes the advantages of cloud computing and the risks associated with them.

Finally we conclude that if we design and define risk management program specifically and in proper way , cloud computing is the best for small businesses to grow and improve in terms of production as well as profit and can save the time as well as manpower.

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