

Cloud Computing and its Technical Feasibility

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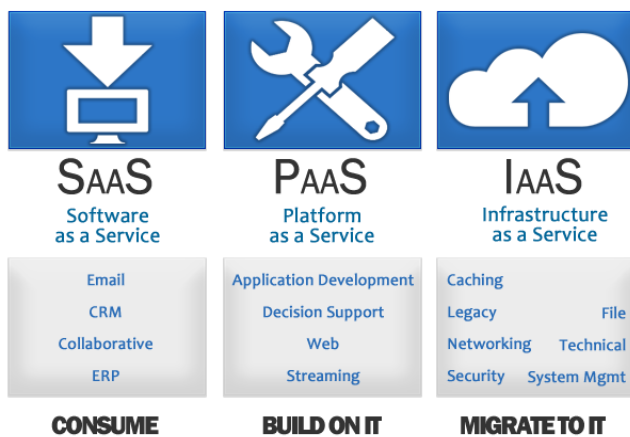
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Abstract— Now a day's cloud computing plays major role in reducing the infrastructural costs to the organizations by providing services like data storage, applications and development platforms , servers and virtual desktops. In this paper, I mentioned about the technical feasibility of cloud computing and its impact on organizations that migrates from traditional IT methods to cloud computing services and scope of cloud computing in IT industry. In this paper for to understand the impacts of cloud service I clearly explained the cloud computing services, costs that incurred for industries for arranging their own infrastructure and at the same time how they benefitted by using cloud services in terms of costs, security, and time.

Keywords—cloud; computing; services; cost; solutions; Cloud Computing; Technical Feasibility;

I. INTRODUCTION

Cloud Computing: It is one best solution which provides customized options that suits the infrastructure, Platform and software needs of an organization and these services are deployed through internet and various computer networks. Cloud Computing creates the environment by enabling convenient, on demand network access to a shared pool of computing to his clients.



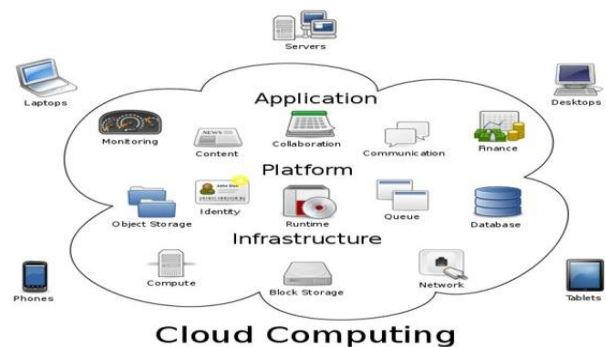
Cloud Computing architecture:

Coming to the cloud computing architecture it is divided in to two sections one is Front End and another one is Back End usually these two are connected with a network called Internet. The front end is the side where clients can see and back end is where cloud section of the system (1).

How cloud computing works:

Let's say that you are the CEO of an organization. Your main responsibilities include making sure that all of your employees will be provided with right hardware and software to do their jobs. Buying computers, furniture, leasing space m, providing stationary for every one isn't enough-you also have to purchase the software licenses to give employees the tools they require. Whenever company movies to new application or going to new projects, or hiring the employee they should keep track of existing software that permits the above said things if it is not again we go for new license or updating the existing the existed license it will cost more and it is stressful that you find it difficult to go to sleep on huge pile of money every night.

Soon, there may be alternative for the companies like you. Instead of installing a suite of software for each computer in your organization, you'd have only load single application. That application would allow employees to log into a web-based service which hosts all the programs the user need for his or her job. The remote machines owned by another company would run everything from word processing to email to data analysis programs. It's called cloud computing and it can change entire computer industry.



In a cloud computing service there is a significant workload shift. Client computers no need to do all the heavy lifting when it comes to running their applications. The network of computer will handle that workload. The hardware and software requirement of companies decreases. The only thing they should take care is to run the cloud computing systems interface software.

II. Basic infrastructural requirements of an organization:

Servers: It is a computer or a device on a network that manage the access to centralized resources rather than computer. Servers often called as program that awaits and fulfils requests from client programs in the same or other computer.

Types of servers used in companies:

- **File server:** a computer and storage device allowed to storing files of any users which are working on that network.
- **Print server:** It manages all the printers and printing devices of an organization.
- **Proxy server:** It is a server that exists between a client program and an external server to filter requests, share connections, and improve performance (2)
- **Web server:** This server is used for hosting your internet website or intranet site
- **Mail server:** It is almost crucial as web servers, mail server's move and store mail over corporate networks and across the internet.
- **Data base server:** This can be used for running SQL. Film maker pro, ACT, OR any other database program.

Server Providers:

1. HP Proliant DL380e-Gen8-xeon E5-2420V22.2 GHZ-16GB (\$2159.99/OR 67.39\$/Month+ 3 year repair warranty- \$61.99+ cdw hardware installation \$17.99)
2. IBM system x3620 M3 (2) Xenon E5620 2.40GHZ quad-core 16GB/2TB 7376-AC1-800101480(\$ 2109.18)
3. CISCO C220 M3 Rack server Intel xenon E5-2609 V2 2.5 GHZ 16GB DDR3 (2348.50\$)

Table.1: Shows the cost of servers for a small company with no of employs 500

	Type	Price(\$)	No of Users	Total servers	Amount(\$)
Servers	HP DL380e	2250	8	40	90000
	IBM X3620	2109	8	40	84360
	CISCO C220	2348	8	40	93920

Server Hosting:

- 1) LAN LOGIC: 399\$/month (5user accounts,500gb disk space, dedicated firewall, dell enterprise class hardware)
- 2) In motion hosting (\$229.99/month-Intel xenon E3-1230 V2 3.3GHZ 4C/8T-16GB RAM-10TB Data transfer

Band width:

It is also known as data transfer rate, the amount of data that can be carried from point to another point in a given time period. Bandwidth is usually expressed in bits per second

Bandwidth is the range of frequencies, the difference between the highest frequency signal component and the lowest frequency signal component an electronic signal uses on a given transmission medium

Bandwidth providers:

- VERIZON FIOS: 500MBPS-\$364.99/Month-6 Users
 Mediacom-ultra105-105mbps-299.95\$/month (3)

Table.2: Shows the bandwidth cost for organization with 500 employees

Band width	Type	Price(\$)	Users	No of employees	amount
	Verizon Fios	364.99/Month	5	500	36499
	Mediacom	299.95/month	5	500	29995

Software licensing:

Oracle Siebel CRM web channel software license price-69000\$ & software update license &support-15180\$-processor (4)

Oracle real time decisions for Siebel ecommerce-57500\$, 12650\$.

Table 3: Show the Price for purchasing a software license

	Type	License Price(\$)	Software update & support	Total
Software License	Oracle Siebel CRM	69000	15180	84180
	Oracle Siebel E Commerce	57500	12650	70150

From the above three tables we can get overall infrastructure cost for an organization with 500 employees

Service	No of employees	Price(\$)
Servers	500	84360
Software License	>500	70150
	Total	154510\$
Bandwidth/Month		29995\$

Cost incurred for the same company using cloud computing service:

Cloud computing service providers:

VMware, Microsoft, Blue lock, citrix, Amazon etc

Table. 4: Shows the price incurred for Virtual private cloud service (3)

Service	Included Resources	Price per Month(\$)
Compute	20GB vRAM, 10GHz CPU	365
Storage	2TB SSD-Accelerated storage	240

Storage	2TB Standard	120
Bandwidth	10Mbps	229
Public IPS	Priced per IP(2 Included)	50
Support	Production level support	110
	Total	1114

From the above table it is observed that the cost that incurred to render a cloud computing service from a Host is only \$1114 per month and by comparing this price with the prices that cost each service individually the former price is less and it reduces the company overall expenditure on infrastructure. This type of migration from traditional approach to cloud computing company can invest his valuable time on getting new projects and utilize the different software applications from cloud host and pay for the service at that point of time only.

Conclusion:

Finally it is concluded that an organization who intended to expand their services to different areas is better to go for cloud computing service in order to

reduce cost, Time. Depending upon agreement with the cloud computing service company all our data is secured and taken care by that company it means any risk like loss, hacking of data.

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