International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

# Cloud Software

**Jyoti M**

Tata Consultancy Services ltd., Synergy Park, Non SEZ, Gacchibowli, Hyderabad, 500032

**Abstract:** ***Software architecture is the fundamental organisation of a system, embodied in its components, their relationships to each other, the environment and the principles governing its design and evolution. A software architecture of a system is the structure of the system which comprises elements, their externally visible properties and the relationships among them. Stakeholders judge the quality of software architecture by judging the parameters as performance, security, modifiability, reliability, usability, availability, reusability, configurability, throughput etc.***

**Keywords:** Organization, software, cloud, architecture

## 1. Introduction

Cloud software is architecture of loosely coupled services encapsulated and strung together using web servicese.g scan a file and deliver it to a web service that enhances the image, than deliver to a cloud storage facility. All major cloud providers allow the ability to load test services. Cloud testing products simplify the process by providing front end to load test, functional test and measure performance.

An example of software architecture is Big Data Solution-Hadoop architecture. It is an open source framework for writing and running distributed applications that process large amounts of data. It runs on cluster of servers adaptable to cloud servers which can automatically expand and contract as needed. Here user pushes programs to where the data is and writes functional programs to analyse unstructured data. Cost of change decreases when software applications are put in the cloud. Architecture upfront becomes more important because change must be seamless. Software as a system is one of the service models of cloud- a complete operating environment with applications, management and the user interface. Since software is a binary code installed in a computer, SaaS delivers code and data over a browser. SaaS does not have installation or hardware worries. Backups occur automatically. People not collocated can work together with same data. Large data sets easier to work with at one location. There are no compatibility issues and upgrades are handled in the cloud. Usage based pricing is different from renting. Renting a resource involves paying a negotiated cost to have the resource over some time period whether or not we use the resource. Pay-as- you go involves metering usage and charging based actual use independent of the time period over which the usage occurs.

Infrastructure software of the future needs to be cognisant that it is no longer running on bare metal but virtual machines. It needs to have billing built in from the beginning as it is very difficult to retrofit an accounting system. Even application software needs a pay for use licensing model to match needs of cloud computing.Software complexity and costs of migrating partial or full data from a legacy enterprise application into cloud is the deciding factor towards the usage of cloud computing. This migration task is already spawning new business opportunities for companies that provide data integration across public and private clouds. Most applications do not make equal use of computation, storage and network bandwidth; some are CPU bound, others network bound and so on and may saturate one resource while underutilizing others. Pay-as-you-go cloud computing can charge the application separately for each type of resource reducing the waste of underutilisation.

Cloud computing presents a unique opportunity for batch processing and analytics jobs that analyses terabytes of data and takes hours to finish. If there is enough data parallelism in the application, users can take advantage of the cloud's new cost associativity. The cost benefit analysis must weigh the cost of moving large datasets into the cloud against the benefit of potential speedup in the data analysis. The advantages of SaaS to both end users and service providers are known. Service providers enjoy simplified software installation and maintenance and centralized control over versioning. End users can access the service " anywhere, anytime", share data and collaborate more easily.

## 2. Conclusion

Cloud computing allows deploying SaaS and scaling on demand without building or provisioning a datacentre. Thus Infrastructure software always needs to be aware that it is not running on bare metal but on VMs. It needs to have billing built in from the beginning. Application software needs to both scale down rapidly as well as scaleup and always needs a pay for use licensing model to match the needs of cloud computing.

## References

[1] Journal of cloud computing, IT World, Channel World

## Author Profile

**Jyoti Madabhushi**, B.E, M.S. has got more than 25 years of work experience in IT industry with more than one and a half decade experience in project management. She has worked in various capacities from being hands on technical person to project manager, program manager, portfolio manager to strategic business unit head mapping her portfolio to the changing trends in IT.