

Cloud Computing utilization in Indian Universities: A Brief Conceptual Study

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ABSTRACT

Cloud Computing is an important name in the field of computing and information technology. Cloud computing is actually a kind of virtualization. Here computing is gear up with virtual platform which helps online and remote place availability of hardware, software, IT resources, application packages. It supports eco friendly atmosphere and indirectly based on green computing principles as well as practice. Cloud computing is applicable in several organizations and institutions including profit making or not profit making, government or private. Universities are today getting help of various computing and information technological tools and weapon. Cloud computing may improve university education and administration many ways; this paper is actually inform these aspects briefly.

Keywords:-Cloud computing, computing, IT application, universities, India, higher education, online education, e learning, virtual education, corporate universities, Information Transformation, Information Management

I INTRODUCTION

Cloud computing is an architecture which lies on virtualization principles and promote online and round o clock computing platform and services. Information Technological tools like monitor, printers, database and other application and packages. Cloud computing is also known as cloud platform and cloud architecture. This helps many ways for cost saving as it does not requires extra software, hardware, and IT packages. And also side by side make online availability. It saves initial cost as it is provided by third party and service seeker no need to connect the service provider. Here internet plays an important role to provide actual level of hardware, software and IT applications. Universities are the higher learning and research institutes needs IT for several purposes like official administration, teaching and learning, tele conferencing and some other activities. India has several universities and institutions some of them are adopting cloud computing and intelligent IT; where most of the universities still not using cloud computing for several reason. Though some new fields are there where use of cloud computing utilizations is possible.

- (c) To learn about Indian education systems, briefly and find out the places where cloud computing application is possible;
- (d) To find out the emerging and possible cloud computing application in online education, virtual education, e learning and similar facet;
- (e) To find out main challenges and issues related to cloud computing application in India.

II OBJECTIVES

The main aim and objectives of this study include:-

- (a) To learn about cloud computing and its basic principles;
- (b) To find out main advantages of cloud computing;

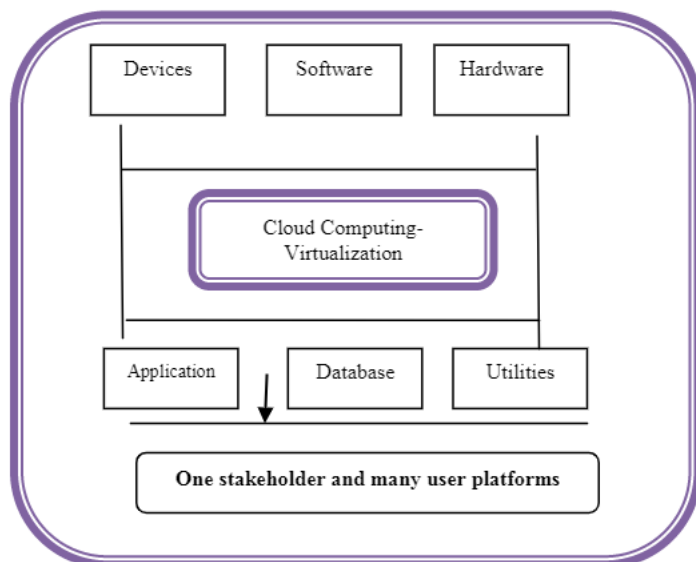


Fig: 1- Showing component of virtualization at a glance

III CLOUD COMPUTING

Cloud computing is actually a computing platform and mechanism. Practically it is not at all a technology. It is a kind of architecture which uses and inspire for less computer, hardware, IT Delivery and side by side limited software and application. Here concentration is given on virtual and online hardware and software services, where one service provider is equipped with almost all type of service and thus one organization may get their required services only by cable and communication medium, regardless of physical hardware and software. Cloud computing is also supports green computing strategy as it involves in less devices and simultaneously for that uses carbon emission is possible with cloud computing strategy or models. Cloud computing is the latest advance gift of computing world and emerging most rapidly.

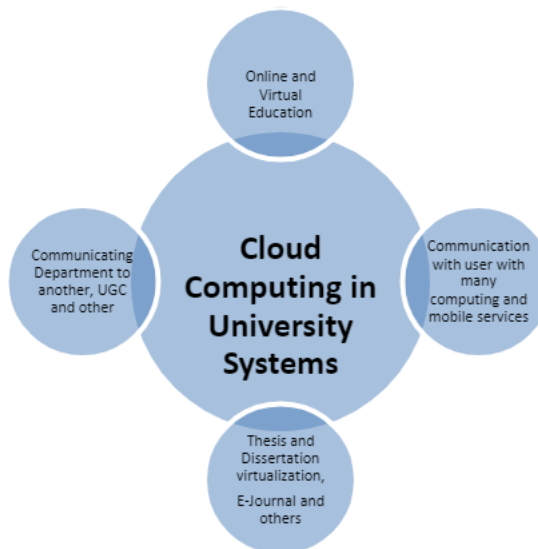


Fig: 2: Showing some applications of Cloud Computing in University systems

IV UNIVERSITIES AND COMPUTING

For several years, computing is application in several places of universities and higher educational institutions which includes offices, administration, teaching and learning, information and knowledge seeking, document management, libraries, defense and private educational mode and other potential areas.

In fact, apart from universities some colleges and institutions are also using information technology for several purposes. Official administration may communicate each other with IT weapon and faster delivery of work is also become easier with computing platform India is the largest education system in the world and has near about 600 universities as on March, 2013. It also deals with near

about 20000+ colleges, providing education to the common people. Thus larger periphery and dimension are key responsible for cloud computing introduction in the university systems.

V CLOUD COMPUTING AND UNIVERSITIES

Cloud computing may be applicable in several places:-

- In general office practices may suit cloud computing practice as universities does not need to buy huge and heavy computing peripheral and no need to take care about software up gradation and others;
- In house and department to department or university to university communication may be happened with cloud power;
- Distance education may grow rapidly where universities can provide the course ware, software via online mode;
- As like distance education, online education may get wider and sophisticated benefit from the cloud computing platform where students can get his/her required assignments, resources through the dedicated information services;
- Universities are today providing several services like internet services, intranet services and other academic and administrative unit; and thus they need to use several computers and other equipment which are power consuming; thus here utilization of cloud computing is possible;
- Various library activities like, library networking, user centric services may deal with cloud computing architecture;
- Corporate education; which is to some extend newer concept and industrial education integrated thus it may use cloud computing principles;
- Connecting affiliating colleges and research centre may get the affiliation of cloud computing.

VI CLOUD COMPUTING IN UNIVERSITIES: CHALLENGES

Cloud computing no doubt has several challenges and issues as far as university system is concerned:-

- Cloud Computing based education needs interrupted internet connection which is to some extend tough in several cases, like place of educational institutions/ universities, service provider availability and others;
- Initial interest to switch Cloud Services is an important issue, in many cases universities or educational institutions may not involved cloud computing; just because of fear of extra jobs;

- (c) Initial manpower and able skilled computer professionals are required to run these services;
- (d) Ready and availability of service provider is an important and emerging matter; without them it is not possible to switch cloud computing services;
- (e) Still planning from educationalist, planning commission, education departments, UGC and other statutory is not satisfied;
- (f) Integrating online education, distance education with cloud computing is really a tough job in many perspective.

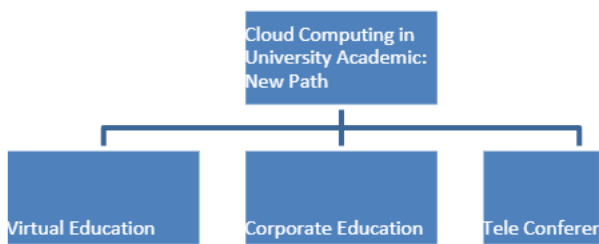


Fig: 3- showing some new area in higher education where utilization of cloud computing is possible

VII FINDINGS

- (a) Cloud Computing is a latest name in the field of Computing;
- (b) Cloud Computing is helpful in the developing country's computing practice, several ways;
- (c) Cloud computing is establishing smart university systems and intelligent education systems;
- (d) Initial interest, funding, availability of service provider is very much important.

VIII SUGGESTION

- (a) Government need to take proper step to introduce cloud computing mechanism;
- (b) University authority need to introduce cloud computing to interact them with UGC or to its affiliating colleges, preferably;
- (c) There should be online education, virtual education, e learning through cloud computing and so on;
- (d) During selection of service provider it is essential to check service provider's credentials, quality of services, reputation and other matter.

IX CONCLUSION

Cloud computing is gaining popularity in all most all the circle whether agriculture, government, commerce and trade, politics, e commerce and so on. Thus there are huge possibilities available to run cloud computing service in the educational domain included administration, teaching-learning, research and development and others.

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