



## CLOUD COMPUTING : VARIOUS ISSUES AND CHALLENGES

<sup>1</sup>Anjana Singh

<sup>1</sup>.Department of Computer Science, A.I.J.H.M.College,  
Rohtak (India), E-Mail :[anjanatalan81@gmail.com](mailto:anjanatalan81@gmail.com)

### Abstract:

In an age of information and globalization, massive computing power is desired to generate business insights and competitive advantage. Since the phenomenon of cloud computing was proposed, there is an unceasing interest for research across the globe. Cloud computing has been seen as unitary of the technology that poses the next-generation computing revolution and rapidly becomes the hottest topic in the field of IT. This fast move towards Cloud computing has fuelled concerns on a fundamental point for the success of information systems, communication, virtualization, data availability and integrity, public auditing, scientific application, and information security. Therefore, cloud computing research has attracted tremendous interest in recent years. In this paper, we aim to precise the current open challenges and issues of Cloud computing. We have discussed the paper in three-fold: first we discuss the cloud computing architecture and the numerous services it offered. Secondly we highlight several security issues in cloud computing based on its service layer. Then we identify several open challenges from the Cloud computing adoption perspective and its future implications. Finally, we highlight the available platforms in the current era for cloud research and development.

ISSN : 2348-5612 © URR



### 1. Introduction :

Cloud computing is a complete new technology. It is the development of parallel computing, distributed computing grid computing, and is the combination and evolution of Virtualization, Utility computing, Software-as-a-Service (SaaS), Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS). Cloud is a metaphor to describe web as a space where computing has been pre installed and exist as a service; data, operating systems, applications, storage and processing power exist on the web ready to be shared. To users, cloud computing is a Pay-per-Use-On-Demand mode that can conveniently access shared IT resources through the Internet. Where the IT resources include network, server, storage, application, service and so on and they can be deployed with much quick and easy manner and least management and also interactions with service providers. Cloud computing can much improve the availability of IT resources and owns many advantages over other computing techniques. Users can use the IT infrastructure with Pay-per-Use-On-Demand mode; this would benefit and save the cost to buy the physical resources that may be vacant.

### 2. Different Issues in Cloud Computing:

More and more information on individuals and companies is placed in the cloud; concerns are beginning to grow about just how safe an environment it is? The issues can be organized into several different categories varying from security, protection, identity management, resource management, power and energy management, data isolation, availability of resources, heterogeneity of resources. Although, there are several issues that demand attention but the following could be treated as of prime concern:

#### 2.1. Privacy :

Cloud computing utilizes the virtual computing technology, users' personal data may be scattered in various virtual data centers rather than stay in the same physical location, users may leak hidden information when they are accessed cloud computing services. Attackers can analyze the critical task depend on the computing task submitted by the users. According to the survey of International Data Corporation (IDC), Security, Performance and Availability are the three biggest issues in cloud adoption. The critical challenge is how it addresses security and privacy issues which occur due to movement of data and application on networks, loss of control on data, heterogeneous nature of resources and various security policies. Data stored, processing and movement of data outside the controls of an organization poses an inherent risk and making it vulnerable to various attacks.

#### 2.2. Reliability :

The cloud servers also experience downtimes and slowdowns as our local server.

#### 2.3. Execution :