A Review on Cloud Computing

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Abstract

Cloud computing is based on grid computing also term as a computational model and which is based on shared computing resources . This paper is an overview over cloud computing and helps those who recently want to take overview and can grasp a lot of knowledge from it regarding computation model which stores data for computations over large network. In this paper we will take a review on cloud computing, architecture of cloud computing, comparison of public, private, hybrid.

Keywords: Cloud computing, Architecture cloud computing, Cloud service model, Public cloud, Private cloud, Hybrid cloud.

1. Introduction

Cloud computing is recently developed for processing and storage of data and can perform a lots of computation over the data. John McCarthy in the 1960s thought that computing facilities will be the general utility of the public. In rapidly changing world of internet technologies where technologies like internet of things (IOT) is in the rage. Internet services are in a boom all over the world because the facilities are easily available so by this trend the realization of a new grid computing model called cloud or computation computing model arises. Recent survey in2018 says at least half of IT spending is totally based on cloud computing. [1][2][6]
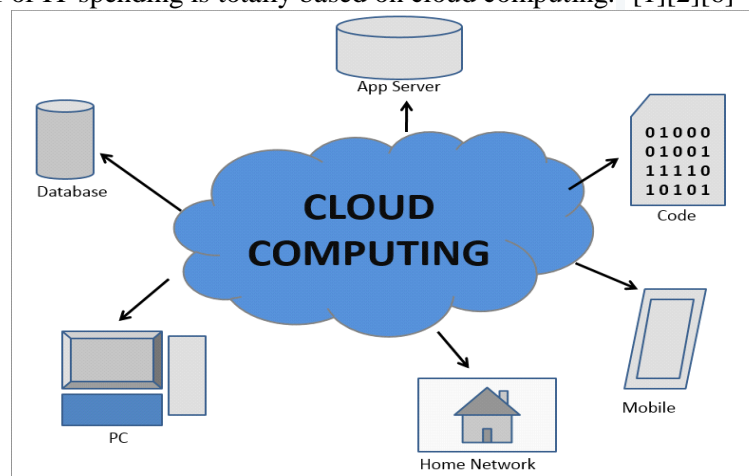

Figure 1. Overview of cloud computing

2. Architecture

Architecture of cloud computing is divided into two end's the front end and the back end. Front end is also called user end where the users can fetch data and use it for further computations.

Back end is also called rear end which is based on cloud computing from where the data is stored. [3]

Layers of cloud computing

- Hardware layer- this layer is used to deal with the physical devices like routers, servers, switches, cooling systems and power etc.

- Infrastructure layer- this layer also term as virtualization layer. It is the storage capacity which stores from physical resources using technologies like KVM and VMware.

- Platform layer- above the infrastructure layer the platform layer is present which the mixture of operating system and requisition structure is.

- Application layer-this layer provide an interface for users and also term as a user interface it is an actual provision from cloud. Example goggle apps, face book, YouTube.[6]

Service Model for Cloud Computing

- Software as a service (SAAS) -   Through Web portals Services users can subscribe for an application and can use it online. Therefore, users are shifting from locally installed software programs to on-line software programs services. Example goggle mail.[3][6]

- Platform as a service (PAAS)-it provide a platform to develop to test to manage and to deliver application over the cloud environment .Example goggle App Engine[3][6]

- Infrastructure as a service (IAAS)-it offers users to access the resources or data base storage servers.it provide scalable infrastructure. Example Amazon'sE2C [3]

3. Comparison

Table 1.Comparison of public, private and hybrid cloud

CHARACTERISTICS	PUBLIC CLOUD	PRIVATE CLOUD	HYBRID CLOUD
Scalability	Very high	Limited	Very high
Security	Low	High	Moderate
Performance	Low to Medium	Very Good	Good
Reliability	Medium, depends on the service providers	High,equipments within the organisation	Medium to High, replicate content is kept within the organisation
Cost of Use	Pay as you use	High cost of initial setup	Pay as you use
Network Requirements	It works on internet	Works on organisation intranet	Move from intranet to extranet

4. Conclusion

Cloud computing is the powerful tool currently, boom in IT industries. cloud computing currently used by many organizations for the storage of data and easily commutated the result over the internet.Cloud computing provides a wide range from infrastructure to platform based to public cloud application i.e Service as a Software. However security over the internet is important area to focus and research area.

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