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CLOUD COMPUTING PROCESS APPLICATIONS FOR TECHNOLOGIES

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Abstract: - Cloud computing is a new technology and rapid development area, most of the research scholar selected cloud computing area to continue his research and its support for data mining, networking, mobile computing, big data analysis. This paper deals with introduction of cloud computing, types, service model, task, data storage, security, challenges and its applications.

Key words: Cloud, task. Data storage, Security.

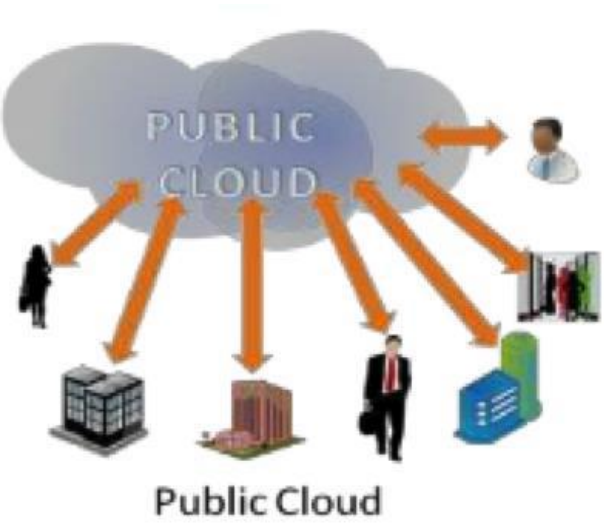
1. Introduction

Cloud computing is a variable technology that can support a broad spectrum of application. The term cloud refers to a network and internet. Cloud is present at remote location cloud provide service over network. The cloud computing refers to the many different type of and application being delivered in the internet cloud and the fact that many cases, the devices used to over the service and application. Cloud computing not application oriented but service oriented .There gives the following three sensitive states that are particular concern with in the operational context of cloud computing .The transection of personal sensitive data to the cloud server.The transmission of data from cloud server to client. The Stage of client personal data in cloud server which are remote server not owned by the clients.

2. Types of Cloud Computing

2.1 Public Cloud

In simple terms, public cloud services are characterized as being available to clients from a third party service provider via the internet. The term "public" does not always mean free, even though it can be free or fairly inexpensive to use. A visible; public clouds provide an elastic, cost effective means to deploy solutions

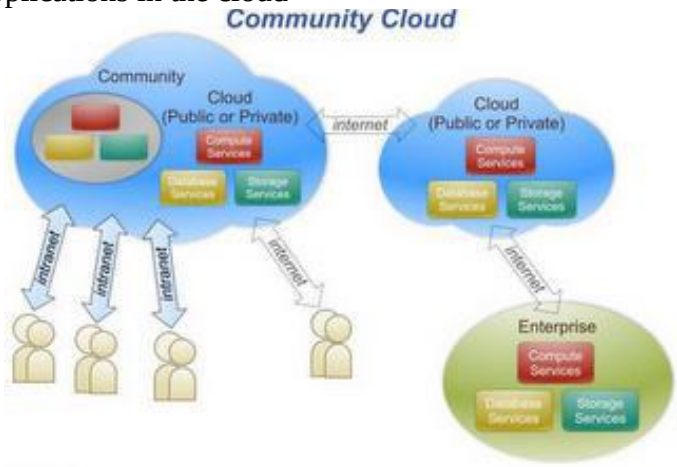


2.2Private Cloud

A private cloud offers many of the benefits of a public cloud computing environment, such as being elastic and service based. The difference between a private cloud –based service, data and processes are managed within the organization without the restrictions of network bandwidth, security exposures and legal requirements that using public cloud services might entail. In addition, private cloud services offer the provider and the user greater control of the cloud infrastructure, improving security and resiliency because user access and the networks used are restricted and designated.

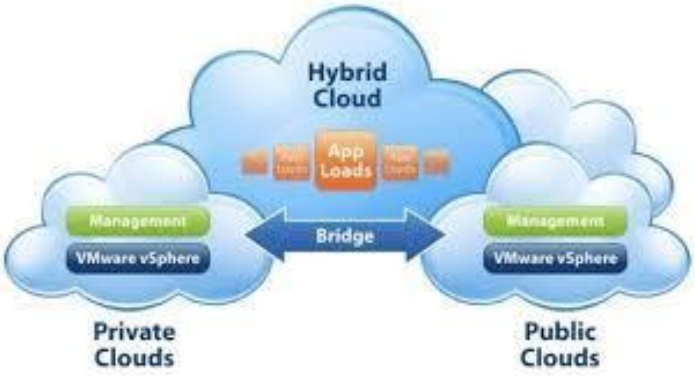
2.3Community Cloud

A community cloud is controlled and used by a group of organizations that have shared interests, such as specific security requirements or a common mission. The members of the community share, access to the data and applications in the cloud



2.4 Hybrid Cloud

A Hybrid cloud is a combination of a public and private cloud that interoperates. In this model user typically outsource non business – critical information and processing to the public cloud, while keeping business critical services and data in their control



3. SERVICE MODELS

3.1. Infrastructure as a Service (IaaS)

Infrastructure as a service is a single tenant cloud layer where the cloud computing vendor‟s dedicated resources are only shared with contracted clients at a pay - per - use fee .This greatly minimizes the need for huge initial investment in computing hardware such as servers, networking devices and processing power. They also allow varying degrees of financial and functional flexibility not found in internal data centers or with collection services, because computing resources can be added or released much more quickly and cost – effectively than in an internal data center or with a

collection service. IaaS and other associated services have enabled startups and other businesses focus on their core competencies without worrying much about the provisioning and management of infrastructure. IaaS completely abstracted the anything about the underlying complexities. The cloud has a compelling value proposition in terms of cost, but „out of the box" IaaS only provides basic security and applications moving into the cloud will need higher levels of security provided at the cost.

3.2. Platform as a Service (PaaS)

Platform as a service is a set of software and development tools hosted on provider"s serves. It is one layer above IaaS on the stack and abstracts away everything up to OS, middleware, etc. This offers an integrated set of developer environment that a developer can tap to build their applications without having any club about what is going on underneath the service. it offers developers a service that provides a complete software development life cycle management, from planning to design to building applications to deployment to testing to maintenance. Everything else is abstracted away from the "view" of the developers. Platform as a service cloud layer works like laaS but it provides an additional level of 'rented' functionality. Clients using PaaS services transfer even more costs from capital investment to operational expenses but must acknowledge the additional constrains and possibly and possibly some degree of lock-in posed by the additional functionality layers. The use of virtual machines act as a catalyst in the PaaS layer in Cloud computing. Virtual machines must be protected against malicious attacks such as cloud malware. Therefore maintaining the integrity of applications and well enforcing accurate authentication checks during the transfer of data across the entire networking channels is fundamental.

3.3Software as a Service (SaaS)

*S*oftware as a service is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the internet. SaaS is becoming an increasingly prevalent delivery model as underlying technologies that support web services and service – oriented architecture (SOA) mature and new developmental approaches become popular. SaaS is also often associated with a pay-as-you-go subscription licensing model. Meanwhile, broadband service has become increasingly available to support user access from more areas around the world. SaaS is most often implemented to provide business software functionality to enterprise customers at a low cost while allowing those customers to obtain the same benefits of commercially licensed, internally operated software without the associated complexity of installation, Management, support, licensing, and high initial cost. The architecture of SaaS-based applications is specifically designed to support many concurrent users at once. Software as Service applications are accessed using web browsers over the internet therefore web browser security is vitally important. Information security officers will need to consider various methods of securing SaaS applications. Web services security, Extendable markup language encryption, secure socket layer and available options which are used in enforcing data protection transmitted over the internet.

Combining the three types of clouds with the delivery models we get a holistic cloud illustration. Surround by connectivity devices coupled with information security themes. Virtualized physical resources, virtualized infrastructure as well as virtualized middleware platforms and business

applications are being provided and consumed as services in the cloud. Cloud vendors and clients need to maintain cloud computing security at all interfaces. The next section of the paper introduces challenges faced in the cloud computing domain.

4. Cloud Management Task

Cloud management involves a number of tasks to be performed by the cloud produce to ensure efficient use of cloud resources

- System data flow
- Because vendor lock in
- Knowing provides security produces
- Monitor capacity planning and scaling capabilities
- Monitor audit log
- Solution testing and validation
- Audit system backup

5. Cloud Computing Data Storage

5.1Storage Devices

Storage device can be broadly classified into two categories

- Block Storage Devices: It offers law storage to the clients; this law storage can be partitioned to create volumes.
- File storage Device: It offers storage the client in form of the files; maintain its own file system. This storage is in the form of network attached storage.

5.2 Cloud Storage Classes

Cloud storage can be broadly classified into two categories

- Unmanaged Cloud Storage: The storage is preconfigured for the consumer cannot formation the consumer can install own file system.
- Managed Cloud Storage : It offer online storage scale on demand managed cloud storage system present what appears to the uses to be law disk that the use can partition and format

6. Cloud Computing Security

Data in cloud should be stored in encrypted form. To restrict client from about allowing the share data, proxy.

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10. Conclusion

This paper describes the survey of cloud computing basics. The cloud computing is a vast storage area to access different user access anywhere in internet. It is a new model of business computing, distributed computing task in a large pool of computer resource enable various application system to obtain computing power needed storage space and a variety of software service.

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