

THE STUDY OF MULTIMEDIA DATA MODEL TECHNOLOGY BASED ON CLOUD COMPUTING

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Abstract: Cloud computing is an emerging computing paradigm in which resources of the computing infrastructure are provided as services of the internet. Cloud computing allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access.

Keywords: Cloud computing, Multimedia, Convolution.

1. INTRODUCTION

Cloud Computing is a technology that uses the internet and central remote servers to maintain data and applications. Cloud computing allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access. This technology allows for much more efficient computing by centralizing data storage, processing and band. Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources e.g., networks, servers, storage, applications, and services that can be rapidly provisioned and released with minimal management effort or service provider interaction. More exactly Cloud computing can be expressed as a combination of: More exactly Cloud computing can be expressed as a combination of:

- **Software as a Service.** This perspective refers to a service delivery model in which remote componentised services are accessible through a software interface and can be combined to create new services delivered via flexible networks .
- **Platform as a Service.** Cloud systems can offer an additional abstraction level: instead of supplying a virtualized infrastructure, they can provide the software platform where systems run on. The sizing of the hardware resources demanded by the execution of the services is made in a transparent manner.
- **Infrastructure as a Service.** Infrastructure Providers manage a large set of computing resources, such as storing and processing capacity. Through Virtualization, they are able to split, assign and dynamically re-size these resources to build ad-hoc systems as demanded by customers. They deploy the software stacks that run their services.

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Benefits Cloud promises much more than technological applications.

1. **Infrastructure cost reduction:** Due to the fact that the physical computing components are provided by the Cloud, the main infrastructure costs remain the networking and connectivity of the network devices.
2. **Increase speed to market:** Because the infrastructure exists in place, any investor can spin up a business much faster, without worrying about the computational needs.
3. **New business models:** Cloud computing brings flexibility and a whole new market niche, so new business models are to be developed for the Cloud users and the providers alike.
4. **Expand existing products:** Existing products can be moved to the Cloud and by doing so can benefit of more interoperability, flexibility, higher performance and integrate new interactivity features that the Cloud provides.
5. **Mobile and social capabilities:** The web offers to any application a limitless scale of mobility and accessibility from anywhere, platform independent. Also it offers social interaction facilities to existing applications, therefore making them more client oriented and providing access that our virtual replicas provide.

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2. CLOUD COMPUTING

Cloud computing provides a computer user access to Information Technology (IT) services i.e., applications, servers, data storage, without requiring an understanding of the technology or even ownership of the infrastructure.

2.1 Cloud Computing Deployment Models

There are four types of clouds that the DoD can potentially invest:

2.1.1 Public Cloud

A public cloud provides shared resources via a web application to many unrelated customers; the provider maintains the cloud. Billing is based on a utility-type configuration.

2.1.2 Private Cloud

A private cloud is built, managed, and directly controlled by the customer, and deemed the most secure type of cloud solution when correctly managed. It may be managed by the organization or a third party, and may exist on premises or off-premises.

2.1.3 Community Cloud

A community cloud provides service for many clients, and falls within the continuum of a public and private cloud, and therefore, could be managed by an organization or a third party on- or off-premises.

3. MULTIMEDIA DATA MODEL CHARACTERISTICS

According to the National Institute of Standards and Technology (NIST), cloud computing exhibits several characteristics:

- Reliability is improved if multiple redundant sites are used, which makes well-designed cloud computing suitable for business continuity and disaster recovery.
- Scalability and elasticity via dynamic (“on-demand”) provisioning of resources on a fine-grained, self-service basis near real-time, without users having to engineer for peak loads.
- Performance is monitored, and consistent and loosely coupled architectures are constructed using web services as the system interface.
- Security could improve due to centralization of data, increased security-focused resources, etc., Security is often as good as or better than other traditional systems, in part because providers are

able to devote resources to solving security issues that many customers cannot afford.

- Maintenance of cloud computing applications is easier, because they do not need to be installed on each user's computer and can be accessed from different places.
- Ubiquitous network access- Ubiquitous network Access is to the systems regardless of user location or device (PC, mobile phone, tablet, etc.)
- Resource pooling- Resource pooling is the Multi-tenancy that enables sharing of pooled resources and costs across a number of users which contain the different physical and virtual resources dynamically assigned and reassigned according to user demand.

4. RESULT AND DISCUSSION

There is a strong industry consensus that security, along with regulatory compliance is the barrier to the adoption of cloud computing. At the same time companies are attracted to cloud computing for its advantages: flexibility, elasticity and the pay-as-you-go economic model. Customers in the cloud can bring up servers and storage in minutes, and they expect a security solution which does not compromise the cloud values of flexibility and elasticity. The needed breakthrough should mean customer's data is always encrypted, and the master encryption keys are themselves encrypted, even when in use.

5. CONCLUSION

Cloud computing multimedia database based on the current hot areas of database development, as in recent years, object-oriented technology, object-oriented fields in the database, increasing display its vitality. As the special nature of multimedia data, it based on cloud computing objectoriented database of such a mechanism just to satisfy the media database modeling requirements. Although it has many theoretical and practical problems be solved with the perfect the cloud-based object-oriented multimedia database for its unique advantages, will become the mainstream of the development of multimedia database

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