

Future of Mobile Computing and Applications

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Abstract— Cloud computing is a new and speedy growing concept, and an accepted way of providing better and efficient application for cloud computing devices. It gives support for data mobile users with collection of data and processing services. This model effectively ensures privacy and security of client data. The cloud computing is used for quality improvement of the program.

Keywords— Cloud Computing; Cloud Security; Mobile Agent; Trust Management; Data Integration.

1 Introduction

Cloud computing as a currently exploring way delivers remote mobile application mobile devices through internet providing the lack of resources. It provides mobile world a new ad hoc infrastructure data storage and processing performed. It still a matter of great concern for a cloud user to security for the data sent and the reliability of cloud services. Mobile devices allow user access to services anytime and anywhere. The mobile computing can help to some problem of cloud computing.

2 Cloud Computing in Mobile Applications

A. Cloud Computing

Cloud computing is introduced as a new and speed the data access and accepted way providing better and efficient application for mobile data. It provides mobile interaction with data storage processing services on a cloud computing platform. Cloud computing it provide a new data of developing, acquiring and using mobile application. Execution of any mobile application cannot the handset with advance any data. They are usually absent with two choices either they mark for now one OS or they generate countless editions of the similar app. Cloud computing is replica for facilitating expedient on-demand base can be entree to collective pool of configurable measuring possessions that can be give mobile and organization attempt communication.

B. Cloud Computing Characteristics

- On-demand self-services

- Broad network access
- Resources pooling
- Measured services

3. Mobile Cloud Computing For Mobile Application

Mobile cloud computing is the form of the cloud devices in combination with mobile devices. Mobile devices are increasing the essential part of human life as the most ineffective and convenient combination of tools cannot be restricted by time and place.

A. Advantages of Mobile Cloud Computing

- Mobile apparatus permits consumers entry to cloud computing wherever and anytime.
- cloud process can give information about a user's location, transmission, and requested the data services to improve user experience person.
- Each mobile devices has storage, computing, sensing, and power resources in the data.
- Mobile computing can help to overcome problem of cloud computing.

4. Mobile Cloud Computing the Future

- As an inheritance and emergence of cloud devices and the mobile computing, mobile computing has been devised as a new phrase.
- Mobile computing can be thought of as infrastructure for data store and processing cloud happen outside of mobile devices, enabling new types of application for context-aware mobile social networks.
- MCC divided into mobile computing and cloud computing. Mobile users send service requests to the client through the mobile devices for cloud services.

A. General Purpose Mobile Cloud Computing

a) Approach

Cloud computing has na extensive standpoint and discovers data. This demands a mobile apparatus to

operate the internet to apply resources in on demand mode.

b) Augmented Execution

This augment execution on the smartphone hardware limitations and it is provided automatically to applications whose developers need few or modification in applications.

B. Application Specific Mobile Cloud Computing(ASMCC)

a) Approach

Application can be implemented mobile cloud computing involves developing specific applications of the mobile data in the mobile devices. While both potentially of the computation from and improve the efficiency of the mobile devices.

b) Mobile Service Clouds

The model enables the data configuration and the data services on an over network to support mobile cloud computing.

c) Partitioning and Execution Of Applications

This is the framework for partitioning and execution of data stream applications in mobile cloud computing devices. It optimizing the data stream application between mobile data and cloud application has been maximum throughput in processing the streaming data.

C. Mobile Cloud Motivations

a) Image Processing

Although he cloud computing connect to a remote server via the network.

b) Natural Language Processing

Where a mobile user may prefer having a file read the data. It can especially in case of the visually impaired.

c) Crowd Computing

Recording from the single data, the mobile cloud devices can be splice to assemble a single video that covers the data.

d) Sharing GPS/Internet Data

It is a more efficient manager to share data among single cloud devices.

e) Sensor Data Application :

Most mobile phone are equipped with sensors for Gaps, accelerometer, light sensor, microphone etc.

f) Social Networking :

Sharing user content is a popular way we interact with users.

g) Multimedia Search :

Mobile devices can stores many of multimedia such as audios, photos. The searching cloud be execution of the data.

5. Mobile Agent Based Trust Model for Cloud Computing

A. Security Agents

A sole point of failure cannot be acceptable to allow for any data loss. Cloud services and client must authenticate each other devices. This can be performed by username and password. It also monitors the flow of our data. The controls can be communication between client application and virtual machines. This agent also works as a security agent by implementing the cloud computing infrastructure through the software/hardware integrity. The risks and vulnerabilities associated with cloud computing.

B. Seven Threads Identification

- Abuse and Nefarious use of cloud computing
- Increase Application programming interfaces
- Malicious codes
- Shared Technology Vulnerabilities
- Data decrease
- Account , Services & Traffic Hijacking
- Unknown risk profile

C. Challenges Related To Mobile Applications

a) Interoperability

Organization generally follows interoperability challenge. Context and location information work for optimizing mobile access. Context aware services exploit data collected from terminal sensors or networks statuses and load. Network services and consumer application both the uses these applications.

b) Cloud Application Flexibility

An application to be supported by certain mobile cloud

infrastructure, can easily be requirements against the cloud infrastructure the devices, the network bandwidth and latency vectors.

c) Mobile Cloud Convergence

Mobile integrated the cloud computing to mobile world the data distribution is key issues. Limitation of mobile devices for their computing power makes distributed very important as the cloud provides performance.

d) Challenges Regarding Security

- Information Security
- Privacy and Confidentiality
- Malicious Attacks
- Denial of services
- Side channel attacks
- Authentication attacks

D. Cloud Services

Cloud services are the hosted services. A computer a group of computers working as the internet server offers a part of required resources for the use in exchange. client uses internet to connect with the server and display the desire data to the client the cloud services is a software systems is responsible for providing interoperable system to system interaction to a network or internet which accessed by cloud computing components, clients, software or end users.

- Identity the data
- Integrity
- Mapping message
- Amounts
- Searching
- Any other devices

E. A Taxonomy of Mobile Cloud Computing

Taxonomy of modern data advances in mobile cloud computing investigate depended on linked to the equipped, consumer and services, and also in areas of safety, circumstance consciousness and data administration.

- Operational level issues
- End user level issues
- Service and applications issues
- Data management

F. Data Security

Mobile devices have all functionalities of computer includes security threat to mobile devices. The threat detection services resources, both in terms of power and

computation.

- Better detection of malicious software
- Reduced resource consumption
- Reduced software complexity

6. Proposed System

Providing a better interface to the shared files is the proposed system goal. Synchronizing our app with personal computer is to allow easy sharing of data. Providing better authentication of data allow group access to shared accounts. The extension of our application can be used on multi-platform. Cloud computing is a form of outsourcing and high level of trust the partnering with. The ability to acquire parts of bulk resources client changed for usage. The cloud infrastructure is operated speedily accessing the organization. It may be managed by the third party and may be exist.

An operational mobile cloud exploits the locally available mobile resources while ensuring the security of the cloud. The cost manager must determine the user priorities the battery conservation, fast execution, monetary gain. The monitor resources usage and post a check on cloud provider for false the uses. It registers all drivers and hardware attestation and the authentication. It can be send the data the new resources to be platform.

7. Methodology

In cloud storage, the concurrent user does not have control over data until he has been send. It provides control the data in the cloud data-centric security in the packet. It accessing the data it should satisfy the policy rules. So cloud should enforce this scheme by us by using cryptographic approaches. We use the RSA algorithm as a basis to provide security for shared data. The RSA algorithm is using for the data security.

Algorithm:

STEP: 1 Select two prime numbers. STEP:

2 Calculate the n value $n=p*q$.

STEP: 3 Calculate the n value for $\phi(n)=(p-1)(q-1)$.

STEP: 4 Select e such that e is relatively prime to $\phi(n)$ and less than $\phi(n)$.

STEP: 5 Determine d such that de congruent module $1(mod \phi(n))$ and $d < \phi(n)$.

STEP: 6 Public key = $\{e,n\}$. STEP:

7 Private key = $\{d,n\}$.

STEP: 8 Cipher text $c = message e mod n$.

STEP: 9 Plain text $p = cipher text d mod n$.

8. Conclusion

Mobile cloud computing is one of the cloud technology. Computer technology is undergoing important transitions and changes like creating data security, privacy and

management changes. Encryption also can cause serious problems and latency issues. Mobile cloud computing is the extension of cloud computing and mobile data. It provides event login and accounting passwords of data for security audit purpose.

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