

Mobile Computing–New Advancement Techniques

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Abstract—Mobile Cloud Computing (MCC) is nearing trends which merge the functionality of cloud computing and mobile applications. Extending usage of mobile cloud computing services which allows the new comers to use over it. The discovery of cloud computing is to deliver the computing services – servers, storage, database & more over the internet. MCC converts the cloud computing into mobile environment and it gives the performance like (e.g.: battery, storage, bandwidth) In this paper we demonstrate about the deviation among the cloud computing and mobile cloud computing and the workflow of the architecture of mobile computing. We also express about the current technologies enables in MCC with real-life layouts which will clarify the usage of mobile computing and mobile edge computing (MEC).

Keywords—Mobile computing, Mobile cloud computing, Storage, Bandwidth, Database, Battery, Technologies, MEC.

1 INTRODUCTION

Over the last few years, there had been potential growth in cloud-based applications. Cloud computing has become much referred research topics in the industrial communities [1]. The merging of ubiquities mobile network and cloud computing generates a new computing stage are said to be mobile cloud computing [2]. Cloud computing indicates the use of framework and capacity to store the base – platform and software as subscription – based services in a PAY-AS-YOU-GO model [3]. Mobile cloud computing – mobile devices plays a potential role for increasing necessary in communicating tool at anytime and anywhere. Cloud computing is based on types of services they are – IaaS, PaaS, SaaS and many more. Cloud provides variants of deployments such as Public, Private, Hybrid. Accede to the analysis form JUNIPER, the cloud computing placed mobile software and applications are expected to increment 90% by the year from 2009 to 2014 (9.5 billion US dollars). This paper gives the workflow of MCC and the Pros and Cons of MCC, impact the future trends in MCC. MEC – Mobile Edge Computing is used to merge the information technology and telecommunications network.

2 IDEAS & PRINCIPLES OF MOBILE CLOUD COMPUTING

MCC is the simplest form to an infrastructure in both data storage and the data processing may works at external parts of mobile devices. A mobile cloud application shifts

the computing strength from the mobile gadgets and brings the applications and mobile computing are simply mobile tools ranges on mobile donor [1].



Fig.1 Mobile Cloud Computing

3 LITERATURE ASSESSMENT

Han Qi[5] express about the mobile computing as an extension of mobile computing and cloud computing which has rooted with high flexibility and scalability. The prospective / proposed system in the paper analyzes the characteristics, latest research work and forthcoming research activities. Dejan[6] analyze about the mobile communities which reveals new recruitments compared to traditional online web communities. The paper tells about the MCCP – Mobile Community Cloud Platform which influences the mobile community growth. The paper provides the design of cloud computing architecture. DeeptiSahnu[7] In this paper titles about “cloud computing in mobile application” discusses about the implementation of cloud computing for mobile device providing records storage. Test related to mobile applications as cloud utility resilience/flexibility are overviewed. Fabrizio[8] states that “5 reasoning to view about MCC” -1. Mobile computing is

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huge in size, 2. Mobile cloud computing is a need to form a aspects of other needs, 3. Mobile cloud needs for the capability being used, 4. Mobile cloud hugely depends on locked- down devices, 5. Mobile cloud is the platform for using free software providers.

4 WORKFLOW OF MOBILE CLOUD COMPUTING— ARCHITECTURE

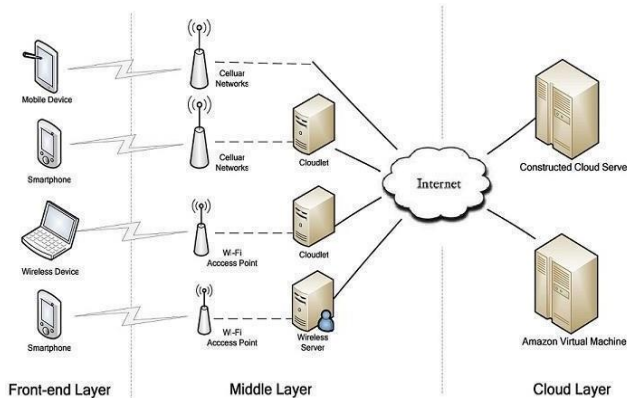


Fig.2 Mobile Cloud Computing Architecture

Architecture of mobile cloud computing might also as followings are - mobile devices, mobile networks, network operators, internet services provider, data center and so forth.

5 REAL LIFE LAYOUTS

We are practicing mobile cloud computing in our day-to-day life. Let us discuss the few real time instances.

Mobile E-mail

If you're using cloud technology mobile e-mail allows user to view, manage & respond to email without ever accessing office network [9].

Face book

It is the combination of two, in that we can store an enormous amount of data, images & videos of your profile [9].

Cloud Computing in Education

SLIDE ROCKET is a floor can be used to create presentation & submit them. Students can even present them through web conferencing on all the cloud areas [9].

No Need of Local Data Storage

We all risk of dropping important files, memories and such like if we suffer from hard drive failure and storing such things. Use ZomoDrive, Microsoft's Sky Drive may offer for both free & paid for storage & backup solution [9].

Chat Bots

Siri, Alexa and Google Assistants - all are allowed to use the cloud - linked basic languages for chat bots. When you speak with Siri (Hello Call MAX) then don't forget to remember that is cloud -based AI solution [9].

Application Development

Building the application for the mobile (or) computer games was easy to create in cloud platform. Amazon Lumberyard is the most used mobile game development tool used in the cloud - based [9].

6 ENABLING ERA OF MOBILE CLOUD COMPUTING

Mobile cloud computing plays an vital role by viewing the above image



Fig.3 MCC plays a vital role

Exponential Growth in Cloud Service Solution SaaS - opened an easy and attractive way for business and consumer to try early cloud services. In 2018, We expect to view many extra organizations with Excessive -level performance.[7]

Increased Cloud Storage Capacity

As we said cloud becomes large de-facto part of doing business with exponentially growth. For small commercial, increased storage capacity in 2018 will provide lower price compare to 2017 [7].

IoE - Internet of Everything

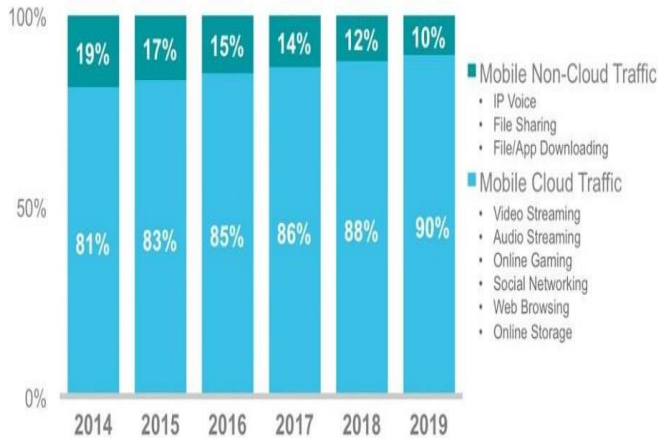
Cloud computing plays in tremendous role in IoE, it develops the complex systems at clearly in any respect interactions [7]. Google Pixel Bugs which are expected to expose in late 2017, it has ability to translate 40 languages in actual - time user [7].

5G

LTE speeds to full 5g network, helping us to reach 5G capabilities in record time. The IoT and IoE industries may even get beneficial in faster network speed by allowing the organization in this space to receive & deliver data more efficiently in real time [7].

Security Challenges

Even Though, 2017 has come to end; it has already made a name as ATTACKERS AT THE HISTORY. Attacks such as Wanna Cry, Ransomware, and the CIA Vault 7 hack [7]. Cloud application will account for 90% of mobile data traffic by 2019, By viewing the below bar-chart diagram [8].



Source: Cisco VNI Mobile, 2015

Fig.4 Mobile Data Traffic

7 PROS AND CONS IN MCC

In this we discuss about the cloud can be used to beater to overcome restriction in mobile computing, We've got numerous benefits by using mobile cloud computing, they may be :

Cost Saving

Business and the organizations can able to lessen the year end operations costs by using cloud storage; Consumer can view supplementary value saving because it doesn't require internal power to store information casually [8].

Multiple Platforms

MCC allows multiple platform supports to access the data and application stored within the cloud [8].

Security

Security of the data mobile users offers sensitive information through the network and sharing the information via secured data [8].

Connectivity

Internet connection in mobile computing is critic, before usage of the services you must check the connection setup [8].

Extending Battery Life Time

Battery is one of the parts in mobile devices. Several resolutions have been scheduled to improve the CPU performance, and to handle in knowledgeable manner [8].

Ease of Integration

Multiple servers from various services employees can integrate easily through the cloud to meet the user's demands [8].

8 FUTURE PACKAGES ON MCC

Enhanced Broadband Coverage

Better connectivity is being achieved out to our mobile devices via - 4G, Wi-Fi, Femto-cells and many others... [9].

Abundant Storage

Cloud based mobile apps has the efficient storage space are offered to apply it [9].

Building Technologies

Forth coming automated computerized components like HTML5, CSS3, Hyper-Visor Virtual and Web4 etc [9].

M (mobile) - Health Care

By 2020, the usage of mobile computing in health care will continue common life span at 20-25 years. Fixing Wi-Fi devices will continual monitor our whole health system. MC is also used to audit our diet in day-to-day life. Diseases such as diabetes will be nearly controlled through wireless monitoring & corrective, which may corrects the adjustment of insulin level without the expertise of patients.

9 CONCLUSION

Mobile cloud computing has photograph representation. We conclude the real life layouts; how the mobile cloud computing is profitable. The enabling technologies for MCC are discussed which makes it practically possible. Also overviewed mobile data traffic upcoming year with bar chart representation, with literature assessment. According to the current study, usage will be extra than 240 million industries will use this cloud services through mobile - platform by 2016. In the forth coming future, the market place of mobile cloud computing will expand more equal playing fields.

REFERENCES

- [1] Mobile Cloud Computing - MukeshGoyal, Sukhwinder Singh - www.erpublishations.com
- [2] Mobile Cloud Computing -Lalit Kumar, Nishant Malik, GouravAgghi, Ajay Anand
- [3] Mobile Cloud Computing ASFuture For Mobile Applications - C Shrivanthi1, H.S.Guruprasad2
- [4] A Literature Review on Mobile Cloud Computing: Open Issues and Future Directions -NiteshKaushik, Gaura, Jitender Kumar.
- [5] SaiNatka, "Mobile Cloud Computing: The Upcoming trends !" - https://www.esds.co.in/blog/mobile-cloud-computing-the-upcoming
- [6] Polrid, "5 examples of cloud computing" - https://www.techbuffalo.com
- [7] Blog O GetCloudServices, "Mobile Cloud Computing - Pros & Cons" - https://www.getcloudservices.com/blog/mobile-cloud-computing-pros-and-cons/
- [8] Pooja N Dharmale, P.L.Ramteke, "Mobile cloud computing" -

www.ijser.net.in

- [9] Han Qi, Abdullah Gani, " Research on Mobile Cloud Computing: Review, Trends and Prespective"
[10] Mobile community cloud computing : Emerges and Evolves -

- DejanKovachev , Dominik Renzel - <http://www.ieee.org/>
[11] The Future of Mobile Cloud Computing: Integrating Cloudlets and Mobile Edge Computing - Yaser Jararweh,1 Ahmad Doulat,1 Omar AlQudah,1 Ejaz Ahmed,2 Mahmoud Al-Ayyoub

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