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Research Article



Impact of Cloud Computing on Embedded Devices

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Abstract | Now-a-days mobile devices like iPhone, android phones, HTC mobiles etc. are not just used for making calls, text messages and for basic operations. Now mobile phones have become smart phones; they can be used to perform almost all the work that can be done on computer. Cloud computing has developed the latest trend regarding development within the quickly building mobile world. In cloud computing information storage and information handling are continued on web as opposed to on a single device. In this research there will be introduction to CC related to mobile devices called mobile cloud computing (MCC), comparison of G Cloud and i Cloud (two platforms providing cloud computing utilities for mobile devices) and in the end take a view of impact of cloud computing on smart phones. The main objective of research is that to understand the concept of "Mobile Cloud Computing" and investigate CC impact on mobile devices, which will help overall students and will be supportive in the upcoming for related application in portable expedient.

Key Words Mobile Cloud Computing, G Cloud, i Cloud, Experimental, search engine and CPU

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INTRODUCTION

With the success of internet in the last several years, computing resources at the moment are more ubiquitously available and it enables the new concept of cloud computing. Cloud Computing is really a warm area in several media, and it is spoken that it gets the potential to transform large aspects of the Information Technology marketplace. Cloud computing offers the facilities online in an on-demand manner. CC is becoming popular very rapidly [1].

G Cloud and i Cloud both are most commonly used for cloud computing values on the platform of mobile phones. G Cloud provide cloud computing utilities for android based mobile phones and i Cloud is used for Apple mobile phones. G Cloud and i Cloud both of these are used to provide backup of your mobile phone storage on protected cloud location and also provides some other features. G Cloud and i Cloud both automatically backs up our links, text, logs of call, images, audio and movies saved in our Android and Apple's mobile Phones [2,3].

Hypothesis

The fundamental principal, task or purpose is the mobile phone going to perform. On the off chance that the

undertaking is amazingly computational substantial the mobile phone's ability will be deficient to complete the task, and offloading to the cloud may be the main result. Then again if the undertaking is little and quick to execute then divesting may be damaging due to laziness and the time it takes to transfer the errand to the cloud servers. I subsequently accept that if the assignment is to some degree considered a "middle" calculation errand, the data allocation capacity boundary is great, and the reckoning limit of the telephone is poor, then it will be useful to offload the undertaking to the cloud. An unfortunate suggestion and a quick cellular telephone will then again prove less beneficial, as a result of the small argument rate of information and the telephones quick computational limit [4].

MATERIALS AND METHODS

The research work can be divided into two parts:

- Theoretical part and
- Another is empirical study which contains experimental work

For theoretical part different research papers and websites

websites will be used to explore the topic. Most of the research papers are accepted. Our work will begin by searching the already done work of cloud computing and mobile cloud computing and then thin down our search by exploring the latest implementation of cloud computing in the area of mobile phones. Different search engine is used to search about topic [5].

Limitations

The main focus of study is on cpu's energy consumption in order to perform specific tasks with the use of cloud and performing same tasks on mobile phone as well. The measurement of power consumption of mobile phone is really a difficult one. So, there are some tools in order to perform these types of measurements. In order to compile results from different devices need different kinds of mobile applications. As we know, Android applications work specifically for Android, so, the main focus of this research is on that kind of devices only.

RESULTS AND DISCUSSIONS

The comparison of both G Cloud and I Cloud shows the beneficial results for the users. Both of these backup storages provide healthy storage for backup. These both cloud backup provides many features, like backup of your contacts, messages, call history, photos, videos, and many more things. Due to cloud backup users can take mental rest of not losing your important data. It shows that even if you lost your phone, you can search it by using these cloud backups. Result of comparison of both backup storage shows the positive results. After that comparison it can be say that every new mobile phone should have cloud backup software. So, user can take full advantage of that technology.

The results from the analysis demonstrate that applications in a few regions have advanced better with the idea of cloud computing than others. The Daily Motion and Facebook errand person applications demonstrated to diminish power utilization on the cell phones. The Daily Motion applications spare power on the grounds that the more lavish operations, for example, disentangling feature/ sound information is offloaded onto remote servers while the non-cloud application, MX player. Must perform these operations on the gadget/ When looking at informing applications, it is found that the information transmission operations are not as immoderate as sending messages the "typical" way. In this manner the Facebook courier additionally expends less power than the non-cloud application.

Nonetheless, when contrasting voice call applications, it is found that Skype utilizes a considerable measure of transforming power to diminish foundation clamor. This makes it extremely battery devouring application contrasted with the implicit calling application in Android and consequently devours more power.

The result structure our record administration test demonstrates that the non-cloud ES File Explorer devours

less power than the cloud-based Google Drive application however contrast is not by much. Nonetheless it must be noted that ES File Explorer additionally performed its operations speedier than cloud-based Google Drive, which must be looked into.

The results from sound also demonstrate that the non-cloud built-in music app uses less power than the cloud-based Sound cloud. Nonetheless it should be noted that built-in music app use more less power comparatively to Sound cloud.

On an abnormal state it might be say that "Mobile Cloud Computing" is in a few cases an ideal option to the conventional local execution. This is ended up conceivable because of development in both Wi-Fi interface innovations, and in addition in the Cloud figuring fields. But still there are issues related to adoption of offloading the heavy computational apps.

CONCLUSIONS

The comparison of both G Cloud and I Cloud shows the beneficial results for the users. Both of these backup storages provide healthy storage for backup. These both cloud backup provides many features, like backup of your contacts, messages, call history, photos, videos, and many more things. Due to cloud backup users can take mental rest of not losing your important data. It shows that even if you lost your phone, you can search it by using these cloud backups. Result of comparison of both backup storage shows the positive results. After that comparison it can be say that every new mobile phone should have cloud backup software. So, user can take full advantage of that technology.

In our experimental work pursuing our own tests, we have now gone to concluding of which "mobile cloud technology" even now has space for lots of advancement. Within our tests, the cloud structured choice just "won" in 2 classes, video playback and also messaging. The file management test is a number of just what in definite however many of us know that the change involving controlling files locally and also within the cloud is rarely recognizable. Online video playback using the official Daily Motion software is less expensive than participating in again any locally saved record. The particular Skype software can also be a critical electric power leech in the course of phone calls, when compared to the typical built-in contacting app. Regarding messaging, the cloud based structured choice Facebook messenger, is less expensive equally in terms of electric power and also money, while each text is cost-free. The experiment of music in which built-in music app uses more less power than the SoundCloud cloud-based app.

Our examination results demonstrate that power utilization is diminished in a few cases which lets us know that cloud-based applications are advancing and gradually conquering their downsides. This is particularly apparent in our video playback test where the computation expense is far lower utilizing a cloud system. With "mobile cloud computing" all consumption and

difficult operations will be moved to the cloud. This will wipe out the requirement for lavish hardware and along these lines' lower device costs. It will additionally free up storage room since the majority of the information will be put away in the cloud and give simpler availability.

There are two main disadvantages of executing cloud-based app's is that accessibility and Quality of service. With the proceeded advancement and extension of 4g it might be says that these deficiencies might be clear by decreasing latency and furnishing more ranges with network access.

Starting at this time, completely moving from the majority of your regular applications to their cloud-based partners won't bring about more battery life, as the options just vary altogether in a few cases. What we can say be that as it may, is that mobile cloud innovation has developed inside the most recent year or two, and will presumably keep on doing so until it has surpassed the custom methodology. As cloud computing advances further, mobile cloud computing takes after.

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