



Survey on Cloud and Media Centre on Raspberry Pi

Swapnil Raut¹, Ankit Chandak², Shiwani Ghodmare³, Prajakta Joshi⁴, Minal Dhawale⁵
Prof. Mohammad Sajid⁶

^{1, 2, 3, 4, 5} B.E Final Year Students, Department of Computer Science and Engineering, Priyadarshini Institute of Engineering and Technology, Nagpur, India

⁶ Assistant Professor, Department of Computer Science and Engineering Priyadarshini Institute of Engineering and Technology, Nagpur, India

[1]swap2200@gmail.com [2]chandak.ankit4@gmail.com [3]shiwani.ghodmare13@gmail.com [4]
prajaktajoshi2510@gmail.com [5]minaldhawale97@gmail.com [6]sajid4u0023@gmail.com

ABSTRACT

Nowadays cloud storage is all the rage in world. Almost everyone who use a smartphone uses a cloud storage service. This project introduces a system focused on cost reduction and providing quality services in the field of technology. Raspberry Pi is a powerful yet small credit card sized computer that can carry out tasks that requires decent amount of processing power. This project uses a web interface hosted on the Raspberry Pi which in turn enables user to move his/her data back and forth from his/her handheld device. This project also proposes a system which would enable user to consume data on the Raspberry Pi by connecting the same to a screen. By means of a media server, user will be able to consume the data that he /she previously stored on the Raspberry Pi on a considerably large screen without downloading the media to their personal device. This project will result in drastic cost reduction that is incurred by an individual for using cloud services. The complete system will be based on wireless communication and can be controlled by the user remotely.

Keywords- Raspberry Pi, Cloud Storage, Smartphone, Media server.

I) INTRODUCTION

We came across a problem scenario which is faced by almost every individual who has an acquaintance with the technology and proposed a solution to the same problem by using Raspberry Pi. Further, every step off proposal is mentioned in detail including the installation of the operating system on the board including the services required to be installed on the Pi.

ISSN : 2278-6848



© International Journal for
Research Publication and Seminar

With the advent of 21st century new technologies, methodologies and concepts were being introduced to the world. As the years rolled by new technologies and ideas made their way into the modern world. The concept of cloud storage was brought into existence by Joseph Carl Robnett Licklider in the 1960. Today, cloud storage services are widely used by individuals across the globe and the technology surrounding it is vastly developing. However, access to these services comes with a significant cost.

Thus, there arises the need to address this problem and reduce the overall cost that an individual incurs whilst having access to the services. The proposed project addresses the problem by providing the same services to the user while maintaining the quality of the service. Now, consider a situation where a person has to pay a hefty amount to the cloud storage services monthly or annually in order to maintain his/her data. To access this cloud storage service the user also requires to have to subscribe to an internet plan which allows user to use abundant amount of data. All this procedure results in the elevation of the total cost required to access the service.

The proposed system makes use of the Raspberry Pi as a web server which provides cost-effective solution to the problem stated above. The



Raspberry Pi will host a web interface which would be accessed by the user. This web interface will enable user to move his files from his personal device to the storage on the Pi, user will be able to backup all his/her files wirelessly without the use of internet, here the Pi will act as a cloud storage centre. User will also be able to acquire the same data if he/she so desires by just connecting his/hers personal device to the Pi wirelessly. A Media server on the Pi will enable the user to consume his/her stored media on the Raspberry Pi itself simply by just connecting a secondary screen to it, be it a monitor or a television.

II) LITERATURE REVIEW

P. Bhaskar Rao and S.K. Uma proposed a project for home control and monitoring system using a microprocessor and microcontroller, with IP connectivity for accessing appliances and controlling devices remotely using Smart phone application. It does not require a dedicated server PC and offers communication protocol to monitor and control the home environment with switching functionality [1].

Jiwa Abdullah introduced a mobile controlled car security system that offers higher level of car security features. This is able to notify the car owner immediately when intrusion is detected. Any of the car feature can be controlled remotely via a mobile phone from anywhere at any time. It is based on GSM positioning system and has the potential to assist in stolen car recovery [2].

Sanjana Prasad and others proposed a Smart surveillance monitoring system using Raspberry pi and PIR sensor for mobile devices. The key feature of this system is that the home security system captures information and transmits it to a Smart phone using web application. When motion is detected, the cameras automatically starts recording and the Raspberry pi informs the owner through web application [3].

Dhaval Chheda and others proposed a system which aims to substitute laptops with Raspberry pi will. It will help achieving quality of service and consume small amount of power. The proposed system will be controlled remotely by mobile phone [4].

III) RESEARCH METHODOLOGY

The objective of the proposed system is to create a web server on Raspberry Pi that will host the web interface that enables user to relocate his/her data onto the storage of the Pi. All the data on the Raspberry Pi will be stored in a database in tabular form. Different type of data will be stored in different sections so that it would be easy for the user to retrieve the relevant data when required. Raspberry Pi will also be configured as a Media Server. If the user wants to consume the media without downloading it back on his/her personal device, Media Server will enable him/her to directly stream content onto their personal devices. If user so desires to view media on a large screen, it can simply be achieved by connecting any screen that supports a digital video signal. Streaming media on personal devices without downloading them on their devices will help users to avoid memory clutter that occurs on these devices. The whole project is based on wireless network to avoid all the hassle of managing the wires.

IV) CONCLUSION

Thus, we have developed a device which is capable of hosting a web interface that enables user to backup or store his data on the Raspberry Pi's storage. This data can be retrieved by the user if he/she loses the same on their personal devices. The Raspberry Pi here will act as a cloud server for the user and also as a Media Server wherein the user can easily consume media without downloading it on their devices. This will save memory on user's device which can be utilized by some other important task. Thus, this project achieves its goal of providing a cost effective solution to the expenses that a user incurs by using cloud storage services without compromising on the quality of service. This project in return also boasts extra functionalities like a Media Server service wherein users can stream media on their devices without paying extra.

REFERENCES

- [1] Raspberry pi Home Automation With Wireless Sensors Using Smart Phone- P Bhaskar Rao, S.k Uma- International Journal of Computer Science



And Mobile Computer- IJCSMC, Vol. 4, Issue. 5,
May 2015.

[2] The Design of Mobile Control Car Security
System- Jiwa Abdullah- International Journal of
Engineering and Technology - IACSIT, Vol.3,
No.3, June 2011.

[3] Smart Surveillance Monitoring System Using
Raspberry pi and PIR Sensor- Sanjana Prasad,
P.Mahalakshmi, A.John Clement Sunder,
R.Swathi-International Journal of Computer
Science and Information Technologies- IJCSIT,
Vol. 5 (6) , 2014.

[4] Smart Projectors using Remote Controlled
Raspberry pi- Dhaval Chheda, Divyesh Darde,
Shraddha Chitalia- International Journal of
Computer Applications- Volume 82 – No 16,
November 2013.

[5] Beginning PHP 5.3 by Matt Doyle.

[6] About Raspberry pi: www.raspberrypi.org .