

# Smart Server IOT Based Temperature Monitoring System

K.P.Kaliyamurthie, Nalini C., N.Priya, A.V.Allin Geo

**Abstract:** *Internet of things is winding up increasingly more prevalent step by step because of its various focal points. Here expression Internet of Things proclaims a dream of things to come Internet where interfacing physical things. Albeit a significant part of the work has been done until today to comprehend the Internet of Things into complete, the vast majority of the work centers around asset obliged hubs, instead of connecting the current installed system[1] to the Internet of things organize. In this paper, we are building temperature based observing framework utilizing Internet of things for the server room . Here there is an application which will demonstrate the present temperature of the server room after every 2 seconds, and on the off chance that we need to change the temperature of the server room we can transform it as needs be. Here we are utilizing equipment perceived as raspberry pi for interfacing reason. Countries can gather the capability of this influx of advancement for assembling as well as for regularly life and work and the improvement of new data and administrations that will change the manner in which we get things done in numerous different backgrounds. Be that as it may, its prosperity isn't unsurprising. We have assessed our framework and demonstrated that our system can be utilized successfully to incorporate functional Internet of things applications over existingsystem.*

**Watchwords :** OT, GPIO, Raspberry Pi

## I. INTRODUCTION

The Internet is a living entity, always altering and evolving. New applications and businesses are created continuously. In addition to an developing Internet, technology is also changing the landscape. The Internet of Things is driven by a growth of the Internet through the inclusion of physical objects combined with an ability to provide better efficiency to the environment as more data becomes available. [1][2]

We are entering a new age of technology that is Internet of Things. Machine to machine, machine to environment, the Internet of the Internet of things technology is referred in our temperature based monitoring system, and it has been an expanding. Technology [11]to[19] at which it provides a platform to enhance the system. Whole thing, the Internet of

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smart Things, intelligent system call it what you want, but it's occurrence, and its possible is vast. We see the internet of things as billions of smart, connected "things", that will include every feature of our life, and its foundation is the intelligence that embedded giving out provides. The internet of things is comprised of elegant.

## II. LITERATURE SURVEY

Web of Things speaks to a typical idea for the ability of system plans to keenness and gather information from the world about us, and after that split that information crossways the Internet where it tends to be process and used for different alluring reason. Numerous organizations on the planet have issue to know the genuine state of the machine. The motivation to know the state of the machine is to make the anticipation and to evade the machine from breakdown, so this task is creating to screen the temperature sensor framework. A great deal of work has been completed for observing temperature sensor. Latest work is toward creating Wireless sensor for temperature checking machines collaborating and imparting [20] with extra machines, substance, condition and foundations. As an outcome, immense volumes of data are being produced, and that realities is being prepared into reasonable occasions that can "expert and oversee" things to make our life a lot simpler and more secure and to Decrease our contact on the environment.[21]tp[30]

The center thought is to interface temperature sensor with Raspberry Pi gather the temperature readings and show those readings on the cell phone. Likewise we would utilize h adoop bunch to spare all the temperature changes. These temperature chronicles perhaps utilized for investigation later on. We will put the Raspberry Pi and the temperature sensor at Neova's server room and read current temperature utilizing Cool Server Room application on the cell phone essentially, we are building an application which will demonstrate the insights and current temperature of the server room.[31]to [40]

The SAP solutions[4] for the Internet of Things give all you have to make information driven knowledge from related impacts, natives and plans. Associate your business with the new generation of Internet empower designs in the cloud, convert your current business procedure and reconsider your industry and client experience. In execution of framework when we recover the present temperature readings and show

those readings on the cell phone. Additionally we would utilize Hadoop bunch to keep every glow change. These hotness recording possibly utilized for concentrate later on. We will put the Raspberry Pi and the temperature sensor at Neova's server room and read current temperature utilizing Cool ServerRoom[5] application on the cell phone essentially, we are building an application which will demonstrate the measurements and current temperature of the server room utilizing Fig:1.

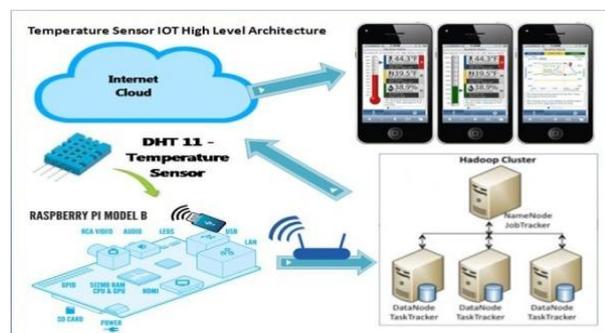


Fig1. System Architecture

In server room, there will be a temperature sensor installed on raspberry pi kit. Raspberry pi will have node js installed on it which will allow the raspberry pi kit to read data on temperature sensor and it will push it to the Hadoop and cloud. There will be Cloud VM which will again have node js installed on it but it will also have sails js (a MVC framework) which will act as server for your mobile app. Sails js server (cloud vm) will provide data to mobile app which it has received from raspberry pi kit. The mobile app will be developed by angular js's framework ionic which will just give you an idea in relation to the data from sails js sever. When the system just connects to the internet, the quick and important is displayed on the screen of device[41].

## A. Actual system

In the server room, there will be a temperature sensor installed on raspberry pi kit. Raspberry pi will have node js installed on it which will allow the raspberry pi kit to read data on temperature sensor and it will push it to the hadoop and cloud. There will be Cloud VM which will again have node js installed on it but it will also have sails js (a MVC framework) which will act as server for your mobile app. Sails js server (cloud vm) [29] will provide data to mobile app which it has received from raspberry pi kit. The mobile app will be developed by angular js's framework ionic which will just show the data from sails js sever by Fig:2.

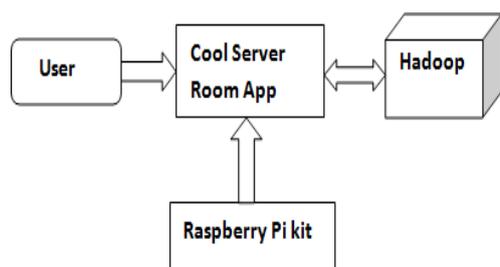


Figure 2 System Implementation

## III.CONCLUSION

As per the paper I conclude that SAP solutions for the Internet of Things give the whole thing you need to generate data-driven intellect from connected things, people and devices[8]. join your industry with the new generation of Internet-and transform your existing business processes and reimagining your commerce and client experience. And in the future it can be used for European countries where the temperature is always cold; therefore in home level it can be used. As there is always cold, there is a need to on the heater of the room, so here everything can be done automatically[9].

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