

SMS Based Server Monitoring System

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ABSTRACT:

There is a need for a web based application which can capture all the organization and data center details and remotely check if each of servers is up and running all the time. This monitoring piece of the application keeps pinging each of the servers at the specific intervals and based on the rules setup and response received it sends out an SMS to a predefined list of specialists whenever there is a failure. This SMS will also contain the information related to the server that has failed and also the time at which it had failed.

KEYWORDS- SMS, Remote Monitoring

I. INTRODUCTION:

Organizations with huge data centres having a lot of servers hosting numerous applications, it is always a major problem to monitor if each of the servers is up and functional all the time. The problem is more acute during late night shifts when the usual number of network/systems engineers working is less.

Usually, when organizations host the applications on their servers on behalf of their clients, they sign-up a service level agreement (SLA), specifying the allowed down time for each of the applications. Any lack of commitment on the part of the organizations in meeting the SLA could result in loss of business or legal action or both. So, it becomes very important for the organizations to know if a server is down or non-functional and take corrective action immediately. Unfortunately, for some less time critical applications, it is usually the client who informs that there is a problem with the server when he/she tries to logon to the application. Organizations would be very interested in knowing about these server failures immediately and take corrective action before the client starts complaining. [1].

II. SYSTEM IMPLEMENTATION:

This system can be developed in two ways. First one is that the targeted LAN network can be controlled by sending SMS sent by user. Another way is that targeted LAN network can be controlled by server machine.

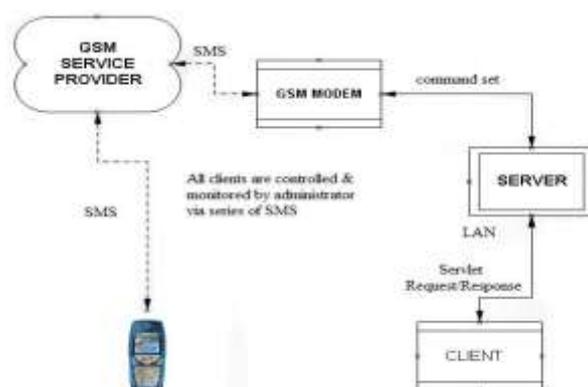


Fig 1: Block diagram of the system using Cell phone

A. GSM IMPLEMENTATION PLAN:

Sms based server is used to send a message to the GSM from a remote based with a desired command to receive details about the functioning of the server. The SMS-based e-government model proposes that local authorities develop their SMS-based services through five levels: Notification, Presentation, Communication, Transaction, and Integration. This section will investigate the technology requirements and other issues related to each level.

The server application can control through registered mobile device.

Using that mobile device the administrator can perform following actions -

- 1) notification
- 2) presentation
- 3) communication
- 4) transaction
- 5) integration

The client application retrieves the list of all the transactions and communication that have take place on the server. Whole lists of events is also shared and send to the email id of the client.

Design of system characterized into three modules: Client module, GSM Server module and Administrator [2].

USER:

Administrator is having application feature on his mobile phone which he uses to send commands to the server for outcomes.

CLIENT:

The client or user on the network requests for information (kill, delete, create file) to access, requests for rights & privileges to access.

GSM SERVER:

The requests received are analyzed by server. Then server performs the respective action as directed by the Administrator. Server and clients communication is performed by using sockets.

B. SERVER ARCHITECTURE:

We sends the request through SMS using mobile phone having Mobile Information Device on phone via GSM modem to the server. Server then recognizes the client request which administrator is supposed to monitor and extract data from locally cached data buffer where latest 16 sec data of every machine is updated or stored and sends this info to the administrator as response [9] the flexibility of the uses the interface has been developed a graphics concept in mind, associated through a browses interface. The GUI'S at the top level have been categorized as best interface.

Through the GSM service provider the communication is done with the GSM modem which communicates with the server and the server communicates with the client. All clients are controlled and monitored by administrator via a series of SMS text messages for which a SMS parser is used to parse the SMS.

The administrator controls the LAN through his mobile even he is at the remote place. The clients cannot send back or communicate to the administrator the communication is unidirectional it is not two way. Only the administrator can give command to the clients.

The mobile used can be any mobile which has a GSM facility in it. Also the administrator can check the network load on the LAN by typing only a command.

FEATURES CONTROLLED BY CELL PHONE:

View: Get in your cell phone, the list of entire **client's** in LAN. Keep pinging every time to check the latest status of the PC's. Anytime, the PC goes offline, its name is removed from the list.

Pull SMS: Get the list of all the processes running on the remote machine.

Event Process: Activate different processes in either the server machine or any of the client's.

Schedule Process: Kill the desired processes on either the server or clients.

Read: You can read the drives, folders, files of any of the client machines / the server machine from cell.

Open File: A small text file residing in any of the client or the server machine can be opened in your cell phone.

Broadcast messages: Broadcast messages to clients, Server from cell.

New File: Create a new document in the cell phone and save the same in either the server or client machine.

Shut Down: The client machines from mobile.

C. GSM MODEM:

A GSM modem [2] is a special type of modem, which accepts a SIM card, and operates after a subscribed sim of a mobile operator, just like a cell phone. From the mobile operator perspective, a GSM modem looks same as a mobile phone. A GSM modem can be a dedicated modem device with a serial, USB or Bluetooth connection, or it may be a mobile phone that

IV. CONCLUSION:

It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge of not only programming in ASP.NET and C#.NET web based application and know some extent Windows Application and SQL Server, but also about all handling procedure related with **"SMS Based Remote Server Monitoring System"**. It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

FURTHER STUDY:

This project can go forward with the government. Digital india can take up this as a lot of e-governance will be provided a lot of load on the server will come . so it is important for a administrator to know that how the servers are behaving how many are still working. Further research can be done in it.

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